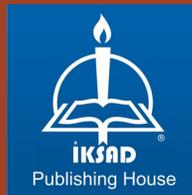
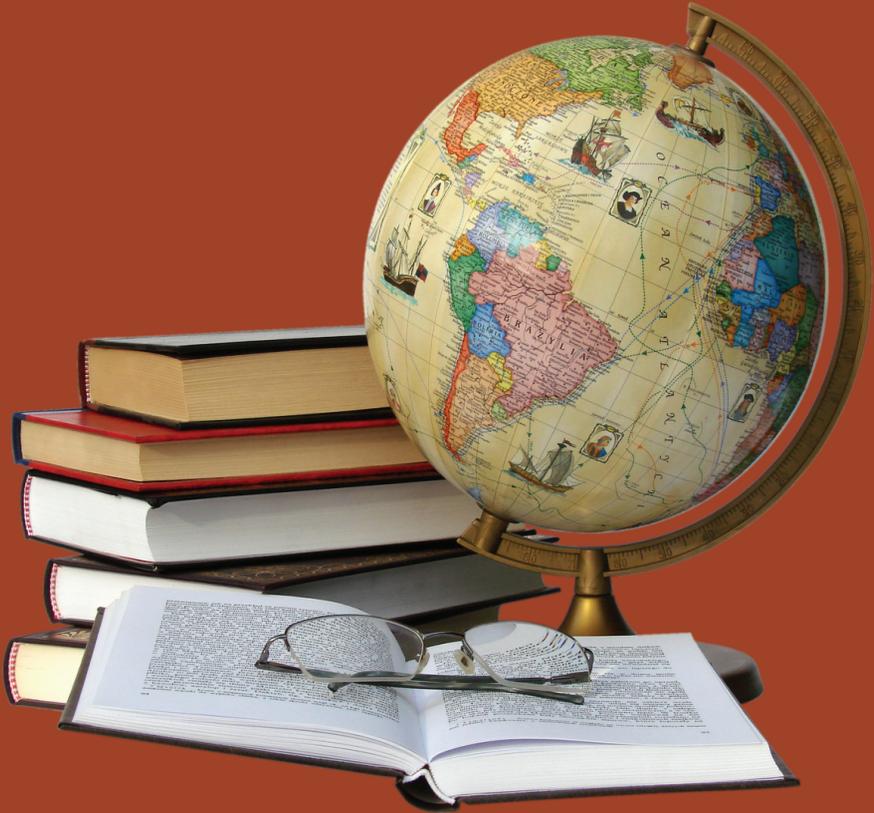


CONTEMPORARY EDUCATIONAL RESEARCH I

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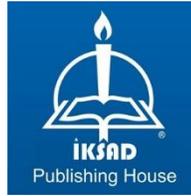
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Development and Social
Researches Publications®
(The Licence Number of Publicator: 2014/31220)
TURKEY TR: +90 342 606 06 75
USA: +1 631 685 0 853
E mail: iksadyayinevi@gmail.com
www.iksadyayinevi.com

It is responsibility of the author to abide by the publishing ethics rules.
Iksad Publications – 2022©

ISBN: 978-625-6955-47-9
Cover Design: İbrahim KAYA
December / 2022
Ankara / Turkey
Size = 16x24 cm

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FOREWORD

The three-element theory developed by George Jellinek is the most widely accepted definition of the state in the academic community. According to this theory, the state consists of the elements of man, land and sovereignty. The most important of these elements is, of course, human. The quality human resources in the hands of the states will facilitate the provision of other elements and directly affect the power of the state. The way to raise quality people is through quality education. For this reason, the issue of education has come to the present day as an issue that states focus on with sensitivity. In the ages when brute force was more important than knowledge, the education given on the art of war shifted to the field of science and technology in the following periods. In this way, thanks to the trained manpower, the states have succeeded in creating the other two elements in the strongest way.

In today's conditions, the importance of education is greater than ever. In the globalizing world, knowledge = power has become and the ways of accessing information have become easier. Although the philosophy of education has shifted to teaching access to information without transferring information, it is necessary to carry out studies in accordance with the requirements of the age in terms of both transferring information and ways of accessing information. In such studies, not only the country to which the academician belongs should be considered, but also the systems of different states that are accepted as positive examples in education in the world.

This book we have prepared includes studies in various fields of education. 8 authors contributed to the book consisting of 6 chapters. We would also like to thank our authors for their meticulously prepared work.

Assoc. Prof. Dr. Osman Kubilay GÜL

CHAPTER 1
IN THE CONTEXT OF CULTURE OF LIVING TOGETHER:
"REVOLUTION HISTORY OF TURKISH REPUBLIC AND
ATATÜRKISM"

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1. INTRODUCTION

The need of people for each other is one of the main issues that contribute to the sustainability of social peace from past to present (Tosun, Yorulmaz, Tekin, Yıldız, 2018). This need has deeply affected the management policies of states in different periods (Sobacı, Miş, Köseoğlu, 2018). The governance structures and cultural understandings of the states that brought the Turkish society with a deep-rooted history to the present day may be cited as evidence of this situation. The states established by Turks in different geographies with thousands of years of history have preserved their existence for many years despite different nationalities, religions and language elements (Bedirhan, 2019; Kara, 2022). When we look at the early, middle and recent Turkish states, we see that the consultation culture plays an important role in the management structure (Demirkol, 2021). We observe that the need for different opinions and different perspectives lies at the basis of these practices, which were carried out under different names such as consultative assembly, kurultay, toy, kengeş, divan (Koçak, 2020). On the other hand, the culture of mutual aid and labour has been kept alive as an important value in social life (Yücel, Baki, 2020). In Turkish social life, where neighbourly relations are also very valuable, the basic title that unites such important elements has been the phenomenon of unity and solidarity (Akgöz, Ercan, 2017). In this context, in order for people to live together in an environment of peace and tranquility in unity and solidarity, state rulers who are in charge of governance had to make decisions that would support this understanding. The freedom of belief and the meticulous handling of the relations between Muslims and non-Muslims during the Anatolian Seljuks period, as well as the tolerance policy implemented during the Ottoman period can be shown as examples (Koç, 2020; Açıkse, Gül, 2009). These practices, whether within the scope of conquest strategy for military purposes or with the aim of ensuring social peace, laid the foundations of a culture of social coexistence (Coşkun, Çoban, Şendururur, 2021).

Changes in political and social issues from the past to the present day change the management approaches of countries. This change also deeply affects the culture of living together towards the phenomenon of unity and solidarity. The French Revolution and the understanding of nationalism that started the recent era caused an increase in separatist ideas within the Ottoman state (Kayıran, 2019). These attempts of the Ottoman state, which took steps to solve the emerging separatist problems, did not bring results in the long

term. This period, in which monarchical governments lost power and the individual came to the fore, can be expressed as an important breaking period for the phenomenon of unity and solidarity (Demir, 2016). The destruction caused by the First and Second World Wars and the human tragedy it brought with it seriously damaged the foundations of the culture of living together (Gözcü, 2018). In today's modern life, where individualisation and being alone are valued, the phenomenon of unity and solidarity continues to lose value day by day. However, global problems such as wars, natural disasters, migration and the accompanying refugee problem, Covid 19 epidemic in different geographies in the 21st century have proved again that the need of people and states for each other will never end (Yavaş, 2001). The wind of change that started in the Middle East and North African countries with the Arab Spring started an endless civil war in Syria (Salmaşur & Şahin, 2020). The effects of the civil war that started in Syria have been felt by many different countries, primarily Turkey. One of the main problems caused by the war has been the problem of migration. The land border connection between Syria and Turkey has caused the migration problem to be felt the most in Turkey. In the study conducted by Salmaşur and Şahin (2020), it was stated that this process resulted in Turkey hosting 3.6 million Syrians. This figure was announced by the Ministry of Internal Affairs of the Republic of Turkey as 3.6 million according to the data of 2022. These migration movements have brought about new problems in Turkey. In this context, the integration of refugees into social life and education have been the main issues that have been seriously addressed. The most fundamental problem that refugees have expressed is the issues of social cohesion and social acceptance. On the other hand, the number of Ukrainian citizens who had to leave their homeland due to the war between Russia and Ukraine is over 11 million according to the United Nations (2022) data. All these developments have revealed the seriousness of the culture of living together on a global scale and the importance of unity, solidarity and tolerance (Ulusoy, 2016).

States carry out studies to develop policies and realise solutions to solve the problems arising in social life. The main area where policies are developed for long-term solution plans for social issues is mostly the field of education (Ereş, 2015). Educational environments provide an important advantage for creating a solutionist infrastructure for problems and providing the necessary citizenship education. This advantage is used concretely through curricula and textbooks. The history of states directing educational environments through educational policies dates back to ancient times. When

we look at the early and middle age civilisations, it is seen that education was shaped to meet social needs (Karataş, 2012). The tradition of keeping records after the invention of writing in the Sumerian civilisation and the fact that people received writing training in ziggurats in this context can be shown as an example (Koroğlu, 2013). Likewise, when we look at the period of the principalities for the founding of the Ottoman state, we see that men and even periodically women were trained in sword-holding and arrow-throwing (Tekin, 2010). According to religious beliefs, efforts to raise children in accordance with religion from an early age can also be evaluated in this context (Kırpık, 2016). As one of the tools of states to design society, education has a very high impact power. In this context, when the history of the Republic of Turkey is examined, it is seen that curricula are frequently updated. Although the main reason underlying these updates is the changes and developments in the world in general, it can also be considered as the state's effort to raise the desired citizen (Akhan, Kaynak, 2021).

One of the important issues that states have a duty to ensure social peace and tranquility is to provide the society with the ability to live in unity and solidarity. When we evaluate this situation in the context of global problems in the 21st century, we can say that this issue has become a necessity. In this context, using educational environments, supporting educational teaching materials with content in this context and receiving support from teachers in this regard have become fundamental issues. The social studies course can be mentioned as a basic course for students to acquire the values within the scope of the culture of living together and the phenomenon of unity and solidarity. Social studies course is defined as a course that prepares the individual for community life (Tokmak, 2022). Within the scope of the course, many different subject areas of social sciences are combined and an interdisciplinary social studies course has been created. Even though the social studies course is considered as a course that mainly deals with history and geography, it is a course that has very sensitive reflexes against today's global problems and changing world conditions. Within the framework of social studies course subjects, there are 7 learning areas: Individual and Society, Culture and Heritage, People Places and Environments, Science, Technology and Society, Production Distribution and Consumption, Active Citizenship, Global Connections. These learning areas are taught in grades 4, 5, 6, and 7. In the teaching process, there are 131 different achievements determined in line with the objectives (MoNE, 2018a).

The course taught in the 8th grade level within the scope of the social studies course is called the Republic of Turkey History of Revolution and Kemalism Course. The course, in which the establishment process of the Republic of Turkey and the reasons that prepared the environment for this, Atatürk's military life, the changes that took place with the republican administration, is shaped on a total of 7 units; A Hero is Born, National Awakening: Steps Taken on the Way to Independence, A National Epic; Either Independence or Death!, Kemalism and Modernising Turkey, Efforts for Democratisation, Turkish Foreign Policy in Atatürk's Era, Atatürk's Death and Aftermath (MoNE, 2018b.)

This study aims to examine the curriculum and textbook of the History of Turkish Republic of Revolution, which is taught within the scope of social studies course in secondary schools, in the context of the culture of living together in the axis of today's changing life needs, the world becoming a global village, and the increasing need for the culture of living together in order to ensure social peace. The sub-problems to which answers are sought in line with this main purpose are as follows;

- What are the objectives of the Turkish Republic History of Revolution and Kemalism course curriculum for the acquisition of the culture of living together in line with the general and specific objectives?
- What is the level of addressing the issues related to the culture of living together within the units of the Turkish Republic History of Revolution and Kemalism course?
- What is the level of inclusion of the culture of living together in the objectives of the Turkish Republic History of Revolution and Kemalism course?
- How are the elements related to the culture of living together addressed in the textbooks of the Turkish Republic History of Revolution and Kemalism?
- What kind of messages about the culture of coexistence do the visuals of the Turkish Republic History of Revolution and Kemalism textbooks contain?

2. METHOD

This chapter includes the model of the research, the data collection tools used in the study and the analyses.

2.1. Model of the Study

This study utilised the document analysis method and used the textbook as the primary source of the teaching process of Turkish Republic History of Revolution and Kemalism. In this context, the texts and textbook visuals prepared for the subject content addressed in the textbooks in line with the learning areas were analysed. In addition, in order to reveal the way in which the relationship between the general scope of the Turkish Republic History of Revolution and Kemalism curriculum and the culture of living together is basically handled, the 2018 Turkish Republic History of Revolution and Kemalism Curriculum was examined in terms of general objectives, specific objectives and target achievements.

2.2. Data Sources of the Study

The study sample consists of the 8th grade Turkish Republic History of Revolution and Kemalism textbook and the 2018 Turkish Republic History of Revolution and Kemalism Curriculum, which are being taught in Turkey in the 2022-2023 academic year. The textbooks were accessed through the EBA digital education platform and the curriculum was accessed through the official website of the Ministry of National Education as the data sources used in the study.

Table 1 shows the information about the sources used in the study and subjected to examination.

Table 1. Information on Data Sources

Name of Source	Publication Date	Authors	Publisher
Turkish Republic History of Revolution and Kemalism Course Curriculum	2018	Ministry of National Education	Ministry of National Education
8 th Grade Turkish Republic History of Revolution and Kemalism Textbook	2019 (For 5 Years)	Mehmet Ülkü Özlem Mutlu Fatih Çetinkaya	Ministry of National Education Books

2.3. Analysing the Data

This study analysed the data obtained from the data sources used to obtain the data by using the content analysis method. In the content analysis method, the data obtained from data sources in line with the target objectives are associated through concepts and coding. In this framework, Republic of Turkey. Revolution History and Kemalism textbook and the aims, objectives, achievements, subject content and visuals related to the culture of living together in the curriculum were analysed. The data obtained as a result of the analyses were categorised and presented in tables. The visuals that are thought to contain messages about the culture of living together are given in sections and interpreted.

2.4. Validity and Reliability

Analysing the results obtained in qualitative studies in terms of validity and reliability is important for the quality of the study. In this study, all of the data obtained in the textbook and curriculum regarding the culture of living together were subjected to three different expert opinions. A fourth expert opinion was taken for the data with disagreement. Findings that were thought to be scientifically contradictory were excluded from the study, and the findings were handled in an impartial, consistent and scientific manner. We believe that the fact that the researchers work as a social studies teacher and are familiar with the textbook and curriculum used in the research contributed positively to the reliability of the research. Support was received from a language expert for the coding and visual interpretations obtained as a result of the analysis of the research data. In this context, necessary arrangements were made to make the findings more understandable.

3. FINDINGS

This chapter presents the findings obtained for the examination of the Republic of Turkey History of Turkish Revolution and Kemalism curriculum and the 8th grade textbook in the context of the culture of living together. The findings were designed in two stages as curriculum and textbook.

3.1. Findings Related to the Curriculum

This chapter includes the analyses of the data obtained as a result of the examinations carried out in the context of the culture of living together for the specific objectives and unit acquisitions in the Turkish Republic History of Revolution and Kemalism curriculum prepared by the Ministry of National Education. The analysis is presented under two separate headings.

3.1.1. Findings Related to Specific Objectives

In the teaching programme of the course, 12 different objectives were expressed. Among these objectives, the statements that are thought to be related to the culture of living together are coded and presented in a table.

Table 2. Findings Related to Specific Objectives

Subject	Theme	Codes	Fr.
Culture of Living Together	Unity and Solidarity	Freedom	2
		Independence	3
		Patriotism	4
		Universality	5
		Universal values	2
		Regionalism and Globalisation	2
		Sympathy	5

We observe that the importance of unity and solidarity is predominantly emphasised in the 12 items expressed in the special objectives. In general, freedom and independence will be built with the consciousness of unity and solidarity, and it is important for individuals equipped with patriotic consciousness to adopt universal values. Among the special objectives of the course, we identified that the development of a regional consciousness and an inclusive attitude towards citizenship education, rather than a micro-nationalist perspective, are included in the special objectives of the course.

3.1.2. Findings Related to Target Outcomes

In the curriculum for teaching the course, a total of 39 learning outcomes were included in 7 units. The achievements were analysed and those that were thought to be related to the culture of living together were evaluated.

Considering the achievements specified in the curriculum, we have obtained data on the concepts that can be evaluated as related to the culture of living together in 12 target achievements within the scope of 6 units. Table 3 presents the codings related to these achievements.

Table 3. Findings Related to Target Outcomes

Subject	Name of Unit	Achievement No.	Related Coding
Culture of Living	A Hero is Born	8.1.1.	Intellectual Movements - Ottomanism

Together	National	8.2.1.	Blocs between countries
	Awakening	8.2.2.	Armenian Deportation Law
		8.2.3.	National unity and solidarity
		8.2.4.	Harmful organisations
	Either		
	Independence or	8.3.1.	Organisation
		8.3.4.	National Obligation Orders
	Death!		
	Kemalism and		
	Modernising	8.4.5.	Unifying decisions
		8.4.9.	Country integrity
	Turkey		National unity and solidarity
	Atatürk Period		
	Turkish Foreign	8.6.1.	Universality, global thinking
Policy			
Atatürk's Death			
and Aftermath	8.7.1.	Atatürk's universal thought	
	8.7.2.	structure	
		The unity of the Republic	

The History of the Revolution of the Republic of Turkey course deals with the invasions suffered by the Ottoman Empire as a result of its defeat in World War I and the transformation of the people's defence initiated for this into a victory of independence under the leadership of Atatürk. The minority revolts that emerged in this process and the activities of harmful societies are discussed within the subjects. It is unlikely that concepts and expressions related to the culture of living together are frequently encountered in a course in which a national struggle for independence is the subject. However, the emphasis on unity and solidarity within the scope of the course, the cultural heritage left behind by the Ottoman culture to keep different nations together also affected the foundations of the new state being established. The Republic of Turkey, the foundations of which were laid under the leadership of Atatürk, was built away from racism and separatist thoughts. In this direction, the emphasis on universal thought and the importance of globalisation in the course objectives proves this.

3.2. Findings Related to the Textbook

As a result of the analyses conducted on the subject content and visuals within the scope of the culture of living together in the Turkish Republic History of Revolution and Kemalism textbook, the following findings were obtained;

1. In a statement made about the city of Bitola, the city where the Military High School where Mustafa Kemal was educated, the following statements are made.

"... In Bitola, where people of various religions and nationalities lived together, especially Serbs, Bulgarians and Greeks wanted to dominate the region through their churches..."

2. In the first unit evaluation questions, the following statement is included in a question prepared about the characteristics of the city of Thessaloniki;

"... Coexistence of different nationalities "

3. The following statement is included in the expression in which the principle of nationalism is explained;

"...A nation is a community of people who have lived together in the past, who have the belief, desire and decision to live together now and in the future, who have the same homeland and cultural values, and who have a unity of language, culture and emotion."

The following statement is included in the same subject;

" Nationalism is the wish and desire of people who consider themselves members of the same nation to live an independent life together within the same borders and to glorify the society they live in and its values."

4. The following statement is included in the subject of the abolition of the Caliphate;

"... During the disintegration period of the state, Islamism policy was emphasised in order to keep Muslim elements together..."

5. The following statement is included in the subject of the steps taken towards democratisation during Atatürk's reign;

"... Mustafa Kemal brought political dynamism to the country by keeping various understandings and approaches together..."

6. Within the issue of foreign schools, the following statement is included;

"... These institutions were freely operating schools opened in Ottoman territories where elements of different ethnic origins and religious beliefs lived together...."

7. The following statement is included in the chapter on Mustafa Kemal's childhood and military life;

"...Thessaloniki was a city where different ethnic and religious communities such as Greeks, Serbs, Greeks, Bulgarians and Jews lived together with Turks. In addition to the official provincial newspaper published in Turkish, Greek, Bulgarian and Hebrew in Thessaloniki, it was also possible to follow newspapers, magazines and books published in various languages in Europe. The multinational structure of Thessaloniki provided a rich cultural environment..."

8. It was reported that Atatürk said the following words about national unity;

"As the years go by, the yields of the national ideal are more and more visible in the form of national unity and national will in working with confidence and in the enthusiasm for progress. This is very important for us, because we see the basis of national existence in national consciousness and national unity."

9. The following statement is made about the hat law;

"... In time, all Turkish people, men and women, began to wear Western clothes as well as clothes reflecting their own culture. Thus, the society gained a more modern appearance and the sense of national unity and solidarity was strengthened."

10. Among the information given about Mustafa Kemal's Military High School years, the following statement is included;

"... he was influenced by Mehmet Emin Yurdakul on the issues of national unity and solidarity."

11. The following statement is included in the Circular of Havza;

"... The Turkish nation began to develop an awareness of defending its country against occupation and a spirit of national unity and solidarity.."

