The Relationship between Acculturative Stress, Perceived Social Support, and Perceived Discrimination in International Students

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ABSTRACT

International students who temporarily move to another country for educational purposes experience difficulty in adapting to their new environment. In spite of this, there is limited research investigating the acculturation process and well-being of international students. Therefore, the current thesis aims to determine predictors of acculturative stress in Iranian and Nigerian international students studying at Eastern Mediterranean University (EMU). It was expected that students' demographic factors (i.e., age, gender and nationality), perceived social support and perceived discrimination would significantly predict acculturative stress in international students. A total of 174 Iranian and Nigerian international students (83 male/ 91 female), aged between 18 to 35 years (M=24.22) and enrolled in various programs such as engineering and psychology at EMU took part in the current study. Participants completed four self-report questionnaires: a demographics questionnaire, the Acculturative Stress Scale for International Students, the Everyday Discrimination Scale and the Multidimensional Scale of Perceived Social Support. Results showed that gender, nationality, perceived social support and perceived discrimination, but not age, significantly predicted acculturative stress in Iranian and Nigerian international students. It was further found that perceived social support mediated the relationship between perceived discrimination and acculturative stress. These findings indicate that demographic and social variables can affect international students' adjustment to their new environment and further highlight the importance of perceived social support as a buffer against perceived discrimination and acculturative stress.

Keywords: Acculturative stress, perceived social support, perceived discrimination.

ÖZ

Eğitim amacıyla geçici bir süre için farklı bir ülkeye taşınan uluslararası öğrenciler yeni ortamlarına uyum sağlamakta zorluk yaşarlar. Buna rağmen uluslararası öğrencilerin kültürel uyum sağlama süreçlerini ve iyi oluşlarını inceleyen araştırma sayısı azdır. Bu nedenle bu tez Doğu Akdeniz Üniversitesi'nde (DAÜ) öğrenim görmekte olan İranlı ve Nijeryalı uluslararası öğrencilerdeki kültürel uyum sağlama stresinin yordayıcılarını belirlemeyi hedeflemektedir. Öğrencilerin demografik faktörlerinin (yaş, cinsiyet, milliyet vb.), algılanan sosyal desteğin, ve algılanan ayrımcılığın kültürel uyum sağlama stresini önemli ölçüde yordaması öngörülmekteydi. Toplamda 18 ile 35 yaş arasında (*M*=24.22), DAÜ'deki psikoloji ve mühendislik gibi birçok farklı programından 174 İranlı ve Nijeryalı uluslararası öğrenci bu çalışmaya katıldı. Katılımcılar dört adet kendi bildirim anketi tamamladılar: demografik anket, Uluslararası Öğrenciler için Kültürel Uyum Sağlama Ölçeği, Günlük Ayrımcılık Ölçeği, ve Algılanan Sosyal Destek için Çokyönlü Ölçek. Çalışmada İranlı ve Nijeryalı uluslararası öğrenciler arasında cinsiyet, milliyet, algılanan sosyal destek, ve algılanan ayrımcılığın kültürel uyum sağlama stresini önemli ölçüde yordadığı görülmüş, ancak yaş faktörü için bu durum görülmemiştir. Ayrıca algılanan sosyal desteğin, algılanan ayrımcılık ile kültürel uyum sağlama stresi arasında kısmi aracılık rolü oynadığı saptanmıştır. Bu sonuçlar demografik ve sosyal değişkenlerin uluslararası öğrencilerin yeni çevrelerine uyum sağlamaları üzerinde etkili olabileceklerini göstermekte, ve algılanan sosyal desteğin ayrımcılık ve kültürel uyum sağlama stresine karşı bir tampon olarak önemini vurgulamaktadır.

Anahtar kelimeler: Kültürel uyum sağlama stresi, algılanan sosyal destek, algılanan ayrımcılık.

I proudly dedicate this work to my family

and my beloved husband

for supporting me all the way.

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LIST OF ABBREVIATIONS AND SYMBOLS

B	Coefficient
CI	Confidence Intervals
EMU	Eastern Mediterranean University
Doi	Digital Object Identifier
F	F-ratio
M	Mean
P	Probability
r	Pearson's Correlation Coefficient
R2	R-square
ΔR2	R-square change
SD	Standard Deviation
SEb	Standard Error
sr²	R-square of Each Variable
t	Critical Value
α	Alpha
β	Beta

Chapter 1

INTRODUCTION

Worldwide, 244 million individuals relocate their home in hope of better living standards and increased job and educational opportunities (Organization for Economic Co-operation and Development (OECD), 2015). However, when two socially and culturally different groups come in contact, psychological and behavioral change (e.g., beliefs, values, attitudes) occur in both the migrating individual or group and members of the dominant culture, a process known as acculturation (Berry, 1997; Berry, Kim, Minde, & Mok, 1987; Gibson, 2001; Smith & Khawaja, 2011; Wan, 2001). The desired outcome of acculturation is economic, socio-cultural, and psychological adaptation (Aycan & Berry, 1996; Berry & Sam, 1997; Ward & Rana-Deuba, 1999).

Economic adaptation is associated with the type of work obtained and the level of satisfaction with employment in the new environment (Aycan & Berry, 1996) while socio-cultural adaptation occurs when the individual has acquired the necessary cultural skills to help in overcoming everyday difficulties, making new friends and succeeding at work or school (Berry, 1997). Alternatively, psychological adaptation is related to the development of cultural and personal identity, achievement of personal satisfaction, and good mental health in the new cultural setting (Berry, 1997; Ward & Rana-Deuba, 1999).

At an individual level, when international populations have difficulties in their adaptation to the new society, acculturative stress occurs (Berry, 1997; Lee, Koeske, & Sales, 2004). Acculturative stress has been defined as 'one kind of stress, in which the stressors are identified as having their source in the process of acculturation; a particular set of stress behaviors that occur during acculturation such as lowered mental health status (especially confusion, anxiety depression), feelings of marginality and alienation, heightened psychosomatic symptoms and identity confusion' (Berry, 1995, p. 479). It is evident that acculturative stress could have adverse effects on one's psychological well-being, when individuals in the host society face stressors that they cannot cope effectively with sometimes due to a lack of cultural skill such as coping strategies (Poyrazli & Grahame, 2007). Much research has thus focused on factors such as social support, degree of contact, positive inter group attitudes and cultural knowledge that can help individuals better adjust to the host country and buffer against acculturative stress in international populations (e.g., migrants and refugees) (Berry, 1997; Poyrazli, Thukral, & Duru, 2010).

The process of acculturation and acculturative stress in voluntary migrants (i.e., individuals who relocate in search of economic and employment opportunities to rejoin with family members, or marriage) (Schwartz, Unger, Zamboanga, & Szapocznik, 2010) has been extensively researched (Bang, 2009; Sullivan & Kashubeck-West, 2015; Mallinckrodt & Leong, 1992; Ward, Bochner, & Furnham, 2005; Yeh & Inose, 2003). Fewer studies (e.g. Church, 1982; Yan & Berliner, 2009), however, have been carried out to examine acculturation and acculturative stress in international students who move to another country for educational purposes. International students vary from voluntary migrants in a number of ways. For

example, they temporarily migrate with intentions to return to their home countries after the completion of their education (Schwartz et al., 2010). They further encounter stressors unique to the academic environment such as the need to learn a new language of instruction and adhere to the regulations and rules of the educational institution they attend (Playford & Safdar, 2007). It is therefore important to further investigate acculturative stress in international students.

