

**IBN HALDUN UNIVERSITY  
SCHOOL OF GRADUATE STUDIES  
DEPARTMENT OF COUNSELING PSYCHOLOGY**

**MASTER THESIS**

**ADJUSTMENT ISSUES OF INTERNATIONAL STUDENTS  
IN TURKEY**

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**ISTANBUL, 2022**

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**MASTER THESIS**

**ADJUSTMENT ISSUES OF INTERNATIONAL  
STUDENTS IN TURKEY**

by

**LÜTFİYE SEVDE YİĞİT**

**A thesis submitted to the School of Graduate Studies in partial  
fulfillment of the requirements for the degree of Master of Arts in  
Counseling Psychology**

**THESIS SUPERVISOR**

**ASSIST. PROF. THSEEN NAZIR**

**ISTANBUL, 2022**

## APPROVAL PAGE

This is to certify that we have read this thesis and that in our opinion it is fully adequate, in scope and quality, as a thesis for the degree of Master of Arts in Counseling Psychology.

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This is to confirm that this thesis complies with all the standards set by the School of Graduate Studies of Ibn Haldun University.

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## ACADEMIC HONESTY ATTESTATION

I hereby declare that all information in this document has been obtained and presented in accordance with academic rules and ethical conduct. I also declare that, as required by these rules and conduct, I have fully cited and referenced all material and results that are not original to this work.

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ÖZ

## TÜRKİYE'DEKİ ULUSLARARASI ÖĞRENCİLERİN UYUM KONULARI

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Bu çalışmada uluslararası öğrencilerin Türkiye'ye uyumlarını ölçmeye yönelik bir ölçek geliştirilmesi amaçlanmıştır. Buna ek olarak yaş, cinsiyet, eğitim düzeyi, medeni durum, dini inanç, Türkiye'de kalma süresi, kalınan yer, daha önce yaşadığı ülke sayısı gibi çeşitli demografik özelliklerin uyumla ve uyum alt boyutlarıyla olan ilişkileri ayrı ayrı incelenmiştir. Araştırmanın çalışma grubunu, Türkiye'de devlet ve vakıf üniversitelerinde eğitim gören 339 uluslararası öğrenci (156 kadın, 183 erkek) oluşturmuştur. Araştırmada veri toplama aracı olarak çalışma kapsamında geliştirilen Uluslararası Öğrenciler Uyum Ölçeği kullanılmıştır. Araştırmanın verilerinin istatistiksel çözümlemesinde SPSS (Statistical Package for Social Sciences) programı kullanılmıştır. Ölçeğin geçerliliği ve güvenilirliği tespit edilmiştir. Uygulanan açımlayıcı faktör analizi sonucunda, ölçeğin 5 alt boyuta sahip olduğu tespit edilmiştir. Bu alt boyutlar akademik, sosyal, kişisel, genel yaşam koşullarına uyum ve akademik uyum & ayrımcılık olarak adlandırılmıştır. Araştırma sonucunda, Türkiye'de geçirilen zaman ile öğrencilerin akademik uyumları arasında anlamlı bir fark bulunmuştur ( $p<0.05$ ). Erkek öğrencilerin kız öğrencilere göre daha yüksek uyum düzeyine sahip oldukları tespit edilmiştir. Bunun yanı sıra sonuçlar, beşten fazla ülkede yaşayan öğrencilerin daha yüksek bir genel yaşam uyumuna sahip olduğunu göstermiştir. Ayrıca öğrencilerin eğitim düzeyleri ile sosyal uyumları arasında anlamlı farklılık bulunmuştur ( $p<0.05$ ). Çalışma sonucunda elde edilen veriler, literatürdeki bilgiler

ışığında tartıřılmış ve yorumlanmıřtır. Bu alanda yapılacak alıřmalar iin arařtırmacılara neriler sunulmuřtur.

**Anahtar Kelimeler:** Uluslararası ğrenciler, Uyum, Uyum leėi



## ABSTRACT

### ADJUSTMENT ISSUES OF INTERNATIONAL STUDENTS IN TURKEY

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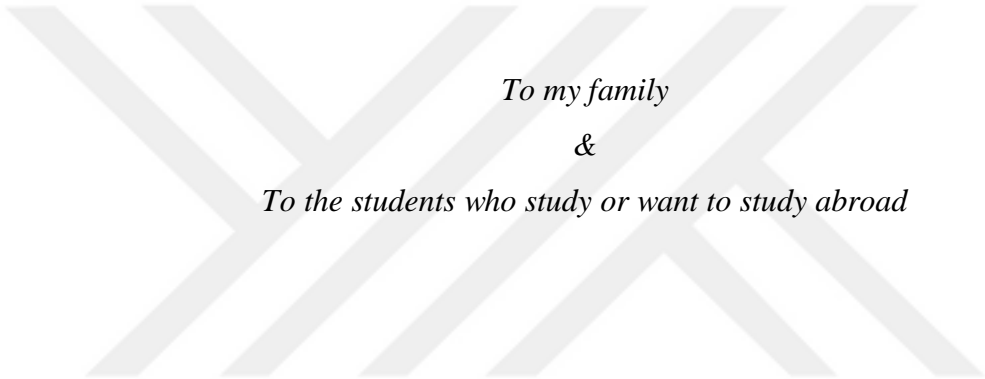
In this study, it is intended to develop a scale to measure the adjustment of international students to Turkey. In addition, the relationship of various demographic characteristics (age, gender, education level, marital status, religious belief, length of stay in Turkey, accommodation, the number of countries previously lived before) with adjustment and its sub-dimensions were examined separately. The sample of the study consisted of 339 international students (156 females, 183 males) studying at the state and private universities in Turkey. The International Students Adjustment Scale (ISAS), which was developed within the scope of the study, was used as a data collection tool in the research. SPSS (Statistical Package for Social Sciences) program was used in the statistical analysis of the data of the study. The validity and reliability of the scale have been found in the study. As a result of the explanatory factor analysis (EFA), it was determined that the scale had 5 sub-dimensions. These sub-dimensions were named academic adjustment, social adjustment, personal adjustment, general living adjustment, and institutional adjustment & discrimination. As a result of the research, a significant difference was found between the length of stay and the academic adjustment of the students ( $p < 0.05$ ). It has been determined that male students have a higher level of adjustment than female students. In addition, results showed that students who lived in more than five countries have a higher general living adjustment. Moreover, a significant difference was found between the education levels of the students and their social adjustment ( $p < 0.05$ ). The data obtained as a result of the study

were discussed and interpreted in light of the information in the literature. Suggestions have been presented to researchers for studies to be carried out in this area.

**Keywords:** International Students, Adjustment, Adjustment Scale



DEDICATION



*To my family  
&  
To the students who study or want to study abroad*

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## LISTS OF SYMBOLS AND ABBREVIATIONS

F	F Statistics
ISAS	International Students Adjustment Scale
SD	Standard Deviation
OECD	Organization for Economic Co-operation and Development
$B$	Beta
$\bar{X}$	Mean
%	Percentage



# CHAPTER I

## INTRODUCTION

Technological developments and globalization have had a major impact on the education system, as well as many other fields. Today, our world is in the midst of a new age of education, as learning and teaching are no longer constrained by national boundaries. Students now have the opportunity to study in other countries as a result of increased access to high-quality education. There is no doubt that studying abroad provides students with a tremendous opportunity to engage with people from different cultures, learn new languages, widen their perspectives, and, most importantly, find decent job opportunities after graduation. Therefore, the number of students who prefer to study abroad is increasing day by day across the world. According to statistics, the number of international students enrolled in tertiary education programs worldwide increased from around 800 thousand in 1975 to 2.1 million in 2000 (OECD, 2014) and more than doubled to 5.3 million in 2017 (OECD, 2019). Now, this number has reached 7.5 million in the world. (Presidency for Turks Abroad and Related Communities, 2020a). Furthermore, among OECD and partner countries, international students tend to study in the United States, the United Kingdom, Australia, and the Russian Federation in 2017. Besides that, students from Asia (56%) and the European continent (24%) account for the vast majority of international student mobility across the OECD (OECD, 2019). The country that sends the highest number of students to the United States is China, with a share of 34% in the 2018-2019 academic year. It is followed by India and South Korea (Open Doors, 2019).

Education has become a significant source of income, particularly for developed countries, as the number of international students has increased. International students are a major source of income for many institutions. Moreover, a part of the export industry of countries consists of the income obtained from international students (Ward et al., 2005). Similarly, in 2018, 62 percent of international students in the United States used international funding resources such as grants from their countries'

governments, institutions, or other personal resources. Only 38% of international students used resources of the USA as funds (Open Doors, 2019). As a result of the foreign financing services they offered, international students contributed more than \$45 billion to the US economy in 2018 (Dennis, 2020; Open Doors, 2019). According to an analysis of NAFSA (2019), three American jobs are provided for every seven international students. International students in the United States supported 458,290 jobs in the 2018-2019 academic year due to their expenses for education, accommodation, food, transportation, telecommunications, health care, and other expenses (NAFSA, 2019). In conclusion, international students contribute a significant amount of money to the country wherein they study. It could be argued that developing countries are competing for larger slices of this cake.

Furthermore, foreign students not only support the country financially, but they also contribute academically to universities by carrying out research and working in labs. With their diverse cultures, they enrich the field of education and foster a multicultural learning environment. (Open Doors, 2019). Local students benefit from international students as well. Local students who engage with foreign students, for example, are found to perform superior at certain skills than non-interactive US students. Local students who are heavily involved with international students can also question their opinions about politics, cultures, religions, and many other issues (Luo & Jamieson-Drake, 2013). Moreover, students learn to see the problems from a global perspective and, as a result of the multicultural environment, they can address the needs of the global community while studying and preparing for their career path (Open Doors, 2019).

Moreover, students who are satisfied with their education will promote the country and the university where they have studied (Ward et al., 2005). Thus, more students will be brought to the host country. Besides, students will continue to have still positive political, economic, and commercial relations with the host country after graduation. While studying, international students are assumed to develop positive attitudes towards the host country and respect its values. When they have any influence after graduation, they are expected to make decisions based on the sympathy they have built for the host country. Even in their home country, it is assumed that their decisions will be focused on the advantage of the host country (Lomer, 2016). As a result,

international students significantly boost the host country's soft power (Nye, 2005). Soft power is defined by Nye, who coined the term, as a country's ability to attract others through the credibility of its policies and the values that underlie them (Nye, 2004). Soft power is a way for a country to accomplish its objectives (Nye, 2004) without resorting to hard power, which means not using political or economic force (Nye, 2005). In other words, countries shape others' preferences due to soft power by impressing others with their values (Nye, 2005). Hosting foreign students is an indicator of popularity and political power for all of these reasons. Taking all this into account, international students are advantageous to countries, universities, and local students in terms of economics, education, culture, and politics.

To reap the benefits of international students' contributions to countries and organizations, students must be assured, and the problems they face must be resolved. For this reason, countries and institutions are continually improving the services they provide to students and increasing their market share by creating engaging advertisements and offering high-cost scholarships and housing opportunities. Student admission and education procedures are simplified for students. Also, students are given residence and work permit, post-graduation job opportunities, and much more permits by developed countries. Effective orientation programs are structured to help international students adjust to their new environment and initiate a long-term internationalization process. To sum up, developed countries are trying to attract more students by attempting to increase students' current conditions and satisfaction. Similarly, positive student experiences are significant for countries and institutions, especially when increased competition from other countries is considered (Ward et al., 2005).

In the past, the understanding of globalized education was mainly carried out with scholarships offered by the United States and the European Union. However, it has recently come out of the monopoly of the west, and options for students diversified a lot due to the various scholarships and incentives provided by governments (Usta et al., 2017). In addition to this, it is seen that the popularity of the USA, which has been the most preferred country for international students for many years, has decreased in recent years. Despite the fact that the total number of international students in the

United States has increased, the number of recently enrolled international students has decreased in recent years when compared to the previous years.

While new registrations in the United States dropped by 3.3 percent in 2016, they decreased by 6.6 percent in 2017, and then dropped by 0.9 percent in 2018 (Open Doors, 2019). This situation shows how the international student trend is moving away from the United States toward other countries. The reasons for this shift can be attributed back to global economic, political, and technological transformations. Other countries are becoming more attractive to students due to the availability of quality and more accessible educational institutions, the ease with which visas for studying and working can be provided, and the existence of a safer atmosphere for students than the United States (Dennis, 2020). For instance, since 2013, the number of mass shootings in the United States has risen by 65 percent, with 418 shootings in 2019 (GVPedia, 2020). As a result, students do not find the United States safe enough to study. Additionally, travel bans in the United States influence the choices of many potential international students. Furthermore, travel bans in the United States influence the choices of many potential international students. Therefore, it is anticipated that these and similar political changes will affect the international student flow, and international students will flock to various countries.

### **1.1. International Students in Turkey: A Brief History**

In the 1960s, Turkey started the process of international mobility by signing bilateral agreements and granting scholarships to students from other countries. However, in 1992, for the first time, international student policy was systematized, and the “Great Student Project” was initiated. Turkey has made considerable progress in various fields since the 2000s, including the economy, foreign policy, and social policy. Thus, these developments have had a positive impact on international student mobility. In 2012, "Turkey Scholarships" was launched and funded by the Turkish Government. This program differs from the other scholarship programs by placing international students in universities. A variety of benefits are given to the students in addition to the scholarship, ranging from air tickets to accommodation. Also, academic, social, and cultural programs are organized within the scope of the Turkish Scholarship program. Owing to these facilities, the Turkish Scholarships program had a considerable effect

on the number of international students in Turkey. The number of applicants for Turkey Scholarships rose from about 10,000 in 2012 to more than 100,000 in 2017, and 145.700 applications from 167 countries were received in 2019 (Presidency for Turks Abroad and Related Communities, 2020b). In addition to Turkish Scholarships, many scholarship options have been created through institutions such as the Presidency of Religious Affairs or private universities. Furthermore, due to the increase in the number of universities, research centers, and academicians, Turkey has become a more attractive country for international students in higher education (Presidency for Turks Abroad and Related Communities, 2020a). Therefore, the number of international students in Turkey increased enormously in the last couple of years. While the number of international students in higher education institutions was 16.656 in 2000, it reached 48.183 in 2013 (Ministry of Development, 2015). The number of international students in Turkey tripled in 5 years and reached 154,505 in the 2018-2019 academic year (The Council of Higher Education, n.d.). In 2017, Turkey ranked 10th among OECD and partner countries in terms of international students enrolled in higher education (OECD, 2019). Moreover, by 2023, this number is targeted to reach 200,000 (Presidency for Turks Abroad and Related Communities, 2020a). Moreover, most of the international students in Turkey come from Syria (17,5%), Azerbaijan (12,5%), Turkmenistan (11,4%), Iraq (4,9%), Iran (4,6%). As a result, students from these five countries account for 50.9% of all foreign students in the 2018-2019 academic year (The Council of Higher Education, n.d.). Since language, geography, historical connections, and political conditions also play a role in students' country preferences (OECD, 2019), this ratio in Turkey is quite understandable. On the other hand, when the number of students coming to Turkey from the countries that send the most students abroad is examined, Turkey's share in the international student market seems to be still very low (Ministry of Development, 2015). To illustrate, in 2017, the number of students going abroad from China exceeded 860 thousand (OECD, 2019), but Turkey was able to attract only 2273 students from China in 2018 (The Council of Higher Education, n.d.). Despite the fact that Turkey has yet to achieve the desired degree of internationalization success (Karakaya & Yıldız, 2020), it aims to become a major player in this area in the coming years.

To reach its objective of attracting more international students in the years ahead, Turkey should first understand the obstacles and problems that students face and then

create practical solutions. This is possible by learning more about the adjustment process of students. Thus, a measuring tool was developed in the study to understand the adjustment of international students in Turkey.

## **1.2. Problem Statement**

It is clear that institutions in Turkey must use effective marketing techniques to retain their current status, recruit more international students, and meet the desired point in internationalization. However, increasing student satisfaction and resolving challenges that students have encountered are equally critical. Finding solutions to international students' issues will improve their satisfaction, which will positively impact international students' adjustment. Increasing students' satisfaction is bound to understanding the adjustment processes of students. More international students will choose to study in Turkey if the adjustment process of international students can be understood and Turkey can achieve its mission of internationalization of education. As a result, students, colleges, and Turkey will benefit in several different ways, including academic, cultural, economic, and political.

In this context, to understand the adjustment process better, there is a need for a reliable scale that measures the adjustment of international students in Turkey. However, when the literature is examined, it is seen that there is no measurement tool developed only to measure the adaptations of international university students in Turkey.

Obviously, there are many other scales in the literature that measure international students' college adjustments in the world. Pascarella and Terenzini's (1980) Institutional Integration Scale, Crano and Crano's (1993) the Inventory of Student Adjustment Strain (ISAS), Sandhu & Asrabadi's (1994) Acculturative Stress Scale for International Students (ASSIS), Ward & Kennedy's (1999) the Sociocultural Adaptation Scale (SCAS) are among these scales. However, the most well-known inventory is Michigan International Student Problem Inventory (MISPI) developed by Porter in 1962 and revised in 1977 (Porter, 1962; 1977). Although Porter developed the inventory to determine the adjustment problems of international students in the United States, he claims that it is culturally independent to all international students (Kılıçlar et al., 2012). Because of this, many researchers from all around the world

(Galloway & Jenkins, 2005; Güçlü, 1996; Malaklolunthu & Sateyen, 2011; Wang, 2009) used MISPI's original or modified versions in their research. In Turkey, Kılıçlar et al. (2012) developed and adapted a scale by using MISPI to determine the adjustment problems faced by international students. Thus, this adapted version of MISPI was used in some studies (e.g., Cengiz, 2018; Kumcağız et al., 2016). In addition, some research in Turkey indirectly assessed the adjustment level of international students by using other scales such as; adjustment to university and life satisfaction scales (Sungur et al., 2016). However, to properly understand the adjustment phase of students, improve the experience of becoming an international student in Turkey, and have better conditions for students, the adjustment level of students should be precisely measured. In addition, a scale built specifically for the students in Turkey can aid researchers by providing cultural and linguistic detailed information. Consequently, it is noticed that there was a gap in this area. In this context, to fill these gaps, a scale called International Students Adjustment Scale (ISAS) was developed for students in Turkey.