12. The following statement is made about the Sivas Congress;

"... The aim of full independence was once again emphasised with the absolute rejection of mandate and protectorate. Thus, the Turkish nation gathered around the idea of national unity and solidarity."

13. The following statement is included in the subject on the opening of the Grand National Assembly of Turkey;

"... care was taken to stay away from political conflicts. They united around the spirit of national unity and solidarity."

14. The following statement is included in the subject of what the Republic has brought to the Turkish nation and Atatürk's goals;

"... The equality of men and women before the law was ensured and women gained their rightful place in society. With Atatürk's reforms, all privileges in society were abolished and national unity and solidarity were strengthened."

15. The following statement is included in the Tenth Year Speech;

"... Because the Turkish nation has known how to overcome difficulties with national unity and solidarity."

16. The following statement is included in the subject of national unity and solidarity, integrity of the country;

"..The sense of national unity and solidarity binds citizens together around a national consciousness. It envisages being one in sorrow and joy. It is to march towards a common goal by uniting around the same ideal and respecting the same values. At the same time, it is to meet differences with respect..."

17. Within the subject of national unity and solidarity, the following statements from Ahmet Mumcu's book "The Foundations and Development of the Turkish Revolution in terms of History" were included;

"It should not be forgotten that the members of a nation are people travelling on the same ship, and if the ship takes water, everyone, crew and passengers alike, will be in danger. Citizens with different places of birth, sources of livelihood, professions and political preferences are bound to the same nation, just as fingers, which at first glance seem to be separate, are bound to the same hand and arm. Just as fingers that seem to be separate can hold a pickaxe, a shovel and a pen together and, when necessary, unite to form a single fist, the members of a nation must know how to join hands for the development or defence of the nation. In order to be able to unite like a single fist when necessary, they must not allow the possibility of placing thorns of enmity between their fingers."



Image 1. Gathering of People from Different Regions for the Rally

The people who came together from different regions to organise protests and rallies against the occupations that started after World War I protested against the occupations. The main idea that brought together the thoughts shaped around different political thoughts, sects and cultural differences was the idea of independence.



Image 2. People Gathered Under National Obligation Orders

In order to meet the needs of the army before the Battle of Sakarya, all the people were asked for help in line with the determined needs. In this context, the people managed to act together as a unity in order to meet the needs of the army.

In Image 3, there is a visual of the Gülcemal ship, which provided the return of the Turkish population remaining in the Balkans after the exchange decision, in order for them to continue their lives within the determined Anatolian borders. The tensions between the Turkish side and the Greek state during the exchange process ended with the Ankara Treaty, and those who

remained outside the Turkish population and the Greek population were included in the exchange. The belief of the Turks in the culture of living together caused the Greek side to try to use the culture of living together as a political trump card due to the conditions of the period.



Image 3. Migration from the Balkans after the Exchange

Image 4 shows the image of Emanullah Khan, the king of Afghanistan, and Atatürk.



Image 4. King of Afghanistan and Atatürk

Afghanistan is the first Muslim country to recognise the Republic of Turkey. The agreements between the two countries and Afghanistan's official recognition of Turkey have increased the international recognition of the Republic of Turkey.

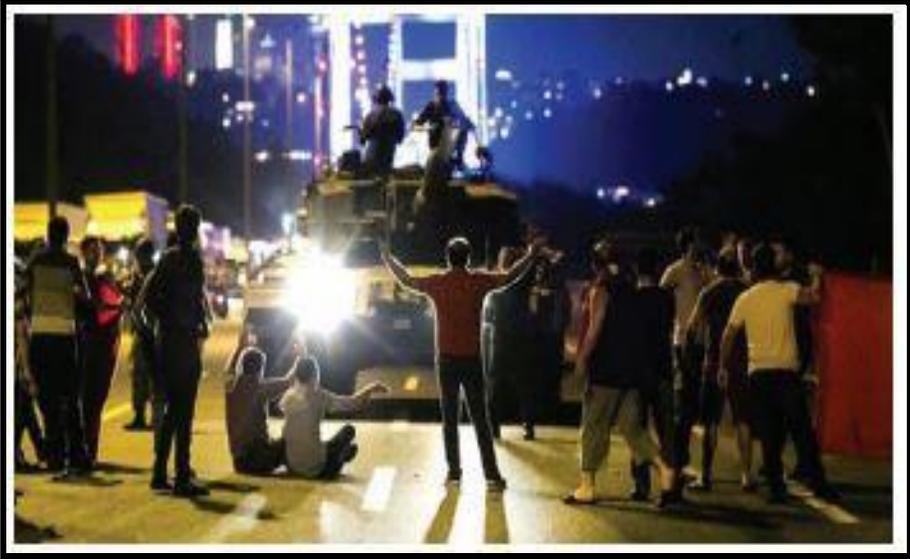


Image 5. 15 July Coup Attempt and the Public

Image 5 shows a photograph of the people coming together and preventing the coup attempt on 15 July 2016. The image proves that the critical threshold for Turkish society to come together, live and act together throughout history is independence and freedom.

4. CONCLUSION

As a result of the examination of the Republic of Turkey History of Turkish Revolution and Kemalism course curriculum within the scope of the topics of culture of living together, national unity and solidarity, and acting together, findings were reached at different levels in the curriculum and the textbook. Despite the frequent emphasis on national unity and solidarity in the curriculum, we found that universal values, global thinking, respect for different cultures and beliefs were mentioned. In the textbook, on the other hand, the culture of living together is mainly about the people acting and organising together in the direction of independence and freedom. However, there are many subjects that enable teaching about the culture of living together in line with the subject contents. In the states that were able to live in peace as a multinational society before the First World War, this structure was disrupted as a result of the minorities evaluating the nationalism movement from a racist perspective and creating discrimination. In this respect, we can say that the basic condition for societies or different nations to live together in order and peace is respect for different religions, languages and thoughts. National independence being a sacred idea for every citizen does not prevent

the culture of living together. The need for a culture of living together is increasing day by day as the world has become accessible in many aspects in today's modern life. Throughout the history of the establishment of the Republic of Turkey, the main motivation that enabled people from different sects, cultures and lifestyles to come together was the sense of freedom and independence. Today, people' main driving factor in this regard is social cohesion and social peace. In this context, the cosmopolitan life in metropolises can be shown as evidence of this.

In conclusion, Turkish history has a long history of coexistence culture. Especially during the Seljuk state and the Ottoman state period, the expanding borders and the necessity of keeping different religions and nations together constituted the most important strength of this culture. The introduction of Islam to the Turks can also be considered as an advantage in the context of the culture of living together. This heritage brought by the Turkish society from its past still continues to exist even after the wars centred on nationalism. The social studies course and the History of Turkish Revolution and Kemalism courses fulfil an important task in this context. In the process of raising patriotic individuals with national consciousness, laying the foundations for the culture of living together and developing respect for differences are among the course objectives. In this context, it is important that the new generations are raised to have a culture of living together and to be educated with a national consciousness. In this respect, we can state that the 8th grade history of revolution course fills an important gap in terms of keeping the culture of living together alive.

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CHAPTER 2

THE TEACHING OF TURKISH IN TURKEY AND THE UNITED STATES*

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*This study was presented at the “ IV International Conference on Educational Research” in İzmir, Türkiye on November 11-13, 2022.

INTRODUCTION

The number of studies conducted in the area of teaching and learning Turkish as a second or foreign language has increased rapidly in the past decade due to a growing interest in learning Turkish in Turkish speaking countries as well as abroad. The present study provides the results of a case study that explored Turkish language instructors' perceptions about the use of methods and approaches in Turkish language classrooms in Turkey and the U.S. The teaching of Turkish has received significant attention by several scholars in recent years (i.e., Arslanyilmaz, 2013; Atak & Çetin, 2016; Ekmekçi, 2016; Göçer, 2008). However, a great deal of research effort has been focused on only describing the earlier and contemporary methods and approaches used in language teaching and how they can be implemented in Turkish language classrooms. Nevertheless, they valuably contributed to our understanding of what is best for Turkish language learners and instructors. The scarcity of empirical research in this area is unfortunate because according to the outcomes of the "Turkish Language Teaching in the World" conference organized by the *Turkish and Foreign Languages* Research and Application Centre (TÖMER) in 2015 a) Turkish is the seventh most frequently spoken language in the world; b) although Turkish is spoken mainly by the Turks in Europe, there is also a growing demand for non-Turkish citizens to learn Turkish and c) the fact that the Turkish channels are being watched in many countries in the world enables Turks to maintain their Turkish and is an important factor that also encourages non-Turkish citizens to learn Turkish. In the next section, we discuss the previous studies that focused on the methods and approaches that could most effectively be used in teaching Turkish as a second or foreign language and the problems related to the use of methods in Turkish language classrooms.

1. LITERATURE REVIEW

Scholars (i.e, Güçlü, Arslan, & Üstünyer, 2017; Güçlü & Ayhan, 2015) investigated the effects of earlier methods on the learning of Turkish, although the use of contemporary methods is now more widespread in second and foreign language teaching. For example, Güçlü, Arslan and Üstünyer (2017) conducted an experimental study to explore the effects of Suggestopedia on vocabulary learning through reading and listening. Their study involved a total of 26 participants (aged 17-35) of Turkish as a second language (TASL) enrolled at the Turkish Language Center of Fatih University. The participants were from 18 different countries. They were

divided into experimental and control groups. The students in the experimental group learned vocabulary items through posters, games, puzzles, slides, flash cards, reading passages, animations, songs and other visual materials. The students in the control group learned the items through traditional methods. In order to determine the extent to which the two groups of participants learned and retained the vocabulary items, the instructors prepared four different types of tests including word-picture matching, comprehension questions and a puzzle. The results showed that the students in the experimental group learned more words than those in the control group. These results confirmed the findings of Güçlü and Ayhan (2015) who also conducted an experimental study involving suggestopedic instruction with intermediate-level Turkish learners in Georgia.

Current communicative approaches such as Communicative Language Teaching (CLT) inspired some scholars to examine its principles and make recommendations as to how they could be integrated into the Turkish language classrooms (Akkaya & Özdemir, 2010; Atak & Çetin, 2016; Khalmatova, 2017; Lüleci, 2010; Tochon, Karaman, & Ökten, 2011; Varışoğlu, 2016; Yaylı & Yaylı, 2104; Yıldız & Tepeli, 2015). Task-based language teaching (TBLT), although not extensively studied, was the focus of some studies (i.e., Arslanyılmaz, 2013; Köse & Özsoy, 2017). For instance, Arslanyılmaz (2013) designed and developed a prototype for a computer-assisted task-based language instruction (CATBI) tool for teaching Turkish and tested its effectiveness in an experimental study that involved intermediate-level 28 high school students learning Turkish as a foreign language (TAFL). The author compared CATBI to computer-assisted form-focused language instruction (CAFFI) with regard to accuracy, lexical complexity, and fluency. The students were randomly assigned to experimental (CATBI) and control groups (CAFFI). The results showed that the CATBI group was significantly more fluent than those in the CAFFI group.

As one of the essential tools that the Deep Approach uses, videos have attracted the attention of some scholars. For example, Çetin (2013) conducted a study to determine the effect of using video on students' motivation. The study included Erasmus students who were enrolled at İstanbul Kültür University, Turkey. The students were asked to record a short video and present it to their classmates. During this process, the researchers observed that the students were motivated to present their own cultural composites. Their motivational levels were also high due to the fact that they

were free to decide on their topic and manage their time on their own. Finally, the students had positive attitudes towards the use of videos in the classroom because even after the study was completed, the students recorded additional videos and shared them with their friends.

Several recent studies were devoted to examining the effects of Intercultural Communicative Approach, Lifelong Learning approach, Genre-based foreign language teaching and Flipped Learning. For example, in a case study, Sarıtaş (2014) implemented Intercultural Communicative Approach in a Turkish language classroom and obtained students' opinions on learning through this approach. The data were collected from 11 students who were enrolled at İstanbul University's Language Center. The students were learners of TASL and were at B2 level. Data collection lasted for four weeks and involved observation notes of the researcher-teacher, student diaries, and face to face interviews. The results showed that most of the students had positive opinions about the lessons that involved the Cultural Approach.

Regarding the Lifelong Learning Approach, Yılmaz Atagül (2016) conducted an experimental study to investigate the effect of using films on the learning of proverbs and idioms, which are considered as important socio-cultural tools. The data were collected from 137 students who were learning TASL at Turkish and Foreign Languages Research and Application Centre of Fatih University and Gazi University. The students were at B2 level and categorized into experimental and control groups. The experimental group consisted of 81 students whereas the control group had 56 students. During the treatment period that lasted for about eight weeks, the experimental group was taught 40 different proverbs and idioms through a television series. The control group learned the target items through traditional methods. At the end of the treatment, a post-test was given to all participants to determine their competence in the proverbs and idioms. The results showed that the experimental group's competency level in the proverbs and idioms was much higher than that of the control group.

Yoğurtçu (2009) investigated the effects of the micro-teaching method on learning Turkish. The data were collected by means of a questionnaire from a total of 239 students who were learning TASL at Kyrgyz Turkish Manas University. The aim of the study was to examine the effect of the micro-teaching method on the students' achievement and motivational levels. The students were randomly categorized into experimental and control groups. The experimental group consisted of five classes with a total of 83 students. The control group consisted of 10 classes with a total of 156

students. The experimental groups were exposed to the micro-teaching method whereas the control groups learned Turkish through traditional methods. The results showed that the experimental group's achievement and motivational levels were significantly higher than those of the control group.

Studies also examined the extent to which Turkish language learners are exposed to different methods, techniques and materials in the classroom. For example, in a qualitative study, Göçer (2008) examined the teaching strategies and class practices of teachers who teach TASL in Turkey. Data were collected via interviews from 15 teachers working in secondary and higher education. The teachers were asked to answer 11 questions in the interviews. The results obtained from the interviews showed that only five teachers received training in teaching TASL. The rest of the teachers reported that they had either attended some seminars or took classes in TASL. Moreover, the teachers preferred traditional methods of teaching instead of the contemporary ones, focused mostly on grammar and conducted dictation and pronunciation exercises in their lessons. Similar results were obtained in Karababa (2009) who collected data via semi-structured interviews from 18 Turkish language instructors teaching at two preparatory schools and a private language school in Turkey. One of the most important findings was that the instructors were required to use only one type of method and this, according to the instructors, had a negative influence on the educational environment. In a recent study, Ekmekçi (2016) determined the problems faced by Turkish language teachers in Belgium. The data were collected from 25 Turkish teachers (seven females and 18 males) working for different schools and universities between 2011 and 2012. The teachers were interviewed with respect to their opinions about the methods and materials they used in the lessons, the physical characteristics of the classrooms, assessment and evaluation, and problems related to the teaching of the Turkish language and culture. The results showed that the instructors taught Turkish explicitly and mostly used the question-answer technique. In addition, the students' motivational levels were very low due to fact that the classrooms were not technologically well-equipped and the students were not exposed to a variety of learning materials.

Despite the research that has been conducted into the effectiveness of language teaching methods and approaches in Turkish as a second or foreign language over the past several years, two issues need to be considered. First of all, only few experimental studies have been conducted with respect to the significant role of the use of certain methods in Turkish language classrooms.

Without experimental and replication studies, it remains controversial whether and to what degree the proposed foreign language teaching methods and approaches will be effective in teaching Turkish. Secondly, the previous studies were exclusively concerned with mostly earlier methods; little research has involved contemporary methods and approaches. As already mentioned, one of the aims of this study was to extend this line of research by exploring and identifying Turkish language instructors' perceptions about the use of methods and approaches in their lessons. In particular, the purpose of this study is to use their teaching experiences to answer the following research question: How do Turkish language instructors in Turkey and those in the U.S. compare regarding a) the methods, approaches, and techniques they use in their classes; b) their reasons for choosing the preferred methods; and c) whether or not they avoid using certain methods.

2.METHOD

2.1. Participants and Data Collection

Permission was obtained from the Izmir Democracy University Ethics Committee in order to implement the present research. The participants were contacted through acquaintances via e-mail and phone to find out if they would be interested in participating in the study. Before signing the consent forms, responding to the questions, and emailing them, they were informed that everything, including their names, would be kept confidential; the research did not carry any risk for them; participation in the research was entirely at their own discretion; they could refuse to participate in the research or leave the research at any stage and this would not result in any penalties or impediments to their benefits. They were also informed that the results of the research would be used for scientific purposes; if they withdrew from the study or were removed by the researcher, the data about them would not be used for scientific purposes.

A case study design was adopted for the present study. The reason for conducting a case study was to provide insights into several aspects of how Turkish is taught in Turkey and the U.S. and, in doing so, illustrate broader results. In particular, the purpose of the study was to have a deeper understanding of the participants' characteristics, their educational background, who their students were, the materials the participants used and the approaches and methods they made use of in their classrooms. Four Turkish language instructors of Turkish origin were the foci of the study. Two of the instructors worked in Turkey and the rest of them worked in the U.S.

The instructors in Turkey were compared with those working in the U.S. to determine any similarities and differences between the teaching of Turkish in a second language environment and in a foreign language environment.

The table below presents information about the participants' gender, whether or not they received any training in teaching Turkish as a second or foreign language or in any other foreign languages, the country where the participants worked, and years of teaching experience in Turkish. To maintain participant confidentiality, letters were used to identify each participant.

Table 1: Demographic Information about the Participants

Participants	Gender	Training in teaching Turkish as a second or foreign language	Training in teaching of other languages
A	Female	Yes	Yes
B	Female	Yes	Yes
C	Female	No	Yes
D	Female	No	Yes

Table 2: Demographic Information about the Participants

Country of work	Number of years in teaching Turkish as a second or foreign language				
	0-6 months	6 months year	-1	1-5 years	5-10 years
Turkey					√
Turkey				√	
U.S.				√	
U.S.	√				

Participant A taught Turkish three hours a week at a language school of a private university in İstanbul, Turkey. In her classroom, there were 13 students who came from several different countries, representing a range of ethnic and sociocultural backgrounds. The students were from Syria, Pakistan, Russia, Lebanon, Saudi Arabia, Germany, and France. The textbooks that she was required to use by her institution were *İstanbul* and *Yeni Hitit*, but in addition to these, she prepared other materials for her lessons. Participant B taught Turkish at a language school in Ankara. She taught 16 hours per week and had 10 students coming from Jordan, China, Afganistan, the U. S., Iran, Iraq, and Pakistan. Like Participant A, participant B also used *Yeni Hitit* but made use of other grammar and methodology books.

Participants C and D taught Turkish in academic programs in different parts of the U.S. Participant C taught Turkish at a university in Texas for seven hours a week and used a textbook that was prepared by the Turkish teachers at the university. She also used reading passages or videos taken from social media websites. She had 22 students who were all American. Participant D taught Turkish at a university in Florida. She also taught Turkish seven hours a week. She used the textbook *İstanbul: Yabancılar için Türkçe*, but also made use of a Turkish grammar book. She had five American students in her class.

The data sources for the present study included a written interview consisting of four open-ended questions and addressed several factors related to the use of methods, approaches and techniques in the classroom, including a) Turkish language teachers' preferences in using certain methods and techniques, b) how and why they choose the preferred methods, c) whether or not they avoid using certain methods, approaches and techniques in the classroom, and d) students' preferences in learning Turkish through a certain method or an approach. In order to collect data, colleagues and teachers within the researcher's social networks were contacted via e-mail and phone to find out if they would be interested in taking part in the study. The interview questions were prepared in Turkish. The researcher emailed the questions to the participants and asked them to email their responses back to her. Out of the 30 Turkish language instructors that the researcher contacted, only four returned the questionnaire.

3. DATA ANALYSIS AND RESULTS

This section describes data analysis and presents the results related to each participant's responses to the questions. The responses to the open-ended questions were analyzed by using content analysis, which was defined, according to Stemler (2000), as 'a systematic, replicable technique for compressing many words of text into fewer content categories based on explicit rules of coding' (p. 1). The data were analyzed using Braun and Clarke's (2012) six-phase approach. The phases included becoming familiar with the data, creating codes, finding the themes, reviewing the themes, defining and labeling themes, and producing the outcomes. In order to identify the themes, the participants' responses to the questions were read several times and similarities in their responses and relevant parts related to the research questions were coded. The recurring themes in the participants' responses were then organized into thematic categories. To achieve reliability,

“intercoder agreement” (Creswell, 2009, p. 191) technique was employed. Intercoder agreement refers to agreeing on the same codes by two or more experts. During the data analyses, an expert in the field of language teaching provided her opinions and feedback to the researcher regarding the codes.

The following table demonstrates the recurring themes that were identified from the participants’ responses to the open questions, as well as their frequencies.