According to the OECD report (2015), globally five million students were enrolled outside their nation of citizenship in the year 2014, while international students were only two million in the year 2000. In the United States, 974,926 international students were enrolled in higher education amid the 2014/15 academic year, which increased by 10% since 2010 (Institute of International Education; IIE, 2015). Likewise, observation of previous five years has been shown a fivefold increase in international students' number that enrolled in higher education programs in North Cyprus (Quality Assurance and Development of Higher Education in North Cyprus (YÖDAK), 2015). According to YÖDAK (2015), there were 20,227 international students in North Cyprus from 127 countries during the 2014/15 academic year. Considering the increasing number of international students, further research is warranted to study factors that could effect on their physical and mental health.

An objective of the current thesis was to therefore determine the relationship between acculturative stress and demographic factors such as age, nationality and gender, perceived level of discrimination and perceived level of social support in international students enrolled in a higher education program in North Cyprus. The following sections will review theories of acculturation and acculturative stress and

present research with regard to factors such as discrimination and social support that has been found to influence international students' level of acculturative stress.

1.1 Acculturation

Acculturation was initially viewed as a uni-dimensional concept in which migrants would disregard their heritage culture and adopt the culture of the host country (Gordon, 1964; for review see Schwartz et al., 2010). However, in later years, acculturation was referred to as a bi-dimensional concept in which adaptation to the host country was a result of desired contact between the host and home culture, that leads to four acculturation approaches, which are integration, assimilation, separation and marginalization (Berry, 1997).

The integration strategy indicates that groups or individuals maintain their own ethnic culture and desire to interrelate with people of the host country while individuals who adopt the assimilation strategy only desire to interrelate with people of the host country (Berry, 1997). On the other hand, the separation strategy is adopted when the migrating individual or group only maintains their own ethnic culture while marginalized individuals or groups do not maintain their own national culture nor do they desire to interact with individuals from the host culture (Berry, 1997). Of the four acculturation strategies, Berry (1992; 1997) indicates that integration is the better option for adaptation and improved well-being yet can only be attained when people of the host society also accept minority ethnic and racial groups.

Following the bi-dimensional concept of acculturation, several theories describe the key factors that influence the process of acculturation. These theories include the

acculturation stress and coping model (Berry, 1997; Berry et al., 1987), the cultural learning approach (Ward et al., 2005), social identification perspective (Ward et al., 2005), the multidimensional individual difference acculturation (MIDA) (Rasmi, Safdar, & Lewis, 2009; Safdar, Lay, & Struthers, 2003), the interactive acculturation model (IAM) (Bourhis, Moise, Perreault, & Senecal, 1997), the relative acculturation extended model (RAEM) (Navas, Garcia, Sanchez, Rojas, Pumares, & Fernandez, 2005), and concordance model of acculturation (CMA), (Piontkowski, Rohmann, & Florack, 2002). Of these models, the acculturative stress and coping model (Berry et al., 1987) and the MIDA (Safdar et al., 2003) have been the only two acculturation models to be examined on international students. Thus, the following section will expand on these two theories.

1.1.1 The Multidimensional Individual Difference Acculturation (MIDA) Theory

The multidimensional individual difference acculturation (MIDA) theory, (Rasmi et al., 2009) has been examined with international students to explain how individuals' perception of their circumstances such as lack of money, difficulty understanding academic processes, and their well-being at the host university affect their socio-cultural and psychological adaptation. Psychological adaptation refers to psychological stability such as psychological well-being during periods of stress in international students who try to improve their academic and economic status and life satisfaction, take part in the new society, and maintain their heritage culture (Rasmi et al., 2009; Safdar et al., 2003). Also, socio-cultural adaptation refers to students' ability to adapt to the new society and overcome difficulties such as severe homesickness, separation from family, discrimination, social isolation, language barriers, making friends from the larger society, and difficulties adjusting to social

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norms and customs (Rasmi et al., 2009). According to the MIDA model, psychological resources such as psychological well-being, cultural competence, perceived out-group social support and lower level of hassles are required for socio-cultural and psychological adaptation and to buffer against psychological distress (Rasmi et al., 2009; Safdar et al., 2003). International students who do not have positive perceptions of the new situation, have poorer levels of psychological resources and higher levels of academic hassles (i.e., are in the separation acculturation mode) have higher levels of stress and poor socio-cultural and psychological adjustment (Rasmi et al., 2009).

1.1.2 The Acculturative Stress Model

A coping and stress model developed by Berry et al. (1987) describes the factors that affect adaptation and acculturative stress in international populations. Berry et al. (1987) explains how during the acculturation process a number of factors such as nature of the host culture and acculturation groups, demographic, personality and social factors of the individual moderate the development of acculturative stress in migrants, refugees and international students.

Nature of the host culture has been indicated to be one component that moderates the acculturative stress level experienced by individuals. Berry et al. (1987) indicates that international populations who feel pressure to accept the cultural standards of the host country feel that they are more discriminated against by people of the dominant culture and have increased levels of stress. A second component that has been identified to influence acculturative stress is the nature of the acculturation group. For instance, the amount of interaction international groups have with the host culture has been indicated to influence their level of acculturative stress.

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International students with more contact with people of host culture have more friends and feel lower level of loneliness and isolation that lead to lower acculturative stress levels. Likewise, individuals who voluntarily move to another country may have more positive attitudes toward change and contact with host culture than those populations who are forced to migrate (e.g. refugees) thus experience a lower level of acculturative stress (Berry et al., 1987).

Finally, demographic, social and psychological factors such as cognitive style, gender, socio-economic status and age have been described to have an effect on the level of acculturative stress in international students (Berry et al., 1987). Berry (1987) indicates that social support and coping strategies are significantly related to acculturative stress. Individuals who feel more social support and possess a variety of coping strategies such as, proactive coping have less difficulty during their acculturation process and experience lower level of acculturative stress compared to people who are unable to efficiently cope with stressors in the new environment and have fewer social support networks (Berry et al., 1987).

The above two models highlight the importance of a variety of factors prior to, during and after the acculturation process that can impact on international students' adaptation and acculturative stress. The following section will review studies that have employed models of acculturation to examine international students' level of acculturative stress.

1.1.3 Acculturative Stress in International Students

International students need to adjust to their new academic setting and host society. When the demands of this new environment exceed the coping resources of the

student, acculturative stress occurs due to experienced differences in social values, food, climate, verbal and nonverbal communication and modes of behavior in a host country (Ward et al., 2005). Past research (Lee et al., 2004; Poyrazli, Kavanaugh, Baker, & Al-Timimi, 2004; Poyrazli et al., 2010; Sandhu & Asrabadi, 1994; Yeh & Inose, 2003) has indicated that the level of acculturative stress is high in international students. Such findings show that international students have difficulty in adjusting to their new social and academic environment.

It is important to examine ways in which acculturative stress can be reduced in international students because a high level acculturative stress has been found to lead to poorer academic achievement, lower self-efficiency (Misra, Crist, & Burant, 2003), an increase in hostility and anxiety, poor sleep patterns and loss of appetite (Ward et al., 2005; Wei, Heppner, Mallen, Ku, Liao, & Wu, 2007) and higher levels of homesickness and loneliness (Sandhu & Asrabadi, 1994). A number of studies have therefore investigated factors that influence acculturative stress in international students.