### **1.3. Purpose of the Study**

This study aims to develop a scale to directly determine international university students' adjustment in Turkey. Within the framework of this general purpose, the following questions will be answered to examine the problem sentence specified in the research in more detail.

1. Is ISAS, which was created to measure international university students' adjustment to Turkey, a valid and reliable scale?
2. When the scores of international university students are analyzed, according to;
  - a) Age
  - b) Gender
  - c) Continent
  - d) Level of education
  - e) The length of stay (Years and months)
  - f) Accommodation (Living with family/friends/dormitory/alone)
  - g) Religion

h) Marital status

i) Previous country experiences (The number of countries they lived in before)

Do students' levels of adjustment change?

Statements designed in the socio-demographic form were determined according to the findings in the early literature. For instance, demographic variables like age (e.g., Sovic, 2008), gender (e.g., Güçlü, 1996; Wang, 2009), level of education (e.g., Güçlü, 1996; Poyrazlı & Kavanaugh, 2006), country of origin (e.g., Güçlü, 1996; Poyrazlı & Kavanaugh, 2006; Wang, 2009), previous abroad experience (e.g., Wang, 2009), length of stay (e.g., Sovic, 2008; Wang, 2009; Ward & Kennedy, 1992), marital status (e.g., Poyrazlı & Kavanaugh, 2006; Wang, 2009), accommodation (Ercan, 2001), and religion (Nazir & Bulut, 2019; Tummala-Narra & Claudius, 2013) were found significant in predicting the adjustment of international students. Besides, due to participants being educated in different universities, names of universities were requested.

According to the theory of Oberg (1960), international students experience a honeymoon stage in their first few weeks of cultural transition. In this stage, they are enchanted by the new environment. In contrast to Oberg (1960) theory, some researchers stated that instead of feeling euphoria, students encounter more stress in their first few months in the host culture due to a lack of knowledge about the host culture, insufficient social support, immediate changes in students' lives, and having limited resources to cope with difficulties. The degree of stress drops after 4-6 months passes from transition (Schartner & Young, 2016; Ward et al., 2005). However, the honeymoon period in Oberg's theory is taken into account in this study since it is a well-known theory in the literature. Also, Oberg (1960) stated in his theory that the honeymoon period could differ from a few days to six months according to person and circumstances. Therefore, criteria were prepared for the students who lived in Turkey for more than 4 months and less than 3 years. Likewise, the students who come from Turkish-speaking countries like Azerbaijan, Turkmenistan, Uzbekistan weren't included in the study to examine the effect of the language learning process on the adjustment of international students.

#### **1.4. Significance of Study**

While even students who go to a different city for university education experience some difficulties in the adaptation process, it is undeniable that international students from different countries will face more difficulties due to language problems, cultural differences, homesickness, and unfamiliar education systems. Moreover, it is seen that young people have to deal with critical problems even in their own culture and country due to their development stages. This is considered a development task that needs to be accomplished by the youth (Otrar et al., 2002). Therefore, there are more challenges for international students because of living this process outside of their home country.

Besides, ensuring the adjustment of international students is very important to maintain and enhance the success of the current internationalization level of Turkey. When the adjustment of international students increases, their satisfaction will increase. Thus, students, institutions, and Turkey will benefit from these developments in academic, cultural, economic, and political ways. As a result, it is expected that developing a scale that directly measures the adjustment of international students in Turkey will contribute to the studies done in this area and help to reach the desired point in the internationalization process.

#### **1.5. Assumptions**

It was assumed that students respond sincerely to the International Students Adjustment Scale (ISAS), and sociodemographic form. Also, the scale used in the study is considered as an appropriate measurement tool for collecting data.

#### **1.6. Limitations of Study**

The limitations of this study are as follows;

1. The sample of the study is limited to 339 international university students in Turkey in the 2019-2020 academic year.
2. Participants of the study are limited to the students who meet the research criteria.
3. This study is limited to the answers given to the scale.

## **1.7. Definitions of the Elements in Study**

In this section, the working definitions of the different variables in the study were given in detail under various headings.

### **1.7.1. International Students**

In literature, various terms used to express international students such as; foreign students, oversea students (Ward et al., 2005), sojourners (Ward & Kennedy, 1993), student sojourners (Coles & Swami, 2012), cross-cultural sojourners, degree-seeking mobile students, credit-mobile students (Schartner & Young, 2016), mobile students, degree-mobile students (OECD 2019), and exchange students (Suanet & Van De Vijver, 2009), etc. The “foreign students” term was also used commonly in Turkish literature. As of 2012, it is seen that the term international student has been used commonly instead of foreign students. Due to the fact that after 2012, universities in Turkey gave more importance to international students (Demirhan, 2017), their perspectives on international students have also changed. Instead of saying “foreign” and evoking the meaning of “other”, universities used the “international students” term to state students’ contribution to the university by their "international" identity (Özkan & Acar Güvendir, 2015). Although these two terms are used interchangeably, it is best to use the two definitions separately, especially considering the increase in the number of immigrants in recent years in Turkey (Demirhan, 2017). Since international students can be described as students who left their home country and moved to another country for educational purposes, international students are not permanent residents of the country they study in (OECD, 2019). However, foreign students can also include students who do not come to the country for educational purposes. Foreign students can be long-term residents or even born in the host country (OECD, 2019). Lastly, in this study, the concept of international students was only used for the ones who take higher education in Turkey.

### **1.7.2. Adjustment**

Adjustment is defined as the process of achieving harmony among the individual and his/her new environment as a result of the changes in the individual’s knowledge,

attitudes, and emotions about the environment (Hannigan, 1990). The process of adjustment results in feeling more at home in the new environment, improved performance, and increased interaction with the people in the host country (Hannigan, 1990).

Moreover, it is important to note that some researchers can use the term adaptation as a synonym of adjustment. However, for some researchers, adaptation is a broader term that includes adjustment as a component (Hannigan, 1990). According to Schartner & Young (2016), while adjustment is a process such as the experience of change, adaptation is a conclusion of this process. In addition to adaptation, the terms of assimilation and acculturation can be used interchangeably to express adjustment. Although the difference among these terms is defined by some theorists, there is still a lack of consensus, which constitutes an obstacle to the studies in the literature (Hannigan, 1990).

There are some forms of adjustment that are interrelated with each other but are predicated by different variables and demonstrate different patterns over time (Ward & Kennedy, 1993; Ward et al., 2005).

**Academic Adjustment:** Academic adjustment means adjusting to differences in the education system and various demands in the educational environment, including teaching and learning styles (Wang et al., 2018).

**Personal Adjustment:** Personal/psychological adjustment can be defined as an individual's affective responses to the new environment. This includes psychological well-being and satisfaction with life (Schartner & Young, 2016; Ward et al., 2005; Ward & Kennedy 1993).

**Social Adjustment:** Social/sociocultural adjustment is a cognitive and behavioral process related to learning the host culture and the acquisition of necessary social skills (Schartner & Young, 2016; Ward & Kennedy, 1993).

**General Living Adjustment:** General living adjustment is the process that includes the adjustment to local food, environment, transportation, climate, financial, and health care systems of the host country (Tseng & Newton, 2002).

**Institutional Adjustment:** Institutional adjustment indicates students' satisfaction with their university and their probability of dropping out (Baker & Siryk, 1984).



## **CHAPTER II**

### **LITERATURE REVIEW**

In this section, theories about international students' adjustment, adjustment and its sub-dimensions, and the studies conducted regarding the adjustment of international students are discussed.

#### **2.1. Theories About International University Students' Adjustment**

There are some theoretical models and views that can be used to understand the process of international students' adjustment to a new culture. The most famous of these is the culture shock theory developed by Oberg (1960). The culture shock theory explains the difficulties faced by people who started living in a foreign country due to the stress of cultural transition. According to this theory, people experience four stages in this process. In the first stage, known as the honeymoon, people are enthusiastic about coming to a new place and seeing new things, just like tourists. This stage may vary from a few days to 6 months, depending on the conditions. In the second stage, called a crisis or culture shock, people have to cope with many problems. Everything in the environment is unfamiliar to them. They lost all previously familiar signs and symbols that enable them to perform essential functions in daily life. They are faced with many new situations such as how to behave in social relations, shop, pay bills, transportation, or language problems. Because of all these troubles, they get stressed, feel anxious, and behave aggressively toward the host country. They criticize the host country negatively with the people from their homeland. Their criticisms are far from being objective. In the third stage, which is defined as recovery, people start to learn the culture, they still experience some trouble, but make jokes about these difficulties. Lastly, in the fourth stage, known as adjustment, people accept and enjoy the host country's culture, customs, foods, and habits. They manage difficulties without feeling anxiety. When they turn back to their homeland after this stage, they miss the host country (Oberg, 1960).

Additionally, another approach that tries to explain the adjustment of international university students is the "U-Curve" approach (Lysgaand, 1955). According to this approach, in the first 6 months, the adjustment process is favorable for students. Between 6-18 months, students have trouble adjusting and feel unhappy and lonely. After 18 months, the adjustment of students is positive and successful again. As a result, similar to culture shock theory, Lysgaand (1955) claimed that the adjustment of international students follows a U-Curve. Gullahorn and Gullahorn (1963) carried the U curve approach further and stated that the adjustment process draws a W-curve. This approach claimed that the stages in the adjustment process were experienced again after the students returned to their homes.

Besides, according to the model developed by Searle & Ward (1990), the cross-cultural adjustment has psychological and sociocultural dimensions. The adjustment process has been handled from various angles by researchers, and it is seen that different dimensions of adjustment draw different paths contrary to the previous theories (Young & Scharner, 2014; Ward et al., 2005). Moreover, in Baker and Siryk's (1984) model, it was claimed that there are four sub-dimensions of cross-cultural adjustment; academic adjustment, social adjustment, personal/emotional adjustment, and attachment. Here attachment measures the satisfaction of college. In the model of Scharner and Young (2016), cross-cultural adjustment was examined under three critical dimensions: academic, psychological, and sociocultural. Moreover, Tseng & Newton (2002) specified the most common adjustment problems as; academic, socio-cultural, personal psychological, and general living adjustment. In this research, the model developed by Tseng & Newton (2002) was used when naming the scale.

## **2.2. Adjustment**

The difficulties faced by international students while trying to adjust to their new environment are called adjustment problems. Solving these problems increases students' adjustment satisfaction. There is a global competition between countries and institutions to attract more international students. For this reason, students' satisfaction with the adjustment process is essential for countries and institutions. Below, some types of adjustment are given.

### **2.2.1. Academic Adjustment**

Apart from the necessities such as war, the main reason why students leave their own country and study in another country is to receive a higher quality education. On the other hand, for the institutions and host countries, it is significant to have successful international students and make the students satisfied from their adjustment process to attract more students. Alemu & Cordier (2017) demonstrated that the most prominent factor affecting overall student satisfaction is academic adjustment satisfaction. Also, when academic satisfaction increases, the percentage of leaving the program and returning to the home country decreases (Gopalan, 2019). Thus, increasing students' academic satisfaction should be the main goal for institutions.

Academic adaptation is usually measured with academic achievement by using students' GPAs (Young & Schartner, 2014). The pattern of academic adjustment is similar to the pattern of sociocultural adjustment (Schartner & Young, 2016). In the early stages of transition, the degree of academic adjustment is lowest owing to being less familiar with the demands of the host university, and it increases as time passes (Young & Schartner, 2014). Especially, considering that master's programs take one year in some countries abroad, academic adjustment is expected to occur rapidly by institutions. Therefore, academic adjustment is a critical process for students, including managing transitional stress and using useful coping mechanisms. A study by Khawaja and Stallman (2011) revealed that international students benefit from strategies to increase their academic adjustment, such as good organization, prioritizing tasks, time management, recording the lessons, getting help from seniors, carefully reading assignment criteria, and consulting lecturers regarding academic demands of the university.

Simply, academic adjustment satisfaction is the satisfaction of the student with the education he/she has received. Some factors affect the academic adjustment satisfaction of students. The most important one is the language ability of international students (Alemu & Cordier, 2017). International students need to develop both academic and social language skills to be successful in academic adjustment because while exams and assignments require knowing the academic language, it is necessary to learn the social language to ask questions in class, participate in discussions, carry

out group assignments, and maintain relationships with professors and students (Alsahafi & Shin, 2017).

In this context, studies demonstrated that language skills and academic performance are significantly correlated (Schartner, & Young, 2016; Poyrazlı & Kavanaugh, 2006). Moreover, a lack of language skills makes students anxious because they are afraid of not being able to pronounce correctly and being laughed at by their classmates. Therefore, students can be reluctant to talk with their classmates or professors (Nazir, 2018). Furthermore, international students in Turkey stated that there is a huge gap between the Turkish language taught at prep school and academic Turkish in the university course (Çollaku & Nazir, 2019). Thus, this decreases the academic adjustment of international students in Turkey. Not only the student's linguistic ability but also the lecturers' language proficiency, their pronunciation, and fluency are important and affect students' academic adjustment. Hence, it is critical for academicians working with international students to have a good command of language.

Support of academicians and not being exposed to discrimination by university professors are other factors affecting academic adjustment (Ahrari et al., 2019). Organizational support, which includes support of academicians and having a welcoming environment in the university, has a positive role in academic adjustment (Gopalan et al., 2019). Thus, the supportive and positive attitudes of academics, especially towards international students facilitate academic adjustment.

Another significant factor that affects academic adjustment is the differences between the education the students received in the country they came from and the education they have received now. Although it changes according to the departments of the students, while one education is mostly application-oriented, the other education can progress with a theoretical focus, and this situation may cause adjustment difficulties for the students. Students' expectations caused by previous experiences and differences in teaching techniques are significant for academic adjustment (Ahrari et al., 2019).

Besides, opportunities and services that are presented to international students by universities and cities/countries affect students' academic adjustment. Scholarship opportunities are vital for students and increase academic adjustment (Alemu & Cordier, 2017) because financial problems are one of the most common problems among international students (Güçlü, 1995; Kıroğlu et al. 2010; Koon & Mehdi, 2019). Additionally, being satisfied with services provided for students is important in the academic adjustment such as international student centers, workshops, academic or social programs, health facilities and resources in libraries, etc. For instance, it was found that international students in Malaysia weren't satisfied with the international offices of universities, and they suffer from problems regarding policies and visas (Ahrari et al., 2019). Students in Turkey stated their dissatisfaction with bureaucratic procedures and lack of activities that are designed for international students too (Güneş & Aydar, 2019). In short, these kinds of problems decrease the international students' academic adjustment. Lastly, establishing effective communication with students before they come to the country, the accuracy of the information provided also affects students' academic adjustment (Alemu & Cordier, 2017).

Besides, Alemu & Cordier (2017) stated that the number of years the student has studied in the university affects the academic adjustment of students. However, there are contradictory findings regarding the level of education. Poyrazlı & Kavanaugh (2006) found that Ph.D. students have higher academic adjustment, language ability, and grades than master students. However, Alshafi and Shin (2017) couldn't find any significant difference between the level of education and academic performance.

Last but not least, some personality traits have an impact on the academic adjustment of international students. To illustrate, Kağnıcı (2012) demonstrated that having an open-minded personality explains 1% of the academic adjustment of international students in Turkey. Also, self-efficacy was found to be an indicator of academic adjustment because of being highly success-oriented and motivated (Gopalan et al., 2019).

On the whole, it is seen that language ability, differences between previous and current education, organizational support, discrimination, and personality traits have an impact on student's academic adjustment.

### 2.2.2. Personal Adjustment

One of the most important types of adjustment is personal/psychological adjustment. Difficulties in the personal adjustment tend to be highest in the early stages of transition, but fluctuations can be seen over time because external factors -non-cultural issues- continuously affect students' well-being, such as relationships problems, weather, exams, etc. (Schartner & Young, 2016; Ward et al., 2005).

Some factors have an impact on the personal adjustment of international students in their cultural transition. Due to being far away from home and loved ones, the most common negative factors in the psychological adjustment of students are homesickness and loneliness. In the studies, the majority of students expressed their homesickness (Kıroğlu et al., 2010) and loneliness (Çollaku & Nazir, 2019). Especially in more stressful times like midterms or final exams, some students stated their homesickness increased (Kıroğlu et al., 2010).

Moreover, students are exposed to stress and anxiety because of the challenges during their adjustment period. Psychological adjustment is intertwined with stress and coping processes (Ward & Kennedy 1993). Therefore, it is necessary to understand the stress and coping methods to understand psychological adjustment (Searle & Ward, 1990). When students use coping strategies successfully to overcome stress, they will have a higher level of psychological adaptation (Schartner & Young, 2016). Acculturation stress is a type of stress experienced by individuals in the cultural transition process. There are some factors that affect acculturation stress. For instance, it was found that lack of language skills creates higher acculturative stress. When the language ability of international students increases, acculturative stress tends to decrease (Poyrazlı et al., 2004). Also, gender has an effect on perceived stress. Studies demonstrated that female students reported a higher level of acculturative stress than male students (Ozer, 2015; Rosenthal et al., 2008). Besides, a negative correlation was found between students' grades and psychological stress (Spencer-Qatey & Xiong, 2006). Coping with stress is important for psychological adjustment because the students who cannot manage the stress can experience some mental illnesses such as depression (Ahrari et al., 2019). A high level of acculturation stress is found as a predictor of depressive symptoms in international students (Jackson et al., 2013).