Table 3: Recurring Themes regarding the Methods, Approaches and Techniques that Turkish Language Instructors Use in their Classes

Instructors in Turkey		Instructors in the U.S.	
Themes	Frequency	Themes	Frequency
CLT	5	CLT	9
TBLT	4	TBLT	5
Role-play	3	Role-play	4
Group-work	2	CBLT	3
Real-life contexts	2	Group-work	2
Question-answer	1	Real-life contexts	2
CBLT	0	Short-stories	2
Short-stories	0	Question-answer	1

As Table 3 shows, the most frequently emphasized theme by all participants was the CLT approach followed by TBLT and role-play. The instructors in Turkey mentioned the importance of group-work, real-life contexts, and the question-answer technique, but contrary to the instructors in the U.S., they never emphasized the importance of CBLT and use of short stories in the classroom. As can be seen in the extracts below, the participants constantly mentioned the importance and advantages of CLT and TBLT and discussed the effectiveness of role plays and group work activities in their classrooms. To our surprise, CBLT was one of the least mentioned themes by the language instructors in Turkey, considering that it is nowadays frequently applied in English language classrooms in the U.S.

Table 4: Recurring Themes Regarding How Turkish Language Instructors Choose their Methods or Approaches to be used in their Classes

Instructors in Turkey		Instructors in the U.S.	
Themes	Frequency	Themes	Frequency
Language skills	3	Language skills	4
Individual differences	2	Individual differences	3
Students' needs	2	Students' needs	2
Knowledge in the target language	2	Students' learning styles	1
Students' learning styles	1	Knowledge in the target language	1

Table 4 demonstrates the themes mentioned when the participants discussed their choice of methods or approaches. Both the language instructors in Turkey and those in the U.S. talked about language skills more frequently than individual differences and students' needs. They gave importance to the integration of all four skills and explained the importance of individual differences since they taught culturally and linguistically diverse students. Knowledge in the target language and students' learning styles were the least mentioned themes by the participants.

Table 5: Recurring Themes Regarding the Methods or Approaches that Turkish Language Instructors Avoid Using in their Classes

Instructors in Turkey		Instructors in the U.S.	
Themes	Frequency	Themes	Frequency
Avoidance of GTM	2	Avoidance of GTM	2

According to Table 5, regarding the methods and approaches that both groups of instructors avoided, the only theme that was mentioned and with a very low frequency was the Grammar-translation method (GTM). This was an expected result considering the fact that GTM is no longer used in most language schools in Turkey and the U.S.

Table 6: Recurring Themes Regarding the Methods or Approaches that TAFL Students Prefer

Instructors in Turkey		Instructors in the U.S.	
Themes	Frequency	Themes	Frequency
Culture	1	Culture	2
Use of technology	1	Use of technology	1

Table 6 shows the themes mentioned when the participants talked about their students' preferences. Although culture and use of technology were mentioned with a low frequency, they were given much importance by the instructors in Turkey and the U.S. because of the fact that they taught culturally diverse students. In addition, they were of the opinion that use of technology made language learning effective and easier.

In regard to the teachers' preferences in using certain methods, approaches and techniques in their classrooms, participants articulated that they, in general, preferred to use CLT and TBLT. For example, Participant A found the use of CLT, TBLT, and CBLT together highly beneficial for advanced level students. As for the techniques, she used drama activities, short stories, group work and the question-answer technique. Participant A reported that she obtained very good results when she used TBLT with her students and had them work in groups. She stated:

Advanced level students are eager to learn from one another and they would like to see that they can use what they know. This increases their motivation.

The methods that Participant B preferred to use were CLT, TBLT, Action-based Approach (AA), and Eclectic Method (EM). Her classroom involved a variety of classroom events, including drama activities, grammar and vocabulary games, brainstorming, pair work, songs, and short movies. Participant B was also in the opinion that CLT and TBLT should be used together in the classroom:

CLT is one of the most effective approaches that can be used with students who are learning TASL in Turkey. Since students live in Turkey, they are exposed to Turkish all the time. Therefore, lessons should be taught in Turkish, integrating the principles of CLT. TBLT can be used to teach students communication skills that they can use in daily life such as asking for and giving directions or ordering something at a restaurant and so on. This approach not only improves all language skills, but it is oriented towards continuous learning.

Participant B used CLT because of its communicative aspect and the fact that it integrates all four skills. She emphasized the importance of communication in her classroom:

I have been speaking Turkish with my students since the beginning of the course and so, communication is very important in my classroom. It is not sufficient to know only the sound system and the grammatical structure of a language. One also has to know how to use them. The previous methods that

were used in foreign language teaching were mostly about teaching the grammatical structure of a language rather than teaching how to use a language. For this reason, CLT is a very effective method for language learners. However, CLT has to be supported with other methods because it does not always meet the needs of the students.

Moreover, Participant B emphasized the importance of AA because it not only allows teachers to use materials for educational purposes, but it also allows them to use unique materials as well. Participant B used a variety of videos, short movies, and pictures to help students participate in the lessons and express themselves. In her opinion, TBLT is also an effective approach, which enables students to accomplish a task, take responsibility for it, and be aware of how they use the target language. Participant B also explained the approach she took in her classes when she taught grammar. She stated:

When I teach grammar, especially at the beginner level, I teach the most frequently used structures in Turkish. Sometimes I use songs to teach such structures. Songs help students to understand abstract concepts. I also find it really important to teach grammatical structures implicitly. I use a variety of contexts and pictures to teach grammar. However, since intermediate level students already know many terms and basic structures, I teach grammar to them in a more traditional way. Turkish is an agglutinative language and so, I teach affixes and roots in an explicit way. I also teach the functions and rules associated with a grammatical structure at the beginning of a class. In other words, at beginner levels, I use the bottom-up technique whereas with intermediate and advanced levels, I use the bottom-down technique. However, this may change according to the difficulty level of the grammatical structure, but I always prefer to start with the simple structures and move on to the more difficult or complex ones. When I teach a new structure, I usually make connections with the previously learned ones.

Participant C reported that she used CLT, Total-physical Response (TPR), Audio-lingual method (AM), TBLT, and CBLT. In addition, she used drama activities, short stories, role-plays and group work activities. Participant D also preferred to use CLT and TBLT as well as EM. She stated:

TBLT activities can be very similar to those that we are engaged in daily life. Students find it easier to focus on those activities and realize that they are the 'agents'.

The third most often mentioned theme was role-play. Participant B discussed the beneficial effects of role-play. She reported that such activities raised students' awareness of the contexts in which certain grammatical

structures were used. This way, students learn how grammatical points were used in real-life contexts. Another reason why she used role-play frequently was that her students were more likely to speak in drama activities than in others. Participant C also used role-play activities. She commented:

I often use role-play in my classes. This way, my students can use the target language in the most effective way.

The question-answer technique was also preferred by the instructors. Participant B reported that she used the question-answer technique. According to her, it is a practical way of developing and improving a variety of skills and can be used with every age group and level. Participant B also used the brainstorming technique because, according to her, it not only improves writing and speaking skills, but it is also a creative technique for teaching vocabulary. In addition to these, she found games very effective in terms of improving language skills. She used games a few times a week to increase students' motivation, help students interact with one another and the teacher, and give students a chance to enjoy the learning process.

The second research question was related to how the Turkish language teachers choose their preferred methods, approaches and techniques in their classroom. Language skills, individual differences and students' needs were the most frequently mentioned themes by the participants. Participant A reported that she taught advanced level students who differed from one another in terms of their skills and needs. For this reason, she emphasized the importance of choosing methods based on students' level of knowledge and needs. She compared advanced level students with beginners and commented:

This is not the case with beginner level students. You can pretty much use the same methods and techniques every semester.

According to Participant B:

It is very difficult for a teacher to teach a group of multicultural/multilingual learners, especially when they have individual differences. There are two reasons for this: First of all, teachers have to follow their school's curriculum and they do not have a lot of time to cover everything in the class. Second, they have to do activities based on each student's needs and learning styles. In my lessons, I often use EM to respond to every student's needs. For example, I use AM when I teach vocabulary and AA and TBLT when my aim is to improve students' communication skills.

Participant B also added:

Individual differences and learning styles determine which methods to be used in the classroom. For example, for some learners, the use of notebook, textbook, and board may not be sufficient. They need to be exposed to visuals, moving images, videos, mobile phones, and computers in the lessons. So, it is important that teachers make use of social media websites such as Facebook or blogs.

Furthermore, Participant B stated that students who learn Turkish usually differ from one another with respect to age, nationality, gender, and educational background. The students in her class were from different countries and were at different ages. Therefore, each student had different learnability problems. For example, Arab students had difficulties with pronunciation and writing. To improve their skills, Participant B used AM and found it very useful. Participant C stated that she chose the methods to be used in the class based on the topic of the lesson, students' ages and interests as well as their knowledge in the target language. Participant D reported similar opinions.

The third research question asked whether or not instructors avoided using certain methods or approaches in the classroom. There seemed to be a general agreement among the teachers that the teaching of Turkish through GTM should be avoided. Participant A stated that she did not use GTM because her students were advanced level students who preferred learning through communicative activities. She commented:

I try not to use GTM because this method improves only reading and writing skills and not listening and speaking. Therefore, students cannot speak fluently and communicate in the target language. In addition, teachers must have very good command of their native as well as the target language.

Participant A also avoided using the Direct Method (DM) because, according to her, this method focuses on only speaking and writing in the target language. Students do not learn the rules of the target language and therefore, they have difficulties in using some skills. Participant A added:

Students' needs change but I can say that my students, in general, would like to learn how to communicate with native speakers in a very short time. My students also want to learn through a variety of methods and techniques instead of being exposed to only one method. This helps them engaged in the lesson.

Participant C stated that she avoided all teacher-centered methods and approaches because she believed that students learn not by listening to the

teacher but by using the target language. Participant D avoided translating sentences from English into Turkish and explicit teaching of grammar because she realized that translations and grammatical explanations prevented students from focusing on tasks. Although Participant B avoided using GTM in her classes, her students had a tendency to use GTM when they were reading a passage or learning a grammatical structure. The reason for this was that they wanted to confirm their understanding of the meaning of the structures and also compare the usages with those in their native languages. This situation occurred mostly at beginner levels. Participant B mentioned:

The students in my class like task-based activities because such activities prepare students to use the language outside of the classroom. They prefer to be exposed to language that is used in real life. At beginner levels in particular, teachers modify their language, but students want to be able to use the language in real life contexts and communicate with native speakers. Therefore, my students prefer to do task-based activities.

Participant C stated that her students preferred role-play activities whereas students in Participant D's class liked working on tasks because tasks increased their motivation. According to Participant C, methods and approaches involving cultural issues and activities that enable students to actively participate in the lessons are the most effective methods. In a similar vein, Participant D stated:

Choosing topics that integrate culture and helping students to make linguistic connections with the languages that they already know really work in my classroom.

4. DISCUSSION AND CONCLUSION

In this case study, four Turkish language instructors' opinions on the use of methods and approaches in their classrooms were examined. It is important to note that their opinions are not representative of those of other Turkish language instructors. One insight that the study provides is that the participants in the present study are in control of what to teach and use in class. The reason for this is that all the participants received some training in foreign language teaching. Further, the study sheds some new light on the methods and approaches used in Turkey and the U.S. The findings indicate that almost all the participants preferred to use contemporary methods such as CLT or TBLT in their classrooms. Almost all of them emphasized the importance of communication which can be practiced through working on tasks. This finding may support the results of Arslanyılmaz (2013) in which computer-assisted task-based language instruction was found to more

effective than computer-assisted form-focused language instruction. However, the finding is not in line with the findings of Göçer (2008) and Ekmekçi (2016) who reported that teachers preferred to use traditional methods of teaching instead of the contemporary ones. In addition, the participants were also aware of the fact that the methods and approaches to be used in the class depend on students' language skills, needs and individual differences such as learning styles. Some participants also mentioned the benefits of integrating technology into the classroom. As mentioned in section 1, few studies are available on the use of methods and approaches in Turkish language classrooms even if the teaching and learning of Turkish as a foreign or second language continues to grow in popularity both in the U.S. and in Turkey. Therefore, the present study contributed valuable insights into how Turkish is taught in a second and foreign language context.

This study attempts to provide the results of a case study that examined the methods and approaches that Turkish language instructors in Turkey and the U.S. make use of when teaching Turkish. Through the case study, evidence documenting the necessity and importance of using a variety of contemporary methods and approaches in the classrooms is offered. In most teacher education programs, pre-service teachers are given the opportunity to observe language classrooms and use their knowledge and skills that they have acquired during their training. When one considers the activities that are carried out in a second or a foreign language course that they have recently observed, they can be aware of the fact that teachers actually employ more than one method or approach. Undeniably, there are language programs that encourage instructors to use only one method or approach in their classrooms, but the integration of different methods and approaches is inevitable especially in a classroom with multilingual/multicultural learners with different types of motivation, learning styles, attitudes, and levels of aptitudes.

Although some of the main characteristics of the methods and approaches still effectively find their way into today's classrooms, language instructors and administrators are now coping with diverse language learning contexts, student needs, their styles and characteristics. Therefore, it is important for language instructors to have a deep understanding of each method and approach so that they can make use of them as efficiently as possible. In addition, instead of depending on only one method or approach, instructors should develop their own way of teaching so that they can respond to the needs of their students.

Several limitations need to be acknowledged for future studies. First of all, the results of the study should be interpreted with caution due to the fact that only four participants' opinions were used. Although the participants' responses have provided sufficient information, the results cannot be generalized to other Turkish as a second or foreign language contexts. Another methodological problem is concerned with the fact that the participants were asked to write down their responses in a form. The data would have been more comprehensive and richer samples could have been obtained if the participants had been interviewed.

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CHAPTER 3

**SOCIOCULTURAL ADAPTATION OF INTERNATIONAL
STUDENTS IN TURKEY***

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*This study was presented at the “International Unequal World Conference” in New York, USA on January 24-25, 2021.

INTRODUCTION

In recent years, Turkey has become a destination country for refugees and international students coming especially from Africa, Asia, and the Middle East. The number of students who prefer to study in Turkey has been increasing every year. According to the statistics provided by the Higher Education Council in Turkey, in 2014, the number of international students was 48.000. As of 2019, this has reached 172.000. One of the reasons for this is that there is a lack of quality education and job opportunities in home countries. Another one is the availability of a variety of different government-funded scholarship programs open to international students. Most of these scholarships are given to students from Rwanda, Pakistan, Kosovo, Macedonia, Albania, Bangladesh, Philippines, Ukraine, Gambia, Palestine, Ethiopia, Sudan, and Uganda. Although international students gain many educational and social benefits by participating in study abroad programs, such as those in Turkey, they experience psychological and sociocultural adaptation problems compared to home students, as it has been reported in many studies (e.g., Gibbs, Yerin Güneri, Pankau, & Bikos 2020; GulRaihan & Sandaran 2017; Gürsoy & Ertaşoğlu 2019; Güzel & Glazer 2019; Mahmood & Galloway Burke 2018; Marangell & Baik 2022). As Adolphs and Durow (2004:92) stated:

International students arriving at British universities may not necessarily find what so many of them expect, namely that they will be able to immerse in the host culture and develop their language proficiency through ongoing participatory experience of L2 communication. Past research suggests that their acculturation process is likely to be an uphill struggle, hindered by serious culture shock, motivational fluctuation and inadequate membership opportunities in host-national networks.

Over the years, adaptation of international students in the United States, Canada, Europe and Asia has received much attention, but adaptation of those in Turkey and the challenges that they face have not been adequately studied. The present study fills the gap in the literature by exploring how international students in Turkey are adapting socioculturally and to what extent certain socio-demographic variables have an effect on their sociocultural adaptation. The following section discusses the theoretical framework related to sociocultural adaptation followed by a review of previous studies regarding the topic. Next, the research questions and

methodology are presented followed by data analysis, findings, conclusion, and recommendations.

1. THEORETICAL FRAMEWORK

The issues of sociocultural and psychological adaptation, which have been the focus of research in many studies in the recent past, were studied under the Acculturation Theory (Berry, Kim, Minde, & Mok 1987; Berry, Kim, Power, Young, & Bujaki 1989). Acculturation refers to “a concept that encompasses all the changes that occur when individuals and groups of people belonging to different cultural backgrounds come into contact with each other.” (Sam, 2015, p. 68). Acculturation is usually discussed in relation to sociocultural and psychological adaptation of immigrants, international students, and refugees in host countries. While psychological adaptation is concerned with the psychological well-being of international students and immigrants during their adjustment in the host country, sociocultural adaptation, which is the focus of the present study, deals with the learning of cultural beliefs, norms, values and social skills necessary to communicate with the speakers of the target language country (Ward & Kennedy, 1999). Sociocultural adaptation defined as “an ability to “fit in” or effectively interact with members of the host culture” (Ward & Kennedy, 1993b, 1996, 1999) has been considered as one of the most influential models in learning (Searle & Ward, 1990).

According to Berry (1974, 1984, 1994), there are two important aspects of acculturation: maintenance of original cultural identity and maintenance of relations with other groups. Berry further identified four acculturation strategies, which are integration, separation, assimilation, and marginalization. Berry stated that:

...individuals who value both cultural maintenance and intergroup relations are seen to endorse an integrationist approach. Those who cherish cultural maintenance but do not value intergroup relations are believed to adopt a separatist position. By contrast, those who value intergroup relations but are relatively unconcerned with cultural maintenance may be classified as assimilationist. Finally, those individuals who value neither cultural maintenance nor intergroup relations are said to be marginalized. (p.423)

These four strategies have been found to be influenced by several socio-demographic factors such as friendship patterns, education, (Berry et al., 1989), cultural distance (differences between the host and the home culture) (Suanet & van de Vijver, 2009), gender (Zhang & Goodson, 2011),

length of stay in the host country (Park, Song, & Lee, 2014), financial status (Khawaja & Dempsey, 2008), and target language proficiency (Sam, Tetteh, & Amponsah, 2015). For instance, studies have shown that sociocultural adaptation can be different across gender. In a study conducted by Wang (2009), female international graduate students enrolled in a university in the south part of the U.S. had more difficulty adapting to the academic life and American culture than the males. However, a similar study found that when females received cultural support, they adapted more easily than those who did not receive any support (Pedersen, 2010). Another important variable that predicted sociocultural adaptation was age. A study conducted with Turkish undergraduate and graduate students enrolled in U.S. universities showed that younger students had less problems with adapting to the American society than older students. The reason for this was that older students' "values, customs, and interests may have been set and they may have a hard time changing them" (Poyrazlı, Abona, Bullington, & Pisecco, 2001, p.59). Time spent in the host country also had a significant effect on sociocultural adaptation. Previous studies provided mixed results. For example, studies have shown that the longer one stayed in the host country, the more they adjusted and the less stress they had (Ward & Kennedy, 1996; Zhang & Rentz, 1996; Ying, 2005). While some studies (Hechanova-Alampay et al., 2002) reported that the difficulty in adjusting to the host country lasts for about six months and then decreases as time goes by, some, however, did not find any significant differences between more and less time spent in the host country (Ye, 2005).

Scholars also focused on cultural distance, which refers to the differences between the host and the home culture (Redmond, 2000). For instance, international students coming from collectivist cultures were more likely to experience problems in cultures that are individualistic (Eustace, 2007) and experience more problems upon their arrival in the host country than later (Ward & Kennedy, 1999). Based on their study involving Malaysian and Singaporean students living in New Zealand, Searle and Ward (1990) found that "the greater the degree of cultural distance, the more likely an individual is to experience sociocultural adjustment problems" (p.459), which also supported the findings of Furnham and Bochner (1982) who conducted a study with international students that were categorized into different groups based on the extent to which they had cultural similarities and differences with British students. Likewise, in Abe, Talbot, and Geelhoed (1998), Asian students, in particular, had more difficulty in adapting to the

U.S. college life than those with cultural backgrounds more similar to the U.S. Target language proficiency was also one of the most important variables that was taken into consideration with regard to sociocultural adaptation. According to Ward and Kennedy (1999), the more proficient the students are in the target language, the easier their sociocultural adaptation is to the host country. This claim was supported in Yeh and Inose's (2003) study that investigated the adaptation of international undergraduate and graduate students studying in the U.S. The researchers found that students with insufficient English language skills were more likely to experience stress than those with better English language skills. Similar results were reported in Poyrazlı, Arbona, Bullington, and Pisecco (2001) who investigated the sociocultural adaptation process of Turkish students in the U.S.