1.1.4 Predictors of Acculturative Stress in International Students

Factors prior to and during acculturation such as age (Poyrazli & Grahame, 2007), gender (Bang, 2009), nationality (Yeh & Inose, 2003), language barriers (Misra et al., 2003; Mori, 2000), cultural competence and preparedness for studying abroad (Yu, Chen, Li, Liu, Jacques-Tiura, & Yan, 2014), a sense of insecurity in the new environment, and a high rate of racial discrimination and perceived rejection (Sandhu & Asrabadi, 1994) have been found to influence international students' level of acculturative stress. For example, it has been found that when international students have difficulty in both speaking and understanding the language of the dominant

culture they have increased difficulty interacting with locals and in making friends in the host country, which lead to increased feelings of acculturative stress (Misra et al., 2003; Mori, 2000).

Desa, Yusooff, and Kadir (2012) further found that having negative attitudes to the host society were strongly related with increased level of acculturative stress in international students studying in Malaysia. A negative attitude to the host society can led to poor contact with member of host society and could hinder the adaptation and integration of students as it prevents students from interacting with other students in the dominant culture. Furthermore, Sandhu and Asrabadi (1994) found that when students felt the need to adjust to the cultural and social norms of the dominant country they had feelings of guilt and betrayal for their own culture, which was a cause of acculturative stress. Such findings support Berry's (1997) view that integration is the best acculturative strategy and indicate the importance of developing policies to integrate students to the new environment which allow them to maintain their own ethnic culture while adjusting to the values and norms of the new academic culture, enabling improved psychological well-being.

For the purposes of the current thesis, the impact of age, gender, nationality, perceived social support and perceived discrimination on acculturative stress in international students will be expanded.

1.2 Demographic factors

The influence of age, gender, and nationality on acculturative stress in international students will be described in the following sections.

1.2.1 Age

Research shows that age of students is a significant factor that can influence whether they develop acculturative stress (Church, 1982; Poyrazli & Grahame, 2007). While Church (1982) indicated that younger international students had a higher level of acculturative stress due to a lack of coping strategies in stressful situations, Poyrazli and Grahame (2007) found that younger international students experienced less acculturative stress compared to older international students. Poyrazli and Grahame (2007) indicated that lower levels of stress in younger students (from different countries such as Germany, Korea, Indian, China, Turkey, and Mexico) in the U.S. may be related to them being more receptive and socially involved, flexible, and open-minded in transition to the new culture. Other the other hand, some studies (e.g., Desa et al., 2012; Poyrazli et al., 2004; Yeh & Inose, 2003) find no significant association between acculturative stress and age in the U.S. Mixed findings thus warrant the need to more examine the association between age of students and acculturative stress.

1.2.2 Gender

Gender has been indicated to be a significant factor that influences acculturative stress. Some researchers (Bang, 2009; Berry, 1997; Berry et al., 1987; Virta, Sam & Westin, 2004) find that female international students have a poorer level of adaptation and experience more acculturative stress than male due to greater difficulty in adjusting to a new country and feeling more lonely and homesick (Berry et al., 1987; Rajapaksa & Dundes, 2002; Virta et al., 2004). On the other hand, other studies (Lee & Padilla, 2014; Yan & Berliner, 2009) have indicated that male Korean and Chinese students studying in the United States experienced higher levels of acculturative stress compared to female students. Possible reasons for male's higher

level of stress were indicated to be increased perceived discrimination, concern for uncertainty of the future, and greater difficulty in learning a new language and adapting to cultural differences (Lee & Padilla, 2014; Yan & Berliner, 2009). Korean and Chinese female students were also found to use more coping strategies such as, social coping that helped buffer against acculturative stress in U.S. (Lee & Padilla, 2014; Yan & Berliner, 2009). A number of researches (Desa et al., 2012; Misra et al., 2003; Poyrazli et al., 2004; Thomas & Choi, 2006; Yeh & Inose, 2003; Zimmermann, 1995) also find no significant gender differenced in relation to the level of acculturative stress that international students experience during the acculturative process. Due to the mixed findings regarding the association between gender and acculturative stress, one objective of the current thesis was to examine the association between these two variables.

1.2.3 Nationality

Nationality of international students can significantly affect students' acculturative stress level. Some studies (Poyrazli et al., 2004; Poyrazli et al., 2010; Yeh & Inose, 2003; Yu et al., 2014) have showed a strong relationship between acculturative stress and nationality in international students. For example, international students whose native culture is more dissimilar to that of the host culture reported higher levels of acculturative stress (Yeh & Inose, 2003; Yu et al., 2014) than those students who had a more similar culture. For instance, Yeh and Inose (2003) indicated that Latin American, African, and Asian international students in the United States compared to European international students reported higher levels of acculturative stress. African international students compared to Latin American and Asian international students also reported more acculturative stress. They inferred that differences in acculturative

stress in different cultural populations can be related to the dissimilarity between the two cultures.

Likewise, Poyrazli et al. (2004) reported that international students from Asia showed more acculturative stress compared to European international students in the U.S. Poyrazli et al. (2004) attributed such differences in acculturative stress between different international students groups to differences in social separation between the home and host culture. European students were assumed to be culturally more similar to the United States culture than Asian students. Findings of Poyrazli et al. (2004) have been replicated by other studies (e.g., Myers-Walls, Frias, Kwon, Ko, & Lu, 2011; Nilsson, Butler, Shouse, & Joshi, 2008) that have shown that Asian students report more challenges and acculturative stress in the United States due to having a dissimilar culture with U.S. culture.

Examining possible differences in levels of acculturative stress between nationalities in international students can be useful to find the reason behind the stress. Therefore, the current thesis will examine national group differences in acculturative stress among international students.

1.3 Social Support

Social support is defined as a communicative process, subtending non-verbal and verbal communication, and purposes to develop an individual's feeling of competence, coping, and belonging (Barrera, 1986; Poyrazli & Grahame, 2007). Social support in the form of tangible support (e.g., financial help), emotional support (e.g., nurturance), informational support (e.g., guidance), and social companionship (e.g., feeling of belonging) (Cohen & Willis, 1985) can be provided

by friends, family members, significant others, coworkers, governments (referred to as public aid) and organizations (Barrera, 1986; Sabouripour & Roslan, 2015). Social support can be actual or perceived. Actual social support is where a person obtains help such as financial assistance while perceived social support alludes to a person's belief that social support is accessible when needed (Demeray & Malecki, 2002). For example, individuals may perceive a sense of belonging to new friends in the new culture (i.e., perceived social companionship).

Social support has been demonstrated to buffer against stress and enable individuals to easily adapt to the host country (Berry, 1997; Berry et al., 1987; Sullivan & Kashubeck-West, 2015; Wethington & Kessler, 1986).

Perceived social support has also been identified to be important in helping international students overcome stressful situations and maintain or improve their psychological well-being (Chen, Mallinckrodt, & Mobley, 2002; Dao, Lee, & Chang, 2007; Misra et al., 2003; Wethington & Kessler, 1986). Misra et al. (2003) reported that students who perceived to have a lack of social support showed higher levels of academic stress, while Dao et al. (2007) indicated that Taiwanese international students in the United Stead with poorer levels of perceived social support showed more depression symptoms. Furthermore, Chen et al. (2002) showed that perceived social support moderated feel of racism and discrimination in international students from Asia in the U.S. Findings of Chen et al. (2002) further demonstrated that social support had an indirect effect on psychological well-being and stress through reducing the level of discrimination felt by students.