Furthermore, acculturative stress was found to decrease career outcome expectations of international students. Students cannot make a career plan effectively because of having low levels of psychological well-being (Franco et al., 2019). Therefore, it is important to understand the stress of international students to make better adjustment experiences.

Besides, perceived social support affects psychological adjustment. International students are exposed to a high degree of acculturation stress during their cultural transition, and they want to be understood. It was found that when the social support of international students increases, acculturative stress tends to decrease (Poyrazlı et al., 2004). Social support was found as a predictor of psychological adjustment (Ozer, 2015). Satisfaction with host country members is associated with better psychological adjustment (Searle & Ward, 1990). In a study by Franco et al. (2019), acculturative stress is found to be negatively associated with social support from the host country. One explanation of this can be that students withdraw due to high stress, and when they try to interact with members of the host country, their stress can be triggered due to language anxiety or discrimination etc. (Franco et al., 2019). It was demonstrated that students who mostly socialized with domestic students had lower levels of acculturative stress than the students who equally or mostly socialized with other students (Poyrazlı et al., 2004). A longitudinal study demonstrated that the social support of local students helps international students develop a sense of belonging (Brunsting et al., 2019). Also, the social support of academicians caused better well-being by decreasing feelings of loneliness (Brunsting et al., 2019).

And more specifically, communication with co-national friends is important for the adjustment of students because it is found that even students with sufficient social support suffer from cultural loneliness (Sawir et al., 2008, p. 24). Cultural loneliness is a type of loneliness that international students experience because they stay away from their cultural or linguistic environment. Although students need to adjust to the culture they live in, this doesn't mean that students should leave their cultural values and completely mix with the host country's culture. Such a situation harms the psychology of the students. Maintaining the elements of their cultures in their lives, like eating traditional food or wearing traditional clothes is essential for students. Thus, in this context, social activities that are organized for the students from the same

country are very important. However, it should be noted that some students may not have this chance if they don't have any friends from their country of origin (Sawir et al., 2008).

Perceived discrimination also affects the psychological adjustment of students. Ozer (2015) affirmed that discrimination is a significant predictor of the psychological adjustment of international students. Studies regarding discrimination were given under the sociocultural adjustment part.

Furthermore, some qualities of students also affect the psychological adjustment. For instance, Bulgan & Çiftçi (2017) indicated that students with a higher level of marital satisfaction and academic self-efficacy experience a better psychological adjustment in cultural transition. Additionally, socially initiative predicated 12% of the psychological adjustment of international students in Turkey (Kağnıcı, 2012). Lastly, Searly and Ward (1990) affirmed that extraversion is associated with the psychological adjustment of students. Low levels of self-esteem, hope, and optimism are found to correlate with depressive symptoms (Jackson et al., 2013).

As noted above, many factors affect the psychological adjustment of international students, such as homesickness, loneliness, acculturative stress, different types of social support, discrimination, gender, marital satisfaction, and some personality traits.

### **2.2.3. Social Adjustment**

Social/sociocultural adjustment can be simply defined as harmonious interpersonal relationships with members of the host culture (Gabel et al., 2005). With the increase in culturally specific knowledge and social skills, the degree of sociocultural adaptation of students will increase (Schartner & Young, 2016). Usually, the degree of sociocultural adjustment rapidly increases in the beginning. After reaching a plateau, it stabilizes at a certain level. As a result, in contrast with psychological adjustment, it was seen that academic and social adjustment draw more predictable tables (Ward et al., 2005).

In the cultural transition process, adjusting to the new socio-cultural environment is critically important. Recent research found that sociocultural adjustment decreases the likelihood of leaving the program and returning to hometown earlier (Gupalon et al., 2019). Many factors affect the sociocultural adjustment of international students.

Firstly, cultural differences/distance is the most critical factor that directly impacts the sociocultural adjustment of students. It was found that cultural and historical proximity increases the satisfaction of students (Alemu & Cordier, 2017). Since the host country's language, culture, values, communication styles, foods, or traditions are already similar to students' home country, students adjust easily to the new environment. For instance, Malaysian international students studying in Singapore demonstrated a higher level of sociocultural adjustment than Malaysian and Singaporean international students studying at universities in New Zealand (Ward & Kennedy, 1999). Also, research conducted in the USA found that students from Asia experienced more acculturative stress than students from Europe due to cultural differences (Poyrazlı et al., 2004). In addition, cultural differences affect students' social life and relationships. For example, it was found that international students could not establish deep relationships with local students due to differences in cultural values and lifestyles (Spencer-Qatey & Xiong, 2006). Moreover, it was indicated that students from countries where people from different cultures live together and where intercultural interaction is high, tend to adapt more easily in sociocultural terms than students from other countries (Ward & Kennedy, 1999). Therefore, the cultural similarity between the host country and homeland makes international students' sociocultural adjustment process easier.

Besides, the language ability of students predicated sociocultural adjustment of international students (Ozer, 2015). Generally, students at the preparatory school do not have the chance to interact with local students because of taking only language lessons (Çollaku & Nazir, 2019; Spencer-Qatey & Xiong, 2006). Even if they have a chance, some of the newcomers do not prefer to talk due to feeling incompetent in the host country's language. Lack of language skills makes it challenging to form new friendships in the host country and creates acculturative stress, anxiety, and loneliness (Ahrari et al., 2019; Spencer-Qatey & Xiong, 2006). Both language ability and sociocultural adjustment follow a trend that increases over time (Ward & Kennedy,

1999). But although language ability improves over time, students' opportunity to make new local friends decreases over time due to increasing workload and fixed friendship groups (Coles & Swami, 2012). This is one of the challenges of international students in their sociocultural adjustment. Thus, language ability is an essential factor in the sociocultural adjustment of students, especially in the earlier times of the transition.

Perceived social support is another crucial factor that affects the social adjustment of international students. Studies demonstrate that to be academically successful, international students need a supportive social network in their new environment. Therefore, social adjustment is a significant concept that directly affects the academic adjustment of students (Sawir et al., 2008). Different studies have demonstrated the importance of different types of social support, including social support from family members (Poyrazlı & Kavanaugh, 2006; Tsevi, 2018), local students or residents (Brunsting et al., 2019; Poyrazlı et al., 2004), co-national students (Sawir et al., 2008), other international students (Çollaku & Nazir, 2019), and academicians (Ahrari et al., 2019; Brunsting et al., 2019) on international students' adjustment. Furthermore, Schartner & Young (2016) indicated that perceived social support is strongly associated with sociocultural adjustment, life satisfaction, and academic achievement. Ozer (2015) also concluded that social support is a significant predictor of social adjustment.

Taking social support from the host country's members is found to decrease the acculturative stress of international students (Brunsting et al., 2019; Poyrazlı et al., 2004). Despite this, international students in Turkey have difficulties in this regard. Students stated that Turkish people did not understand their problems; they did not have such experience before (Çollaku & Nazir, 2019). Therefore, with the help of socio-cultural activities organized by institutions, student clubs, etc., the interaction of local and international students should be increased, and their communication should be deepened. Moreover, students need to receive social support from other international students who have experienced or are experiencing similar problems with them. In this context, it was found that group counseling programs which include psychoeducation help international students with their adjustment process by increasing their perceived social support, reducing feelings of loneliness, normalizing

the experiences, and teaching necessary communication skills and cultural knowledge regarding the host country (Çollaku & Nazir, 2019; Yakunina et al., 2011).

Also, social support from family members is essential for students. The study of Poyrazlı & Kavanaugh (2006) demonstrated that being married increased students' perceived social support and decreased the feeling of loneliness. One explanation for this might be that it is harder for single students to learn the social skills necessary to find a partner in their new culture, and they feel lonely (Poyrazlı & Kavanaugh, 2006).

Besides, perceived discrimination was a significant predictor of social adjustment of international students (Ozer, 2015). Being exposed to discrimination by academicians, students, or other people negatively affects students' sociocultural adjustment (Ahrari et al., 2019). A qualitative study conducted on Muslim graduate international students demonstrated that majority of them were exposed to overt and aversive discrimination (Tummala-Narra & Claudius, 2013). On the other hand, issues such as discrimination and exclusion of international students have been given a limited place in Turkish literature. The reason for this limitation can be explained by the fact that such a problem is not experienced much by international students in Turkey (Demirhan, 2017). Kıröğlü et al. (2010), in a study they conducted with international students, most of whom came from Turkic Republics, demonstrated that the participants did not encounter prejudice or exclusion much owing to cultural similarities. Another study was indicated that 73.1% of the students studying in Turkey were exposed to positive discrimination and 23% to negative discrimination (Usta et al., 2017). Moreover, a study by Topal & Tauscher (2020) pointed out that 17.7% of international students were discriminated against because of their religious beliefs and 26.3% because of their appearance. It has been determined that students from Africa and Asia suffer the most from discrimination due to their appearance. Previously mainly the students from Turkish and related communities were hosted in Turkey, but the diversity of students increased in terms of nationality and religion in recent years. Thus, it may lead to an increase in perceived discrimination and exclusion in Turkey.

Additionally, some personality traits have an impact on sociocultural adjustment. For instance, having emotional stability and social initiative predicated 22% of the social adjustment of international students in Turkey (Kağnıcı, 2012). Also, cultural empathy

was found helpful for students in their relationships with the opposite sex (Kağnıcı, 2012).

In conclusion, students' sociocultural adjustment is affected by many factors such as cultural distance, language, different types of perceived social support, discrimination, and some personality traits.

#### **2.2.4. General Living Adjustment**

There are some factors that have an impact on the general living adjustment of the students. The host country's climate is one of them. A study conducted in Malaysia demonstrated that international students' physical health affect negatively due to unfamiliar climatic conditions, they sometimes experience complaints such as dizziness, fever, and sneezing. Students in Malaysia found the weather overwhelming because there was only one season in Malaysia, the weather was humid and hot (Rahim et al., 2018). In another study, an Arab student stated that he suffers from depression and homesickness due to the long and cold winter in America (Abu Rabia, 2016). Bianchi (2013) claimed that good weather is a factor that increases international students' satisfaction in Australia. For this reason, exposure to an unfamiliar climate or harsh weather conditions is one of the factors affecting the general adjustment of the students.

The availability of health care systems also has an impact on the students' general living adjustment. Students' difficulty in accessing health services is a factor that negatively affects students' overall satisfaction (Bianchi, 2013). It has been determined that international students in Turkey have various problems due to lack of health insurance (Güneş & Aydar, 2019; Şahin & Demirtaş, 2014). In another study, 33% of students stated that they have problems accessing health services in Turkey (Yardımcıoğlu et al., 2017). Access to counseling services is also essential for students, but it has been observed that compared to domestic students, international students apply less to counseling services despite the high levels of cultural stress they experience (Yakunina et al., 2011). On the other hand, there are positive examples in the world; it has been determined that international students in Australia are satisfied with health services (both physical and mental) and apply to these services without

hesitation due to factors such as easy appointment, competence, and involvement of experts (Russell et al., 2008). In short, for a better adjustment process, students should be provided with ease of access to health services.

Moreover, financial difficulties affect students' general living adjustment. Most of the studies demonstrated that international students experience financial difficulties while studying abroad (Güçlü, 1995; Kıroğlu et al. 2010; Koon & Mehdi, 2019; Köleoğlu, 2018; Sungur et al., 2016; Suprpto et al., 2019; Usta et al., 2017). It has been determined that international students in Karaman do not have sufficient financial means even for education (Usta et al., 2017) When students' income is not enough, as a natural consequence of this situation, their adjustment process will be negatively affected by financial stress. Also, it was found that most of the students in Karaman do not know the historical and touristic places of the host city (Usta et al., 2017). Considering that students do not have enough money even for education, this situation is quite understandable. However, in terms of a healthy adjustment process and cultural interaction, students must be above a certain economic level, meet their basic needs, go to places, and attend the activities that will enable them to know the city's historical culture. Bianci (2013) claimed that visiting the touristic areas of the host city increases students' adjustment satisfaction, and it is part of the international experience. Solving economic problems to a certain extent is important for students' general living adjustment. There are some countries and institutions that are successful in this regard. To illustrate, international students in Malaysia reported financial difficulties as a minor problem due to having a wide range of part-time job alternatives, host countries/institutions scholarships, etc. (Malaklolunthu & Sateyen, 2011).

Lastly, adjusting to the host country's food culture is another factor that affects the general living adjustment. Students usually stay at dormitories and do not have a chance to choose the food they eat because dormitory meals typically consist of fixed menus. When they don't get used to the food and taste of the host country, students experience some problems. For instance, in a qualitative study, it was found that dissatisfaction with food in dormitories triggers students' homesickness and increases the feeling of missing their mothers and cultural foods (Çollaku & Nazir, 2019). In a study conducted in Australia, students stated that limited shopping time due to the early closure of the markets and high food prices are one of the difficulties experienced

in the adjustment process. To cope with this problem, cooking at home is suggested by students (Khawaja & Stallman, 2011). Besides, the majority of the international students stated that they had difficulty getting used to Turkish food initially, but they got used to it after some time passed (Kıroğlu et al., 2010). On the other hand, some students expressed that they still couldn't eat the Turkish food, they cooked their own food using their own species (Kıroğlu et al., 2010). As a result, problems with food have an impact on students' general living adjustment.

In short, it is seen that students' general living adjustment is affected by the climate, health care systems, financial conditions, and food of to host country.

### **2.2.5. Institutional Adjustment**

The adjustment of international students to the institution they are enrolled in is crucial for their general adjustment process. However, the institutional adjustment of international students has been studied less in the literature than other sub-dimensions of adjustment. Most studies have considered institutional adjustment within the context of academic adjustment. However, some researchers consider institutional adjustment as a distinct sub-dimension from academic adjustment. For instance, according to Baker and Siryk's (1984) approach, college adjustment is divided into four sub-dimensions: academic adjustment, social adjustment, personal-emotional adjustment, and attachment. In this approach, attachment is considered as an institutional attachment. Baker & Siryk (1984) explained that a student's high institutional attachment score means that the student is less likely to drop out of her institution and more likely to finish her education. For this reason, universities and countries should pay attention to the institutional adjustment level of international students and try to increase it if necessary.

There are some factors that affect the institutional adjustment of students. One of these factors is the success of students before university. Fernandez et al. (2017) conducted a study in Spain on the variables affecting the adjustment of international students. In this study, they found that the only significant predictor of academic, social, and institutional adjustment was pre-university achievement. Secondly, staying on campus, for example, in a dormitory, is another factor that affects the institutional

adjustment of students. It has been found that the students residing on the campus have higher institutional adjustment because they spend more time on the campus, participate in social activities more easily, and use the facilities on campus, such as the library, more effectively (Almukhambetova & Hernández-Torrano, 2021). In addition, it has been determined that students living outside the campus cannot focus on their lessons as much as students living on campus because they spend more time in transportation (Almukhambetova & Hernández-Torrano, 2021). Besides, in their qualitative study, Sevinç and Gizir (2014) determined that the two main factors affecting institutional adjustment are institutional identity and belonging. Institutional identity includes the perception of the university and the perception of other students at the university, while institutional belonging consists of the sense of belonging to the academic and social context. Also, it has been determined that the negative academic, social, and individual experiences of the students on campus reduce the academic and social adjustment of the students as well as their institutional identity and sense of belonging to the university (Sevinç & Gizir, 2014).

As a result, although it has been studied less than other sub-dimensions in the literature, institutional adjustment is a critical process that shows whether students will continue their education. Pre-university success, staying on campus, institutional identity, institutional belonging, negative academic, social, and individual experiences were found to be the factors affecting the institutional adjustment of the students.

### **2.3. Domestic Studies on International University Students**

Although Turkey has been hosting international students for many years, the number of students and diversity in terms of incoming countries was very limited until the last years. Due to this fact, studies regarding international students in Turkey stayed very limited in the literature. This part presents the studies in Turkey regarding the adjustment of international university students.

Güçlü (1995) examined the problems of international graduate students of Pittsburgh University. In the result, it is found that among eleven problem areas of MISPI (Michigan International Student Problem Inventory) language and finance are the main problems for international students. In addition to this, the qualitative part of the

study demonstrated that students also have significant social-personal problems. To cope with social-personal problems, students suggest some strategies like getting family support via phone or mail.

Sungur et al. (2016) conducted research with 72 international students enrolled in Duzce University to examine the factors that affect the social adjustment and life satisfaction of students. Findings supported the importance of financial income for international students and it was acknowledged as a determining factor on life satisfaction. In addition, research results show that male students get higher scores in university adjustment and social adjustment. Moreover, it was found that the length of stay in Turkey and thinking that other students refrain from making friends affect the social adjustment of international students.

In a recent qualitative study, as a result of the interviews conducted with 20 university students, the challenges of international students were classified into three main themes as academic, social isolation, and cultural adjustment (Nazir & Bulut, 2019). It was determined that having language proficiency was significant in overcoming the difficulties encountered in all these categories. Besides, it was underlined that communication has a great impact on all dimensions of adjustment. It was noted that while the difficulties create various obstacles for students, they also motivate students to produce new strategies to handle these difficulties within or outside the university (Nazir & Bulut, 2019).