2. LITERATURE REVIEW

Early studies on sociocultural adaptation often led to consistent findings with most researchers reporting a positive effect of prolonged length of residence, proficiency in the target language, employment in the host country, openness, and cultural support on sociocultural adaptation (Gibbs, Yerin Güneri, Pankau, & Bikos 2020; GulRaihan & Sandaran 2017; Gürsoy & Ertaşoğlu 2019; Güzel & Glazer 2019; Mahmood & Galloway Burke 2018; Marangell & Baik 2022; Vulić-Prtoric & Oetjen 2018; Yerken, Urbán, & Nguyen Luu 2022). Variables such as gender and age also had a significant effect on sociocultural adaptation (Vulić-Prtoric & Oetjen 2018; Mahmood & Galloway Burke 2018; Gürsoy & Ertaşoğlu 2019). For example, GulRaihan and Sandaran (2017) investigated the difficulties related to the sociocultural adaptation of international students in the host university in Malaysia. The data were collected from 200 students via a sociocultural adaptation scale. Based on the students' responses, the authors determined four areas that the students had difficulty with in terms of sociocultural adaptation. These were language proficiency, academic adaptation, environmental adaptation and interpersonal adaptation with language adaptation and academic adaptation affecting the sociocultural adaptation of international students more than the others. Furthermore, the university campus and where the students came from were other variables having an impact on their academic and environmental adaptation. Based on the findings, the authors recommended that students should form relationships with the locals as well as with people from different cultures.

Vulić-Prtoric and Oetjen (2018) analyzed the effects of several variables on Erasmus students' acculturation, psychological and social adaptation levels when studying and living in Croatia. The data were collected from 141 international students who came from different European countries. The students completed four online questionnaires. The findings showed that the students adjusted to the culture in Croatia at a significantly higher rate. In addition, females, older students and students who were content with their social lives in Croatia experienced better psychological adaptation. In fact, according to the results of multiple regression analyses, satisfaction with social situation was a good predictor of psychological and sociocultural adaptation. Similar findings were reported in Güzel and Glazer's (2019) study that compared international and domestic students in the U.S. with respect to the influence of demographic factors on acculturation and sociocultural adaptation as well as the effects of cultural values, uncertainty avoidance (UA) and power distance (PD) on two types of sociocultural adaptation: social interaction and localizing. The participants were 207 international and 173 domestic students enrolled at a university in California. The data were collected via a self-report survey. According to the results, international students had less problems related to sociocultural adaptation than domestic students in the U.S. With respect to the results regarding gender, there was not a significant difference between males and females in terms of sociocultural adaptation when the whole sample was taken into consideration, however, women coming from cultures in which high UA and low PD are practiced had higher sociocultural adaptation. The authors attributed this result to the fact that "Internationals from high UA cultures tend to be less comfortable taking risks, and they usually desire more stability" (p. 1089). Additionally, international students whose parents never immigrated to the U.S. experienced more adaptation problems than those who parents were either born or have lived in the U.S. Finally, contrary to the findings of previous studies (e.g. Ward & Kennedy, 1996) that reported positive effects of long-term residence, the authors did not find any significant difference between length of stay and sociocultural adaptation.

Mahmood and Galloway Burke (2018) examined the relationship between acculturative stress and sociocultural adaptation among undergraduate international students studying at a U.S. university as well as the effects of social variables such as country of origin, time spent in the U.S., gender, age, and knowledge of the English language. The results showed that there was a negative correlation between the students' sociocultural

adaptation levels and acculturative stress. In other words, having higher skills in interpersonal communication, academic/work performance, personal interests and community involvement, ecological adaptation, and language proficiency lowered the acculturative stress levels of the students. Moreover, there was also a significant relationship between males and females in terms of acculturative stress levels in that the males had higher acculturative stress levels than the females. Gender, age, culture as well as employment in the host country were also the foci in Gürsoy and Ertapoğlu's (2019) study that determined whether or not there were differences between genders, age groups, and occupations with respect to the integrative orientation of Syrian immigrants. Their attitudes towards the Turkish language and culture were also investigated. 170 adult Syrian immigrants who lived in one of the biggest cities in Turkey participated in the study. The results of a questionnaire showed that the younger participants gave more importance to learning Turkish, the more they integrated with the Turks than the older ones. With respect to gender differences, the male participants were more likely to integrate into the Turkish communities than the females. Furthermore, the participants who were employed tended to have more positive orientations towards using Turkish in different contexts. Regarding the time spent in the country, the participant group that spent between 7 and 12 months in Turkey was the most isolated group. In a similar study, Gibbs, Yerin Güneri, Pankau, and Bikos (2020) identified the variables that predicted psychological adjustment and sociocultural adaptation using structural equation modeling (SEM). Data were collected via online surveys from 161 international students in Ankara, Turkey. The results showed that having a close contact with the Turks and higher Turkish language proficiency resulted in higher sociocultural adaptation. On the other hand, students coming from cultures different from the Turkish culture had more psychological and sociocultural adaptation problems than those coming from similar backgrounds.

Social support was also the focus of previous studies. For instance, Ladum and Burkholder (2019) conducted a quantitative study to determine the variables that predicted undergraduate international students' adaptation in northern-Cyprus. The authors investigated whether there was a difference between international students and Turkish-Cypriot students in terms of their adaptation. In addition, the authors also analyzed the role social support played in international students' perceptions of their native and target cultures and stress levels. The international students consisted of students coming from Turkey and other countries. Data were collected via a survey. The results

showed a significant difference between international students and Turkish-Cypriot students regarding their adaptation, that is, Turkish-Cypriots expressed more positive emotional responses than international students. The findings related to the multiple regression analyses showed that financial problems and lack of social support were the main predictors of acculturative stress.

Recent studies investigated the effects of psychological problems on sociocultural adaptation. For example, Yerken, Urbán, and Nguyen Luu (2022) examined the sociocultural adaptation of international students living in Hungary. 267 students with a mean age of 24.5 participated in the study. The findings based on a Sociocultural Adaptation Scale showed that students' countries of origin and cities in which they lived determined their sociocultural adaptation. Moreover, students who experienced depression, stress, and had lower life satisfaction had difficulties with sociocultural adaptation whereas students who were able to stay calm when confronted with disruptive situations tended to have lower level of academic difficulties. The authors, therefore, recommended that international students' countries of origin, places of residence, and mental health should be addressed in counseling and educational programs. In other studies, students' learning experiences in the courses proved to be an important factor. For example, in an attempt to understand and support international students' wellbeing, Marangell and Baik (2022) conducted a qualitative study with 601 international students enrolled in a university in Australia. Based on the responses of the students, the authors concluded that the wellbeing of students can be improved through improving their learning experiences.

To summarize the findings discussed in this section, gender, age, length of residence, country of origin, proficiency in the target language, and cultural similarities between the home and host countries affected sociocultural adaptation. Unfortunately, to the best of the researcher's knowledge, not many researchers have attempted to investigate the sociocultural adaptation of immigrant and international students in Turkey. Over the years, adaptation of international students in the United States, Canada, Europe and Asia has received much attention, but adaptation of those in Turkey and the challenges that they face have not been adequately studied. Upon their arrival in Turkey, international students may experience major challenges from finding accommodation to using public transportation. Added to this are the cultural differences among different regions and the variety of languages and dialects spoken in Turkey. All of these factors may cause stress

in students, which may prevent them from adapting to the educational system. Therefore, the aim of the present study was to shed some light on this issue and recommend solutions. In particular, the study explored the degree of sociocultural adaptation and the effects of certain variables such as age, gender, and cultural distance on students' sociocultural adaptation.

The present study focused on the competencies of international students in different sociocultural adaptation levels as well as the effects of selected socio-demographic variables on international students' sociocultural adaptation. The study aims to answer the following research questions:

1. In which level of sociocultural adaptation are the international students the most competent?
2. Is there a significant difference between male and female international students with respect to their sociocultural adaptation in general and competencies in its domains?
3. Is there a significant difference between younger and older international students with respect to their sociocultural adaptation in general and competencies in its domains?
4. Is there a significant difference between students from Asia and Africa with respect to their sociocultural adaptation in general and competencies in its domains?

3.METHODOLOGY

3.1. Participants

The present study was approved by İzmir Democracy University Ethics Committee for the protection of human subjects. The participants included 87 intermediate-level students who were learning Turkish as a second language at the Turkish Teaching Application and Research Center of a government university in Turkey. The Center was established in 1994 to teach Turkish and other foreign languages to international students. The students take Turkish language courses in an intensive one-year preparatory program that prepares them for a variety of undergraduate academic programs at different universities in Turkey. The program starts in September. Depending on their level, the students are exposed to 25-35 hours of Turkish per week.

The participants in the current study had already been accepted to an undergraduate program at different Turkish universities but were required to take Turkish classes due to their insufficient Turkish skills. The students took

Turkish courses as elementary-level students at the beginning of September and took the final exam for intermediate-level in January. The final exam is designed to assess students' knowledge of grammar, reading, writing, listening, and speaking skills in Turkish. Most of the students have been in Turkey for less than 6 months. Of the 87 participants, 70 have lived in Turkey between 0-6 months, 2 between 6-10, 5 between 11-20 and 3 for more than 20 months. The participants consisted of 62 males and 25 females. There were 54 participants who were between the ages of 17 and 22 and 33 students were above the age of 23.

The participants were mostly from Asian and African countries. Asian countries included Iraq, Afghanistan, Iran, China, Kyrgyzstan, Uzbekistan, Malaysia, Philippines, Bangladesh, Indonesia, Syria, Kazakhstan, Mongolia, and State of Palestine. African countries included Morocco, Ethiopia, Ghana, Algeria, Cameroon, Central African Republic, and Equatorial Guinea. The majority of the Asian students came from Afghanistan followed by Iraq and Iran. Most of the students from Africa were from Morocco followed by Ghana. In addition, the students reported that they had the knowledge of at least two languages.

After the students graduate from the Turkish language program, they are expected to attend undergraduate programs such as architecture, civil engineering, literature, Turkology, nursing, mechanical engineering, psychology, dentistry, public relations, law, economic development and growth, history, international relations and trade management and so on. The following table presents socio-demographic information about the participants.

Table 1: Distribution of Participants by Age, Gender, Length of Residence and Home Country

Age	N	Gender	N	LOR (mos)	N	Home	N
17-22	54	Male	62	0-6	70	Asia	55
23+	33	Female	25	6-10	2	Europe	5
				11-20	5	Africa	26
				20+	3	South	1
						America	
Total	87		87		80		87

3.2. Instrument

For this study, the Revised Sociocultural Adaptation Scale (SCAS) designed by Wilson & Ward (2010) was adopted for the purpose of assessing students' sociocultural adjustments. The scale consisted of 21 items that assess the following five domains: Interpersonal communication (Items 1, 3, 6, 11, 13, 16, 21), academic/work performance (Items 2, 7, 12, 17), personal interests and community involvement (Items 4, 8, 14, 18), ecological adaptation (Items 5, 9, 15, 19), and language proficiency (Items 10 and 20). The participants were asked to rate these items on a five-point Likert Scale of 1 (= Not at all competent) to 5 (= Extremely competent). So, higher scores would indicate greater social difficulties and less sociocultural adjustment. The items in the questionnaire were provided in both English and Turkish. The English items were translated into Turkish in case the participants had difficulty understanding English. The translated items were consolidated by a translator with regard to meaning and concepts. In addition to the questionnaire, the participants were also asked to provide sociodemographic information such as age, country of birth, gender, languages spoken, length of residence in Turkey, their major, and the languages spoken. The students filled out the questionnaire in 20-30 minutes. The participants gave their consent to participate in the study. The data were collected by the researcher during class time.

4. DATA ANALYSIS AND RESULTS

The purpose of this study is to examine Turkish learners' competencies related to levels of sociocultural adaptation and the influence of social variables such as age, gender, and home culture on their sociocultural adaptation. The data were analyzed quantitatively using the Statistical Package for the Social Sciences (SPSS), version 27. The first analysis to be considered is the average rate related to each of the five domains. Table 2 shows the results of the descriptive statistics.

Table 2: Mean Rates of Domains for All Participants

Domains	N	M	SD
Academic work performance	87	3,77	,59
Ecological adaptation	87	3,77	,68
Language proficiency	87	3,72	,69
Interpersonal communication	87	3,54	,58
Personal interest and community involvement	87	3,39	,60

As can be seen in table 2, highest levels of competency lay within the academic work performance and ecological adaptation domains followed by language proficiency, interpersonal communication, and personal interest and community involvement. A one-way analysis of variance was also conducted to determine the relationship among the five domains. The results were not significant. To see the effects of social variables such as gender, age, and home culture on participants' socio-cultural adaptation, separate independent-samples t-tests were conducted. Since the two gender groups did not have equally sized number of participants, randomly selected 25 male participants were included in the analysis to equally compare males and females. The following table shows the results regarding the relationship between gender and sociocultural adaptation as well as between gender and each domain related to sociocultural adaptation.

Table 3: Independent Samples t-test: Gender and Sociocultural Adaptation

	Gender	N	M	SD
Sociocultural Adaptation	Female	25	18,51	,383
	Male	25	17,77	,393
Domains	Gender	N	M	SD
Academic work performance	Female	25	3,84	,407
	Male	25	3,62	,689
Ecological adaptation	Female	25	3,69	,758
	Male	25	3,71	,553
Language proficiency	Female	25	4,00	,540
	Male	25	3,70	,645
Interpersonal communication	Female	25	3,56	,465
	Male	25	3,42	,432
Personal interest and community involvement	Female	25	3,42	,581
	Male	25	3,32	,552

According to the results, the females showed higher sociocultural adaptation than the males but the difference was not statistically significant. The females were more competent in all domains than males except for ecological adaptation. However, the results were not significant. The next analysis to be considered was related to the effect of age on sociocultural adaptation. Once again, the two age categories were not of equal size and thus randomly selected 33 participants were included in both age categories for equal comparison.

Table 4: Independent Samples t-test: Age and Sociocultural Adaptation

	Age	N	M	SD
Sociocultural Adaptation	17-22	33	18,08	,431
	23+	33	17,31	,370
Domains	Age	N	M	SD
Academic work performance	17-22	33	3,70	,640
	23+	33	3,90	,555
Ecological adaptation	17-22	33	3,72	,723
	23+	33	3,78	,551
Language proficiency	17-22	33	3,79	,613
	23+	33	3,73	,849
Interpersonal communication	17-22	33	3,56	,632
	23+	33	3,48	,496
Personal interest and community involvement	17-22	33	3,32	,638
	23+	33	3,43	,524

Table 4 shows that the younger age group showed higher sociocultural adaptation than the older age group. The older participants were more competent than the younger ones in terms of academic work performance, ecological adaptation, and personal interest and community involvement. The differences between the two age groups, however, were not significant. The last analysis determined whether or not cultural distance had a significant effect on sociocultural adaptation. Randomly selected 20 Asian participants were compared with those from Africa.

Table 5: Independent Samples t-test: Home Culture and Sociocultural Adaptation

	Home	N	M	SD
Sociocultural Adaptation	Asia	20	14,89	1,721
	Africa	20	14,04	1,544
Domains	Home	N	M	SD
Academic work performance	Asia	20	3,86	,503
	Africa	20	3,96	,598
Ecological adaptation	Asia	20	3,83	,703
	Africa	20	3,51	,646
Language proficiency	Asia	20	3,83	,545
	Africa	20	3,10	,641
Interpersonal communication	Asia	20	3,66	,574
	Africa	20	3,48	,380
Personal interest and community involvement	Asia	20	3,55	,599
	Africa	20	3,50	,585

According to table 5, students from Asian countries showed slightly higher sociocultural adaptation than those from Africa. The students from Asia were more competent than the African students with regard to the domains of ecological adaptation, language proficiency, interpersonal communication, and personal interest and community involvement. The only domain that was statistically significant was language proficiency.

5. DISCUSSION

The present study investigated the degree of sociocultural adaptation of international students living in Turkey. SCAS designed by Wilson and Ward (2010) was employed for the study. Four research questions were explored concerning the degree of competencies related to the domains of sociocultural adaptation and whether or not there were significant differences between different gender, age, and cultural groups with respect to the competencies related to the domains of sociocultural adaptation. Regarding the first research question, which explored the degree of competencies related

to the domains of sociocultural adaptation, the results showed that the participants showed the highest level of competency in the academic work performance and ecological adaptation domains followed by language proficiency, interpersonal communication, and personal interest and community involvement. This was not a surprising result considering the fact that the students were in fact high-achieving students who succeeded in the university entrance exams that each university requires international students to take. Some prestigious Turkish universities even require students to take Scholastic Aptitude Test (SAT) as well as English language proficiency exams such as Test of English as a foreign language (TOEFL) and The International English Language Testing System (IELTS). The second research question was related to the differences between males and females regarding their sociocultural adaptation. According to the results, in general, the females showed higher sociocultural adaptation than the males. Further, there was a difference between the females and the males with females being more competent than the males in all domains except for ecological adaptation. Although the results were not significant, they do seem to support the findings of earlier studies (Güzel & Glazer, 2019) that found that women coming from cultures in which high UA and low PD are practiced had higher sociocultural adaptation than males.

The third question explored whether there was a significant difference between different age groups in terms of sociocultural adaptation. The results showed that in general, the younger students were more competent than the older students with regard to sociocultural adaptation. The older participants showed higher performance than the younger ones in terms of academic work, ecological adaptation, and personal interest and community involvement. These results partially support the findings of Poyrazlı, Abona, Bullington, and Pisecco (2001). In their study, younger students were more likely to adapt to the American society with less problems than the older ones. Finally, the last question focused on the differences among students coming from different cultural backgrounds. When Asian and African students were compared, it was observed that, in general, the Asian students showed higher sociocultural adaptation than those from Africa. Their adaptation levels were higher with respect to ecological adaptation, language proficiency, interpersonal communication, and personal interest and community involvement. Language proficiency was the only variable that proved to be statistically significant. This may be attributed to the linguistic similarities between Turkish and the languages spoken in the countries of Asia. For instance, Turkish and modern

Turkic languages such as Kazakh, Kyrgyz, and Uzbek are mutually intelligible languages with regard to the most common 1000 words. Similarly, Turkish shares lexical similarities with Persian and Arabic, which have remained in Turkish for a very long time. As Hazır (2015) stated “even after the Language Revolution of the early republic, Persian and “Persianized” Arabic words continued to exist in Turkish (p. 5). It is interesting to note that a great majority of the religious words in Turkish are taken from Persian”. Thus, the similarities may have led the Asian students to be more proficient in Turkish than the students from Africa. Although the other variables were not significant, it is still worth mentioning that cultural similarities may have played a role in the differences between the two groups. In particular, Turkey and countries such as Iran, Iraq, Afghanistan, and Pakistan share similarities with respect to religion and beliefs, social structure, status of family, traditional festivals and so on. In this respect, the findings seem to partially support Yerken, Urbán, and Nguyen Luu’s (2022) study that showed that students’ countries of origin and cities in which they lived had an effect on their sociocultural adaptation.

6. CONCLUSION

The present study measured the degree of sociocultural adaptation of international students studying in Turkey. By including established predictors of sociocultural adaptation in a context, which has received less attention, the present study, therefore, provided the opportunity to fill this gap. The results of the study showed that the participants, in general, were more competent in the domains of academic work performance and ecological adaptation; the female participants showed higher sociocultural adaptation than the males and they were more competent than the males in all domains except for ecological adaptation; the younger students were more competent than the older students with regard to sociocultural adaptation; the Asian students showed higher sociocultural adaptation than those from Africa. Language proficiency was the only variable that proved to be statistically significant between the Asian and African students.

The results from this study can have implications with respect to how international students can receive support upon their arrival in the host country. The universities can open orientation programs and require international students to attend them for at least a semester. These programs can be beneficial especially for students who experience difficulties adjusting to the host country, but may not be willing to seek any help. These programs

may identify such students and help them cope with their adjustment problems. In these programs, students can be advised about topics such as university policies, expectations of the instructors and classrooms, cultural adjustment, transportation, safety, healthcare and so on. In addition, as Jackson, Ray, and Bybell (2013) recommended “universities should focus on creating a sense of community for international students through various forms of outreach programs” (p. 25). For instance, universities can encourage senior students to form student associations where new international students can be acquainted with others who come from similar cultural backgrounds. Further, new students can be assigned a mentor who can provide any kind of support to them in their adjustment to their universities and the host culture.

The study has several limitations. One limitation was that data were collected from only one university in Turkey, which makes it difficult to generalize the findings to other contexts. Related to this is the selection of participants. Most of the participants had lived in Turkey between 0-6 months compared to previous studies that employed a longitudinal approach comparing students who spent more time in a country with those who spent less time. One further limitation was related to the questionnaire, which asked the students to self-report their experiences. This may have led the students to give anticipated responses. Further research can include data collected via interviews, focus groups (Volet & Ang, 1998), or student interactions (Montgomery & McDowell, 2009) in order to enable students to express themselves explicitly. Further research can also include participants from different contexts and take on a longitudinal approach to see whether or not there would be a difference between students who spend more and less time in a host country.

7. RECOMMENDATIONS

The findings provide several recommendations for further research. It is possible to include international students from more than one university and examine in detail the differences among them with respect to their culture, time spent in Turkey and so on. The present study compared Asian and African students. A further study could also include students from other continents e.g., Europe. Finally, the outcomes of interviews, focus groups, and observations of student interactions might also be broadly studied. This can prevent students from giving expected responses.