1.3.1 Social Support and Acculturative Stress in International Students

Few studies have investigated the correlation between acculturative stress and actual social support (Lee et al., 2004; Mallinckrodt & Leong, 1992; Poyrazli et al., 2004; Sullivan & Kashubeck-West, 2015; Yeh & Inose, 2003) and perceived social support (Chen et al., 2002; Ye, 2006) in international students. The study by Poyrazli et al. (2004) demonstrated that international students in the U.S. who reported poorer level of actual social support had greater levels of acculturative stress. Similarly, findings of the Yeh and Inose (2003) study revealed that satisfaction with social support systems significantly reduced acculturative stress level in Asian, African, European, and Central American internationals students in the U.S. With regard to perceived social support, Ye (2006) found that Chinese international students in the United Stead who reported more levels of perceived emotional and informational social support experienced less stress. Perceived social support by East Asian international students was showed to buffer against the negative influences of stress and racism in the U.S. (Chen et al., 2002).

International students who receive social support from people of the host culture increase their knowledge of the dominant culture (Searle & Ward, 1990). This helps them develop skills that they can use to cope in their new environment which facilitates their adjustment and integration leading to less acculturative stress level (Berry et al., 1987; Berry, 1997; Cohen & Wills, 1985; Searle & Ward, 1990). A recent study by Sullivan and Kashubeck-West (2015) investigated the association between the acculturation modes that is integration, assimilation, separation, and marginalization and acculturative stress' sources in international students in the U.S. The findings of this study revealed that acculturative stress was related to both the

level of social support and students' adopted acculturation mode. Social support particularly from host nationals leads to assimilation and integration which effects in a lower level of acculturative stress. They found that adopting the integration and assimilation acculturation mode was associated with higher levels of social support from host nationals. These findings show the importance effect of social support in the host society and are in line with the suggestions of Berry (1997) that dominant cultures need to be accepting of minority groups such as, international students for integration to occur. Policies and programs that can help in the integration of migrant populations are thus warranted.

1.4 Perceived Discrimination

Discrimination is defined as a mistreatment or act toward a person or minority group based on their actual or perceived membership in a certain social category or group (Dion, 2002; Liebkind & Jasinskaja-Lahti, 2000). Discrimination can happen based on actual or perceived behavior among individuals who have negative feeling due to certain unfounded beliefs, prejudices and stereotypes (Padilla, 2008). Actual discrimination refers to group's reaction that effects on individual's actual behavior towards the group, limiting members from opportunities, and leading to the rejection of the individual or objects (Dion, 2002; Oskamp, 2000; Padilla, 2008). Perceived discrimination on the other hand refers to a person's perception of being an object of prejudice and stereotypes that can lead to feeling socially isolated (Dion, 2002; Oskamp, 2000; Padilla, 2008).

Individuals can be discriminated or can feel discriminated against based on their age, race or nationality, religious beliefs, and gender (Dion, 2002; Oskamp, 2000; Pincus, 1996). Age or ageism refers to a set of stereotypes such as, ban on activities towards

old people, or adolescents and children based on their age (Oskamp, 2000). Race or racism refers to prejudices and stereotypes behaviors based on skin color (Oskamp, 2000). Religious beliefs refer to treating a person or group in a different way because of what they believe or because of their feelings towards a given religion for example, wearing a scarf among Muslim women. Gender or sexism refers to beliefs and attitudes in relation to the gender of a person (Oskamp, 2000).

A group of people that face serious discrimination is international populations including international students (Chen, 1999; Dion, 2002; Hanassab, 2006; Jung, Hecht, & Wadsworth, 2007; Lee & Rice, 2007; Mori, 2000; Poyrazli & Lopez, 2007; Smith & Khawaja, 2011; Wadsworth, Hecht, & Jung, 2008; Wei, Ku, Russell, Mallinckrodt, & Liao, 2008). A review of the literature has revealed many studies (i.e., Bonazzo & Wong, 2007; Chen, 1999; Lee & Rice, 2007; Leong & Ward, 2000; Robertson, Line, Jones, & Thomas, 2000; Sam, 2001; Schmitt, Spears, & Branscombe, 2003; Smith & Khawaja, 2011; Yeh & Inose, 2003; Ying, 2005) that examine actual discrimination in international students, yet fewer studies (Duru & Poyrazli, 2011; Hanassab, 2006; Jung et al., 2007; Karuppan & Barari, 2010; Poyrazli & Lopez, 2007; Wei et al., 2008) have examined perceived discrimination in international students.

1.4.1 Perceived Discrimination in International Students

Perceived discrimination is a main factor during the acculturation process and a number of factors have been identified to influence the degree of perceived discrimination in international students (Duru & Poyrazli, 2011; Hanassab, 2006; Jung et al., 2007; Karuppan & Barari, 2010; Poyrazli & Lopez, 2007; Wei et al., 2008). For instance, Karuppan and Barari (2010) conducted a study with 227

international students (average age was 25 years) from Africa, Asia, Middle East, and Europe (most of them were from Asia that 94 of them were from India and 68 were from China) in the U.S. They showed that perceived English proficiency (language barrier) significantly predicted the level of perceived discrimination in international students. Those students who perceived to have lower levels of English proficiency had higher levels of perceived discrimination because they had poorer contact with faculty members and people of the dominant culture. In return, they indicated that perceived discrimination had a strong negative influence on students' academic experience that affected their learning outcome and engagement in the host society.

Furthermore, race and nationality in international students has been found to predict perceived discrimination among them (Hanassab, 2006; Poyrazli & Lopez, 2007). Poyrazli and Lopez (2007) found that African, Asian, Middle Eastern, and Latino international students but not European international students showed higher level of perceived discrimination compared to United Stead students. Likewise, Hanassab (2006) indicated that students from the Africa and Middle East perceived to be discriminated against more by faculty, staff, other students and community members due to a dissimilar culture and language barriers than European students in the U.S. National group differences in perceived discrimination were attributed to cultural differences and differences in physical characteristics such as color of skin (Hanassab, 2006; Poyrazli & Lopez, 2007).

Higher levels of perceived discrimination have also been showed to lead to difficulty in cultural adjustment and increased levels of acculturative stress (Sandhu & Asrabadi, 1994).

1.4.2 Perceived Discrimination and Acculturative Stress in International Students

To date only a few studies (i.e., Chavajay & Skowronek, 2008; Sandhu & Asrabadi, 1994; Sullivan, 2011) have investigated the association between perceived discrimination and acculturative stress in international students. While some studies (Sandhu & Asrabadi, 1994; Sullivan, 2011) find a positive relationship between perceived discrimination and acculturative stress, others (Chavajay & Skowronek, 2008) find no significant relationship. The study by Sandhu and Asrabadi (1994) required 128 international students with an average age of 23 years from Middle East, Asia, Africa, Latin, and Europe studying in the U.S. to complete the Acculturative Stress Scale for International Students (ASSIS) questionnaire. This questionnaire measured perceived discrimination, rejection, fear, homesickness, guilt, and cultural shock as predictor factors of acculturative stress. Findings of this study showed that perceived discrimination was the best predictor of acculturative stress in international students and accounted for 38.3% of the variance. Likewise, Sullivan (2011) examined predictors of acculturative stress in 653 international students (341 males & 312 females) aged between 17 to 52 years from Asia, Europe, Middle East, Latina, and Africa with in the U.S. Finding of this study showed that perceived discrimination was a significant moderating factor for acculturative stress in international students regardless of racial background. On the other hand, Chavajay and Skowronek (2008) found no significant relationship between acculturative stress and perceived discrimination in 130 international students (69 males & 61 females) aged between 18 to 42 years from Asia, America, Europe, and Africa with in the United States.

According to Berry's acculturation theory, international populations who feel discrimination in the new cultural setting have distinct feelings, poor relationships in the host society and escape from adjusting to the values of host society (Berry, 1997; Berry et al., 1987). This thus results in separation and marginalization, which lead to higher levels of acculturative stress (Berry, 1997; Berry et al., 1987; Sullivan, 2011). A reduction in perceived discrimination could therefore aid in allowing for the formation of stronger acceptance and relationships of values and norms of the host society to alleviate acculturative stress in international students.