In another study by Nazir (2018), twenty students were interviewed to understand the adjustment process and coping strategies of international students in Ankara. The result of the study demonstrated that students face some academic and socio-cultural problems during their transition. It has been determined that one of the obstacles to academic adjustment was the communication problems students have with their friends, lecturers, and other members of the university. The biggest reason behind this was the language barrier. Additionally, students were afraid that if they failed to meet the expectations of the institutions, their scholarships would cease. This fear creates stress on students and makes their academic adjustment difficult. Furthermore, due to a lack of knowledge about Turkish culture, students had difficulties behaving in some

circumstances. Lastly, taking language support and attending social activities were effective coping strategies.

In a study conducted with 26 international students studying in Karaman, the problems experienced by students were examined, and solutions were provided for them (Usta et al., 2017). In the study, it was found that most students do not have sufficient financial income. Moreover, in terms of academic adjustment, it was found that students had difficulties using Turkish, especially in-class participation. Also, in the statistics results, most of the students claimed that they were exposed to positive discrimination in Turkey. Therefore, it was found that the people of Karaman embrace students as guests instead of excluding them.

Köleoğlu (2018) examined the social adjustment process of international students in Çanakkale. 165 students participated in the study. Almost a quarter of them were students from Azerbaijan. The rest were students from different parts of the world. The study result confirmed that the main problems experienced by international students are economical as in other studies (Aydın Kartal et al., 2018; Güçlü, 1995; Sungur et al., 2016; Suprpto et al., 2019; Usta et al., 2017). Other areas where international students have the most problems are determined as educational differences and language issues. Besides, it is seen that at the root of the problems international students experience in social adjustment, there are economic, educational, and language problems. Likewise, as also found in Usta et al. (2017), this research found that international students in Turkey do not experience major problems with the public or their Turkish friends. Students are generally satisfied with them.

Güneş & Aydar (2019) are among the researchers who tried to understand the adjustment problems and coping strategies of international students. In their mixed-method research, 122 students who enrolled at Iğdır University participated. The main problem areas were stated as accommodation, lack of social activities, and health insurance. Language problems were more in the background in this study, as most of the participants (57,1%) came from Azerbaijan. It was found that the students from Azerbaijan, Somalia, and Syria experience less difficulty in adjusting than the other students. However, it was stated that especially African students experienced more language difficulties than other students. Furthermore, it was found that to cope with

the scarcity of socio-cultural activities in the city and in the university, students socialize only by meeting with their friends.

Cura & Işık (2016) researched the academic adjustment of international students by measuring the effect of social support and acculturative stress. 298 students from four Turkish universities participated in the study. 26,2% of the participants were students who came from Turkic Republics. A positive correlation was found between academic adjustment and social support according to the statistics. Thus, when social support from family, friends, or university increases, the academic adjustment also increases for students. Besides, a negative correlation was found between academic adjustment and acculturative stress. Some sub-scales of acculturative stress, perceived discrimination and hate, are also negatively correlated with academic adjustment. In addition, especially when social support from university increases, acculturative stress declines for students. As a result, important predictors of academic adjustment were stated as social support and acculturative stress.

Another study on the social and academic adjustment of international university students was carried out by Aydın Kartal et al (2018). 69 students from the University of Health Sciences attended the study. The majority of the participants lived in Turkey for more than 3 years. It was determined that the most common problems among participants were language and financial difficulties. These findings are parallel with many studies in the literature (Güçlü, 1995; Koon & Mehdi, 2019; Köleoğlu, 2018; Sungur et al., 2016; Suprpto et al., 2019; Usta et al., 2017). At the same time, it was determined that financial difficulties affect the adjustment of students. Longing for family and home, rules about social life, difficulty expressing oneself, accommodation problems, and food culture were identified as other difficulties for students. It was found that the students who previously knew Turkish and those who lived with their families had better scores in university adjustment and social adjustment. Compared to female students, it was found that male students' academic adjustment was significantly higher. This is also similar to Sungur et al.'s (2016) study.

Gökcyer (2017) conducted a study to examine the psychological adjustment of international students. The author benefited from acculturation theory, which explains the changes that occur due to the individual's contact with another culture. It was found

in the study that the most critical variable that predicts students' psychological adjustment is their attitudes of acculturation. Mostly, students preferred the attitude of integration to the acculturation attitude. Since the increase in cultural distance increases the problems in adjustment, the concept of cultural distance has also been investigated in the study. Similarities were found between the hometown of students and Turkish culture in the categories of religious belief, family life, customs, world view, social activities, and living standards. However, cultural differences were detected in the categories of clothing, communication style, values, friendship, language, and food culture. Likewise, while there was no significant difference between male and female students in this study, it was observed that, in general, students' life satisfaction and health status were low.

#### **2.4. Studies on International University Students Around the World**

Considerable research was done on the adjustment problems of international university students in the world, and solutions were tried to be developed for these problems. US and European countries began to host international students in the earlier years than Turkey. For this reason, the studies conducted abroad regarding the psychosocial problems of international university students started earlier (in the 1950s) than in Turkey (Ward et al., 2001). Also, today, the US and some of the European countries have more international students than Turkey; thus, it is considered that their analysis can be a guide for research in Turkey. Moreover, the research conducted in Muslim countries are helpful to understand the adjustment of international students in Turkey because of having a similar background. In this part, some of the studies in the world directly related to this study are summarized.

In the study conducted by Alharbi & Smith (2018), a literature review was presented regarding the stress that international students experienced and their wellbeing in terms of individual differences. The findings in the literature were ranked according to the sources of experienced stresses, individual reasons for the differences, and were evaluated in terms of psychological well-being. Due to the differences related to samples, countries, ethnicities, cultures, and universities, contradictory findings were included.

Sovic (2008) examined the stress experienced by international students in London. The sample consisted of 141 students from six geographical international student areas: Japan, South Korea, Hong Kong, Taiwan, India, America. The author found that the most stressful element in the adjustment period is the language for most of the students. As a result, difficulty with language affects their academic success and social life. In addition, it was determined that students experienced cultural shock, academic shock, and social shock during their adjustment process because they are not in the education system, culture, and social environment they are used to.

Alsaifi & Shin (2017) conducted mixed-method research with 100 Saudi students in Australia to understand the factors impacting their adjustment and academic achievement. Similarly, Sovic (2008) found that language is the most prominent factor affecting Saudi students' academic achievement and social adjustment. In addition to the language factor, some social and academic factors affecting students' academic performance were also identified. Missing homeland and feeling lonely are found as social factors. Furthermore, the activities in class and assessment methods are stated as academic factors. Besides, developing language abilities and time management skills are found to be the most effective coping strategies for students (Alsaifi & Shin, 2017).

Tsevi (2018) investigated the problems, and the coping strategies of five international students enrolled in the United States by conducting in-depth interviews. By supporting the previous findings of (Alsaifi & Shin, 2017; Sovic, 2008), the results revealed that international students suffer from language problems, differences between their previous and current education, the intensity of academic studies, daily challenges of being independent, and homesickness. Having social support from friends and professors, social and economic support from family, and activities outside of class is stated as the most used strategies for coping with the challenges of being an international student. The author emphasizes that universities should design programs that will assist international students in facilitating the adjustment process and eliminating language barriers as much as possible.

A study conducted in Azerbaijan investigated the challenges of international students and their life satisfaction (Koon & Mehdi, 2019). They found that most students had

difficulty in the Azeri language, communication, scarcity of English activities, local food, and cultural environment. The majority of the students stated their experiences as positive, and they are satisfied with studying in Azerbaijan. However, in parallel with the work of Sungur et al. (2016), it was determined that the life satisfaction of the students was affected by financial difficulties. Besides, it was found that students have trouble with health insurance and residence permits. Despite all these difficulties, it has been determined that the positive attitudes of the public and academics help students overcome the challenges they face.

In Wang et al.'s (2018) study on understanding the experiences of South American international students in Flanders, the researchers conducted interviews with five students. At the end of the thematic analysis, three themes emerged: socio-cultural adjustment, academic adjustment, and psychological adjustment. The results of the study showed that the adjustment process was influenced by individual factors such as students' acculturation and coping strategies. In addition to these individual factors, social variables like social interaction and cultural discomfort were found to affect the adjustment period.

Suprpto et al. (2019) developed the Life Adjustment Questionnaire in their study, which investigated the adjustment of international university students in Eastern Taiwan. In the study involving 104 students, they ensured the validity and reliability of the scale. When the sub-dimensions of the questionnaire are examined, the dimensions of commitment to the goal and academic adjustment have the highest scores while financial adjustment is the sub-dimension that students score the lowest. It has also been revealed in many studies (Aydın Kartal et al., 2018; Güçlü, 1995; Sungur et al., 2016; Usta et al., 2017, Koon & Mehdi, 2019; Köleoğlu, 2018) in different parts of the world that students have problems in financial matters. In addition, the results revealed that economic adjustment significantly correlated with personal adjustment and academic adjustment. These findings also demonstrate how vital financial problems are for students. Lastly, in terms of academic and financial adjustment, doctoral students had higher scores than master and undergraduate students.

Lashari et al. (2018) examined the effect of social support on acculturation stress, academic and psychological adjustment. Two hundred postgraduate international students in Malaysia attended the research. Results of the study demonstrated that students with higher levels of social support had a higher academic and psychological adjustment. Additionally, it was determined that social support negatively correlates with acculturation stress. It was found that a high level of stress is an indicator of low psychological adjustment. By showing the importance of social support, the authors make some suggestions to the university administrations to increase the adjustment of international students.

In recent research that seeks to understand the stress and coping mechanisms of Asian international students in China, it is found that students experience little or no acculturative stress (Ngwira et al., 2020). On the other hand, in the study involving 162 students, it was determined that the sources of acculturation stress were homesickness, cultural shock, and guilt. To manage stressful circumstances, the majority of students use active coping strategies such as religious practices, planning, active coping, and instrumental support. However, the students who have higher levels of acculturative stress use avoidant coping strategies more, such as self-blame and behavior disengagement. Furthermore, the factors that impact acculturative stress are stated as age, level of education, and length of stay.

## **CHAPTER III**

### **METHOD**

In this part, the research model, participants, instruments, data collection, and data analysis procedures of the study are given.

#### **3.1. Research Model**

In this study, a psychometric measurement tool was developed in order to measure and understand the adjustment process of international students in Turkey better. This study is quantitative and was conducted in the survey model. Babbie (1990, as cited in Creswell, 2014) stated that the goal of the survey model is to make predictions from a sample to a population and thus draw conclusions about a trait, attitude, or behavior.

#### **3.2. Participants**

To understand the adjustment process of international students better and to measure the effects of the language on the adjustment process, specific criteria are defined for participation.

The criteria of this research are:

1. Being an international student in higher educational settings in Turkey (preparatory school, undergraduate, master, or Ph.D. level)
2. Being between 18-35 years old.
3. Living in Turkey for at least 4 months to 3 years.
4. Not coming from Turkish-speaking countries such as Turkmenistan, Azerbaijan, Uzbekistan, etc.
5. Knowing English (because of the language of the scale)

To reach more students easily and economically, a nonprobability sample (convenience sample) is used. Data is collected via face-to-face and online methods. In the face-to-face data collection process, some universities, dormitories, student houses, and some international student associations were visited. Thanks to online survey techniques, students in different cities were also reached.

Furthermore, the participants helped to find more participants by sharing the research with their friends or relatives, such as their brothers, sisters, or cousins. For that reason, the sampling method of this study is also snowball sampling.

Firstly, 80 international students were reached for the trial application of the developed International Students Adjustment Scale (ISAS), which was made in the 2019 Summer with students in TOMER at Ibn Haldun University. Then, 210 students were subjected to the test-retest method, but those who didn't complete the study or didn't fit the criteria were omitted, and 162 students left. Then 263 international students were reached in the final application of the scale but, again the participants who didn't fill the survey entirely and who didn't fit the criteria were omitted from the research. In the end, 187 participants left for the last part of the research. In conclusion, 349 international students were included in the research. In the study, 339 students remained after removing the extreme values during the analysis.

The ages of international students are divided into three groups, their numbers and percentages are shown in Table 3.1. When the distribution of the participants is examined according to their ages, it is seen that participants aged 18-24 constitute 67.8% of the total participants, 23.3% between the ages of 25-29, and 8.8% between the ages of 30-35.

**Table 3.1. Ages and percentages of international students**

		Frequency	Percent
Age	18-24 age	230	67,8
	25-29 age	79	23,3
	30-35 age	30	8,8
	Total	339	100,0

When data is examined according to gender, it is seen that women constitute 46% of the total individuals and men 54%. It was observed that the distribution of male and female individuals was close to each other. The gender distributions and percentages of participants are shown in Table 3.2.

**Table 3.2. Gender and percentages of international students**

		Frequency	Percent
Gender	Female	156	46,0
	Male	183	54,0
	Total	339	100,0

The universities where international students study are shown in Table 3.3. The universities with the highest number of participants are Ibn Haldun University with 21.5%, Istanbul Şehir University with 16.5%, and Health Sciences University with 11.8%. The rest of them (50,2%) study in different universities in Turkey. Within the scope of the study, students from every region of Turkey and 58 universities were reached.

**Table 3.3. Universities and percentages of international students**

		Frequency	Percent
Universities	Ondokuz Mayıs University	5	1,5
	Erciyes University	13	3,8
	Istanbul Sabahhatin Zaim University	16	4,7
	Istanbul Technical University	3	,9
	Bilkent University	1	,3
	41 North Business School	4	1,2
	Middle East Technical University	2	,6
	Istanbul Sehir University	56	16,5
	Karadeniz Technical University	1	,3
	Tokat Gaziosmanpaşa University	5	1,5
	Ibn Haldun University	73	21,5
	University Of Health Sciences	40	11,8
	Karabuk University	9	2,7
	Gazi University	1	,3
	Ankara Yıldırım Beyazıt University	1	,3
	Eskişehir Osmangazi University	3	,9

**Table 3.3. (continued)**

		Frequency	Percent
Universities	Necmettin Erbakan University	4	1,2
	Anadolu University	7	2,1
	Sakarya University	11	3,2
	Adnan Menderes University	1	,3
	Bursa Uludağ University	7	2,1
	Yıldız Technical University	3	,9
	Sabancı University	1	,3
	Abdullah Gul University	1	,3
	Medipol University	1	,3
	Istanbul Aydın University	2	,6
	Hacı Bayram Veli University	1	,3
	Bahçeşehir University	1	,3
	Kırıkkale University	1	,3
	Istinye University	1	,3
	Üsküdar University	1	,3
	Afyon Kocatepe University	1	,3
	Dokuz Eylül University	1	,3
	Gaziantep University	1	,3
	Nisantasi University	2	,6
	Suleyman Demirel University	1	,3
	Ataturk University	3	,9
	Bandırma Onyedli Eylül University	2	,6
	Özyeğin University	1	,3
	Nevşehir Hacı Bektaş Veli University	1	,3
	Istanbul Kültür University	1	,3
	Hacettepe University	1	,3
	Istanbul Gelişim University	1	,3
	Marmara University	4	1,2
	Fatih Sultan Mehmet University	3	,9
	Istanbul University	8	2,4
	Bilecik Şeyh Edebali University	4	1,2
	Kastamonu University	3	,9
	Istanbul Commerce University	3	,9
	Selçuk University	3	,9
	Kocaeli University	2	,6

**Table 3.3. (continued)**

		Frequency	Percent
Universities	Istanbul Medeniyet University	2	,6
	Ege University	3	,9
	Recep Tayyip Erdoğan University	1	,3
	Kırşehir Ahi Evran University	4	1,2
	Konya Technical University	1	,3
	Social Sciences University of Ankara	1	,3
	Total	339	100,0

The education levels of international students are shown in Table 3.4. The percentage of students in the preparatory school is 7.7%, undergraduate students is 57.5%, postgraduate students make up 27.4%, and Ph.D. students make up 7.1%. The education level with the highest number of international students is in the undergraduate group.

**Table 3.4. Educational status and percentages of international students**

		Frequency	Percent
Level of education	Prep School	26	7,7
	Undergraduate	195	57,5
	Master	93	27,4
	PhD	24	7,1
	Total	338	99,7
Missing	System	1	,3
Total		339	100,0

The religion of international students is shown in Table 3.5. The religion of the international students who participated in the survey is Islam with 90.3%, Christianity with 6.2%, Agnostic with 0.3%, and Omniteist with 0.3%. Those who answered as none constituted 1.5%.

**Table 3.5. Religions and percentages of international students**

		Frequency	Percent
Religions	Islam	306	90,3
	Christianity	21	6,2
	Agnosticism	1	,3
	Atheism	1	,3
	Omnism	1	,3
	None	5	1,5
	Total	335	98,8
Missing	System	4	1,2
Total		339	100

The numbers and percentages of international students' length of stay in Turkey are shown in Table 3.6. The rate of those staying between 4-12 months is 25.7%, the rate of those staying between 13-23 months is 28.6%, and the rate of those staying for 2-3 years is 45.7%.

**Table 3.6. Numbers and percentages of the length of stay of international students in Turkey**

		Frequency	Percent
Length of stay in Turkey	4-12 months	87	25,7
	13-23 months	97	28,6
	2-3 years	155	45,7
	Total	339	100,0

The marital status and percentages of international students are shown in Table 3.7. The great majority of the participants are single with a rate of 90.6 %, and married ones make up 8.8 %.

**Table 3.7. Marital status and percentages of international students**

		Frequency	Percent
Marital status	Single	307	90,6
	Married	30	8,8
	Total	337	99,4
Missing	System	2	,6
Total		339	100,0

Countries and percentages of international students are shown in Table 3.8. It is seen that the participants mostly come from Indonesia with 13.3% and the Philippines with 11.5%. In total, students from 62 countries participated in the study.