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CHAPTER 4

THE IMPACT OF COVID-19 PANDEMIC ON MENTAL HEALTH IN TURKEY: AN EMPIRICAL STUDY

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INTRODUCTION

People as social beings need social interaction with each other in order to be satisfied with social life and experience happiness. However, the spread of COVID-19 has forced people to avoid close contact with each other, reduce social interactions, and pay attention to social distancing. More than a third of the world's population has been put under lockdown with restrictions on movements to stop the spread of the COVID-19 (Kaplan et al., 2020). While paying attention to social distancing is important for maintaining physical health during the pandemic, it poses a major threat to maintaining mental health. During the COVID-19 pandemic, there has been an increase in mental and social issues that potentially disrupt daily activities, and problems such as depression, stress and anxiety have become more common in societies all over the world. Hence, there are significant concerns worldwide about how changes in the way people engage in daily activities affect their mental health and well-being including issues such as depression, anxiety, stress, and sense of fear. Various studies conducted around the world have set out to explore the effect of social distancing on mental health during lockdowns since the COVID-19 pandemic started. The literature reported various studies that focused on mental health disorders such as depression, anxiety, stress, adjustment disorder, and fear during this period (Mamun & Griffiths 2020; Pakpour & Griffiths 2020; Schimmenti et al., 2020; Liu, 2020; Shigemura et al., 2020; Qiu et al., 2020; Martinez-Lorca et al., 2020; Lin, 2020; Xiang 2020; Holmes et al., Paredes et al., 2021). However, there is still limited research in Turkey on how the COVID-19 pandemic affects mental health in terms of issues such as depression, anxiety and stress (DAS). Like many countries, Turkey also closed schools, shopping malls, restaurants, cafes, sports halls, and suspended business activities during the period that started on the 11th of March, 2020 in order to prevent the spread of the COVID-19 pandemic. While curfews were imposed for children and older individuals, some companies switched from full-time work hours to flexible work hours and some of them had to close for economic reasons, with many employees losing their job in the process. The conditions caused by the pandemic have made words such as social distance, isolation and quarantine very common in our daily life. Quarantines and social distance and economic problems caused by them have affected people's mental and physical health negatively. Mental health problems have also increased due to the fear and anxiety caused by the probability that family members, friends and immediate surroundings could

be infected with the virus and the uncertainty about when the pandemic would end.

Physical and mental health are associated with each other, indicating that social interaction might have positive effects on people's physical and mental health (Okechukwu, 2021). For this reason, it is important to examine the effect of the changes in the daily activities and behavioral characteristics of individuals, as well as the effects of fear levels, resilience, and psychological well-being on their mental health during the COVID-19 pandemic in Turkey. Several studies conducted in Turkey have examined the impact of the COVID-19 pandemic on mental health conditions such as anxiety, depression, and stress particularly among health workers in Turkey (Aker and Midik, 2020; Ozdin & Ozdin 2020; Bakioglu et al., 2020; Karataş & Tagay, 2021; Duran & Geyiktepe, 2021). Elbay et al., 2020; Şahin et al., 2020; Hacimusalar et al., 2020; Tengilimoglu et al., 2021; Ceri & Çicek, 2021; Yalcin et al., 2021). The present study differs from other studies as it aims to focus on the impact of the COVID-19 pandemic on the mental health of individuals in the general population in Turkey. Hence, this study aims to determine how socio-demographic characteristics, economic variables, behavioral characteristics and daily activities affect the probability of depression, anxiety, and stress and total score of DASS-21 (The Depression Anxiety Stress Scales) during the COVID-19 pandemic in Turkey. The findings are believed to contribute to understanding the psychological impact of the pandemic on the mental health of individuals in Turkey during lockdowns. The results could also provide recommendations to policymakers to help them improve the mental health aspects of individuals during the COVID-19 pandemic in Turkey.

1. METHODS

1.1. Participants and Data Collection

The data were collected by convenience sampling method using an online survey conducted in Turkey between the 15th of April 2020 and the 15th of May 2020. The total sample consisted of 1,007 individuals in Turkey who were aged from 17 to 65 years old who were from all regions of Turkey.

The data obtained from the study provided information about gender, age, occupation, income, expenditure, and consumption as well as demographic and socioeconomic characteristics of the Turkish citizens who participated in the study. Data were collected through the Turkish version of the Depression Anxiety Stress Scales (DASS-21), which was adapted to

Turkish by Yilmaz et al. (2017), the Brief Resilience Scale (BRS), which was adapted to Turkish by Doğan (2015), and the Fear of COVID-19 Scale (CFS), which was adapted to Turkish by Satici et al. (2020).

The Depression Anxiety Stress Scales (DASS-21): The DASS-21 was developed by Lovibond & Lovibond (1995) to measure anxiety, depression, and stress through a self-report scale. The DASS-21 contains 21 items and three subscales including (1) depression, (2) anxiety, and (3) stress to measure three negative emotional states in total. Three subscales containing seven items each measure individuals' depression, anxiety, and stress (Henry & Crawford, 2005). Responses range from 0 to 3, with 0 indicating 'did not apply to me at all; 1 indicating 'applied to me to some degree, or some of the times'; 2 indicating 'applied to me to a considerable degree or a good part of the time'; and 3 indicating 'applied to me very much or most of the time'. The scores obtained from each of the three sub-scales of DASS-21 are summed. The total scale score ranges from 0 to 63, and each subscale ranges from 0 to 21 (Verma & Mishra, 2020). Total scores on each subscale of DASS-21 are multiplied by 2. Hence, the total score for each subscale ranges from 0 to 42 while the total scale score ranges from 0 to 126 (Lovibond & Lovibond, 1995).

The Fear of Covid-19 Scale (CFS): The Fear of Covid-19 Scale, which was developed by Ahorsu et al. (2020), is a seven-item scale that has a stable unidimensional structure with robust psychometric properties. Responses include the options of "strongly disagree," "disagree," "neither agree nor disagree," "agree," and "strongly agree". Scores for each question ranges between a minimum of 1 and a maximum of 5 points. The total score, ranging between 7 and 35, is calculated by adding the score of each item. The total score of CFS is used as an independent variable of the logit and multiple regression models to determine its impact on DASS-21.

The Brief Resilience Scale (BRS): The Brief Resilience Scale (BRS) was developed by Smith et al. (2008). The scale consists of six items responded on a scale indicating 1= strongly disagree, 2= disagree, 3= neutral, 4= agree, and 5= strongly agree. The total score is obtained by summing the scores obtained from the five subscales. The total score ranges between 6 and 30, with higher scores indicating high resilience. The total scores of BRS were included in the models as an independent variable.

Cronbach-alpha coefficient was found to be 0.89 for the depression subscale, 0.91 for the anxiety subscale, 0.87 for the stress subscale, and 0.95

for DASS-21 in general, 0.92 for the Fear of COVID-19 Scale and finally 0.71 for the Brief Resilience Scale.

1.2. Statistical Analyses

Initially, the IBM SPSS Statistics 22.0 computer program was utilized for the analysis of the data specifically for the reliability analysis. Besides, Stata 15 program was used for the descriptive analysis of variables, logit model, and multiple regression model estimations. Cronbach's alpha is a convenient test that is used to estimate and examine the reliability or internal consistency of the DASS-21, CFS and BRS used as the data collection tools in the present study.

The logit model and multiple regression model were the econometric models utilized in this study. The dependent variables of the logit model for depression, anxiety, and stress were generated by considering moderate, severe, and extremely severe scores as *depressed, anxious, and stressed* and normal and mild scores as *not depressed, anxious, or stressed*. Therefore, the participants who demonstrated moderate, severe, and extremely severe symptoms were given the value of 1, and those who demonstrated other symptoms were given the value of 0, which created separately dependent variables for depression, stress, and anxiety equations of the logit model. While the dependent variable of the multiple regression model was the total score of DASS-21, the same variables were used in the logit model and multiple regression.

2. RESULTS

DASS-21 subscale scores of the participating individuals are presented in Table 1. The results of the depression subscale based on the participants' responses showed that 18.77% of the participants had mild depressive symptoms, 14.80% had moderate depressive symptoms, 6.06% had severe depressive symptoms, and 9.53% had extremely severe depressive symptoms. The results of the anxiety subscale based on the participants' responses showed that 8.84% of the participants had mild anxiety symptoms, 8.94% had moderate anxiety symptoms, 5.16% had severe anxiety symptoms, and 9.14% had extremely severe anxiety symptoms. The results of the stress subscale based on the participants' responses showed that 45.68% of the participants had normal and mild stress symptoms, 16.88% had moderate stress symptoms, 17.89% had severe symptoms, and 19.56% had extremely severe stress symptoms. Moderate, severe, and extremely severe were considered as *depressed, anxious, and stressed* whereas the others were

considered as *not depressed, anxious, or stressed* respectively. Of all the participants, 306 (30.39%) had depression symptoms, 234 (23.24%) had anxiety symptoms, and 547 (54.33%) had stress symptoms according to the results indicating moderate, severe, and extremely severe items (Table 1).

Table 1. Results of the depression, anxiety and stress scale during the COVID-19 in Turkey

Psychological distress factor severity (range of scores)	Frequency
Depression	
Normal (0-9)	512 (50.84%)
Mild (10-13)	189 (18.77%)
Moderate (14-20)	149 (14.80%)
Severe (21-27)	61 (6.06%)
Extremely severe (≥ 28)	96 (9.53%)
Anxiety	
Normal (0-7)	684(67.92%)
Mild (8-9)	89 (8.84%)
Moderate (10-14)	90 (8.94%)
Severe (15-19)	52 (5.16%)
Extremely severe (≥ 20)	92 (9.14%)
Stress	
Normal (0-14)	326 (32.37%)
Mild (15-18)	134 (13.31%)
Moderate (19-25)	170 (16.88%)
Severe (26-33)	180 (17.89%)
Extremely severe (≥ 34)	197 (19.56%)

Table 2 demonstrates findings of the socio-demographic characteristics of the participants, the total scores obtained from DASS-21, BRS, and CFS as well as how the participants spent their time at home during the COVID-19 pandemic in Turkey. The results showed that the average household size was 4.12; the average number of children aged between 0 and 6 was 0.44; and the average household members aged between 20 and 64 years old was 2.66. Besides, 67% of the participants were male and 33% of them were female. Findings of the type of household showed that 86% of the participants had a nuclear family and 9% had an extended family. Of all the participants, 38% were married, 62% were not married, 52% graduated from secondary school, and 18% graduated from university. The average number of working individuals in the family was 1.33, and 18% of the participants had a chronic disease. The monthly average income was ₺7,356.95, and the monthly total expenditure and monthly food expenditure were ₺5,594.68 and ₺1,703.82 respectively. The average score of DASS-21 was 9.49 for the

depression subscale, 6.18 for the anxiety subscale, and 9.83 for the stress subscale. The total mean score of the DASS-21, BRS and CFS were found 25.50, 17.57 and 18.32 respectively. During the COVID-19 pandemic, people in Turkey were found to spend 21.77 hours on average per week cooking and preparing meals, 22.20 hours on average watching TV or movies, 19.86 hours on average cleaning and washing, 15.67 hours on average following social media (WhatsApp, Twitter, Facebook, etc.), and 14.76 hours on average doing physical exercises-activities (Table 2).

Table 2. Findings about the socio-demographic characteristics of the participants and how they spent their time at home during the COVID-19 Pandemic in Turkey

Gender (%)	Mean(standard deviation)
Female	0.33 (0.48)
Male	0.67 (0.49)
Age	31.16 (10.50)
Household size averages	4.12 (2.35)
Age group	
Age 0-6	0.44 (0.87)
Age 7-19	0.81 (1.05)
Age 20-64	2.66 (1.03)
Age 65+	0.21 (0.53)
Education (%)	
No educational background	0.03 (0.16)
Primary-secondary school	0.27 (0.44)
High school	0.52 (0.49)
University	0.18 (0.38)
Marital status (%)	
Married	0.38 (0.48)
Unmarried	0.62 (0.48)
Family type (%)	
Nuclear family	0.86 (0.35)
Extended family	0.09 (0.28)
Other	0.05 (0.22)
Having a chronic disease (%)	0.18 (0.39)
Number of working individuals in the family	1.33 (0.47)
Total income (£/month)	7356.95 (8582.8)
Total expenditure (£/month)	5594.68 (5871.0)
Total food expenditure (£/month)	1703.82 (1468.2)
Average score	
Depression	9.49 (10.54)
Anxiety	6.18 (8.50)
Stress	9.83 (10.88)
DASS21	25.50 (27.51)
BRS	17.57 (3.14)

CFS	18.32 (7.46)
Activity (hours/week)	
Reading	14.83 (7.13)
Listening to music	8.42 (3.13)
Watching TV/film	22.20 (12.18)
Playing computer games	14.03 (6.89)
Cleaning-washing	19.86 (10.72)
Cooking and preparing food	21.77 (12.38)
Doing Sports -physical activities	14.76 (8.36)
Spending time on social media (WhatsApp, Twitter, Facebook, etc.)	15.67 (8.34)
Making handwork-knitting	7.71 (3.78)
Other	7.56 (5.01)

Besides individuals' daily life activities were restricted and their eating behaviors changed by lockdown, isolation, and quarantine measures during the spread of the COVID-19 pandemic in Turkey. The results regarding behavioral changes are shown in Table 3.

As it is shown in Table 3, 11.12% of the participants indicated that their frequency of shopping changed during the pandemic. Besides, 40.91% of the participants reportedly changed shopping places, and 17.17% indicated that they did online shopping. Of all the participants, 60.77% reportedly increased their food expenditures, 64.05% increased communication expenditures, 53.03% increased cleaning, washing, and home care costs, and 34.56% increased production of domestic foods. While 21.05% reported a decrease in their food waste, 29.66% reported an increase in their alcohol consumption during the COVID-19 pandemic in Turkey. Of all the working participants, 58.03% started working online, 31.175% started to have flexible working hours, and 9% lost their job.

Table 3. Behavioral changes during the COVID-19 Pandemic in Turkey

Behavior	Frequency (%)
Change in the frequency of shopping	112 (11.12%)
Change in the place of shopping	412 (40.91%)
Buying from local markets	68(6.75%)
Buying from supermarkets	134 (13.30%)
Online shopping	173 (17.17%)
Other	37(3.67%)
Alcohol consumption	132 (total 445)(29.66%)
Decrease in food waste	212 (21.05%)
Increase in cleaning, washing, and home care	534 (53.03%)

Increase in the production of food at home (bread, yogurt, etc.)	348 (34.56%)
Increase in communication expenditures	645(64.05%)
Increase in food expenditures	612(60.77%)
Production of domestic foods (bread, yogurt, etc.)	348 (34.56%)
No work	398 (39.52%)
Lost work during the COVID-19 pandemic	91(8.93%)
Working	510(50.44%)
Type of working during the COVID-19 pandemic	510 (100%)
No change	55 (10.78%)
Flexible working hours	159 (31.17%)
Online working	296 (58.03%)

3. STATISTICAL ESTIMATION

The independent variables used in logit and multiple regression models, the odds ratio of the logit model on DASS-21 and the results of multiple regression analysis on total scores of DASS-21 are indicated in the Table 4. Most of the estimated parameters on the logit model and multiple regression model were statistically significant at a 5% level for depression, anxiety, and stress equations. Similar results were obtained by both the logit and multiple regression models.

The parameters of the logit model also showed that the participants' expenditures had a positive and statistically significant effect on depression and stress, but it also had an insignificant effect with a positive sign on anxiety. The effect of age was statistically significant with a positive sign on depression. In terms of gender, the male gender was found to have a statistically significant and negative effect on depression, anxiety and stress. The education level of the university had a positive and statistically significant effect on depression, but it had a significant effect with a negative sign on anxiety. Having flexible working hours, cleaning-washing, high CFS scores, being married, and living with children under 20 years of age were found to have a positive and statistically significant effect on depression, anxiety, and stress. On the other hand, the Brief Resilience Scale was found to have a negative and statistically significant effect on depression, anxiety, and stress.

Doing physical exercises and drinking alcohol had a negative and statistically significant effect on stress. The coefficient of being married had a negative sign on the depression equation but a positive sign on anxiety and stress equations. Cooking more than 16 hours per week during the COVID-19 pandemic was found to have a negative and statistically significant effect on

depression and anxiety, but it had an insignificant effect with a positive sign on stress.

The accuracy of the multiple regression model on the total score of DASS-21 was assessed by the R^2 and was found to be statistically significant ($F(13,993) = 4.53, p = 0.0001$). The value of R^2 indicated that 43% of the variance in the total score of DASS-21 could be explained by the independent variables of the model. The results of this study indicated that being male, being married, cooking and drinking alcohol more frequently than usual and having high resilience scale scores were negatively associated with the total score of DASS-21. On the other hand, having flexible working hours, being married and living with children younger than 20 years, doing physical exercises, cleaning more than usual, and having a high Fear of COVID-19 scale score were associated with a higher total score of DASS-21.

Table 4. The odds ratio of the logit model on DASS-21 and multiple regression analysis on total scores of DASS-21

Variables	Definition	The odds ratio of the logit model			Multiple regression
		Depression (z test)	Anxiety (z test)	Stress (z test)	Coeff (t-test)
Lnexp	Log of expenditure	1.14 (2.49*)	1.03 (0.41)	1.21 (2.11*)	0.60 (0.99)
Age	Age of individual (year)	1.01 (1.91*)	1.02 (0.87)	1.01 (0.26)	0.05 (0.91)
Gender	Equals 1 if the individual is male, 0 otherwise	0.86 (-2.51*)	0.73 (-2.71*)	0.69 (-2.12*)	-2.34 (-2.51*)
Education	Equals 1 if the education level of the individual is a university, 0 otherwise	1.10 (7.71*)	0.95 (-1.98*)	0.99 (-0.20)	-0.22 (-0.22)
Married	Equals 1 if the individual is married, 0 otherwise	0.67 (-2.21*)	1.18 (3.71*)	1.09 (4.02*)	-1.66 (-2.33*)
Married*c hild	The interaction term on married individual living with a child under 20 years of age	1.06 (2.85*)	1.12 (2.79*)	1.10 (2.01*)	0.45 (3.11*)
Flexible work	Equals 1 if the individual has flexible working hours during the Covid-19 pandemic, 0 otherwise	1.64 (2.96*)	1.40 (3.46*)	1.82 (3.76*)	2.45 (2.51*)
Sport	Equals 1 if individual does daily physical activities during the Covid-19 pandemic, 0 otherwise	1.04 (0.17)	0.93 (0.70)	0.75 (-1.89*)	-0.63 (-2.19*)
Cleaning	Equals 1 if individual cleans-washes more than before during the Covid-19 pandemic, 0 otherwise	1.54 (3.28*)	1.62 (2.65*)	1.49 (2.76*)	2.64 (2.90*)
Cooking	Equals 1 if individual cooks more than 16 hours weekly during the Covid-19 pandemic, 0 otherwise	0.74 (-1.96)	0.67 (-1.98*)	1.02 (1.19)	-0.49 (-4.73*)
Alcohol	Equals 1 if individual drink alcohol more than before Covid-19, 0 otherwise	0.85 (-1.31)	0.85 (-1.36)	0.89 (-3.30*)	-2.35 (-2.56*)
BRS	Total score of the Brief Resilience Scale	0.75 (-2.05*)	0.82 (-2.24*)	0.91 (-3.24*)	-0.50 (-3.24*)
CFS	The total score of The Fear of Covid-19 Scale	1.07 (7.36*)	1.11 (10.07*)	1.08 (7.56*)	0.69 (12.78*)
logL		-596.34	-628.27	-475.86	2.50 4.63*) cons.
LR		38.04	36.27	40.08	R ² =0.43
*: 5% of significant level.			F test (13,993) =4.53		(p value) 0.00

4. DISCUSSION AND CONCLUSION

This study determined how socio-demographic characteristics and economic variables, as well as behavioral characteristics and daily activities, affected the probability of depression, anxiety, and stress and the total score of DASS-21 during the COVID-19 pandemic in Turkey. To the best of researchers' knowledge, this is the first study to examine the psychological impact of the COVID-19 pandemic in a general population represented with a sample from all regions of Turkey.

This study found that 30.39% of the participants reported moderate to severe depressive symptoms; 23.24% reported moderate to severe anxiety symptoms; and 54.33% reported moderate to severe stress symptoms. One of the important findings of this study is that those who have high expenditures are more likely to have depression and stress. Hence, an increase in total expenditures is considered to cause more than one-time likelihood of depression and stress.