1.5 The Current Study

Eastern Mediterranean University (EMU) in North Cyprus is a major university with one of the largest number of international students. In the 2014/15 academic year, 7191 students were enrolled in EMU with the largest non-Turkish speaking international student groups being Nigerian, Pakistani and Iranian students (YÖDAK, 2015).

Although much research exists on the topic of acculturation, there is a lack of study that examines the impact of perceived discrimination and perceived social support on the level of acculturative stress in international students to their host society. Furthermore, in spite of the large number of international students in North Cyprus, their level of acculturative stress and the factors that facilitate or hinder their adaptation are unknown. Past research (Duru & Poyrazli, 2011; Ye, 2006) indicates that two major factors that influence acculturative stress in international students is discrimination and social support. Although perceived discrimination is a better predictor of stress than actual discrimination (Dion, 2002), fewer studies exist to examine perceived discrimination in international students. One purpose of the

present study was to therefore investigate the relationship between acculturative stress and perceived discrimination. Likewise, although perceived social support than actual social support is a better predictor of positive adaptation to stressful life events in international students (Dunkel-Schetter & Bennett, 1990; House & Kahn, 1985; Wethington & Kessler 1986), few studies have examined its influence on acculturative stress level in international students. A further object of the present study was to therefore investigate the relationship between perceived social support and acculturative stress in non-Turkish speaking international students (i.e., Nigeria and Iran) studying at EMU, North Cyprus.

Inconsistent results have further been revealed by past studies (Poyrazli et al., 2004) that have investigated the impact of demographic factors such as age, gender and nationality on the level of acculturative stress experienced by international students. Therefore, the current study further aimed to investigate whether age, gender and nationality predict acculturative stress.

Furthermore, in line with the past studies (e.g., Karuppan & Barari, 2010) that have examined social support as a significant buffer factor against discrimination and acculturative stress, the present study further aimed to examine whether perceived social support act as a buffer against perceived discrimination and acculturative stress.

It was expected that:

1) Students' age (younger vs. older), gender (male vs. female), and nationality (Nigerian vs. Iranian) will predict the level of acculturative stress experienced in

international students while studying in Cyprus. It will be expected that younger students in comparison to older students, female students in comparison to male students, and Nigerian students in comparison to Iranian students experience higher levels of acculturative stress.

2) Perceived social support (from family, friends and significant others) will negatively predict the level of acculturative stress experienced by international students.

3) Perceived discrimination will be positively predicted the level of acculturative stress experienced by international students.

4) Perceived social support will mediate the association between perceived discrimination and acculturative stress.

Chapter 2

METHOD

2.1 Participants

A total of 174 international students (91 females/83 males) between 18 to 35 years old (M=24.22, SD=4.15) participated in the present study. Two national groups of the international students (Iranian and Nigerian students) consisted as participants in the current study. The total participants involved 88 Iranian students that contained 47 female and 41 male between 18 to 35 years old (M=24.12, SD=4.53) and 86 Nigerian students that contained 44 female and 42 male between 18 to 34 years old (M=24.31, SD=3.73). The summary of demographic characteristics of the Iranian and Nigerian students is presented in Table 1.

Table 1: Demographic characteristics of Iranian and Nigerian students

Variable	Category	Nationality		Total
		Iranian	Nigerian	
Age	17-21	33	22	55
	22-27	34	48	82
	28-32	16	12	28
	33-35	5	4	9
	Total	88	86	174
Gender	Female	47	44	91
	Male	41	42	83
	Total	88	86	174
Degree	Undergraduate	36	68	104
	Master	18	15	33
	PhD	34	3	37
	Total	88	86	174
Length of stay	< 1 year/ 1 year	49	12	61
	2 years to 3 years	23	35	58
	> 4 years	16	39	55
	Total	88	86	174

Family status	Alone	72	73	145
	With family	16	13	29
	Total	88	86	174
Funding Type	Teaching/Research assistance	10	0	10
	Scholarship	26	7	33
	Family founds	51	79	130
	Total	88	86	174
Social economic status (SES)	Machine operators, semiskilled workers(20-29)	0	6	6
	Skilled craftsmen, clerical, sales workers (30-39)	13	10	23
	Medium business, technical, minor professional (40-54)	24	16	40
	Major business and professional (55-66)	51	54	105
	Total	88	86	174

2.2 Materials

In the current thesis, four questionnaires were administered to the participants for data gathering.

2.2.1 Demographic Questionnaire

A demographic questionnaire are completed by participants to obtain background information such as their age, gender, marital status, nationality, length of residence, socio-economic status (SES), and their level of Turkish language knowledge (see appendix A).

The Hollingshead's Four Factor Index of Social Status (1975) was used to evaluate the level of socio-economic status (SES) of participants' families based on parents' education level, occupation of each parent, and the total scores of parents.

2.2.2 The Acculturative Stress Scale for International Students

The Acculturative Stress Scale for International Students (ASSIS) developed by Sandhu and Asrabadi (1994) was used to measure acculturative stress and was standardized in international students' population who come from Asia, Europe, Africa, Latin America, and Middle East to study in the United Stead. The ASSIS includes 36 items, containing subscales of fear (4 items), perceived discrimination (8 items), stress due to change (3 items), perceived hate/rejection (5 items), guilt (2 items), homesickness (4 items), and non-specific concerns (10 items). ASSIS is a 5-point Likert scale with arraying 5 (strongly agree) to 1 (strongly disagree). The ASSIS involved items such as "I feel low because of my cultural background". The total scores on the ASSIS are from range 36 to 180, with higher scores signifies higher level of acculturation stress. Low scores are from 36 to 72 ranges, 73 to 144 are moderate scores, and over 145 are considered high scores (see appendix B). Cronbach's alpha in this scale reported ranged from 0.92 to 0.96 (Sandhu & Asrabadi, 1994). In the present study, internal consistency of the total scale was high (α= .96).

2.2.3 The Everyday Discrimination Scale

The Everyday Discrimination Scale (EDS) was used in the current study to measure discrimination based on race and nationality (Williams, Yu, Jackson, & Anderson, 1997). The EDS in general assesses the underlying construct of perceived discrimination equivalently across diverse racial/ethnic groups which was standardized in international populations such as immigrants and international students in the United Stead. Past studies (Gee, Spencer, Chen, & Takeuchi, 2007) have also employed the EDS to assess how racial/ethnic discrimination contributes to stress in Asian American university students. The original 9-item scale is an

experience of unfair treatment in day-to-day life on a 4-point Likert-type scale ranging from 0 (never) to 3 (often) with a possible total score range is from 0 to 27, that higehr scores representing higher amount of perceived discrimination. The EDS contains items such as "You receive poorer service than other people at restaurants or stores" (see appendix C). Cronbach's alpha for the EDS has reported ranging from .87 to .91 in ethnically and racially different samples. In the present thesis, internal consistency of the total scale was high (α= .90).