**Table 3.8. Countries and percentages of international students**

	Frequency	Percent
<b>Country of origin</b> Macedonia	3	,9
Palestine	16	4,7
Somalia	15	4,4
Pakistan	15	4,4
Albania	8	2,4
Philippines	39	11,5
India	6	1,8
Indonesia	45	13,3
Ethiopia	5	1,5
Uganda	2	,6
Nigeria	10	2,9
Syria	12	3,5
Zimbabwe	1	,3
Egypt	10	2,9
Ghana	4	1,2
Algeria	3	,9
Mozambique	1	,3
Kosovo	3	,9
The Gambia	5	1,5
Jordan	9	2,7
Kenya	4	1,2
Ivory Coast	1	,3
Thailand	3	,9
Cameroon	3	,9
Philippines	2	,6
Myanmar	1	,3
Bangladesh	10	2,9
Republic of Malawi	1	,3
Ukraine	2	,6
Sudan	10	2,9
Chad	10	2,9
Afghanistan	7	2,1
Yemen	11	3,2
Saudi Arabia	1	,3

**Table 3.8. (continued)**

	Frequency	Percent
Benin	2	,6
Tunisia	4	1,2
South Sudan	2	,6
Georgia	1	,3
Venezuela	2	,6
Lebanon	3	,9
Iraq	1	,3
Guinea-Bissau	1	,3
Morocco	12	3,5
France	1	,3
Burkina Faso	3	,9
Guinée	1	,3
Liberia	1	,3
The Central African Republic	2	,6
United Arab Emirates	2	,6
South Africa	4	1,2
Guinea	1	,3
Rwanda	1	,3
Italy	1	,3
Iran	3	,9
Mali	1	,3
Senegal	1	,3
Mauritania	1	,3
United Kingdom	1	,3
Bosnia and Herzegovina	2	,6
Sierra Leone	2	,6
Tanzania	1	,3
Nepal	1	,3
Missing System	3	,9
Total	337	99,4

Participants in the study are classified according to their continents and are shown in Table 3.9. 6.8% of the students came from Europe, 54.9% from Asia, 36.9% from Africa, and 0.9% from South America. It is seen that the majority of students come from Asia and Africa.

**Table 3.9. Continents and percentages of international students**

		Frequency	Percent
<b>Continents</b>	Europe	23	6,8
	Asia	186	54,9
	Africa	125	36,9
	South America	3	,9
	Total	337	99,4
Missing	System	2	,6
<b>Total</b>		<b>339</b>	<b>100,0</b>

The accommodation and percentages of international students are shown in Table 3.10. It is found that 54.4% of the students stay at the dormitory, 26.6% of the students stay with their friends, 14.3% of the students stay with their families or some parts of their family like living with sister/brother/cousins, etc., and 4% of those are alone.

**Table 3.10. Accommodation and percentages of international students**

		Frequency	Percent
<b>Accommodation</b>	Dormitory	187	55,2
	Friends	90	26,5
	Family	47	13,9
	Alone	13	3,8
	Total	337	99,4
Missing	System	2	,6
<b>Total</b>		<b>339</b>	<b>100,0</b>

The countries where international students lived before, and their percentages are shown in Table 3.11. 59.6% of the students stated that they had lived in only one country before, 23.9% had lived in two countries, 10.3% had lived in three countries, 3.5% had lived in four countries, and the number of people staying in five or more countries constitutes 1.5%.

**Table 3.11. Numbers of countries of residence and percentages of international students**

		Frequency	Percent
<b>Number of Countries they lived in before</b>	1	202	59,6
	2	81	23,9
	3	35	10,3
	4	12	3,5
	5 and above	5	1,5
	Total	335	98,8
Missing	System	4	1,2
	Total	339	100,0

### **3.3. Instruments**

In the research, participants signed the consent form and filled out a short sociodemographic form and International Students Adjustment Scale (ISAS), which are developed in the study. All of them took approximately 10-15 minutes to complete. The instrumentations are added to the Appendices section.

#### **3.3.1. Students Consent Form**

Before applying the questionnaire to the participants, they read the consent form. Therefore, students are informed about the aim of the research and the span of the survey. Especially confidentiality of their personal information was emphasized in the consent form because participants' contact information was asked to make test-retest reliability. Lastly, students signed the consent form to indicate they voluntarily participated in the study.

#### **3.3.2. Sociodemographic Form**

To see the factors that affect the adjustment process of international students, a short sociodemographic form is prepared. Before filling the survey, participants filled out the sociodemographic form consisting of 12 items. In this part, participants indicated their gender, name of the university, level of education, country of origin, marital status, and religion. Additionally, their length of stay in Turkey, their accommodation

information (staying with family/friends or dormitory), and the number of countries they lived in were asked. Besides, to ensure test-retest reliability, students' email addresses and phone numbers are requested in the sociodemographic form but indicating the contact information was voluntary in the study. It was assured that personal data will only be used for research and will not be shared with third parties. Test-retest reliability was conducted with the volunteer students who share their email addresses and phone numbers.

### **3.3.3. International Students Adjustment Scale (ISAS)**

In the study, the International Students Adjustment Scale (ISAS) designed in this research was implemented for the participants. To prepare the questions, literature was searched. After preparing the questions, the opinions of the experts were received. According to their suggestions, the necessary changes were made in terms of the content and shape of the scale. Questions also were read by students to check whether they were understandable and minimize the dual meanings in the statements. At the end of this process, the scale was finalized.

ISAS is designed for individuals over 18 years old and students who study in higher educational settings in Turkey. The language of the scale is English considering that newcomers may not know Turkish very well. The scale is arranged as a five-point Likert. Scoring is done from positive to negative as 1- Strongly agree, 2- Agree, 3- Not sure, 4 Disagree, 5- Strongly Disagree. Students choose the most appropriate options for themselves. The scale is scored as 5,4,3,2,1 and higher scores demonstrate higher levels of adjustment to Turkey.

Reliability and validity scores are established during the research. Reliability demonstrates whether the scale is stable over time. To ensure reliability, test, and retest reliability is made. Furthermore, for reliability, whether scores to items on an instrument are internally consistent or not is stated according to the results.

### **3.4. Collecting Data**

Before starting the data collection process, necessary permissions were obtained from Ibn Haldun University Social and Humanities Scientific Researches and Editorial Ethics Board. Afterward, to reach more students, data were collected face-to-face and online by contacting various universities, dormitories, students in student houses, international student associations, student clubs, university members, and some social media accounts related to international students, etc. Also, participants invited their friends and relatives to the research and helped reach more participants.

In the online data collection process, when there is a misunderstanding of any questions or incomplete survey, students were reached -if the contact information was given- and asked to clarify the answers or asked to complete the form. When the data was collected face to face, the students were supported in Turkish or English at the points where the students were confused.

After one month passed, to ensure test-retest reliability, 162 students were reached again via their email addresses or phone numbers. Students have filled out the retest face-to-face or online according to their availability.

### **3.5. Analyzing Data**

Statistical analyzes of the data collected for the study were carried out with SPSS Statistics version 26. In this study, a scale to measure the adjustment of international students was developed. To develop the scale, the steps listed below were followed. While preparing the steps in the list, 10 steps in the scale development made by Carpenter (2018) were used.

1. Firstly, to prepare the items on the scale, a literature review was made about the most common problem areas of international students in their adjustment processes. With the help of the findings on the literature, an item pool of the scale that includes nearly 100 problem statements was created. Each item was developed within the study.

2. Then, the opinions of experts and intended participants were taken to ensure content validity. Content validity assesses how well the items measure the content they were intended to measure (Creswell, 2014). While designing the expressions, attention was paid to the clarity of item expressions and the appropriateness of items to international students. Some statements were omitted from the scale due to including similar items. To examine the items on the scale, experts and intended participants ranked the items from 1 to 10. After feedback for items was taken, necessary arrangements were made, and the highest-scoring sentences were used in the scale; the others were eliminated. Then the number of items on the scale was reduced to 35. The last version of the scale was sent to the experts and intended participants. Then, their opinions were asked again to ensure the items' clarity. After deciding to use the Likert type scale with the items, the scale form to be used in the pilot application was created. Afterward, the sample size was decided. There is no common opinion in the literature about the ideal sample size, a minimum ratio of participants to items changes between 5:1, 10:1, or 20:1 (Carpenter, 2018; Worthington & Whittaker, 2006). However, mostly it is accepted that a sample of 300 or more is good. It is also acknowledged that the sample size can be smaller, especially in samples that are difficult to reach (Worthington & Whittaker, 2006). As a result, in this study, while 300 participants were initially targeted, 349 participants were reached at the end.

3. The pilot application of the scale was applied to TOMER students of Ibn Haldun University in 2019 summer. 80 students participated in the pilot application. Then, the data obtained as a result of the pilot application was reviewed. Under the guidance of experts, the test-retest version of the scale was prepared and conducted.

4. Outliers were checked and omitted from the research (Carpenter, 2018).

5. In the field of social sciences, factor analysis is mainly used to ensure construct validity (Büyüköztürk et al., 2012). Construct validity enables items “to measure hypothetical structures or concepts” (Creswell, 2014). Factor analysis is a multivariate statistical method that aims to find a small number of new meaningful variables called factors by combining variables with high correlations (Büyüköztürk, 2019; Watkins, 2018). In this study, exploratory factor analysis was used to reveal the factor structure of the scale.

6. To conduct factor analysis, the Kaiser-Meyer-Olkin (KMO) value of the data set must be over 0.60, and the Barlett's chi-square must be statistically significant (Büyüköztürk, 2019) at  $p < .05$  (Carpenter, 2018). The statistically significant test result also demonstrates the normality of the scores (Büyüköztürk, 2019).

7. Principal component analysis was used as a factor extraction method.

8. Exploratory factor analysis (EFA) is conducted with 162 students in the test-retest group.

9. The number of factors was determined, and factors were rotated. Items on the scale were retained based on the analysis. As a result of the EFA, it was seen that the scale had a 5-factor structure.

10. Reliability represents internal consistency, test-retest correlations, and consistency in test administration and scoring (Creswell, 2014). Therefore, test-retest correlations were applied to check whether the scores remained constant in time when the scale was conducted again. Internal consistency, which is the consistency of the items' responses across the construct, was measured using the Cronbach alpha statistic. (Creswell, 2014).

After developing the scale, demographic data, mean and standard deviation values of the scale, and its sub-dimensions were determined. Significance levels were determined to find out whether the adjustment of international students differed according to the demographic variables (gender, age, marital status, educational status, religion, accommodation, length of stay, and the number of countries they lived in before). The analysis of those between two groups' means was carried out with the independent sample t-test. However, the analysis of group means with more than two was performed with the One Way Anova test. Tukey test, LSD test, and Dunnet test were used to find the differences between the groups. The Pearson test was used in the correlation between the adjustment scale and its sub-dimensions. The whole study was carried out by considering the significance levels of 0.05 and 0.001. The statistical information obtained was given in the findings section. After analyzing the data, the results were interpreted with the help of literature.

## CHAPTER IV

### RESULTS

In this section, the findings obtained from the data analysis and interpretations of these findings are included.

#### 4.1. Reliability of Scales and Factor Analysis

In this study, it is aimed to measure the adjustment of students from different countries towards Turkey. In this context, International Students Adjustment Scale (ISAS) has been developed. In order to develop the scale, a pre-test which consists of 35 questions has been applied to 162 international students. After the pre-test results, the reliabilities of the 35 questions have been determined, and then the 20th and 25th questions, which reduced the reliability of the scale, have been removed. The Cronbach Alpha coefficient obtained from the pre-test was found to be 0.861. In addition, a post-test was carried out to the same participants one month after the pre-test. The Cronbach Alpha coefficient obtained from the post-test was found to be 0.893. The reliability values obtained from the pre-test and post-test after removing the 20th and 25th questions are shown in Table 4.1.

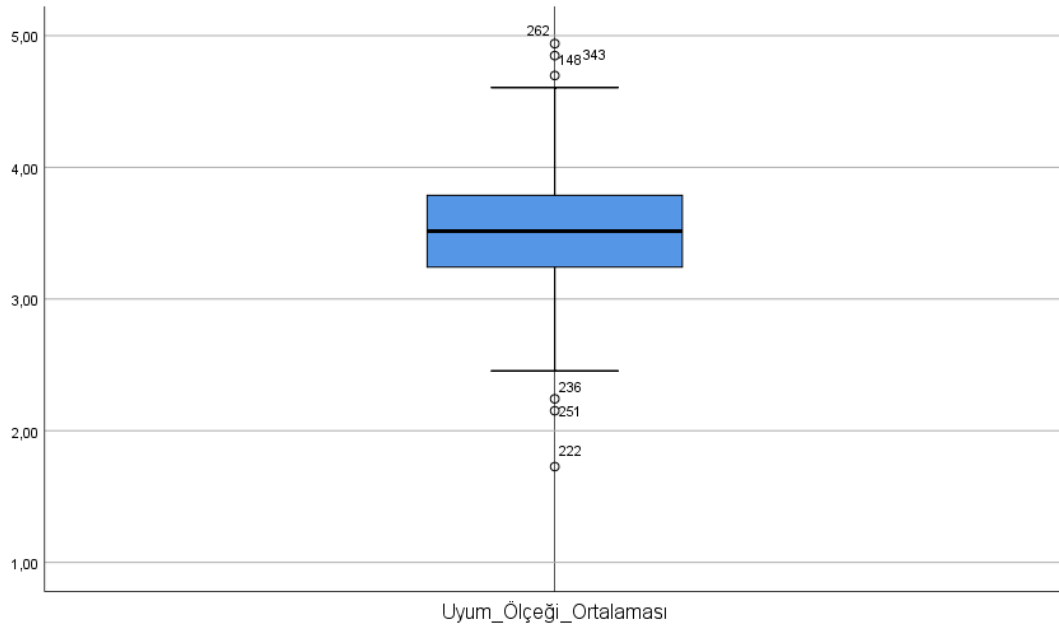
**Table 4.1. Cronbach Alpha values obtained from the pre-test and the post-test**

<b>Reliability Statistics</b>			
	Cronbach's Alpha	Cronbach's Alpha Based on Standardized Items	N of Items
Pre-test	0,861	0,862	33
Post-test	0,893	0,896	33

International Students Adjustment Scale (ISAS) was reorganized after the removal of the two questions following the pre-test and post-test. This reorganized ISAS was applied to 349 international students. Z value was examined, values other than -3/+3

have been excluded from the scale. The values of 222nd, 236th, and 262nd participants have been excluded because they are extreme values.

Additionally, the highest and lowest data that did not fit the scale with the extreme method were calculated and removed from the scale. The highest and lowest values of these extreme values are shown in Table 4.2. and Figure 4.1. The surveys of 10 out of 349 participants were regarded as invalid.



**Figure 4.1. Detection of extreme values**

**Table 4.2. Detection of extreme values**

Extreme Values				
			Case Number	Value
Mean of ISAS	Highest	1	262	4,94
		2	343	4,85
		3	148	4,70
		4	149	4,61
		5	226	4,61
	Lowest	1	222	1,73
		2	236	2,15
		3	251	2,24
		4	266	2,45
		5	255	2,45

Extreme survey responses in the scale have been excluded, and reliability analyses have been conducted. Cronbach's alpha value of the scale has been found to be 0,864, and it is shown in Table 4.3.

**Table 4.3. Cronbach's Alpha value of ISAS**

Cronbach's Alpha	Cronbach's Alpha Based on Standardized Items	N of Items
0,84	0,845	33

Reliability analysis is a concept that reveals the consistency of all questions in a survey and their homogeneity in measuring the discussed entity. There is a coefficient of  $\alpha$  in the reliability analysis made. This alpha value means  $0 < \alpha < 0.40$  is unreliable,  $0.40 < \alpha < 0.60$  low reliability,  $0.60 < \alpha < 0.80$  moderate reliability,  $0.80 < \alpha < 1.00$  high reliability. As a result, ISAS has high reliability.

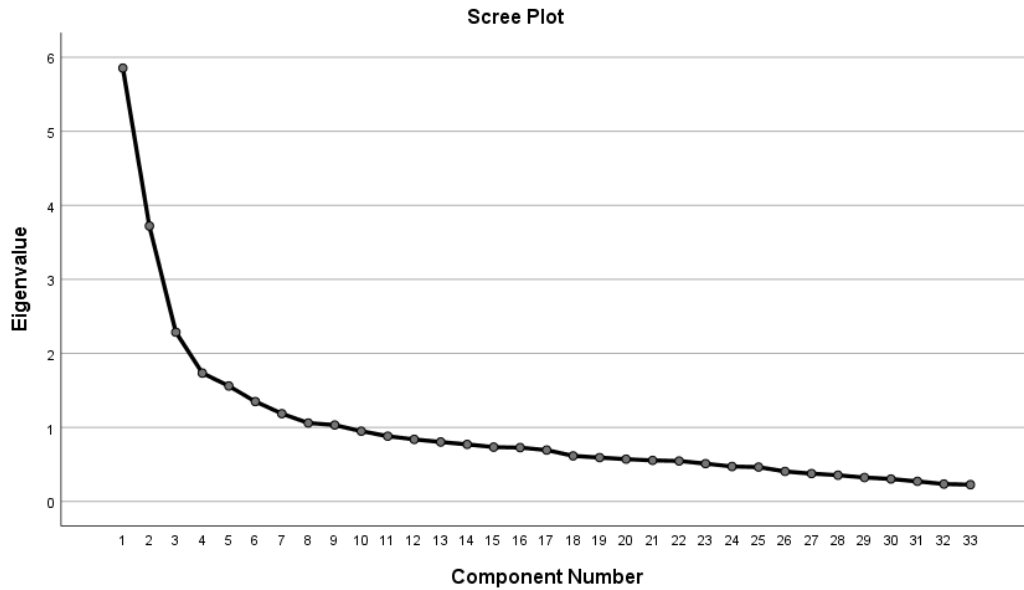
To determine the construct validity and factor structure of the ISAS, factor analysis was conducted. However, to conduct factor analysis, the Kaiser-Meyer-Olkin (KMO) value of the data set must be over 0.60, and the Barlett's chi-square must be statistically significant (Büyüköztürk, 2019). In the statistical analysis it was found that the Kaiser-Meyer-Olkin (KMO) value of the ISAS was found to be 0,806 and, Barlett's chi-square was found statistically significant at  $p < .05$ . The statistically significant test results are also a sign of the normality of the scores (Büyüköztürk, 2019). These results are shown in Table 4.4. As a result, ISAS is suitable to conduct factor analysis.