As individuals get older, they are about one time more likely to be depressed, anxious and stressed in Turkey. In the present study, the average age of the participants was found 31.16, and 86.49% of them were aged between 18 and 45. Stanton et al., (2020) found that in Australia, younger individuals (aged from 18 to 45 years old) had significantly higher scores of depression, anxiety and stress in comparison to older individuals. This result is considered to be associated with the fact that this age group that is composed of the active population use social media more intensively than older individuals and is concerned about the future, uncertainty in working conditions, risk of losing their jobs, future consequences of the epidemic, and economic difficulties (Salari et al., 2020; Ahmed and Ahmed, 2020; Moghanibashi-Mansourieh, 2020).

Female individuals were likely to have 1.16 ($1/0.86=1.16$), 1.37, and 1.44 times more depression, anxiety, and stress, respectively than male individuals during the COVID-19 pandemic in Turkey. Female participants were found to be more depressed, anxious, and stressed in comparison to male participants. Females also had a higher total score of DASS-21 in comparison to males. These findings are somewhat expected since women are expected to manage both professional work and household chores such as babysitting, cooking, cleaning, and laundry during the pandemic process. In their study conducted at the beginning of the COVID-19 pandemic, Mazza et al. (2020) found that women were positively affected by depression, anxiety, and stress.

Similarly, Balsamo and Carlucci (2020) reported that women were at higher risk for experiencing depressive symptoms during the COVID-19 pandemic.

The participants in this study who had a university degree were found to be 1.1 times more depressed than the participants with no university degree, and the participants with no university degree were found to be 1.05 ($1/0.95=1.05$) times more anxious during the COVID-19 pandemic in Turkey. Unmarried individuals were 1.49 times ($1/0.67=1.49$) more likely to have depression than married individuals, and married individuals were 1.18 and 1.09 times more likely to have anxiety and stress respectively than unmarried individuals. Being married was associated with a lower total score of DASS-21 in comparison to being unmarried. Females, less educated participants, and unmarried participants were found to be affected by the COVID-19 pandemic due to low social and emotional support, feelings of loneliness, and future anxiety. The results of this study are consistent with the findings of several other studies in the literature (Verma & Mishra, 2020; Liu, et al., 2020; Salari et al., 2020; Wang et al., 2020; Tee et al., 2020), which could be associated with the fact that social relationships may prevent sadness and pain and lead to a decrease in diseases and improvement in mental health. The literature reports this as the "buffer effect", indicating the impact of social support on stress (Argyle, 1996). This positive effect is commonly seen in marriages or marriage-like relationships (Argyle, 1996; Argyle and Furnham, 1983; Sengul & Fisunoğlu, 2012).

Married individuals who live with their children under the age of 20 were found to be one time more likely to have depression, anxiety, and stress, and they were found to have higher total scores of DASS-21. This could be because children under the age of 20 are in the period of school age and attend online classes at home. Having online classes at home is considered to be the cause of stress as it restricts family members' activities in the home environment. The participants who had flexible working hours were found to be one time more likely to be stressed out in comparison to the individuals who worked online during the COVID-19 pandemic in Turkey. Individuals who had a job with flexible working hours had a higher total score of DASS-21 in comparison to those who did not have a job with flexible working hours. Uncertainty and insecurity of the employment status may have caused more depression and anxiety, which could be attributed to the loss of hundreds of thousands of jobs worldwide (Verma & Mishra, 2020).

The participants who did not drink alcohol were one time more likely to have depression and stress in comparison to the participants who drank

alcohol during the COVID-19 pandemic in Turkey. While the participants who did not do physical activities were one time more likely to have stress in comparison to the participants who did physical activities, the participants who actively cleaned or washed more than usual were 1.5 times more likely to have depression, anxiety, and stress in comparison to others. Besides, the total score of DASS-21 was found to decrease in individuals who did physical activities in comparison to those who did not do physical activities during the COVID-19 pandemic. The total score of DASS-21 was found to increase 2.64 times more in participants who cleaned or washed in comparison to the individuals who did not. The participants who cooked more than usual during the COVID-19 pandemic were found to have 26% and 33% less depression and anxiety respectively. Besides, the total score of DASS-21 was found to decrease by 0.49 in individuals who cooked more than 16 hours per week compared to the participants who cooked less than 16 hours per week during the COVID-19 pandemic.

Resilient participants (OR=75% and 82%) were 25% and 18% more likely to have less depression and anxiety in comparison to the participants who were not resilient. As the total score of the Fear of Covid-19 Scale (*CFS*) increased, the participants were found to be 1.07 times more likely to be depressed, 1.11 times more likely to be anxious, and 1.08 times more likely to be stressed. The total score of DASS-21 was found to decrease as resilience scores increased, and it was found to increase as the Fear of Covid-19 Scale increased. Individuals who are resilient to depression, anxiety, and stress are reported to enhance good mental health. Some studies in the literature indicate that those with resilient personalities are affected by the COVID -19 pandemic negatively (Liu et al., 2020). Numerous studies have shown that resilient people are powerful individuals who can survive in the face of environmental problems and maintain interactions with the environment, overcome the condition that negatively affects mental health (for example stress), and eventually recover quickly (Garmezy, 1991; Henderson & Milstein, 1996; Karatas & Tagay, 2001; Mahmoud et al., 2012; Cheng, 2014). Another study also reported that individuals with higher levels of psychological resilience and active coping styles had lower levels of anxiety and depression during the COVID-19 pandemic (Song et al., 2021). Higher total fear scores indicate higher fear of COVID-19 (Satici et al., 2020). Fear is one of the basic human emotions playing a critical role in the evolutionary emotional continuity of humanity. Fear may be destructive or harmful for mental health when it exceeds a certain level (Yalcin et al., 2021). The fear of

the COVID-19 pandemic is very common among people during lockdowns. Therefore, the fear of COVID-19 has negative effects on mental health. Drinking alcohol and cooking reduce depression, anxiety, and stress. Cooking, drinking alcohol, doing physical activities, and having resilient personality characteristics were found to reduce the total score of DASS-21 during the COVID-19 pandemic in Turkey. On the other hand, having a job with flexible working hours, cleaning-washing more than usual, and having an increased total score of the Fear of Covid-19 were found to increase the total score of DASS-21 during the COVID-19 pandemic in Turkey.

During lockdowns with social distancing, individuals who have hobbies such as sports, physical activities and cooking are reported to have lower levels of depression, anxiety, and stress in comparison to individuals who do not have such hobbies or who do not have the ability to make use of their spare time. Leisure time is a very important source of well-being, so leisure activities create positive emotions and are one of the most important components of satisfaction (Argyle, 1996). Cheng and Furnham (2003) highlight that leisure time is the direct determinant of happiness. Hence, social activity is closely associated with happiness (Argyle and Lu 1990; Cenkseven and Akbaş, 2007).

In conclusion, behavioral changes are inevitable during the pandemic period. The findings of this study show that the COVID-19 pandemic has negative effects on mental health issues such as depression, anxiety, stress, and fear. During periods like this, mental health is considered to be as important as physical health. The importance of maintaining physical activities even in a physically isolated environment should be conveyed to society through social media. Conducting programs that enable individuals to spend their free time at home individually through social media tools could reduce the pressure on mental health. People should be taught and informed about both pandemic prevention measures and indoor leisure activities. Besides, psychological, social, and economic support should be provided to the community, especially to the vulnerable groups including those who are females, who are single, and who have low education level as well as vulnerable groups who lose their job and whose workplace is closed. The findings of this study are important in terms of making effective policy recommendations for reducing psychological diseases in society during the COVID-19 pandemic in Turkey.

Limitations

This study utilized cross-sectional data that were collected through an online survey using the convenience sampling method. The sample might therefore be biased and may not represent the whole population. For example, the poor, one of the most vulnerable groups of the pandemic, may not be represented in this study due to the difficulty in accessing the internet. Hence, the findings of this study may not be generalized to the whole population of the country.

Abbreviations

DAS Depression, Anxiety and Stress
DASS-21 Depression Anxiety Stress Scales
CFS Fear of Covid-19 Scale
BRS Brief Resilience Scale

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CHAPTER 5

EFFECTS OF PRESCHOOL TEACHERS' DEVELOPMENTALLY APPROPRIATE BELIEFS ON 3- TO 6-YEAR-OLD CHILDREN'S SOCIAL SKILLS: A LONGITUDINAL STUDY¹

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INTRODUCTION

The first six years of a child's life are critical to his or her development. During this period, the basic knowledge, skills and habits children acquire through experience effectively shape their future social and emotional lives alongside their academic skills (Bredekamp and Copple 1997). For this reason, the lives of pre-school-aged children should not be left to chance, but scientifically and systematically organized (Ari et al. 2006).

In 1987, United States' National Association for the Education of Young Children (NAEYC) published the first edition of its principles for Developmentally Appropriate Practice (DAP; see also Almesad 1999). Bredekamp and Copple (1997) subsequently expanded these NAEYC guidelines to reflect that socio-cultural contexts, especially diversity, were also important to DAP (Rababah 2015). Effectively, DAP is a roadmap that focuses on how children develop and how learning is best achieved. More specifically, it holds that children can achieve goals – even challenging ones – if such goals are appropriate to their ages, experience levels, interests, and existing skills (Bredekamp 2015). Accordingly, developmentally appropriate programs are those that focus on how each child develops and learns (Bredekamp and Copple 1997; NAEYC 2009), and conceive of the child as their center or source (Hart, Burst, and Charlesworth 1997).

Social skills can be defined as the whole skillset individuals need if they are to live their lives in harmony with their environments and to maintain regular social relations (Günindi 2010). Such skills – including empathy, joining in group activities, helping others, communication, and problem solving – encourage children to interact positively with their environment and with one another (Lynch and Simpson 2010).

According to DAP theory, early-age experiences are cumulative: positive social experiences with other children in the preschool years help a child develop effective social skills, learn to trust others, and to make friends. In subsequent years, with the benefit of such experiences, the child will have greater social competence and academic success than would otherwise be the case. And conversely, children who cannot acquire minimal social skills, and are rejected by their peers for that reason, are more likely to drop out of school and to experience mental-health or other health problems later in their lives (Asher et al. 1984, cited in NAEYC 2009).

Various prior studies have examined DAP from various angles. Specifically, these have included links between preschool teachers' mathematics activities and their DAP beliefs (Li, McFadden, and DeBey

2019); in-service and pre-service teachers' perceptions of DAP (Abu-Jaber, Al-Shawareb, and Geith 2010; Betawi and Jabbar 2019); the developmental appropriateness of preschool teachers' beliefs and practices regarding classrooms' physical environments, classroom management, and behavior management (Şahin-Sak and Sak 2016; Şahin-Sak, Tantekin-Erden, and Pollard-Durodola 2018); whether preschool teachers' beliefs about DAP predict their practices (Mohamed and Al-Qaryouti 2016); the relation of preschool teachers' and teacher candidates' social-competence teaching strategies to their DAP beliefs (Kim and Han 2015); and preschool teachers' and parents' beliefs about DAP and developmentally inappropriate practices (DIP) (Demircan 2012).

Scholars have also conducted extensive explorations of preschool children's social skills in both home and school environments (e.g., Maleki et al. 2019; Pekdoğan 2016; Yener and Akduman 2015). These have covered the effect of gender on the relationship between teacher-child interaction and children's social skills (Mohamed 2018); inconsistencies between parents' and teachers' evaluations of children's social skills (Heyman et al. 2018); the impact of particular preschool education programs integrating field-trip activities, physical education, or art on children's social-emotional development (Kızıltaş and Sak 2018; Tsangaridou et al. 2014; Yazıcı 2017); the relationship between teacher-child interaction and children's cognitive and social skills (Hu et al. 2017); the relationship between children's early academic achievements and their learning-related social skills (Ansari and Gershoff 2015); preschool teachers' and parents' views of supporting social skills (Özyürek and Ceylan 2014); the impact of six year olds' social skills on their school readiness (Tunçeli and Akman 2014); the relation of mothers' parenting styles to their perceptions of their children's social skills (Abu Taleb 2013); the effect of gender on preschool children's social skills (Sheikhzakaryaie et al. 2012); the effectiveness of games in the acquisition of social skills (Kascsak 2012); and the relationship between preschoolers' social functionality and their academic development (Arnold et al. 2012).

Taken as a whole, the findings of the studies cited above uphold both the importance and the specific features of DAP as delineated by theorists. Yet, despite preschool teachers around the world being expected to adopt DAP, no study has hitherto examined the relationship between such teachers' DAP beliefs and the social skills of the children in their classrooms. As well as filling that important gap in the literature, the current study is expected to

provide critical information in support of policy-makers', school administrators' and preschool teachers' planning related to child development.

1. METHODOLOGY

1.1. Research Design

If preschool children's social skills are indeed affected by their teachers' beliefs about DAP, it is reasonable to expect that such an effect will become more marked over time, i.e., as the duration of the children's exposure to a particular teacher increases. Therefore, a longitudinal survey approach was selected. In this quantitative study, the children's social skills were measured three times at three-month intervals.

1.2. Participants

In the first phase of the study, the Developmentally Appropriate Practice Teacher Beliefs Scale (DAP-TBS) was administered to 350 teachers, selected randomly from among those working in the central districts of Van Province, Turkey. Their demographic characteristics and professional status are presented in Table 1, below.

Table 1. Demographic Characteristics and Professional Status of Preschool Teacher Participants

Variables		n	%
Gender	Female	318	90.9
	Male	32	9.1
Age	23 and under	65	18.6
	24-28	155	44.3
	29-33	74	21.1
	34 and above	56	16.0
Professional seniority	1-3 years	145	41.4
	4-6 years	117	33.4
	7-9 years	44	12.6
	10 years and above	44	12.6
Education level	Associate degree	38	10.9
	License	312	89.1
Contract type	Permanent	301	86.0
	Temporary	49	14.0
Pupil age group	3-4 years	97	27.7
	5 years	223	63.7
	6 years	30	8.6
School sector	Private	36	10.3
	Public	314	89.7
Institution type	Kindergarten	173	49.4
	Nursery class	177	50.6
Number of children in the class	5-10	46	13.1
	11-15	89	25.4
	16-20	138	39.4
	21-25	77	22.0

The other 350 participants in this study comprised 167 children whose teachers were assessed as having high DAP beliefs, and 183 children whose teachers’ DAP beliefs were low. Their demographic information is shown in Table 2, below.

Table 2. Demographic Characteristics of Preschool Children Participating in the Study

Teacher DAP beliefs	Child’s gender	N	%
High	Female	85	50.9
	Male	82	49.1
Low	Female	95	51.9
	Male	88	48.1
Child’s Age			
High	6	89	53.3
	5	58	34.7
	4	20	12.0
Low	6	88	48.1
	5	84	45.9
	4	11	6.0
Time in preschool as of start of study			
High	1 year	124	74.3
	2 years	43	25.7
Low	1 year	142	77.6
	2 years	41	22.4

1.3. Data-collection Tools

In addition to the DAP-TBS, data for this study were collected through two demographic information forms, one for teachers and the other for children, and the teachers’ version of the Preschool Social Skills Assessment Scale (PSSAS). The demographic form for teachers covered all the categories of information set forth in Table 1, and that for children, all the categories of information shown in Table 2, plus number of siblings, mother tongue, age of parents, parents’ education level, parents’ professions, family income, home type, and family type.

1.3.1. Developmentally Appropriate Practice Teacher Beliefs Scale

This instrument consists of the belief sub-scale of Kim and Buchanan’s (2009) Teacher Belief and Practice Scale, adapted for use in Turkey by Şahin-Sak and Sak (2017). It consists of 29 items, including one open-ended item, divided into three dimensions: 1) developmentally

appropriate (n=13, i.e, items 2-5, 7-8, 10, 12, and 14-18); 2) developmentally inappropriate (n=9, i.e., items 6, 9, 11, 13, and 25-29, all of which were reverse-scored); and 3) family, culture and inclusion (n=6, i.e., items 19-24). The Cronbach's alpha reliability coefficient for all items on this instrument was calculated as .85.

The items were all answered on five-point Likert-type scales, ranging from 1=not at all important to 5=extremely important. Thus, the highest possible score on the DAP-TBS was 140, and the lowest, 28, which for ease of analysis was converted to a scale of 0-112. The higher the score, the stronger the teacher's belief in DAP. The 112-point scale was divided into three roughly equal parts, with scores of 0-37 deemed to indicate low DAP beliefs; scores of 38-74, moderate DAP beliefs; and scores of 75-112, high DAP beliefs.

1.3.2. Preschool Social Skills Assessment Scale Teacher Form

The PSSAS, which was used to compare children's social skills at the beginning, middle and end of the school year, was developed by Ömeroğlu et al. (2015) for use with 3 to 5 year olds. It consists of 49 items divided into four dimensions, as follows: 12 items for capturing initial skills (i.e., items 1-12); another 12 (i.e., 13-24) for measuring academic-support skills; 13 items (25-37) for friendship skills; and 12 (38-49) for emotional-management skills. **Initial skills** include greetings, addressing peers by name, introducing oneself, speaking clearly, introducing others, giving thanks, asking for permission, apologizing, asking for help, saying goodbye, asking questions, and expressing one's feelings. **Academic-support skills** include answering questions, obeying instructions, producing alternative solutions, ending an ongoing activity, staying engaged, making efforts to reach goals, speaking at appropriate times, holding the floor, expressing one's thoughts, offering criticism, and being open to criticism. **Friendship skills** include understanding friends' feelings, protecting others' rights, reacting appropriately to friends' opinions, cooperating with friends, appreciating friends, joining peer groups, waiting one's turn, sharing, offering help, inviting others to play, obeying games' rules and accepting their outcomes, and reacting appropriately to friends' emotions. Finally, **emotional-management skills** include displaying emotions without disturbing others, coping with frustration, coping with mistakes, understanding others' feelings, staying calm under pressure, coping with mockery, being able to answer "no" and accepting "no" answers from others, delaying requests, thinking before

reacting, protecting one's own rights, and ignoring problems that are likely to be resolved spontaneously. Responses are given on a five-point Likert-type scale ranging from 1= "almost never good" to 5= "almost always good" (Ömeroğlu et al. 2015). Accordingly, the highest possible score for the initial skills, academic-support skills and emotional-management skills dimensions is 60, and the lowest, 12; and the highest and lowest possible scores for the friendship-skills dimension are 65 and 13.

The four-factor structure of the scale was examined using confirmatory factor analysis (CFA), which found a medium to high level of relationship between the factors. Thus, one can conclude that the four types of skills defined as dimensions of social skills are not in fact independent of each other. Nevertheless, the results show that the data fit of the four-factor model of the scale is at an acceptable level (RMSEA=.09, GFI=.66, RMR=.06, CFI=.96, and NFI=.95).

When the researchers looked at the correlations between the corrected item-factor scores to evaluate how well the PSSAS's items distinguished among children in terms of their social skills, and their contribution to the variance related to the factors, such correlations were found to be over .40 for all items. Cronbach's alpha reliability coefficients were .96 for the instrument as a whole, .90 for initial skills, .90 for academic-support skills, .92 for friendship skills, and .92 for emotional-management skills. Thus, it is possible to accept the instrument in its current form as a valid tool for measuring and distinguishing the social skills of 48- to 66-month-old children (Ömeroğlu et al. 2015).

1.4. Data-collection Process

The study was carried out in several stages. In the first, lists of public and private schools in the central districts of Van Province were prepared, based on information from the Van Provincial Directorate of National Education, and the necessary permissions to conduct the study were obtained. Then, the purpose of the study was explained to those schools' teachers via their administrations. All 350 preschool teachers who volunteered then completed the DAP-TBS.

Next, these teachers' individual DAP-TBS scores were compared. In cases where more than two teachers were working in the same school, the two with the highest and lowest scores were selected, resulting in the sample including 26 pairs of one high-DAP and one low-DAP teacher from the same school.

In the following stage, all the teachers were asked to fill in the PSSAS Teacher Form a total of three times, i.e., approximately six weeks after the beginning of the academic year; in mid-February; and in mid-May. When the study started, there were 411 child participants, but 61 of them transferred to non-participating schools, or discontinued their schooling, before the end of the school year.

1.5. Data Analysis

The researchers commenced data analysis by examining the collected data's normality and homogeneity using Kolmogorov-Smirnova and Levene tests, the former being especially appropriate for samples of more than 50 people. The Kolmogorov-Smirnova normality test showed the data were normally distributed ($n=350$, $p>.05$), and the Levene homogeneity test that they were homogeneously distributed ($n=350$, $p>.05$).

Next, an independent-samples *t*-test and one-way repeated measures ANOVA were performed on the data about the preschool teachers' DAP beliefs. The former is a parametric test performed to determine whether there is a statistically significant difference between the averages of data values obtained from different groups (Can 2016). The reason for using the latter, which is used to compare the averages of the data obtained as a result of consecutive measurements from the same data source (Can 2016), was that the preschoolers' social skills were measured at three time-points. Lastly, Bonferroni testing was used to determine the source of the differences between the means. All data analyses were carried out using the SPSS statistical package program.