2.2.4 The Multidimensional Scale of Perceived Social Support

The Multidimensional Scale of Perceived Social Support (MSPSS) was used to measure perceived social support. MSPSS is a brief research tool designed to assess perceptions of social support from 3 sources: Family, Friends, and Significant Other. This scale was standardized and examined in across different populations and settings such as, college students in the United Stead (Zimet, Dahlem, Zimet, & Farley, 1988). Sabouripour and Roslan (2015) have used the MSPSS to examine international students' level of perceived social support from family, friends and significant other. This scale is included of a total of 12 items, with 4 items for each subscale (family, friends, and significant other). Each item is evaluated on a seven-point Likert-scale (7 = very strongly agree; 1 = very strongly disagree) with a possible total score range is between 12 and 84, a higher scores show a higher level of perceived social support. This scale involved items such as "I get the emotional help and support I need from my family" (see appendix D). The MSPSS is a valid and reliable instrument that Cronbach's alpha has been reported to range from 0.74 to 0.95 (Zimet, Dahlem, Zimet, & Farley, 1988). For the current study internal consistency of the total scale was high (α= .95).

2.3 Procedure

Prior to conducting the current study, ethical approval was acquired from EMU Department of Psychology Ethics and Research Committee (see Appendix E). The current thesis employed the questionnaire survey method and participants were recruited using the opportunity sampling technique among Eastern Mediterranean University international students (between April 2016 and May 2016). Prospective participants were informed of the study aims and their voluntary participation was requested using the Informed Consent Form. Upon this, voluntary participants were requested to complete the demographic questionnaire, the ASSIS, the EDS and, the MSPSS, which were in English and return the completed forms to the researcher. The response rate was 81%. Completion of the questionnaires took approximately 30 minutes. Then, participants were given a debrief form that further explained the study aims and allowed participants to ask any questions or be informed of sources for further assistance. Data analysis was carried out using a statistical computer software program, Statistical Package for Social Sciences, Version 20.

2.4 Design

The current study looks at perceived social support, perceived discrimination, and acculturative stress in international students. Acculturative stress was the dependent variable and perceived social support, and perceived discrimination and demographic variables (i.e., age, gender, and nationality) were the independent variables.

Since the present study aims to look at the relationship between acculturative stress, perceived discrimination, and perceived social support, the correlation design was employed.

2.5 Bootstrapping in Mediation

The Preacher and Hayes Bootstrapping method (Preacher & Hayes, 2004) was used in the present study to examine the effect of mediator factor, perceived social support on the relationship between perceived discrimination and acculturative stress in international students. The Preacher and Hayes bootstrapping method is a non-parametric method based on resampling with replacement which is done many times, e.g., 5000 times (Preacher & Hayes, 2004). Bootstrapping involves repeatedly randomly sampling observations with replacement from the data set to compute the desired statistic in each resample. Over hundreds, or thousands, of bootstrap resamples provide an approximation of the sampling distribution of the statistic of interest. Hayes offers a macro that calculates bootstrapping directly within SPSS, a computer program used for statistical analyses (Preacher & Hayes, 2004). This method provides point estimates and confidence intervals by which one can assess the significance or non-significance of a mediation effect. With the distribution, a confidence interval, a p value, or a standard error can be determined. Point estimates reveal the mean over the number of bootstrapped samples and if zero does not fall between the resulting confidence intervals of the bootstrapping method, one can confidently conclude that there is a significant mediation effect to report (Preacher & Hayes, 2004). In the present study the 95% confidence interval of the indirect effects was obtained with 5000 bootstrap resample to predict the t value parameter in the mediation analyses.

Chapter 3

RESULTS

3.1 Data Preparation

Prior to any inferential analysis, a number of procedures were undertaken to ensure that the acculturative stress data was normally distributed. Histograms showed a relatively normal distribution of the acculturative stress data. Furthermore, to ensure that there were no outliers in the data set, Z scores were conducted and showed participants' scores were in a range of $\pm$ 2.5 standard deviation of the mean. Moreover, primary analyses were carried out to ensure no violations of the assumptions of normality, linearity, multicollinearity, and homoscedasticity in regression analysis.

An ANOVA and independent sample t-tests were conducted to find differences between demographic factors and acculturative stress in Iranian and Nigerian students. Also, a hierarchical multiple regression was carried out to determine relationships between acculturative stress and potential predictors (age, gender, nationality, perceived social support, and perceived discrimination). Furthermore, a mediation analysis was conducted to determine whether perceived discrimination and acculturative stress can be mediated through perceived social support. The enter method and an alpha level of 0.05 was used for all the inferential statistical analysis.

3.2 Differences in Demographic Factors

To determine the influence of demographic factors, 2 (gender, male vs. female) $\times$ 2 (nationality, Nigerian vs. Iranian) on acculturative stress a two-way ANOVA was carried out in EMU international students. The ANOVA results show that there was a significant main effect of gender on acculturative stress in international students (F (1,170) = 24.81, p < 0.01) and female students reported significantly more acculturative stress (M = 102.82, SD = 30.62) compared to male students (M = 85.84, SD = 21.88). Also, there was a significant main effect of nationality (Iranian vs. Nigerian) on acculturative stress between international students (F (1,170) = 31.08, p < 0.01) and Nigerian students reported significantly higher level of acculturative stress (M = 104.89, SD = 30.09) compared to Iranian students (M = 84.78, SD = 21.86). Furthermore, the results of ANOVA show that there was a significant interaction effect between gender and nationality (F (1,170) = 24.40, p < 0.01) in international students. Nigerian female students reported higher level of acculturative stress than Iranian female students. Also, Nigerian male students reported higher level of acculturative stress than Iranian male students. However, the difference between female Nigerian and Iranian students was found to be considerably larger than that between male Nigerian and Iranian students.

Moreover, to determine the influence of demographic factors, 2 (gender, male vs. female) $\times$ 2 (nationality, Nigerian vs. Iranian) on perceived discrimination a two-way ANOVA was carried out in EMU international students. The ANOVA results show that there was a significant main effect of nationality on perceived discrimination in international students (F (1,170) = 37.14, p < 0.01) and Nigerian students reported significantly more perceived discrimination (M = 13.06, SD = 6.74) compared to

Iranian students ($M = 7.57$, $SD = 5.27$). However, the main effect of gender on perceived discrimination was not significant (F (1,170) = 1.73, $p > 0.05$). Furthermore, the results of ANOVA show that there was a significant interaction between gender and nationality (F (1,170) = 15.59, $p < 0.01$) in international students. Nigerian female students reported higher level of perceived discrimination than Iranian female students. Also, Nigerian male students reported higher level of perceived discrimination than Iranian male students

3.3 Age, Gender, Nationality, Perceived Social Support, Perceived Discrimination and Acculturative Stress in International Students

To determine the relationship between acculturative stress and age, gender, nationality, perceived discrimination and perceived social support, a three step hierarchical multiple regression analysis was conducted. Preliminary analyses were conducted to ensure no violations of the assumptions of normality, linearity, multicolinearity and homoscedasticity were violated. Age, gender and nationality, were entered in Step 1, perceived discrimination was entered in Step 2 and perceived social support was entered in Step 3. The enter method and 0.05 was used as an alpha level for the statistical analysis. The multiple regressions of inter-correlations between variables are presented in Table 2.