**Table 4.4. KMO and Bartlett's Test**

Kaiser-Meyer-Olkin Measure of Sampling Adequacy.		0,806
Bartlett's Test of Sphericity	Approx. Chi-Square	3469
	Df	528
	Sig.	0,000

In the factor analysis, the Total Variance Explained table shows how many factors the scale consists of and to what extent these factors measure the phenomenon to be measured. After the factor analysis, it was determined that ISAS consisted of 5 main

sub-dimensions, and it is shown in Table 4.5. The scree plot graph is shown in Figure 4.2.



**Figure 4.2. The scree plot graph**

**Table 4.5. Total Variance Explained table and factor groups**

Total Variance Explained									
Component	Initial Eigenvalues			Extraction Sums of Squared Loadings			Rotation Sums of Squared Loadings		
	Total	% of Variance	Cumulative %	Total	% of Variance	Cumulative %	Total	% of Variance	Cumulative %
1	5,854	17,740	17,740	5,85	17,74	17,740	4,58	13,894	13,894
2	3,721	11,277	29,017	3,72	11,27	29,017	3,34	10,136	24,030
3	2,286	6,928	35,944	2,28	6,92	35,944	3,00	9,101	33,131
4	1,734	5,254	41,198	1,73	5,25	41,198	2,25	6,825	39,956
5	1,560	4,726	45,925	1,56	4,72	45,925	1,97	5,968	45,925
6	1,350	4,090	50,015						
7	1,186	3,594	53,609						
8	1,060	3,212	56,821						
9	1,032	3,127	59,948						
10	0,949	2,875	62,822						

**Table 4.5. (continued)**

Component	Total Variance Explained								
	Initial Eigenvalues			Extraction Sums of Squared Loadings			Rotation Sums of Squared Loadings		
	Total	% of Variance	Cumulative %	Total	% of Variance	Cumulative %	Total	% of Variance	Cumulative %
11	0,881	2,671	65,493						
12	0,839	2,541	68,034						
13	0,803	2,432	70,467						
14	0,771	2,336	72,803						
15	0,734	2,223	75,026						
16	0,727	2,204	77,230						
17	0,694	2,102	79,332						
18	0,616	1,865	81,198						
19	0,593	1,796	82,993						
20	0,571	1,730	84,723						
21	0,554	1,680	86,403						
22	0,547	1,657	88,059						
23	0,510	1,547	89,606						
24	0,472	1,429	91,035						
25	0,464	1,405	92,441						
26	0,406	1,229	93,670						
27	0,376	1,139	94,809						
28	0,354	1,073	95,882						
29	0,323	0,979	96,861						
30	0,303	0,919	97,780						
31	0,271	0,822	98,602						
32	0,235	0,711	99,313						
33	0,227	0,687	100,000						

Extraction Method: Principal Component Analysis.

The Rotated Component Matrix table was used to create the factor structure, and it is shown in Table 4.6. During the examination process of the Rotated Component Matrix table, it was checked under which factor each item had the highest value. Then, these items were grouped to form a factor structure.

**Table 4.6. Rotated Component Matrix table**

<b>Rotated Component Matrix</b>					
	Component				
	1	2	3	4	5
S1	0,665	0,040	0,058	-0,025	0,180
S2	0,623	0,125	0,023	-0,040	0,019
S3	0,595	0,222	0,023	0,042	-0,139
S4	0,631	0,172	-0,083	0,078	-0,224
S5	0,763	0,072	0,053	-0,069	-0,018
S6	0,665	0,048	0,102	-0,009	-0,159
S7	0,612	0,146	0,028	-0,107	0,047
S8	0,006	0,109	-0,033	0,241	0,787
S9	0,498	-0,129	0,116	0,175	0,139
S10	0,577	-0,192	0,232	0,046	0,127
S11	0,038	0,130	-0,042	0,170	0,819
S12	0,186	0,132	0,519	-0,285	-0,061
S13	-0,027	0,416	0,226	-0,183	0,252
S14	0,436	-0,117	0,363	0,070	0,019
S15	0,583	-0,105	0,294	-0,095	0,149
S16	0,139	-0,099	0,497	0,207	0,007
S17	0,012	0,172	0,739	0,107	0,049
S18	-0,096	0,104	0,691	0,107	-0,035
S19	0,144	0,169	0,542	-0,175	0,084
S21	0,315	0,083	0,347	0,027	0,176
S22	0,365	0,054	0,250	0,203	-0,159
S23	0,099	-0,032	0,511	0,168	-0,029
S24	-0,119	0,490	0,021	-0,080	0,429
S26	0,027	0,719	0,156	0,293	0,008
S27	0,106	0,772	0,142	0,217	-0,017
S28	0,093	0,791	0,109	0,179	0,131
S29	0,229	0,768	0,040	0,189	0,064
S30	0,010	0,328	0,072	0,494	0,066
S31	0,048	0,145	-0,019	0,570	0,135
S32	0,231	0,281	-0,007	0,272	0,299
S33	-0,072	0,128	0,128	0,763	-0,033
S34	-0,020	0,077	0,061	0,614	0,168
S35	0,128	0,184	0,526	-0,042	-0,100

The first dimension is named as academic adjustment, whose Cronbach's alpha value is 0.838, the second dimension is named as social adjustment, whose Cronbach's alpha value is 0.802, the third dimension is named as personal adjustment, whose Cronbach's alpha value is 0.72, the fourth dimension is named as general living adjustment, whose Cronbach's alpha value is 0.635, the fifth dimension is named as institutional

adjustment & discrimination, and its Cronbach's alpha value is 0.611. Therefore, it was found that academic and personal adjustment subdimensions have high reliability, and social adjustment, general living adjustment, and institutional adjustment & discrimination subdimensions have moderate reliability. The sub-dimensions and reliability values of the scale are shown in Table 4.7.

**Table 4.7. Sub-dimensions and reliability values of ISAS**

<b>Sub-dimensions</b>	<b>Related items</b>	<b>Cronbach's Alpha</b>	<b>N of Items</b>
Academic adjustment	1,2,3,4,5,6,7,9,10,14,15	0,838	11
Personal adjustment	13,24,26,27,28,29	0,802	6
Social adjustment	12,16,17,18,19,21,22,23,35	0,72	9
General living adjustment	30,31,33,34	0,635	5
Institutional adjustment & discrimination	8,11,32	0,611	3

#### **4.2. Evaluation of International Students' Adjustment Levels According to Some Demographic Characteristics**

It has been investigated whether there is a significant difference between some socio-demographic variables (age, gender, educational status, religion, length of stay, marital status, continent, accommodation, and the number of countries they have lived in before) and students' adjustment to Turkey.

The level of significance between the age, gender, educational status, and religion of the international students who participated in the study and their adjustment to Turkey is shown in Table 4.8. No significant difference has been found between the gender and religion of the students and their adjustment to Turkey ( $p > 0.05$ ).

A significant difference has been found between the ages of the students and their adjustment to Turkey ( $F:3.12$ ,  $p < 0.05$ ,  $p = 0.045$ ). In age groups, students aged 25-29 were found to be more adjusted than students aged 18-24.

A significant difference has been found between the educational status of the students and their adjustment to Turkey (F:3.18  $p<0.05$ ,  $p=0.024$ ). It has been observed that those who are doing Ph.D. are more adjusted to Turkey than those who have undergraduate education.

**Table 4.8. Age, gender, educational status, and religion of international students and their level of adjustment to Turkey**

		N	Mean	Std. Deviation		
<b>Age</b>	18-24 age	230	3,4825	,41180	F	Sig. <b>,045*</b>
	25-29 age	79	3,5959	,42174		
	30-35 age	30	3,6177	,39453		
	Total	339	3,5209	,41526		
<b>Gender</b>	Female	156	3,4791	,43270	T	Sig. 0,087
	Male	183	3,5565	,39752		
	Total	156	3,4791	,43270		
<b>Level of Education</b>	Prep School	26	3,6177	,42555	F	Sig. <b>,024*</b>
	Undergraduate	195	3,4669	,38559		
	Master	93	3,5599	,45013		
	PhD	24	3,6867	,44150		
	Total	338	3,5197	,41525		
<b>Religion</b>	Islam	306	3,5236	,40099	F	Sig. ,1
	Christianity	21	3,6219	,55477		
	Agnosticism	1	2,7273	.		
	Atheism	1	3,0909	.		
	Omnism	1	2,7879	.		
	None	5	3,5515	,22616		
	Total	335	3,5243	,41300		

Table 4.9 shows the significance levels between the length of stay, marital status, continent, accommodation, the number of countries they have lived in before, and their adjustment to Turkey.

No significant difference has been found between length of stay, marital status, continent, accommodation, and their adjustment to Turkey ( $p>0.05$ ). A significant difference has been found between the number of countries they lived in before and their adjustment to Turkey (F:3.54,  $p<0.05$ ,  $p=0.008$ ). It has been observed that people

who lived in five countries have higher adjustment scores than those who lived in one, three, and four countries.

**Table 4.9. Length of stay, marital status, continents, accommodation, the number of countries they lived in and the level of adjustment to Turkey**

		N	Mean	Std. Deviation	F ve T değeri	P değeri
<b>Length of stay</b>	4-12 months	87	3,5573	,41398	F	Sig
	13-23 months	97	3,5133	,41577	,459	,632
	2-3 years	155	3,5052	,41710		
	Total	339	3,5209	,41526		
<b>Marital Status</b>	Single	307	3,5174	,42042	t	Sig.
	Married	30	3,5712	,36936	-0,676	,499
<b>Continents</b>	Europe	23	3,6298	,45408	F	Sig.
	Asia	186	3,4856	,38608	1,48	,219
	Africa	125	3,5614	,44080		
	South America	3	3,3939	,51693		
	Total	337	3,5227	,41367		
<b>Accommodation</b>	Dormitory	187	3,5168	,42847	F	Sig
	Friends	90	3,5132	,41983	0,128	,943
	Family	47	3,5348	,39899		
	Alone	13	3,5828	,29695		
	Total	337	3,5209	,41649		
<b>Number of Countries they lived in before</b>	1	202	3,4983	,41879	F	Sig
	2	81	3,6071	,39787	3,54	,008*
	3	35	3,4952	,38224		<b>DIFFERENCE:1-5</b>
	4	12	3,3081	,35641		<b>DIFFERENCE:3-5</b>
	5 and above	5	3,9879	,40350		<b>DIFFERENCE:4-5</b>
	Total	335	3,5248	,41416		

#### 4.3. Means and standard deviation values of the ISAS and its sub-dimensions

The mean and standard deviation values of the scale and sub-dimensions obtained from the 33-item questions of 339 international students are shown in Table 4.10. The mean and standard deviation values of the scale were found as  $3.52 \pm 0.41$ . The mean of academic adjustment is  $3.84 \pm 0.55$ , the mean of personal adjustment is  $3.13 \pm 0.79$ , the mean of social adjustment is  $3.61 \pm 0.54$ , and the mean of general living adjustment is

3.26±0.83 and the mean of institutional adjustment & discrimination was found to be 3.17±0.86.

**Table 4.10. Mean and standard deviation values of the ISAS and its sub-dimensions**

	N	Mean	Std. Deviation
Mean of ISAS	339	3,5209	,41526
Mean of academic adjustment	339	3,8450	,55823
Mean of personal adjustment	339	3,1332	,79106
Mean of social adjustment	339	3,6131	,53969
Mean of general living adjustment	339	3,2596	,83875
Mean of institutional adjustment & discrimination	339	3,1799	,86540

#### **4.4. Evaluation of Adjustment Levels of International Students According to Some Demographic Characteristics**

Whether there is a significant correlation between the demographic characteristics (age, gender, educational status, religion, length of stay, marital status, continent, accommodation and the number of countries they have lived in before), and the subdimensions of ISAS (academic, social, personal adjustment, general living adjustment and institutional adjustment & discrimination in Turkey) has been investigated.

The level of significance between the age, gender, and educational status of the international students and the sub-dimensions of the ISAS is shown in Table 4.11.

No significant difference has been found between age and academic adjustment, personal adjustment, and institutional adjustment & discrimination ( $p>0.05$ ). A significant difference has been found between age and social adjustment and general living adjustment ( $p<0.05$ ). The social adjustment and general living adjustment scores are lower in 18-24 age groups than other age groups. It has been observed that age increases adaptability to social environment and general living.

No significant difference has been found between the gender of the students and social adjustment, personal adjustment, general living adjustment, and institutional adjustment & discrimination ( $p>0.05$ ). However, there is a difference between the gender of the students and academic adjustment ( $p<0.05$ ). It has been observed that male students have higher scores in academic adjustment than female students.

No significant difference has been found between the educational status and academic adjustment, personal adjustment, general living adjustment, and institutional adjustment & discrimination ( $p>0.05$ ). However, a significant difference has been found between the educational status of the students and their social adjustment ( $p<0.05$ ). It is observed that the students who are in Ph.D. were more socially adjusted than all the groups.

The level of significance between the religions of the international students who participated in the study and length of stay, and the sub-dimensions of the scale are shown in Table 4.12.

No significant difference has been found between the students' religion and social adjustment, personal adjustment, and institutional adjustment & discrimination ( $p>0.05$ ). However, a significant difference has been found between the students' religion and academic adjustment ( $p<0.05$ ).

No significant difference has been found between the length of stay and social adjustment, personal adjustment, and institutional adjustment & discrimination ( $p>0.05$ ). However, a significant difference has been found between the length of stay and academic adjustment ( $p<0.05$ ). It was found that the academic adjustment of students living between 4-12 months in Turkey is higher than the other groups. Contrary to expectations, it has been observed that the academic adjustment of students decreased as the length of stay increased.

The marital status and continent of the international students who participated in the study and the significance levels between the sub-dimensions of the scale are shown in Table 4.13. There is no significant difference between the sub-dimensions of the scale according to both conditions ( $p>0.05$ ).

**Table 4.11. Evaluation of the significance levels between some demographic characteristics of international students and ISAS's sub-dimensions**

		Academic adjustment			Social adjustment		Personal adjustment		General living adjustment		Institutional adjustment & discrimination	
		N	Mean	Std. Deviation	Mean	Std. Deviation	Mean	Std. Deviation	Mean	Std. Deviation	Mean	Std. Deviation
<b>Age</b>	18-24 age	230	3,82	,55	3,03	,78	3,61	,55	3,18	,86	3,11	,87
	25-29 age	79	3,90	,57	3,31	,84	3,59	,52	3,37	,75	3,32	,82
	30-35 age	30	3,85	,51	3,38	,58	3,61	,47	3,55	,72	3,30	,82
	Total	339	3,84	,55	3,13	,79	3,61	,53	3,25	,83	3,17	,86
				F	Sig.	F	Sig.	F	Sig.	F	Sig.	F
			,611	,543	5,435	<b>,005*</b>	,044	,957	3,547	<b>,030*</b>	1,974	,141
					DIFFERENCE:	<b>1-2,3</b>				DIFFERENCE:	<b>1-2,3</b>	
<b>Gender</b>	Female	156	3,76	,54	3,07	,75	3,58	,52	3,22	,82	3,22	,83
	Male	183	3,90	,56	3,18	,81	3,63	,55	3,28	,85	3,13	,89
			t	Sig.	t	Sig.	T	Sig.	t	Sig.	t	Sig.
			-2,304	<b>,022*</b>	-1,188	,236	-,859	,391	-,616	,538	,956	,340
<b>Level of Education</b>	Prep School	26	3,91	,55	3,39	,55	3,61	,40	3,34	,99	3,34	,89
	Undergraduate	195	3,80	,54	2,99	,78	3,62	,55	3,18	,83	3,07	,85
	Master	93	3,88	,60	3,22	,82	3,57	,56	3,28	,79	3,29	,91
	PhD	24	3,97	,49	3,46	,74	3,66	,47	3,64	,79	3,4	,68
	Total	338	3,84	,55	3,13	,79	3,61	,53	3,25	,83	3,18	,86
			F	Sig.	F	Sig.	F	Sig.	F	Sig.	F	Sig.
			,752	,522	5,109	<b>,002*</b>	,208	,891	2,366	,071	2,402	,068
					DIFFERENCE:	<b>1,2,3-4</b>						

Significance levels: \* $p < 0,05$

Table 4.11. (continued)