2. RESULTS

2.1. Preschool Teachers' Beliefs Related to Developmentally Appropriate Practice

2.1.1. Levels of Beliefs

It can be seen from Table 3 that the sampled preschool teachers' mean score for DAP belief was just over 102, out of a possible 140 points: i.e., on the borderline between the middle range (66-102) and the high range (103+).

Table 3. Preschool Teachers' DAP Belief Levels

DAP	N	\bar{x}	Sd
Preschool teachers	350	102.27	11.16

2.1.2. Differences in Beliefs by Teacher Gender, Age, Seniority, Education Level, and Contract Type

The independent-samples *t*-test conducted to determine whether the sampled preschool teachers’ DAP beliefs varied according to their gender found that such variance was significant ($t_{350}=2.017, p<.05$), with the female teachers’ average belief score ($\bar{x}=102.65$) being significantly higher than that of their male counterparts ($\bar{x}=98.50$). However, no significant differences in beliefs were found by age ($F_{346}=.497, p>.05$), seniority ($F_{346}=.563, p>.05$), education level ($t_{348}=1.674, p>.05$), or contract type ($t_{348}=-1.569, p>.05$).

Table 4. *t*-Test Results, DAP-TBS Scores by Teacher Gender

	Gender	N	\bar{x}	Sd	<i>t</i>	<i>p</i>
DAP	Female	318	102.65	11.08	2.017	.044
	Male	32	98.50	11.39		

2.1.3. Differences in Beliefs by Institution Type and Sector

An independent-samples *t*-test conducted to determine whether preschool teachers’ DAP differ according to whether they worked in a stand-alone kindergarten or a nursery class within a wider school found no significant difference between these two settings ($t_{348}=.374, p>.05$). However, a similar test conducted to determine whether their DAP beliefs differed according to whether their institution was state-run or private found a significant difference ($t_{348}=2.461, p<.05$), with private-school teachers’ average DAP beliefs ($\bar{x}=106.58$) being significantly higher than those of their public-school counterparts ($\bar{x}=101.78$).

Table 5. *t*-Test Results, DAP-TBS Scores by Sector

	Sector	N	\bar{x}	Sd	<i>t</i>	<i>p</i>
DAP	Private	36	106.58	11.50	2.461	.014
	Public	314	101.78	11.03		

2.2. Children’s Social Skills

2.2.1. Differences in Children’s Social Skills by Classroom Teachers’ Level of Belief in Developmentally Appropriate Practice

To determine whether the social skills of the sampled children changed more significantly over the course of the focal school year when their teachers had high vs. low DAP beliefs, an independent-samples *t*-test was conducted, and its results shown in Table 6, below.

Table 6. Social-skills Measurements, Beginning of the Academic Year

	Teacher's Belief Level	n	\bar{x}	Sd	<i>t</i>	<i>p</i>
Initial Skills	High	167	44.26	11.22	1.609	.10
	Low	183	42.44	9.94		
Academic-support Skills	High	167	45.43	9.82	.052	.95
	Low	183	45.37	9.50		
Friendship Skills	High	167	47.71	10.95	1.223	.22
	Low	183	46.36	9.63		
Emotional-management Skills	High	167	33.18	9.09	.609	.54
	Low	183	32.63	7.67		

As the table indicates, at the beginning of the academic year, the children's social skills did not differ across teacher belief levels in any skill dimension (i.e., initial skills, $t_{348}=1.609$, $p>.05$; academic-support skills, $t_{348}=.052$, $p>.05$; friendship skills, $t_{348}=1.223$, $p>.05$; and emotional-management skills, $t_{348}=.609$, $p>.05$).

However, as Table 7 shows, by the middle of the school year, the children's initial skills ($t_{348}=2.675$, $p<.05$) and academic-support skills ($t_{348}=2.712$, $p<.05$) had both come to differ significantly according to their teachers' DAP beliefs, with high teacher belief associated with higher skill scores in both these dimensions. On the other hand, there was no significant difference by teacher DAP belief on either the friendship-skills ($t_{348}=1.675$, $p>.05$) or emotional management management-skills dimensions ($t_{348}=1.421$, $p>.05$) at this time-point.

Table 7. Social-skills Measurements, Middle of the Academic Year

	Teacher's Belief Level	n	\bar{x}	SD	<i>t</i>	<i>p</i>
Initial Skills	High	167	49.9820	8.4171	2.675	.008
	Low	183	47.5355	8.6607		
Academic-support Skills	High	167	50.0539	8.2624	2.712	.007
	Low	183	47.6339	8.4067		
Friendship Skills	High	167	53.4072	9.0174	1.675	.095
	Low	183	51.8415	8.4659		
Emotional-management Skills	High	167	41.4850	8.6962	1.421	.156
	Low	183	40.2732	7.2393		

Table 8. Social-skills Measurements, End of the Academic Year

	Teacher's Belief Level	n	\bar{x}	Sd	t	p
Initial Skills	High	167	55.25	6.61	6.712	.000
	Low	183	50.11	7.60		
Academic-support Skills	High	167	55.33	7.33	6.590	.000
	Low	183	49.55	8.90		
Friendship Skills	High	167	57.17	8.45	4.354	.000
	Low	183	52.53	11.16		
Emotional-management Skills	High	167	45.20	7.64	4.981	.000
	Low	183	41.08	7.80		

2.2. Initial Skills of Children with High-DAP Teachers

Table 9 presents the arithmetic means and standard deviations of the measurements of the preschool teachers with high DAP beliefs at the beginning, middle and end of the school year, and Table 10, the results of one-way repeated measures ANOVA performed to determine whether there was a significant difference between the means.

Table 9. Descriptive Values, Initial Skills, High-DAP Group

	N	\bar{X}	Sd
Beginning of the Academic Year	167	44.26	11.22
Middle of the Academic Year	167	49.98	8.41
End of the Academic Year	167	55.25	6.61

Table 10. Repeated Measures ANOVA Results, Initial Skills, High-DAP Group

Source of Variance	Sum of Squares	Sd	Mean of Squares	F	p	Significant Difference
Measurement	10075.992	2	5037.996	144.432	.000	C>B C>A B>A
Subjects	10070.527	1	10070.527			
Error	11580.675	332	34.882			
Total		166				

A=November administration B=February administration C=May administration

As Table 10 shows, the initial-skills scores of those children whose preschool teachers had high DAP beliefs differed significantly from the beginning of the year to the middle, from the middle to the end, and from the beginning to the end ($F_{2,332}=144.432$, $p<.01$). Bonferroni testing confirmed that the average initial skills of children with high-DAP teachers at end of the school year ($\bar{X}=55.25$) was significantly higher than their average in the middle of the school year ($\bar{X}=49.98$) or at the beginning of the school year

(\bar{x} =44.26). In addition, it showed that these children's average initial skills in the middle of the school year (\bar{x} =49.98) was significantly higher than at the beginning of the school year (\bar{x} =44.26).

2.2.3. Academic-support Skills of Children with High-DAP Teachers

Tables 11 and 12 present the parallel results for change over time in the academic-support skills of children with high-DAP teachers.

Table 11. Descriptive Values, Academic-support Skills, High-DAP Group

	N	\bar{x}	Sd
Beginning of the Academic Year	167	45.43	9.82
Middle of the Academic Year	167	50.05	8.26
End of the Academic Year	167	55.33	7.33

Table 12. Repeated Measures ANOVA Results, Academic-support Skills, High-DAP Group

Source of Variance	Sum of Squares	Sd	Mean of Squares	F	p	Significant Difference
Measurement	8202.842	2	4101.421			C>B
Subjects	8190.766	1	8190.766	104.392	.000	C>A
Error	13043.824	332	39.289			B>A
Total		166				

A=November administration B=February administration C=May administration

Again, the social skills of the pupils of high-DAP teachers – in this case, their academic-support skills – differed significantly across the three time-points ($F_{2,332}=104.92$, $p<.01$). Bonferroni testing showed that their academic-support skills at the end of the school year (\bar{x} =55.33) were, on average, significantly higher than at the middle of the school year (\bar{x} =50.05) or the beginning (\bar{x} =45.43); and that their average academic support-skills score from the middle of the school year (\bar{x} =50.05) was significantly higher than that from the beginning (\bar{x} =45.43).

2.2.4. Friendship Skills of Children with High-DAP Teachers

The friendship skills of the pupils of high-DAP teachers also changed significantly through the school year ($F_{2,332}=89,456$, $p<.01$), as shown in Tables 13 and 14.

Table 13. Descriptive Values, Friendship Skills, High-DAP Group

	N	\bar{X}	Sd
Beginning of the Academic Year	167	47.71	10.95
Middle of the Academic Year	167	53.40	9.01
End of the Academic Year	167	57.17	8.45

Table 14. Repeated Measures ANOVA Results, Friendship Skills, High-DAP Group

Source of Variance	Sum of Squares	Sd	Mean of Squares	F	p	Significant Difference
Measurement	7586.551	2	3793.275			C>A
Subjects	7483.716	1	7483.716	89.456	.000	C>B
Error	14078.116	332	42.404			B>A
Total		166				

A=November administration B=February administration C=May administration

Bonferroni tests again confirmed that this group of children’s average score for this dimension of social skills was significantly higher at the end of the school year ($\bar{X}=57.17$) than in the middle ($\bar{X}=53.40$) or at the beginning ($\bar{X}=47.71$); and that the rise in this measure between the beginning and the middle was also significant (i.e., $\bar{X}=47.71$ vs. $\bar{X}=53.40$).

2.2.5. Emotional-management Skills of Children with High-DAP Teachers

Tables 15 and 16 present the parallel results regarding this group of children’s emotional-management skills.

Table 15. Descriptive Values, Emotional-management Skills, High-DAP Group

	N	\bar{X}	Sd
Beginning of the Academic Year	167	33.18	9.09
Middle of the Academic Year	167	41.48	8.69
End of the Academic Year	167	45.20	7.64

Table 16. Repeated Measures ANOVA Results, Emotional-management Skills, High-DAP Group

Source of Variance	Sum of Squares	Sd	Mean of Squares	F	p	Significant Difference
Measurement	12644.084	2	6322.042			C>A
Subjects	12060.027	1	12060.027	128.448	.000	C>B
Error	16340.583	332	49.219			B>A
Total		166				

A=November administration B=February administration C=May administration

Change over time in this dimension of social skills was again significant ($F_{2,332}=128.448, p<.01$), as confirmed by Bonferroni testing, with the average emotional-management score from the end of the school year ($\bar{x}=45.20$) significantly higher than either that from the middle ($\bar{x}=41.48$) or the beginning ($\bar{x}=33.18$). In addition, the average for this dimension from the middle of the school year ($\bar{x}=41.48$) was significantly higher than that from the beginning ($\bar{x}=33.18$).

2.2.6. Initial Skills of Children with Low-DAP Teachers

We turn now to the group of children whose teachers had low DAP-TBS scores. As shown in Tables 17 and 18, there were significant differences between these children’s initial-skills scores at the study’s three time-points ($F_{2,364}=83.952, p<.01$).

Table 17. Descriptive Values, Initial Skills, Low-DAP Group

	N	\bar{x}	Ss
Beginning of the Academic Year	183	42.44	9.94
Middle of the Academic Year	183	47.53	8.66
End of the Academic Year	183	50.11	7.60

Table 18. Repeated Measures ANOVA Results, Initial Skills, Low-DAP Group

Source of Variance	Sum of Squares	Sd	Mean of Squares	F	p	Significant Difference
Measurement	5570.044	2	2785.022			
Subjects	5378.167	1	5378.167	83.952	.000	C>A
Error	12075.290	364	33.174			B>A
Total		182				

A=November administration B=February administration C=May administration

Bonferroni testing confirmed that this group of children’s average initial-skills score from the end of the school year ($\bar{x}=50.11$) was significantly higher than that from the beginning ($\bar{x}=42.44$) or the middle ($\bar{x}=47.53$), while that from the middle was significantly higher than that from the beginning ($\bar{x}=42.44$).

2.2.7. Academic-support Skills of Children with Low-DAP Teachers

Tables 19 and 20 present the parallel results for change over time in the low-DAP group’s academic-support skills.

Table 19. Descriptive Values, Academic-support Skills, Low-DAP Group

	N	\bar{x}	Ss
Beginning of the Academic Year	183	45.37	9.50
Middle of the Academic Year	183	47.63	8.40
End of the Academic Year	183	49.55	8.90

Table 20. Repeated Measures ANOVA Results, Academic-support Skills, Low-DAP Group

Source of Variance	Sum of Squares	Sd	Mean of Squares	F	p	Significant Difference
Measurement	1602.364	2	801.182			
Subjects	1598.975	1	1598.975	12.30	.000	C>A
Error	23462.302	364	64.457			B>A
Total		182				

A=November administration B=February administration C=May administration

For this social-skills dimension, too, this group of children exhibited a significant difference across the academic year ($F_{2-364}=12.430, p<.01$). Bonferroni testing showed that the end-of-year average ($\bar{x}=49.55$) and middle-of-year average ($\bar{x}=47.63$) were both significantly higher than the beginning-of-year average ($\bar{x}=45.37$).

2.2.8. Friendship Skills of Children with Low-DAP Teachers

Tables 21 and 22 present the parallel results for the low-DAP group’s friendship skills.

Table 21. Descriptive Values, Friendship Skills, Low-DAP Group

	N	\bar{x}	Ss
The Beginning of the Academic Year	183	46.36	9.63
Middle of the Academic Year	183	51.84	8.46
End of the Academic Year	183	52.53	11.16

Table 22. Repeated Measures ANOVA Results, Friendship Skills, Low-DAP Group

Source of Variance	Sum of Squares	Sd	Mean of Squares	F	p	Significant Difference
Measurement	4179.916	2	2089.958			
Subjects	3482.626	1	3482.626	34.367	.000	C>A
Error	22136.084	364	60.813			B>A
Total		182				

A=November administration B=February administration C=May administration

There was a significant difference in this group’s friendship skills over time ($F_{2-364}=34.367, p<.01$). Bonferroni testing confirmed that the mean

of this dimension of social skills at the end of the school year ($\bar{x}=52.53$) was significantly higher than at the beginning ($\bar{x}=46.36$). In addition, it was found that the mid-year average ($\bar{x}=51.84$) was significantly higher than the beginning-of-year average ($\bar{x}=46.36$).

2.2.9. Emotional-management Skills of Children with Low-DAP Teachers

Tables 23 and 24 present key information about the emotional-management skills of the children whose teachers' DAP beliefs were low.

Table 23. Descriptive Values, Emotional-management Skills, Low-DAP Group

	N	\bar{x}	Ss
Beginning of the Academic Year	183	32.63	7.67
Middle of the Academic Year	183	40.27	7.23
End of the Academic Year	183	41.08	7.80

Table 24. Repeated Measures ANOVA Results, Emotional-management Skills, Low-DAP Group

Source of Variance	Sum of Squares	Sd	Mean of Squares	F	p	Significant Difference
Measurement	7942.692	2	3971.346			
Subjects	6521.926	1	6521.926	121.497	.000	C>A
Error	11897.974	364	32.687			B>A
Total		182				

A=November administration B=February administration C=May administration

Significant change over time was again identified ($F_{2,364}=121.497$, $p<.01$). Bonferroni test results showed that the end-of-year ($\bar{x}=41.08$) and mid-year ($\bar{x}=40.27$) average scores for this dimension of social skills were both significantly higher than beginning-of-year average ($\bar{x}=32.63$). Again, however, the mid-year and end-of-year averages were not significantly different from each other.

3. DISCUSSION

The 350 sampled Turkish preschool teachers' mean DAP belief score was at the upper bound of the middle range for such scores. This may have been because preschool teachers have internalized DAP principles, via the emphasis that is placed on them by Turkey's child-centered preschool education program. In other words, teachers are aware that the child should be at the center of the program, and that each child has unique characteristics (Abu-Jaber, Al-Shawareb and Geith 2010). This tends to support the findings

of various prior studies. For instance, high DAP beliefs were previously found among teachers by Erdiller (2003) and Şahin-Sak, Tantekin-Erden and Pollard-Durodola (2018) in Turkey; Rentzou and Sakellariou (2011) in Greece; Abu-Jaber, Al-Shawareb and Geith (2010) in Jordan; Hegde and Cassidy (2009) in India; and Faour (2003) in Libya.

The present study's female teacher participants reported significantly stronger DAP beliefs, on average, than their male counterparts did. This could have been the result of cultural factors. Kuzucu (2011) noted that, although marriages and family roles have been undergoing various changes, fathers still tend to be seen as maintainers of discipline while mothers are more likely to be primary caregivers. If one can accept Lamb and et al.'s (1985) argument that, even though fathers are responsible for childcare, mothers are better at it, it is perhaps unsurprising that female teachers have been found more prone to recognize individual children's interests and needs, to meet those needs flexibly, and to engage in play with them. In fact, Steedman (1985; cited in Langford 2010) described female preschool teachers as embracing both dimensions of the emerging modern concept of good motherhood: i.e., as salaried workers who nevertheless spend the whole day nurturing children. In Turkey, given the widespread idealization of the latter nurturing role and association of it particularly with women, it is unsurprising that the female preschool teachers in the present study's sample were found to have more developmentally appropriate beliefs than the male ones. Conversely, Turkish male teachers appear to adopt more disciplined and prescriptive approaches, in line with their society's expectations (Sak, Şahin Sak, and Yerlikaya 2015).

The sampled preschool teachers' ages, work experience, education levels, contract type, and institution type had no statistically significant relationship to their DAP beliefs. This could be partially explicable by the fact that the majority of the teacher participants had 10 years' experience or less. As such, most would have been trained during their associate or undergraduate years in accordance with the post-2006 format of Turkey's preschool teacher education program. That program was designed to foster child-centered, flexible and play-based preschool education that supports learning and creativity via exploration, daily life experiences, and school-family cooperation, while also taking account of cultural values, universal values, and individual differences (Ministry of National Education [MoNE] 2013). In short, since 2006, but especially since 2013, Turkish preschool teachers have been trained in accordance with DAP principles; and the role of undergraduate and graduate educational content in shaping teachers' beliefs,

independently from other variables, is well-documented (Lampert 1990; Schmidt and Kennedy 1990).

Nevertheless, some studies have yielded contrasting results. For example, Bittner-Simpson (2013) found that teachers' educational levels and professional perceptions did affect their DAP beliefs, but that work-experience levels did not. Abu-Jaber, Al-Shawareb, and Geith (2010), meanwhile, reported no significant differences in teachers' beliefs across education levels, work experience or age, but clear differences between the beliefs of those who had specialized in education and those who had not. Erdiller (2003) and McKenzie (2013) also found no relationship between teachers' beliefs and their experience levels; but Lee (2003) reported that older teachers' beliefs were better suited to fostering child development than younger teachers' beliefs were. And a study by Hegde and Cassidy (2009) concluded that the education teachers received and their experiences in the field both affected their beliefs about DAP.

Importantly, at the beginning of the present study's focal academic year, the sampled preschoolers' social skills did not differ significantly in any dimension across teachers' levels of DAP belief, as measured by the DAP-TBS. Given the strong similarities between the two groups of children, both demographically and in terms of the curriculum they received, it appears likely that the increasing divergences in their respective social skills that were observed at this study's two subsequent time-points were related to their teachers' DAP-belief levels. Specifically, by mid-year, the initial skills and academic skills of those children whose teachers had high DAP beliefs were higher than they were among those children whose teachers had low DAP beliefs – though no significant differences between the two groups of children were yet discernible in the dimensions of friendship skills and emotional-management skills. This result was expected, in that the preschool-education process is expected to equip each child with the basic skills necessary for harmonious group membership. Additionally, it is reasonable to expect that teachers with high DAP beliefs will incorporate play into a wider array of teaching and learning activities, as such teachers are more likely to be aware of its importance to children's language, thinking and social skills (Walsh et al. 2010). The lack of a significant difference in the other two social-skills dimensions, meanwhile, could be explained by the fact that the researchers' mid-year evaluation was conducted shortly after a mid-term break, and a two-week absence from their classmates could have represented a setback for some children in the development of these two types of social skills.

The measurements made at the end of the academic year indicated that all four dimensions of the sampled preschoolers' social skills were higher among those whose teachers had high DAP beliefs than among those whose teachers had low DAP belief. As Friedman and Snow (2015) noted, DAP emphasizes the importance not only of doing math, science or literacy preparation activities for children, but also of providing them with opportunities to improve their social skills. This is because, from a developmental perspective, social skills support learning across various disciplines, as well as being critical to each child's development. As such, a teacher with a strong belief in DAP can be expected to engage his/her pupils in activities aimed at building a variety of social skills, ranging from the most basic skills to the ability to manage emotions.