Table 2: Hierarchical multiple regression for variables predicting acculturative stress

Variables	R	R²	ΔR²	B	SEb	β	sr²
Step1	.49	.24	.24				
Age				.67	.45	.09	.09
Gender				-17.14	3.76	-.31**²	.31
Nationality				20.37	3.75	.36**²	.36
Step2	.77	.59	.36				
Age				.45	.33	.07	.07
Gender				-14.09	2.76	-.25**²	.25
Nationality				4.97	3.02	.09	.08
Perceived discrimination				2.79	.23	.66**	.59
Step3	.78	.61	.37				
Age				.41	.32	.06	.06
Gender				-13.18	2.74	-.24**²	.23
Nationality				4.46	2.98	.08	.07
Perceived discrimination				2.64	.23	.62**	.54
Perceived social support				-.19	.07	-.14*	.15

Note: N= 174; *$p<.01$, **$p<.001$; 1= male, 2= female; 1= Iranian, 2= Nigerian

Results show that at the first stage, age, gender, and nationality have a significant contribution to the regression model, $F(3,173) = 17.49$, $p < 0.01$ and represented 24% of the variation in acculturative stress. Perceived discrimination explained an additional 59% of the variation in acculturative stress and this change in R² was significant, $F(4,173) = 61.51$, $p < 0.01$. Perceived discrimination ($β = .62$, $p < 0.01$) significantly predicted acculturative stress. Adding perceived social support to the regression model explained an additional 61% of variation on acculturative stress and this change in R² was significant, $F(5,173) = 52.498$, $p < 0.01$. Perceived social

support (β = -.138, $p < 0.01$) significantly predicted acculturative stress. When all independent variables were entered to the regression model, at the third stage age and nationality were not significant predictors of acculturative stress. The most significant predictor of acculturative stress was perceived discrimination which exclusively illustrated 59% of the variation in acculturative stress. Altogether independent variables represented 61% of the variance in acculturative stress.

3.4 Perceived Social Support as a Mediator Factor on the Relationship between Perceived Discrimination and Acculturative Stress

Multiple regression analyses found that perceived discrimination was related with acculturative stress (B= 3.05, t (172) = 13.64, $p < 0.01$). It was further found that perceived discrimination was relationship to perceived social support (B= -.95, t (172) = -4.29, $p < 0.01$). Finally, results showed that the mediator, perceived social support, was negatively related with acculturative stress (B= -.24, t (171) = -3.26, $p <$ 0.01). The results of the mediation analysis affirmed the mediating role of perceived social support in the connection between perceived discrimination and acculturative stress (B=.23, CI= .08, to .47). Additionally, results showed that the direct effect of perceived discrimination on acculturative stress became significant (B=2.82, t (171) = 12.31, $p < 0.01$) when controlling for perceived social support interactions, thus suggesting partial mediation. Figure 1 displays the results.
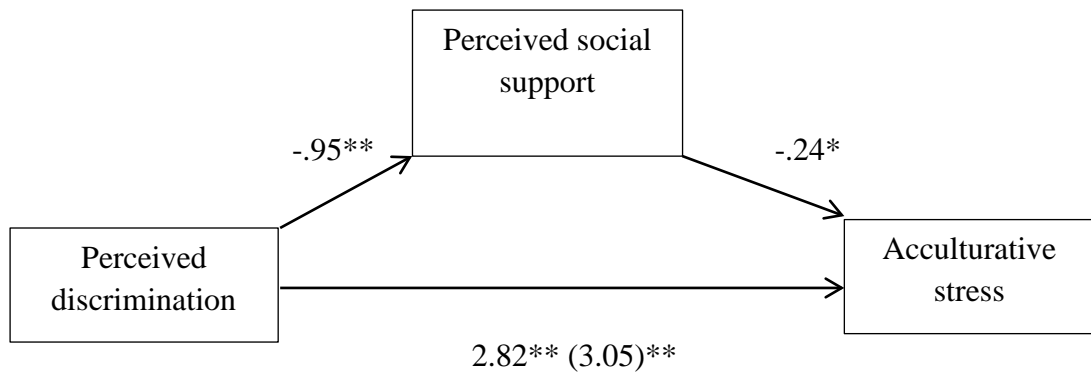
Figure 1: The standardized regression coefficient between acculturative stress and perceived discrimination, controlling for perceived social support
Note: * *p*<.01, ***p*<.00

Chapter 4

DISCUSSION

The current thesis investigated the relationship between demographic factors (age, gender, and nationality), perceived social support, perceived discrimination and acculturative stress in non-Turkish speaking international students (i.e., Nigerian and Iranian) studying at EMU, North Cyprus. It was expected that perceived discrimination, perceived social support and students' demographic factors age, gender and nationality would predict the level of acculturative stress in international students and these expectations were partially supported. It was further expected that the association between perceived discrimination and acculturative stress would be mediated through perceived social support and this expectation was supported.

Findings of the current thesis showed a moderate level of acculturative stress for Nigerian and Iranian students studying at EMU in which gender, nationality, perceived social support and perceived discrimination accounted for 61 percent of the variance. This result is similar to those of previous studies which find a moderate (e.g., Poyrazli et al., 2004; Poyrazli et al., 2010) or high (e.g., Lee et al., 2004; Yeh & Inose, 2003) level of acculturative stress for their sample of European, Asian, Middle Eastern, and African international students and attribute such stress to lack of social support networks in the home and host society and a lack of use of effective coping strategies such as proactive coping in stressful situations (i.e., finding

accommodation, academic achievement in a different academic system, and adjusting to the new cultural norms).

Findings of the current thesis further showed that gender and nationality but not age was a significant predictor of acculturative stress in Iranian and Nigerian students. Female students reported higher levels of acculturative stress compared to male students and Nigerian students reported more acculturative stress compared to Iranian students. Furthermore, current findings showed that perceived social support was a significant predictor of acculturative stress in international students. It was found that international students with higher levels of perceived social support from family, friends, and significant others reported less acculturative stress. Likewise, perceived discrimination was a significant predictor of acculturative stress in that students who reported higher levels of perceived discrimination also reported more acculturative stress in the new academic culture. Additionally, the findings of the present thesis have shown that perceived social support mediated the relationship between perceived discrimination and acculturative stress. International students who had a poorer level of perceived social support reported higher level of perceived discrimination and acculturative stress.

With regard to gender and acculturative stress, the current findings are similar to those of past studies (Rajapaksa & Dundes, 2002; Virta et al., 2004) which find a larger amount of acculturative stress for female students than male students can refer to homesickness, guilt and greater difficulty in adjustment to their host country. According to the MIDA theory (Rasmi et al., 2009), students' perceptions of their circumstances, such as lack of money or homesickness, adversely affect their socio-

cultural adaptation and result in higher levels of acculturative stress. Therefore, in light of the current findings which female students experienced higher level of acculturative stress than male can refer to difficulty in their adjustment, higher level of homesickness and guilt for female than male students in North Cyprus. However, the current findings are contrary to those of other findings (Lee & Padilla, 2014; Yan & Berliner, 2009) which find that international female students compared to male students have lower levels of acculturative stress. While (Lee & Padilla, 2014; Yan & Berliner, 2009) study looked at Korean and Chinese students in the U.S. the current study examined Iranian and Nigerian in North Cyprus yet it seems that regardless of these differences gender is an important factor predicting acculturative stress.

The current findings which found that Nigerian students compared to Iranian students had higher level of acculturative stress are similar to those of past research (Poyrazli et al., 2004; Poyrazli et al., 2010; Wilton & Constantine, 2003; Yeh & Inose, 2003) which finds that Asian and African international students report higher levels of acculturative stress compared to European international students in the United States. These findings indicate that international students whose native culture is dissimilar to that of the dominant culture report higher levels of acculturative stress. This is because culturally similar populations experience less of a contrast in their values, norms and cultural patterns of behavior that allow for a smoother adjustment and integration to the host society (Yeh & Inose, 2003). In North Cyprus, Iranian culture has more similarity with the Cypriot culture, for example both cultures have a similar religion, food, and customs compared to the Nigerian culture. Therefore, Nigerian students compared to Iranian students who are

assumed to have a more distant culture from the Cypriot culture experience greater difficulties in their level of adjustment to North Cyprus resulting in higher levels of acculturative stress.