		Academic adjustment		Social adjustment		Personal adjustment		General living adjustment		Institutional adjustment & discrimination		
		N	Mean	Std. Deviation	Mean	Std. Deviation	Mean	Std. Deviation	Mean	Std. Deviation	Mean	Std. Deviation
<b>Religion</b>	Islam	306	3,83	,53	3,14	,77	3,62	,52	3,25	,84	3,19	,86
	Christianity	21	4,00	,72	3,11	1,09	3,64	,75	3,57	,72	3,22	,80
	Agnosticism	1	2,90	.	2,66	.	3,22	.	2,00	.	1,66	.
	Atheism	1	3,72	.	2,00	.	3,22	.	3,25	.	2,33	.
	Omnism	1	2,45	.	2,33	.	3,66	.	3,25	.	1,66	.
	None	5	4,29	,29	3,20	,29	3,26	,23	2,85	,65	3,33	,57
	Total	335	3,84	,55	3,13	,79	3,61	,53	3,26	,83	3,18	,86
			F	Sig.	F	Sig.	F	Sig.	F	Sig.	F	Sig.
			2,92	<b>,013*</b>	,706	,620	,647	,66	1,291	,267	1,480	,196
<b>Length of stay</b>	4-12 months	87	4,05	,52	3,10	,85	3,58	,59	3,09	,95	3,15	,94
	13-23 months	97	3,77	,47	3,20	,79	3,58	,50	3,25	,82	3,29	,80
	2-3 years	155	3,77	,59	3,10	,75	3,64	,52	3,35	,76	3,12	,85
	Total	339	3,84	,55	3,13	,79	3,61	,53	3,25	,83	3,17	,86
				F	Sig.	F	Sig.	F	Sig.	F	Sig.	F
			8,966	<b>,000**</b>	,552	,577	,498	,608	2,706	,068	1,18	,30
			DIFFERENCE 1-2 ve 1-3									

Significance levels: \*p<0,05

Table 4.11. (continued)

		Academic adjustment			Social adjustment		Personal adjustment		General living adjustment		Institutional adjustment & discrimination	
		N	Mean	Std. Deviation	Mean	Std. Deviation	Mean	Std. Deviation	Mean	Std. Deviation	Mean	Std. Deviation
<b>Marital Status</b>	Single	307	3,84	,56	3,11	,80	3,62	,55	3,24	,84	3,19	,86
	Married	30	3,90	,51	3,35	,63	3,55	,39	3,38	,73	3,11	,80
			T	Sig.	t	Sig.	T	Sig.	t	Sig.	t	Sig.
			-,544	,587	-1,577	,116	,659	,510	-,862	,389	,504	,615
<b>Continents</b>	Europe	23	3,88	,59	3,28	,75	3,73	,53	3,50	,84	3,23	,79
	Asia	186	3,80	,56	3,05	,75	3,59	,50	3,22	,75	3,19	,82
	Africa	125	3,91	,54	3,22	,83	3,62	,59	3,27	,94	3,13	,94
	South America	3	3,39	,53	3,00	1,33	3,70	,35	3,41	,94	3,22	,50
	Total	337	3,8	,55	3,13	,79	3,61	,53	3,26	,83	3,17	,86
			F	Sig.	F	Sig.	F	Sig.	F	Sig.	F	Sig.
			1,645	,179	1,482	,219	,529	,663	,774	,509	,191	,902

Significance levels: \*p<0,05

Table 4.11. (continued)

		Academic adjustment			Social adjustment		Personal adjustment		General living adjustment		Institutional adjustment & discrimination	
		N	Mean	Std. Deviation	Mean	Std. Deviation	Mean	Std. Deviation	Mean	Std. Deviation	Mean	Std. Deviation
<b>Accommodation</b>	Dormitory	187	3,82	,54	3,10	,81	3,62	,55	3,27	,83	3,19	,84
	Friends	90	3,88	,59	3,09	,77	3,65	,48	3,14	,84	3,07	,84
	Family	47	3,78	,54	3,25	,72	3,52	,56	3,43	,78	3,34	,96
	Alone	13	3,98	,55	3,28	,85	3,53	,57	3,26	1,04	3,25	,70
	Total	337	3,84	,55	3,13	,79	3,61	,54	3,26	,84	3,18	,86
			F	Sig.	F	Sig.	F	Sig.	F	Sig.	F	Sig.
			,636	,592	,682	,564	,741	,528	1,274	,283	1,136	,334
<b>Number of Countries they lived in before</b>	1	202	3,83	,54	3,11	,79	3,58	,53	3,22	,84	3,13	,86
	2	81	3,93	,54	3,15	,84	3,75	,52	3,35	,81	3,20	,89
	3	35	3,77	,49	3,22	,69	3,48	,48	3,28	,82	3,31	,79
	4	12	3,56	,57	3,04	,68	3,40	,56	3,00	,88	3,00	,71
	5 and above	5	4,16	,49	3,73	,36	3,82	,79	4,20	,32	4,06	,76
	Total	335	3,84	,54	3,14	,78	3,61	,53	3,27	,83	3,18	,86
			F	Sig.	F	Sig.	F	Sig.	F	Sig.	F	Sig.
			1,884	,113	,938	,442	2,735	<b>,029*</b>	2,240	,064	1,803	,128
			DIFFERENCE: <b>1,2,3,4-5</b>									

Significance levels: \*p<0,05

The significance levels between accommodation and the number of countries they lived in before, and the sub-dimensions of the ISAS are shown in Table 4.14.

No significant difference has been found between accommodation and academic adjustment, social adjustment, personal adjustment, general living adjustment, and institutional adjustment & discrimination ( $p>0.05$ ).

There is no significant difference between the number of countries they lived in before and academic adjustment, social adjustment, and institutional adjustment & discrimination ( $p>0.05$ ). However, a significant difference has been found between the number of countries they lived in before and personal adjustment ( $p<0.05$ ). It has been observed that students who lived in more than five countries have a higher general living adjustment than those who lived in four countries.

#### **4.5. Correlation Coefficients of ISAS and Sub-dimensions**

The correlation coefficients of the scale and its sub-dimensions are shown in Table 4.15, and the relationships of scales between each other have been determined. The values found in the correlation are expressed with "r" and take a value between - 1 and +1. Here, the direction of the relationship is determined by the sign of "r", and the degree is determined by the size of the coefficient. Negative values indicate that as one variable increases, the other decreases, while positive values indicate that the values of both variables increase and decrease together.

As a result of the statistical analysis, it was found that there was a moderately positive relationship between ISAS and all its sub-dimensions (academic adjustment, social adjustment, personal adjustment, general life adjustment, academic adjustment, and discrimination).

Moreover, a moderate level of positive correlation between social adjustment and personal adjustment, general living adjustment, and institutional adjustment & discrimination was found in the study. However, there was a low level of positive correlation between social adjustment and academic adjustment.

Also, a moderate level of positive correlation between personal adjustment and academic adjustment was observed. It has been observed that there was a low level of a positive relationship between personal adjustment and general living adjustment. No significant correlation between personal adjustment and institutional adjustment & discrimination was found.

Additionally, it has been observed that there is a low level of a positive relationship between academic adjustment and institutional adjustment & discrimination. No significant correlation between academic adjustment and general living adjustment was found.

Last but not least, a moderate level of positive correlation between general living adjustment and institutional adjustment & discrimination was observed.

**Table 4.12. Sub-dimensions of ISAS and relationships of the sub-dimensions between each other**

		<b>ISAS</b>	<b>Academic adjustment</b>	<b>Social adjustment</b>	<b>Personal adjustment</b>	<b>General living adjustment</b>	<b>Institutional adjustment &amp; discrimination</b>
ISAS	Pearson Correlation	1					
	Sig. (2-tailed)						
Academic adjustment	Pearson Correlation	<b>,675**</b>	1				
	Sig. (2-tailed)	,000					
Social adjustment	Pearson Correlation	<b>,689**</b>	<b>,157**</b>	1			
	Sig. (2-tailed)	,000	,004				
Personal adjustment	Pearson Correlation	<b>,682**</b>	<b>,393**</b>	<b>,300**</b>	1		
	Sig. (2-tailed)	,000	,000	,000			
General living adjustment	Pearson Correlation	<b>,511**</b>	<b>,037</b>	<b>,375**</b>	<b>,148**</b>	1	
	Sig. (2-tailed)	,000	,498	,000	,006		
Institutional adjustment & discrimination	Pearson Correlation	<b>,487**</b>	<b>,125*</b>	<b>,388**</b>	<b>,060</b>	<b>,352**</b>	1
	Sig. (2-tailed)	,000	,022	,000	,274	,000	

\*\* . Correlation is significant at the 0.01 level (2-tailed).

## **CHAPTER V**

### **DISCUSSION**

Due to the civil war in the neighboring countries in recent years, the increase in university programs and scholarships in Turkey has led to significant increases in both the number and diversity of international students. For this reason, studies on the adjustment of international students have increased in recent years in the Turkish literature. In this study, it is aimed to develop a scale for the adjustment process of international students studying in Turkey, and to understand better the adjustment processes of the students. Some demographic variables are examined to understand the adjustment process.

There are some points that make this study different from other studies. One of them is its development of a scale for international students studying in Turkey. Studies in the Turkish literature are mostly on the problems experienced by international students, and there is no particular scale designed for international students studying in Turkey. In order to collect data, adapted scales and generally Turkish-language scales were used in the literature. For this reason, in the studies in literature, the participants generally consist of students who are fluent in Turkish, have stayed in Turkey for a long time, and can be said to have already adjusted to Turkey. However, in this study, the scale was developed in English and allowed to measure the adjustment of newly arrived international students who do not speak Turkish. Moreover, to understand the adjustment process of international students, as an inclusion criterion, the length of stay in Turkey was limited to 3 years in the study. Because of these points, this study gives more detailed information about international students who are new to Turkey and do not know Turkish very well yet. In addition, in this study, students living in Turkey for less than 4 months were excluded in the study in order to minimize the effect of the process called the honeymoon stage by Oberg (1960). These specific exclusion and inclusion criteria are also important points of the study.

Another point that makes this study different from other studies is that the sample does not include students from the Turkic Republics. Most of the previous studies generally included students from Turkic Republics with a high percentage. Statistics show that after Syria (17.5%), Turkey hosted the most students from Azerbaijan (12.5%) and Turkmenistan (11.4%) in 2018 (The Higher Education Council, n.d.). For this reason, it is quite understandable that there is a high rate of students from the Turkic Republics in the studies. However, it has been determined that students coming from Turkic Republics do not experience problems in terms of exclusion, prejudice, and tradition-custom due to the similarity of culture and language (Kıroğlu et al., 2010). Therefore, it can be said that the adjustment of the students from Turkic Republics are easier than other international students. This situation has been supported by other studies in the literature, and it has been determined that cultural distance is an important indicator of psychological adjustment (Bastien, 2018). As a result, in order to better understand the adjustment process of international students, students from the Turkic Republics were not included in this study, and this is one of the different and important aspects of this study.

In short, within the scope of this study, the International Students Adjustment Scale (ISAS) was developed to measure the adjustment of international students studying in Turkey. In the result of explanatory factor analysis, it was found that ISAS has 5 sub-dimensions. These sub-dimensions were named academic adjustment, social adjustment, personal adjustment, general living adjustment, and institutional adjustment & discrimination. Furthermore, adjustment and its sub-dimensions were examined via some demographic variables. It was found that age and the number of countries students lived in before are the variables that demonstrate statistically significant results for the adjustment process. Lastly, in this chapter, the findings of the study are discussed with the help of literature and suggestions for future research are given.

Before discussing the findings, it should be noted that there are many different and inconsistent findings in the literature in studies conducted on international students. This can be explained by the fact that students' interactions with the host country and university, and students background affect the results. From this point of view, it is

quite understandable that different results are obtained in various studies and that the results are not compatible with each other.

## **5.1. Sociodemographic Variables and Adjustment**

In the study, the relationship of various demographic properties (age, gender, education level, marital status, religious belief, the length of stay, accommodation, the number of countries previously lived before) with adjustment and its sub-dimensions were examined separately.

### **5.1.1. Age and Adjustment**

Statistical analysis demonstrated that there is a significant difference between the ages of the students and their adjustment level ( $F:3.12$ ,  $p<0.05$ ,  $p=0.045$ ). Students aged 25-29 were found to be more adjusted than students aged 18-24.

More specifically, looking at the sub-dimensions of adjustment, it is seen that there is a significant difference between age and social adjustment and general living adjustment ( $p<0.05$ ). Students between the ages of 18-24 have the lowest social and general living adjustment scores among all age groups. Therefore, it can be said that social and general living adjustment increase when the students' age increase. There are some studies in the literature that are consistent with this study. For instance, younger international students who study at the undergraduate level expressed a higher level of acculturative stress and its' all subdimensions than the graduate students (Ngwira et al., 2020). Likewise, Alsaifi and Shin (2017) point out that younger international students perceive more difficulty in language. Therefore, it can be concluded that transition experience can be more challenging for the younger international students than older age groups.

On the other hand, there is no significant difference between age and academic adjustment, personal adjustment, and institutional adjustment & discrimination ( $p>0.05$ ). Contrary to these findings, a study in Thailand found that younger students had lower academic and health compliance scores (Rujipak & Limprasert, 2016). These differences are explained by the coping skills that older students develop over

time as a result of their life experiences. However, as in this study, no significant difference was found between the psychological adjustment scores of the students and their age in the study conducted in Thailand (Rujipak & Limprasert, 2016). However, researchers in the US found that there is a significant difference between age, attachment to the university community, cultural distance, acculturation strategy, and psychological adjustment (Bastien et al., 2018).

### **5.1.2. Gender and Adjustment**

In this study, no significant difference was found between gender and adjustment of international students ( $p>0.05$ ). This is consistent with the study of Otlu (2010), which showed that gender is not a predictor of international students' adjustment. Besides, no significant difference was found between gender and social adjustment, personal adjustment, general living adjustment, and institutional adjustment & discrimination ( $p>0.05$ ). Likewise, in a study conducted in Thailand, it was determined that there was no significant difference between students' (psychological and sociocultural) adjustment and gender (Rujipak & Limprasert, 2016).

However, these are inconsistent with the findings of a study conducted in Spain which found that female students had lower scores in personal-emotional adjustment than male students (Fernández et al., 2017). Again, Akhtar & Kroener-Herwig (2019) found that female students' psychological well-being is lower than male peers. Besides, in a study conducted among students from Turkic Republics in Turkey, more psychopathology (somatization, obsessive-compulsive disorder, depression, anxiety disorder) was found in female students compared to males (Otrar et al., 2002). Unlike these, Gökyer (2017) found in his study that female students have higher health status and life satisfaction than male students. Also, female students exhibited higher levels of sociocultural adaptation and its subscales such as academic achievement and language proficiency (Mahmood, 2014). Moreover, contrary to the findings of Ozer (2015) and Rosenthal et al. (2008), Mahmood (2014) found that female students demonstrated lower levels of acculturative stress.

Additionally, in the present study, there was a significant difference between gender and academic adjustment ( $p<0.05$ ). It has been observed that female students have

lower scores in academic adjustment than male students. However, in the study of Fernández et al. (2017), female students demonstrate higher academic adjustment than male students.

### **5.1.3. Educational Status and Adjustment**

It was found that there was a significant difference between the educational status of the students and their adjustment to Turkey ( $F:3.18$   $p<0.05$ ,  $p=0.024$ ). Statistical analysis showed that Ph.D. students are more adjusted to Turkey than those who take undergraduate education. The explanation of this can be that Ph.D. students are older than other students usually; thus, as age progresses, maturation may also bring about easier adaptation to a new place or having more realistic expectations there. This is consistent with some previous studies. For instance, older and graduate international students were found as slightly more satisfied with their university experience than younger and undergraduate students (Mahmood, 2014).

When examined in terms of sub-dimensions of adjustment, no significant difference was seen between the educational status and academic adjustment, personal adjustment, general living adjustment, and institutional adjustment & discrimination ( $p>0.05$ ). A significant difference was found only between the educational status of the students and their social adjustment ( $p<0.05$ ). It is seen that Ph.D. students have higher scores in the social adjustment sub-dimension than all groups. Similarly, in the study of Güçlü (1996), Ph.D. students stated that they had fewer problems than master students in the areas of admission, language, social-personal adjustment, living and dining. Moreover, Brunsting et al. (2019) pointed out that the psychological well-being of graduate students was higher than undergraduate students. Likewise, the study of Akhtar & Kroener-Herwig (2019) indicated that undergraduate students were shown to be much more stressed compared to graduate students. However, there are also studies in the literature that reach different results. To illustrate, Sawir et al. (2008) found that Ph.D. students experience more loneliness due to the higher course load and the individual progress of their studies.

#### **5.1.4. Marital Status and Adjustment**

In the study, no significant difference was found between marital status and students' adjustment ( $p>0.05$ ). Besides, there was no significant difference between marital status and any sub-dimension of the scale ( $p>0.05$ ). However, some studies in the literature have obtained different results from this study. For example, it has been determined that married students have fewer problems in the field of health services, socio-personal, admission and selection, living and dining services, orientation services, student activities, and religious services (Galloway & Jenkins, 2005). In addition, married students expressed a lower level of social adjustment than single students (Poyrazlı & Kavanaugh, 2006). Researchers commented on these findings: While married students meet their social support needs thanks to their spouses, single students need to talk to other students to meet these needs. This situation causes single students to adjust socially faster than married ones. Moreover, Son (2019) pointed out that married international students are financially more unstable than single ones. These differences were explained by the additional living expenses of married students.

Most of the students participating in this study ( $n= 307$ ; 90.56%) stated that they were single. The differences between the findings in the literature and the findings in this study may be due to the low number of married students. More married students should be reached in order to make more accurate inferences about the impact of marital status on the adjustment of international students.

#### **5.1.5. Religion and Adjustment**

In this study, the results demonstrated that there was no significant difference between students' religion and their adjustment to Turkey ( $p>0.05$ ). When examined in more detail in terms of sub-dimensions, no significant difference was found between students' religion and social adjustment, personal adjustment, and academic adjustment & discrimination ( $p>0.05$ ). However, there was a significant difference between the students' religious beliefs and their academic adjustment. Academic adjustment levels of students who belong to Omnism and Agnosticism were found to be lower than students who belong to other religions.