At this study's second and third time-points, the social skills of both groups of children improved as compared to the previous measurement; in each case, however, the children with high-DAP teachers improved more. This echoes prior results by Marcon (1993) and Jones and Gullo (1999), and may reflect that – in classrooms where DAP is adopted – growth in children's social and academic skills are both supported by the child being seen as a whole (Bredenkamp and Copple 1997). The lesser degree of improvement in the social skills of those children with low-DAP teachers, on the other hand, could easily have resulted from their entry into, and socialization within, a social environment.

In the light of these findings, and given that the preschool curriculum in Turkey closely reflects the principles and philosophy of DAP, in-service trainings should be provided to further support this philosophy. Such intervention would be especially useful to those preschool teachers who can be identified as having low levels of DAP belief via the DAP-TBS or other similar tools that could be developed. Academic courses on DAP could also usefully be added to Turkey's undergraduate curriculum in preschool education.

In-service training and activities that will support children's social skills, in accordance with DAP philosophy and principles, should also be organized. Such interventions should take account of the age characteristics of the groups of children teachers work with, those children's individual characteristics, and the features of the societies they live in. Introductory seminars, conferences, and programs of courses aimed at raising preschool teachers' awareness of DAP should also be offered. However, this is not to say that such training should be limited to teachers, since an array of

personnel working in preschool institutions would also benefit from greater awareness of these principles. Also, given that social skills are not acquired solely at school, and that DAP emphasizes school-family cooperation, comprehensive activities aimed at building children's social skills should be planned with parents.

In terms of directions for future research, based on the present study's finding that female preschool teachers' average DAP beliefs were higher than male teachers', the effect of gender on DAP beliefs and practices is worthy of further in-depth examination. Additionally, given that this study only looked at preschool teachers' DAP beliefs, it might be useful to expand its approach to cover teachers of other grade levels as well as other teacher-belief categories. Future research should also delve into the mechanisms by which teachers' beliefs and practices affect children's social-skills development, perhaps via the preparation of an experimental social-skills program rooted in DAP principles. Lastly, the present study's finding of potential slippage in two dimensions of preschool children's social skills following a holiday period raises interesting questions about the longevity of such skills, which would also be worth addressing in future studies.

4. CONCLUSION AND SUGGESTIONS

The results of the study revealed that the means of preschool teachers' beliefs about DAP were at the middle range level but very close to high level. Also, female teachers in the study had significantly stronger developmentally appropriate beliefs than their male colleagues had. According to the results, preschool teachers' ages, experiences, education level, working status (regular-hourly paid) and institutions where they worked have no statistically significant effects on their beliefs related to DAP.

In the measurements made at the beginning of the academic year, it was found that the social skills of pre-school children did not differ significantly in the sub-dimensions of their initial skills, academic skills, friendship skills and emotion management skills, according to their teachers' beliefs about the DAP.

In the measurements made in the middle of the academic year, it was found that the social skills of the children in the classrooms of the preschool teachers with a high level of belief about the DAP were higher in the initial skills and academic skills sub-dimensions than those in the class of those with low beliefs. No significant difference was found in the sub-dimensions of friendship skills and emotion management skills.

In the measurements made at the end of the academic year, it was found that the social skills of children in the classrooms of preschool teachers with a high level of belief about the DAP were higher than those of the teachers with low beliefs in the sub-dimensions of their initial skills, academic skills, friendship skills and emotion management skills.

Another result of the study is that there is an improvement in the social skills of the children in the classrooms of teachers with high and low beliefs about the DAP in the second and third measurement compared to the previous one; however, in both measurements, it was revealed that the social skills of the children in the classroom of teachers with high beliefs about the DAP were better.

When the findings of the study are considered, some seminars can be organized for especially teachers with lower developmentally appropriate beliefs to explain them developmentally appropriate philosophy. Also, training related to developmentally appropriate practices can be given not only to preschool teachers, but also to the administrators and other personnel working in preschool education institutions. Considering that social skills will not only be skills to be acquired at school and also taking into account the DAP's emphasis on school-family cooperation, comprehensive social skills activities can be planned with parents.

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CHAPTER 6

EVALUATION OF MALATYA VOCATIONAL SCHOOL CLASSROOMS IN TERMS OF NOISE AND LIGHTING

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1. INTRODUCTION

Determining the effects of physical risk factors (noise, vibration, lighting, thermal comfort, radiation, etc.) of educational environments on the quality of education and the health of the residents (students and academic staff), expressing them quantitatively and controlling these variables will directly affect the educational efficiency. affects (Tuncer et al., 2012). Physical conditions in education and training areas create stress on students. Making these environments ideal in terms of occupational health and safety will not only provide morale and motivation for students and teachers, but also contribute to the quality of education (Aydın et al., 2011). It is known that the educational environments in which the learning activity is carried out are effective in the perception levels of the students in physical, social and psychological terms. In other words, the classes prepared for education and training should primarily meet certain standards. The most basic way to increase perception and learning power is classroom environments that are prepared in the best physical, social and psychological sense. It is easier for students to learn in classrooms that meet certain criteria in terms of occupational health and safety (Önder et al., 2012). For this reason, physical factors such as lighting, noise, air-conditioning, thermal comfort and radiation should increase the educational desire and efficiency of the students.

Noise can be defined as unwanted and unpleasant sound. Noise causes adverse effects such as increased heart rhythm numbers, hearing loss, dizziness, slowing of the digestive system, dilated pupils, decreased reflexes, increased cholesterol, decreased electrical resistance of the skin, and increased hormone levels in the adrenal glands (Eleftheriou, 2002; Frank et al., 2003; Fujiwara et al., 1997; Gaja et al., 2003). Continuous exposure of employees to noise creates a negative effect on the sense organ and causes occupational disease due to partial or permanent hearing loss. The effect of the noise here may vary depending on the frequency, duration, level of the noise, distribution in the working time period, age of the personnel and hereditary disorders (Cui et al., 2003; Ayr et al., 2003; Bennett, 1991). Some researchers have analyzed the noise that occurs in educational institutions. Özbıçakçı et al., (2012), a number of studies have been carried out in order to raise awareness of the noise, which is a physical risk factor in classrooms and corridors in a primary school in İzmir, as well as the level of noise. In the beginning, after the students in the relevant educational institution were informed about the noise sources, they gave information about reducing the noise. Before and after the briefing, measurements were taken with the help of a dosimeter during the

lesson and during recess. Before the information, the noise levels obtained in the corridors were determined as the lowest 80.75 dB and the highest 87.25 dB, while the noise levels obtained after the information were determined as the lowest 80.25 dB and the highest 84.50 dB. Çetinkaya et al., (2014) determined noise levels in 10 different pre-school education institutions, cafeterias and playgrounds in Uşak with the help of dosimeter and obtained quantitative data about the exposure values of teachers during the day. Noise measurements were carried out by determining not only the environment but also personal noise levels. According to the quantitative data obtained from personal dosimeters, the noise level levels that teachers are exposed to during the day were determined as 87.45 dB in classrooms, 84.15 dB in dining halls, and 89.28 in playgrounds on average. In ambient measurements, these values were determined as 82.18 dB, 81.18 dB and 86.85 dB, respectively. Abakay and Buluz (2018) determined the noise sound levels in the school and in the school garden in 3 primary schools, 3 secondary schools and 4 high schools in Bursa-Orhangazi district with the help of dosimeter. Based on the quantitative data obtained, they determined that, except for one school, the Occupational Health and Safety Law No. 6331 was higher than the allowable noise level in schools and similar educational institutions. In line with the quantitative data obtained with the help of the dosimeter, they found that the highest noise level was in primary schools with an average of 72.83 dB, while the lowest noise level was in high schools with an average of 70.14 dB. They emphasized that the main reason for this noise is the location of the schools, and the construction of new buildings far from the city center will be effective in reducing the noise level.

Lighting is a very effective physical parameter on human psychology. It is of vital importance to illuminate the environment in a way that does not tire the eyes in order for the classrooms where education and training are held to provide a comfortable and efficient education. Insufficient or more than necessary lighting causes distraction and eye fatigue in addition to focusing problems. Therefore, the lighting parameter should be taken into account in increasing the quality of education and training. Aksoy and Keleşoğlu (2004) evaluated the suitability of the building, machinery and metal training workshops in the Technical Education Faculty of Fırat University in terms of lighting within the scope of OHS. They emphasized that the lux value obtained with the help of the lighting measuring device has an insufficient lighting value for the fine works specified in the standards and it is important to improve this value in terms of student-teacher health and safety. Başkan

and Sözen (2006) evaluated the relationship between lighting and student satisfaction in some classes of Ayazağa Işık High School both experimentally and through questionnaires. The researchers supported the effect of the difference between the old lighting level and the improved lighting level on student satisfaction with the results of the survey. Tuncer et al (2012) determined the physical risk factors (humidity, temperature, noise, lighting, radiation, etc.) of the classrooms of some secondary education institutions in Turkey with the help of portable test devices. When the researchers evaluated the quantitative data they obtained for the luminous intensity, they determined that it was below the standards and stated that this lighting intensity could lead to early fatigue and low motivation in both students and teachers due to inadequacy.

In this study, the noise levels of six classes in İnönü University Malatya Vocational School during the lesson and in empty situations, and the lighting values when the lighting sources are on-off were determined with the help of devices. The data obtained were interpreted within the scope of the standards.

2. MATERIAL AND METHODS

In this study, the suitability of the noise and illuminance values of the classes was investigated experimentally. For this purpose, noise and brightness measurements were taken during the lesson and when it was empty in six classes of İnönü University Malatya Vocational School.

Noise intensity is quantitatively determined with the help of devices called sonometer, dosimeter, sound meter or sound level meter. These devices give the noise level in decibels, which is a logarithmic value. These devices generally have three different filter types, A, B and C. This type of filters are used in order to make the noise suitable for the perception level of the human ear. It is the process of expressing the measured noise intensity in terms of dB(A), dB(B) and dB(C) depending on whether the filter used is A, B and C. While investigating the effect of noise on the human ear, the noise intensity is determined in dB(A) since it is the A filter closest to the human ear. Measurements made with the sound dB(A) type have a logarithmically increasing structure. While the hearing limit/threshold is 0 dB(A), the value range of 140 dB(A) is the pain threshold, and exceeding this value can cause the eardrum to burst (Kumari et al., 2015; Jain et al., 2017; Sellappan & Janakiraman, 2014). In general, it is recommended to take precautions at noise levels above 80 dB, while continuous exposure to a value above 85 dB causes

occupational diseases (Morova et al., 2010). National and international legislations have suggested that the dB(A) filter should be preferred in the studies conducted for the determination, control and improvement of noise, and to determine the sound level subjectively. A filtered sound level weight curve used for this purpose is used to determine the physical effects of sound on human health for each sound level and their responses to these effects (Güvercin & Aybek, 2003; Atak, 2017). In noise measurement, Delta was determined by OHM HD2010UC/A model sonometer (Figure 1). With this device, the noise sound level can be directly measured in dB units.



Figure 1. Noise measuring device

It has been amply proven that light can affect us both physically and emotionally. Lack of light and/or prolonged exposure to insufficient artificial lighting can affect people's eyesight. This effect is even more pronounced in the most vulnerable groups in society, such as children of developmental age. For this reason, adequate lighting is extremely important in schools and other relevant educational institutions where students have to spend certain days and hours of the week. It is possible to determine whether the lighting is sufficient with the help of the device. Lighting levels are determined with the help of a light sensitive sensor called a luxmeter. The lighting intensity value

of the environment can be read directly on the device in lux. This device, called luxmeter, consists of a photoelectric cell that converts light energy into electrical energy, and a highly sensitive milli-ammeter adapted as a lux unit (Winterbottom & Wilkins, 2009). In this study, SDL400 model produced by Extech Instruments was used as the illuminance measuring device (Figure 2). The measurement points with both devices are given in Figure 3.



Figure 2. Illumination measuring device



Figure 3. Measurement points

3. RESULTS AND DISCUSSION

Lighting and noise measurements of some classrooms in Malatya Vocational School were determined with the help of devices. Noise measurements were determined by using certain measurement standards (in TS ISO 1996-2 standard / at least 3 measurements with measurement times of 5 minutes) and under normal conditions (windows open and closed), within the areas that were planned and designed in advance for the classes to be taken. The results obtained are given in Table 1. In the illuminance measurement, 3 different locations were determined for each class and the average value was determined by taking 5 measurements from each location (TS ISO 1996-2, 2020). The results obtained for illumination are given in Table 2.

Table 1. Noise measurement results

Classroom	Value	In class (dBA)	Empty classrooms (dBA)
202	Average	55.8	40.4
	Maximum	68.5	45.3
203	Average	50.2	35.1
	Maximum	64.7	40.2
204	Average	56.2	40.8
	Maximum	69.3	45.7
205	Average	49.7	35.2
	Maximum	63.9	40.7
208	Average	57.8	40.1
	Maximum	68.9	45.2
209	Average	49.1	37.4
	Maximum	63.2	42.5

Table 2. Lighting measurement results

Classroom	Location	Light on (lux)	Light off (lux)	Increase (lux)
202	Window side	311	257	54
	Middle	341	233	108
	Wall edge	179	167	12
203	Window side	412	321	91
	Middle	421	317	104
	Wall edge	190	171	19
204	Window side	487	436	51
	Middle	471	381	90
	Wall edge	307	173	134
205	Window side	319	285	34
	Middle	305	279	26
	Wall edge	191	121	70
208	Window side	381	321	60
	Middle	388	273	115
	Wall edge	201	145	56
209	Window side	341	315	26
	Middle	297	255	42
	Wall edge	221	207	14

The effect of the physical environment is very important in increasing the quality of education and training in schools. The main parameters that make up the school climate are thermal comfort, lighting and noise values. The fact that the noise and brightness values in schools are lower or higher than the standard values create negative effects in terms of student-teacher relations. This negativity can cause not only physiological but also psychological (attitude-behavioral) disorders. It is a well-known fact that the fact that both students and teachers are not exposed to physical and psychological effects will directly affect the quality of education and contribute to their social life outside of school. Polat and Buluş-Kırıkkaya (2007) classified the effects of noise on human health as in Table 3.

Table 3. Psychological-physiological effects of noise

Noise value (dB)	Impact
0-35	Non-harmful effects
35-65	Affects sleep and rest
66-85	Disturbing effects, Mental disorders,
86-115	Physiological side effects
116-130	Dangerous noise, Hearing losses, Permanent deafness
131-150	Pretty dangerous noise, eardrum burst

Classrooms such as schools, private teaching institutions and course centers located in the residential area must have a value of 35 in Leq dBA within the framework of the relevant regulation (legislation). When Table 1 is examined, all classes in Malatya Vocational School exceed this limit value. It is seen that especially double-digit classes (such as 202, 204, 206) have higher values in dBA due to the fact that they are parallel to the ring road. Classes facing the campus (single digits such as 203, 205, 207) were determined to be closer to the standard value. The quality of education and the physiological-psychological improvement of the student-teacher in classrooms that exceed such limit values are of vital importance. The precautions to be taken against noise in classrooms within Malatya Vocational School can be listed as follows;

- 1- Students and teachers should be informed about the causes, effects and protection methods of noise pollution.
- 2- By making regular noise measurements, the factors that increase the noise should be determined. Solution suggestions should be developed at the source of the problem.
- 3- It is necessary to repeat the noise risk analysis until it reaches an acceptable level.
- 4- Worn PVC glasses should be replaced or their wicks should be renewed.
- 5- Heat-sound insulation should be done on the exterior of the building.
- 6- During the lesson, the windows of the classrooms facing the ring road must be closed.
- 7- External sound should be neglected by making air-conditioning artificially.

Lighting is a fundamental element that has a significant impact on the educational experience. Classes with natural light sources and complemented by adequate artificial light provide what we call dynamic lighting that can adapt to the biological and emotional rhythm of students. Lighting is an enhanced educational experience that affects both emotional and cognitive behavior of students, thus increasing their concentration and motivation levels. The illumination level in educational buildings should be at least 300 lux in general education areas (TSE, 2013). When Table 2 is examined, the lighting values of the classes in Malatya Vocational School are quite low. When Figure 4 is examined, the increase in the lux values of the rows by the window due to natural lighting can be seen with the naked eye. Similarly, shadowing and darkening are observed on the wall edge. When Figure 5 is examined, it is seen that the dimensions of the glasses are insufficient and the column that negatively affects the distribution of natural lighting in the classroom. Figure 6 shows the negative effects of both columns and beams on natural and artificial lighting. In addition, it is seen that the lighting sources within the Vocational School are old and insufficient. This situation causes negative side effects in terms of education-teaching quality and student-teacher.

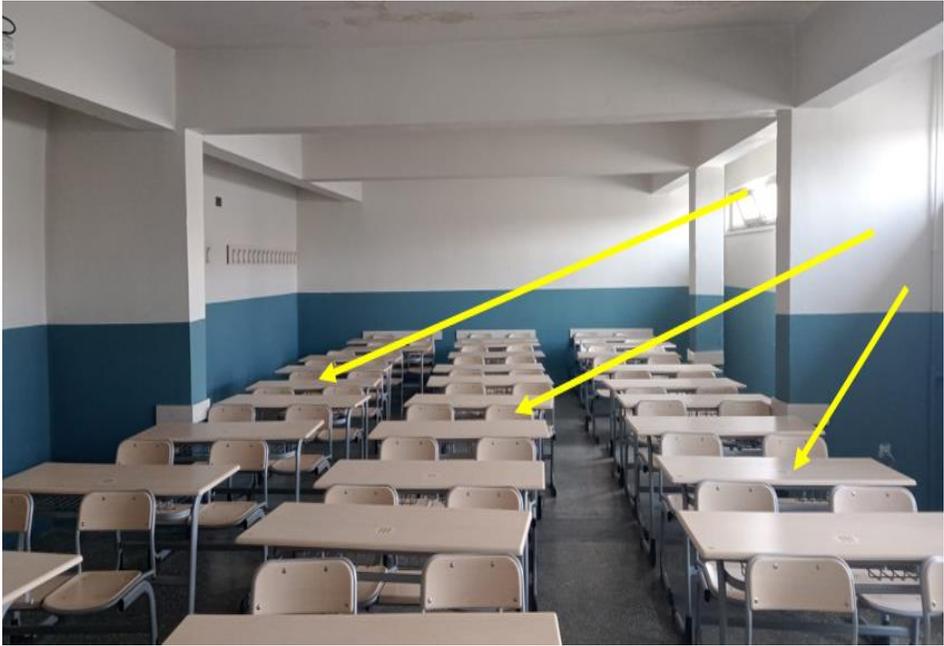


Figure 4. Effect of different lighting angles



Figure 5. Barrier of the column to lighting



Figure 6. Lighting source and beam barriers

Some suggestions for improving the lighting values of the classrooms within Malatya Vocational School;

- 1- Lighting should not be a distraction for teachers and students in any way.
- 2- Students and teachers should be informed about lighting.
- 3- The correct use of lighting should be well known by both the student and the teacher.
- 4- Risk analyzes related to lighting should be constantly repeated and ways of improvement should be sought.
- 5- Natural lighting should be preferred due to sunlight.
- 6- Curtains etc. during the lesson. If there are situations, they must be in open positions.
- 7- General lighting should be given importance rather than point lighting.
- 8- Lighting sources within the Vocational School are insufficient and are of old type. Their numbers should be increased.
- 9- Sources with high lighting power should be preferred.

- 10- There are beams that obstruct the lighting source. Therefore, the beam of lighting sources should be lowered to the lower level.
- 11- Lighting should be uniform and not dazzling.
- 12- Shading barrier should be designed.
- 13- Wall colors should be turned into light colors that reflect lighting.

4. CONCLUSIONS

Schools are special environments established for educational purposes and the places where education takes place in these special environments are classrooms. In order to reach their educational goals, teachers and students in the classroom share their knowledge and experience, which they have obtained through various communication tools, in an appropriate arrangement, and this sharing is through communication. The realization of the goals depends on the quality of the communication established between the teacher and the students. In order for the school to achieve its goals, education and training spaces must have a physical structure with acoustic properties that can provide communication and appropriate auditory comfort. Sounds formed in classroom spaces in educational buildings are of great importance in communication, in this regard, in these structures based on the concept of communication, besides visual perception, the effectiveness of auditory perception and the intelligibility of speech should be emphasized. The relationship between lighting and learning is the most important issue in lighting in schools. It is important for their psychology that students stay under quality lighting in the classrooms where most of their time is spent. Low lighting levels, wrong light color temperatures, low color rendering trigger people's mood in a depressive direction. A poorly lit classroom environment adversely affects the psychological well-being of the student and, as a result, the ability to learn is reduced. Therefore, each parameter should be handled carefully and minimum improvements should be made in the most efficient and rapid manner.

FUNDING

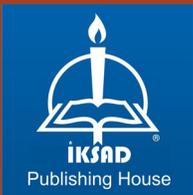
This study was funded by Inönü University Research Funding (Inönü University-BAP), Project No. SBG-2020-2277.

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ISBN: 978-625-6955-47-9