In addition, there are some studies showing that religion has an effect on students' adjustment process. Some findings in the literature show that international students face discrimination when they belong to a minority religion in the host country. For instance, in a qualitative study conducted with Muslim international students in the United States, the majority of the participants stated that they were discriminated because of their religion. (Tummala-Narra & Claudius, 2013). Furthermore, in a recent qualitative study, it was seen that Turkish people asked international students about their religion and sect, and ended the conversation according to the answer they received (Nazir & Bulut, 2019). It can be said that international students studying in Turkey are subject to discrimination according to their religion and sect. On the other hand, most of the students (n= 306; 90.26%) who participated in the research stated that they were Muslims. In this study, different results were obtained from the findings in the literature. The low number of students belonging to other religions in the study may have caused this situation, so it is necessary to reach more students in future studies.

#### **5.1.6. Accommodation and Adjustment**

The results showed that there was no significant difference between accommodation and adjustment to Turkey ( $p>0.05$ ). Additionally, there was no significant difference between accommodation and any sub-dimension of the scale ( $p>0.05$ ). These results are consistent with the study of Rujipak & Limprasert (2016) which demonstrated that there is no difference between international students living in Thailand alone and students living with friends or relatives in terms of their level of adjustment. On the other hand, there is a lack of consensus in the literature regarding the impact of the accommodation on the adjustment process. For instance, Ercan (2001) found that students staying at home have more problems than students living in dormitories. Moreover, Sungur et al. (2016) was stated that while accommodation doesn't impact the adjustment of students, there is a negative correlation between the satisfaction of the accommodation and the adjustment of international students. This may have been based on the fact that students who are dissatisfied with their living area spend more time on social events, which enhances their university adjustment (Sungur et al., 2016).

### **5.1.7. The Length of Stay and Adjustment**

In this study, no significant difference was found between the length of stay of the students and their adjustment to Turkey ( $p>0.05$ ). Considering the sub-dimensions of adjustment, there was no significant difference between the length of stay and social adjustment, personal adjustment, institutional adjustment & discrimination ( $p>0.05$ ). These results are consistent with the study of Rujipak & Limprasert (2016) which indicated that there is no significant difference between the length of stay and (socio-cultural and psychological) adjustment.

On the other hand, there was a significant difference between the length of stay and academic adjustment ( $p<0.05$ ). More specifically, it was found that the academic adjustment scores of students living in Turkey between 4-12 months were higher than the other groups. In this study, it was determined that as the length of stay of the students in Turkey increased, the academic adjustment decreased. On the contrary, in the previous research, it was found that length of stay was significantly correlated with language proficiency and connection to the host country's culture (Bastien et al., 2018). Therefore, Bastien et al. (2018) indicated that length of stay, language proficiency, and help-seeking predicted academic adjustment. Sovic (2008) also stated that length of stay in the UK has an impact on the perceived stress of international students.

### **5.1.8. The Continents and Adjustment**

In this study, no significant difference was found between the level of adjustment of the students with the continent they came from ( $p>0.05$ ). Likewise, no significant difference was found between the adjustment sub-dimensions and the continents ( $p>0.05$ ). These results are consistent with the study of Akhtar & Kroener-Herwig (2019), which indicated that the degree of psychological well-being of international students from Asia, Europe, and Latin America demonstrated no significant differences. However, there are also studies contrary to these findings. For example, in a study conducted in Thailand, it was determined that students from Europe had better academic and psychological adjustment than students from Asia (Rujipak & Limprasert, 2016). Similarly, Güçlü (1996) pointed out that European students

studying in America faced fewer difficulties in all problem areas than students from other continents. In another study conducted in the USA, it was found that students from South and East Asia experienced higher levels of acculturation stress than students from other regions (Hansen et al., 2018). Again, in the USA, it has been determined that students from Japan, Hong Kong, and Taiwan have less difficulty in finance and placement problem areas compared to other students (Galloway & Jenkins, 2005). Furthermore, Japanese students reported less difficulty in the student activities area (Galloway & Jenkins, 2005).

### **5.1.9. Previous Experiences Abroad and Adjustment**

In this study, there was a significant difference between the number of countries students lived in before and their adjustment to Turkey ( $F:3.54, p<0.05, p=0.008$ ). It was found that students lived in five countries had higher adjustment scores than those who lived in one, three, and four countries. Therefore, it can be concluded that previous experiences abroad make students' adjustment process easier. It can be said that students who have lived in five or more countries are more prepared for international experiences.

Moreover, in terms of sub-dimensions of adjustment, no significant difference was found between the number of countries they lived in before and academic adjustment, social adjustment, academic adjustment, and discrimination ( $p>0.05$ ). On the other hand, there was a significant difference between the number of countries they lived in before and personal adjustment ( $p<0.05$ ). Also, in terms of the general life adjustment sub-dimension, it was observed that students living in more than five countries scored higher than those living in four countries. These findings are consistent with the study of Wang (2009) that demonstrated previous international experiences are one of the significant background variables in the adjustment of international students.

## **5.2. ISAS and Sub-dimensions**

In order to investigate the adjustment of international students, it is necessary to develop valid and reliable tools for international students studying in Turkey. When we look at the studies investigating the adjustment of international students in the

literature, there wasn't any measurement tool with reported validity and reliability that measures the adjustment of students studying in Turkey. In this research, which was carried out for this need, the ISAS was developed, and evidence for the validity and reliability of this measurement tool was presented. ISAS will contribute to future researchers by measuring the adjustment level of international students. At the same time, in the light of this information obtained, programs can be prepared by counseling centers in universities to increase the level of adjustment of international students.

In the preliminary study carried out; while the pre-test form was 35 items, the number of items was determined as 33, in line with the analysis of the data. In addition, it was found in the analysis that the scale had 5 sub-dimensions. Academic adjustment subdimension is represented by 11 items, social adjustment subdimension by 9 items, personal adjustment subdimension by 6 items, general living adjustment subdimension by 4 items, and institutional adjustment & discrimination subdimension by 3 items.

In the study, correlation coefficients of ISAS and its sub-dimensions were examined. The ISAS has been found to have a moderate level of positive correlation with all of its subdimensions. This correlation was expected because while creating the items and naming the sub-dimensions, the areas where international students had the most problems were identified, and the literature was used. While naming the factors, specifically, Tseng & Newton's (2002) model was used.

Similar findings are also seen in the literature. For instance, it was found that the most important element determining international students' adjustment is academic adjustment (Alemu & Cordier, 2017). Therefore, the correlation between the ISAS and academic adjustment subdimension is consistent with the literature findings because the result obtained from the ISAS shows the general adjustment level of the student to Turkey.

Personal adjustment includes the emotional reactions of the student to the environment during the adaptation process (Schartner & Young, 2016). Therefore, it was expected that there would be a positive correlation between the students' total ISAS scores and their scores in the personal adjustment subdimension.

In the literature, it has been determined that as the level of sociocultural adjustment increases, the probability of international students dropping out decreases (Gupalon et al., 2019). Therefore, it can be said that sociocultural adjustment is a critical process in the university adjustment process. This situation explains the positive relationship between ISAS and the sociocultural adaptation sub-dimension.

Moreover, financial conditions, health services, climate are among the elements of general living adjustment. In many studies, students stated financial circumstances as main problem areas in their adjustment process (Güçlü, 1995; Kiroğlu et al. 2010; Koon & Mehdi, 2019; Köleoğlu, 2018; Sungur et al., 2016; Suprpto et al., 2019; Usta et al., 2017). Bianchi (2013) discovered that climate and availability of health care systems are the factors that impact students' adjustment satisfaction. Therefore, positive correlations between ISAS (students' overall adjustment level) and general living adjustment are supported by the literature findings.

Furthermore, the study discovered a moderate level of correlation between social adjustment and personal adjustment. According to studies, social support, which is a component of social adjustment, reduces student stress (Brunsting et al., 2019; Poyrazlı et al., 2004) and loneliness (Çollaku & Nazir, 2019) while also increasing life satisfaction (Schartner & Young, 2016). These findings also support the correlation between social adjustment and personal adjustment.

A moderate level of correlation between social adjustment and general living adjustment was found as a result of the analysis. In many studies, it has been determined that students have financial problems. The financial problems of the students may cause them not to be able to go to the touristic and cultural places of the host country, not be able to mingle with the host country's people. This situation can reduce the perceived social support from people in the host country and also socio-cultural adjustment.

Besides, the study indicated a moderate level of correlation between social adjustment and institutional adjustment & discrimination subdimensions. This is consistent with the study of Ahrari et al. (2019), which found that sociocultural adjustment is

significantly impacted when students are subjected to prejudice by university members or other people (Ozer, 2015).

On the other hand, a low level of positive correlation was found between social adjustment and academic adjustment. Studies in the literature demonstrated that social adjustment directly impacts academic adjustment because students require a supportive social network in their new setting to be successful. (Sawir et al., 2008; Schartner & Young, 2016). Also, the academic adjustment process includes some social skills such as having good contact with students and university members, participating in discussions, attending group assignments (Alsahafi & Shin, 2017). Therefore, it explains the correlation between academic adjustment and social adjustment.

In addition, there was a moderate level of positive correlation between personal adjustment and academic adjustment. Findings in the literature support these results. To illustrate, Spencer-Qatey & Xiong (2006) pointed out that students' stress decrease when their academic success increase. Also, Franco et al. (2019) found that students decrease their academic expectations when they are exposed to a high level of stress.

There was a low level of a positive relationship between personal adjustment and general living adjustment, according to the findings. This is consistent with the findings in the literature. Some elements in the general living adjustment, such as extreme climatic circumstances (Abu Rabia, 2016) and food (Çollaku & Nazir, 2019) might negatively affect students' personal adjustment. Also, no significant correlation between personal adjustment and institutional adjustment & discrimination was found.

Moreover, a low level of positive relationship between academic adjustment and institutional adjustment & discrimination has been discovered. Studies in the literature point to the importance of organizational support, academic support, and a tolerant environment free from discrimination in academic adjustment (Ahrari et al., 2019; Gopalan et al., 2019). Therefore, the positive correlation between these two subdimensions is consistent with the literature. Also, no significant correlation between academic adjustment and general living adjustment was found in this study.

Finally, a moderate level of positive correlation was found between general living adjustment and institutional adjustment & discrimination. No specific findings on this subject were found in the literature.

### **5.3. Suggestions**

In line with the findings of the research, some suggestions are presented. These recommendations are:

1. Conducting research on the relationship between the adjustment levels of international students at different education levels, in different cities, and in different age groups with various demographic variables can provide more detailed information about how these demographic variables and adjustment levels are related. Therefore, these findings can be used in education or orientation programs to be designed for the integration process of international students.
2. In this study, the length of stay in Turkey was determined as between 4 months and 3 years as the criteria for participation. In future studies, longitudinal studies can be carried out by including participants before 4 months and following their adjustment a few months or years later. Thus, it can be determined how the adjustment graphs have evolved over time and how much change has occurred in which sub-dimensions etc.
3. This study was carried out as a quantitative study only. In the future, more comprehensive information about students' adjustment can be obtained through qualitative and mixed-method studies.

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## APPENDICES

### APPENDIX A

#### Students Consent Form

You are being invited to join a research study which called as “Adjustment issues of international students in Turkey” In this research study, we are trying to develop a scale to measure the adjustment of international students. And the data taken will be kept confidential and will be used purely for research purpose. Your name and your personal information will kept confidential and will not be used when data from this study are published. Participation in this study is voluntary. You had the right not to participate at all or to leave the study at any time.

Lütfiye Sevde Yiğit

#### CONSENT

I agree to attend to the research.

**Name:** \_\_\_\_\_

**Date:** \_\_\_\_\_

**Signature:** \_\_\_\_\_

## APPENDIX B

### International Students Adjustment Scale (ISAS)

Name of University: \_\_\_\_\_ Age: \_\_\_ Gender: \_\_\_\_\_ Religion: \_\_\_\_\_  
 Level of Education: \_\_\_\_\_ Living with family/friends/dormitory: \_\_\_\_\_  
 No of Years/Months staying in this country: \_\_\_\_\_ Marital Status: \_\_\_\_\_  
 Country of Origin: \_\_\_\_\_ Number of Countries you lived in before: \_\_\_\_\_  
 Email id: \_\_\_\_\_ Phone: \_\_\_\_\_

	Strongly Agree	Agree	Not Sure	Disagree	Strongly Disagree
I am happy for being part of my university					
I am satisfied for being part of my program					
I am satisfied with my grades					
I am ok with my workload of courses					
I am satisfied with the class lectures					
I am satisfied with the exam evaluation system					
I am satisfied with the pronunciation of instructors					
I feel academic Staff treat differently students according to their origins.					
I am satisfied with the campus of the university					
I am satisfied with the availability of resources in university library					
I feel university administration treat differently students according to their origins.					
I take part in social activities					
Because of language I am not able to take part in social activities					
I am satisfied with the accommodation					

I feel it's easy to access the information's regarding social activities in university					
I get along well with my roommates					
I get along well with Native Turkish Friends					
I have Native (Turkish) friends					
I feel ok speaking Native (Turkish) language					
I go well with the pace of this country					
I manage my financial conditions well					
I share my problems with my friends in this country					
I feel marginalized among different groups					
I feel lonely most of the times					
I feel in stress all the times					
I often feel isolated					
I often feel sad					
I am struggling with the food here					
I am struggling with the weather here					
I face discrimination in this country because of my race, religion, gender, color, language etc. or any one of them.					
I am having health issues in this country					
I am not able to access health services in this country					
I am able to communicate my feelings in this country					

## APPENDIX C

### Written Permission From the Ethical Committee of Ibn Haldun University

T.C.

**İBN HALDUN ÜNİVERSİTESİ**

**SOSYAL VE BEŞERİ BİLİMLER BİLİMSEL ARAŞTIRMALAR VE YAYIN ETİĞİ KURULU  
BAŞKANLIĞI KARAR FORMU**

<b>BAŞVURU BİLGİLERİ</b>	<b>ARAŞTIRMANIN AÇIK ADI</b>	To study the adjustment issues of international students and their coping strategies in Turkey			
	<b>KOORDİNATÖR/SORUMLU ARAŞTIRMACI UNVANI/ADI/SOYADI</b>	Lütfiye Sevde Öztürk			
	<b>KOORDİNATÖR/SORUMLU ARAŞTIRMACININ UZMANLIK ALANI</b>	Rehberlik ve Psikolojik Danışmanlık			
	<b>KOORDİNATÖR/SORUMLU ARAŞTIRMACININ BULUNDUĞU MERKEZ</b>	İbn Haldun Üniversitesi			
	<b>ARAŞTIRMAYA KATILAN MERKEZLER</b>	<b>TEK MERKEZ</b> <input type="checkbox"/>	<b>ÇOK MERKEZLİ</b> <input type="checkbox"/>	<b>ULUSAL</b> <input checked="" type="checkbox"/>	<b>ULUSLARARASI</b> <input type="checkbox"/>

<b>Değerlendirilen Belgeler</b>	Belge Adı	Tarihi	Versiyon Numarası	Dili
	ETİK KURUL BAŞVURU FORMU	14.11.2019		Türkçe <input type="checkbox"/> İngilizce <input checked="" type="checkbox"/> Diğer <input type="checkbox"/>
	BİLGİLENDİRİLMİŞ GÖNÜLLÜ OLUR FORMU	14.11.2019		Türkçe <input type="checkbox"/> İngilizce <input checked="" type="checkbox"/> Diğer <input type="checkbox"/>
	SOSYODEMOGRAFIK FORM	14.11.2019		Türkçe <input type="checkbox"/> İngilizce <input checked="" type="checkbox"/> Diğer <input type="checkbox"/>
<b>KARAR NO: 2019/23-1</b>		<b>TARİH: 18.11.2019</b>		
<b>Karar Bilgileri</b>	<b>KARAR:</b> Kurulumuza başvuran Sn. Lütfiye Sevde Öztürk - "To study the adjustment issues of international students and their coping strategies in Turkey" isimli proje; amaç, araştırma türü ve örneklem, veri toplama araçları, süreç ve işlemler, veri analizleri dikkate alınmak suretiyle değerlendirilerek aşağıdaki sonuca ulaşılmıştır:			
	Proje etik açıdan uygun bulunmuştur			<input checked="" type="checkbox"/>
	Projenin etik açıdan geliştirilmesi gerekmektedir			<input type="checkbox"/>
Proje etik açıdan uygun bulunmamıştır			<input type="checkbox"/>	

ETİK KURULDAKİ GÖREVİ	ADI SOYADI	İMZA
Etik Kurul Başkanı	Prof. Dr. Ali Yeşilırmak	
Üye	Prof. Dr. Yüksel Özden	
Üye	Prof. Dr. Fuat Erdal	
Üye	Prof. Dr. Halil Berktaş	
Üye	Prof. Dr. Bilal Aybakan	
Üye	Prof. Dr. Yusuf Çalışkan	
Üye	Prof. Dr. Üzeyir Ok	

## CURRICULUM VITAE

### Personal Information

Name-Surname: Lütfiye Sevde Yiğit

### Education:

2008 – 2012: Gonen Anatolian High School, Isparta, Turkey

2012 – 2017: Psychology, Istanbul Sehir University, Turkey

2018 – 2020: Guidance and Psychological Counseling Master Program, Ibn Haldun University, Turkey

### Work Experience:

2014 – 2019 Co-Founder, Feyzan Design, Istanbul, Turkey

2019 – 2020 Psychologist, Research and Counseling Center of Ibn Haldun University, Istanbul, Turkey

2020 – .... Researcher, Developmental Psychology, Tokat Gaziosmanpaşa University, Tokat, Turkey