It has further been suggested that when students' facial features look different from members of the dominant culture they feel discriminated against and report higher levels of acculturative stress (Yeh & Inose, 2003; Yu et al., 2014). Nigerian students more so than Iranian students have facial features that are generally different from that of Cypriot people. Such difference in physical appearance could therefore account for Nigerian students' higher level of perceived discrimination and acculturative stress in North Cyprus. This notion is further supported by the current findings which show that nationality was no longer a significant predictor of acculturative stress when perceived discrimination was added to the equation. In light of these findings, it is likely that facial features that lead to perceived discrimination may account for the initial significant findings of nationality as a predictor of acculturative stress rather than a dissimilar culture between Iranian and Nigerian students.

A review of the literature further indicates that age is a demographic factor that significantly predicts acculturative stress in international students (Berry et al., 1987; Church, 1982; Poyrazli & Grahame, 2007). These studies show that younger students report higher levels of acculturative stress compared to older international students, due to a lack of coping strategies in stressful situations such as their new academic life (Church, 1982). However, the current findings indicate otherwise and find that the age of international students was not a predictor of acculturative stress. Such findings are similar to those of past studies (e.g. Desa et al., 2012; Poyrazli et al.,

2004; Yeh & Inose, 2003) which find no significant relationship between age and acculturative stress. These findings indicate that factors such as social support rather than age per se may mediate the level of acculturative stress which experienced by students. However, it is important to mention that the age range in the present study was between 18-35 years, while for the Poyrazli and Grahame (2007) study it was between 18 to 45 years. A smaller age range in the current study compared to that of the Poyrazli and Grahame (2007) study might mean that the impact of age could not be detected, accounting for the non-significant relationship between age and acculturative stress. This therefore warrants further research to examine the relationship between age and acculturative stress.

With regard to perceived social support and acculturative stress, current findings are parallel to those of previous research (i.e., Chen et al., 2002; Ye, 2006) revealing that international students with poorer levels of perceived social support have more acculturative stress level. Perceived social support (i.e., from people of the host culture) can help international students feel that they have developed communication skills and have acquired effective coping strategies (such as proactive coping) that can be used to manage stressors (e.g., homesickness, language barrier, and new academic life) in their new environment. Therefore, perceived social support can facilitate students' adjustment and integration to their new environment (i.e., increased desire to interrelate with people of the host society while retaining their national culture) which leads to lower levels of acculturative stress (Berry et al., 1987; Berry, 1997; Cohen & Wills, 1985; Searle & Ward, 1990). In line with Berry's (1987) acculturative stress theory, students in the present study who reported higher levels of perceived social support had lower levels of acculturative stress possibly

because they believe they are better equipped with the necessary cultural skills to deal with stressors in North Cyprus.

A positive relationship between perceived discrimination and acculturative stress has been found by both the current study and that of past research (i.e., Sandhu & Asrabadi, 1994; Sullivan, 2011) which reveal perceived discrimination to be the best predictor of acculturative stress in international students. Iranian and Nigerian students in the current study who believed they were discriminated against (e.g., feel that they are respected less than other people) had higher levels of acculturative stress. According to Berry's acculturation theory, international populations who feel discrimination in the new cultural setting have poor relationships in the host society and escape from adjusting to the values of the host culture(Berry, 1997; Berry et al., 1987). This thus results in separation and marginalization, which leads to higher levels of acculturative stress (Berry, 1997; Berry et al., 1987; Sullivan, 2011). In line with this theory, it is suggested that students in the present study with higher perceived discrimination levels may have had poorer relationships in North Cyprus, accounting for their higher level of acculturative stress. These findings indicate that social support networks in the host country are important in reducing acculturative stress. In support of this notion, the mediation results further show that as perceived social support increases, the impact of perceived discrimination on the level of acculturative stress decreases. Such findings coupled with that of past research (Karuppan & Barari, 2010) indicate that social support is a significant buffer factor against perceived discrimination and acculturative stress in international students.

Overall, the present findings indicate that gender, perceived discrimination and perceived social support are significant predictors of acculturative stress in Iranian

and Nigerian students, yet the current thesis was not without limitations. International students in the present study comprised of only Iranian and Nigerian students, thus the current findings may not generalize to other student populations. Future research investigating the well-being of international students from other nationalities, ethnicities and cultures is needed. This will further shed light on the association between nationality, culture and acculturative stress.

In addition, the current findings found no significant relationship between age and acculturative stress. It could be possible that the small age range of the current study accounts for the non-significant findings. Levinson (1986) indicates that after the age of 35 years people have a number of developmental changes in their life context such as new social roles which can increase their ability to cope effectively with stressful situations such as a new life style. Since students in the current study were not older than 35 years it was not possible to compare an older group of students against a younger group of students which could have better revealed the relationship between age and acculturative stress. Further research which includes international students of all ages is thus needed to determine whether age (i.e., developmental changes that take place throughout one's lifespan) predicts acculturative stress.

Furthermore, although a positive relationship was found between perceived discrimination and acculturative stress, the current study was limited in revealing whether increased perceived discrimination precluded students from integrating to North Cyprus. This is because the current study did not assess the type of acculturation strategy (i.e., separation, integration, marginalization, and assimilation) adopted by international students in North Cyprus. It is therefore important that

future studies assess international students' acculturation strategies when examining acculturative stress and determine whether international students in North Cyprus are integrated, assimilated, separated or marginalized.

A further limitation of the current study was that it was limited in measuring cultural similarity between international students' to further determine whether cultural similarity between the host and home country is a predictor of perceived discrimination in international students in North Cyprus. It is therefore important that future studies investigate the impact of cultural similarity between international students and the dominant culture.

Moreover, the present thesis was limited in equating student on educational level (e.g. undergraduate, master, and PhD). International students in different educational levels may experience different levels of stress due to differing levels of academic expectations. It may be possible that educational level may be an important contributor to the level of acculturative stress experienced by students thus future studies should determine the influence of education on acculturative stress in international students in North Cyprus.

Although a negative relationship was found between perceived social support and acculturative stress, the current study was limited in controlling actual social support received by international students when assessing the effect of perceived social support on the levels of acculturative stress. It may be possible that the amount of actual social support received by students mediates acculturative stress and should

controlled for in future studies examining perceived social support and acculturative stress in international students.

Furthermore, the questionnaires used in the current study were administered in English which was not the native language for the Iranian students. Iranian students may have had difficulty in responding to the questions which may account for the acculturative stress differences between Nigerian and Iranian students. It is therefore important that future studies that aim to examine acculturative stress in international students administer the questionnaires in students' native language.

Considering that integration is an essential outcome of the acculturation process, it is important to determine difficulties beyond perceived discrimination, homesickness and guilt which students encounter in their new country (e.g., transportation difficulties) and academic setting (e.g., differences in the learning systems, dependent learning versus independent learning) that could affect their adaptation to North Cyprus. Investigating ways to reduce homesickness and guilt in international students and increase the use of effective coping strategies such as proactive coping is can examine in future direction.

Integration cannot be attained unless members of the dominant culture accept the values and norms of migrant minority groups in the host country and allow minorities to live their own lives according to their own norms (Berry, 1997). In light of this, it is suggested that future studies investigate the attitudes and behaviors of Cypriot people towards international students in North Cyprus. Such findings will

help develop strategies and policies to aid in the integration of international students to North Cyprus.

In conclusion, findings of the present thesis add to the acculturative stress literature by revealing that gender, nationality, perceived social support and perceived discrimination predict acculturative stress that experienced by Iranian and Nigerian students in North Cyprus. It was found that being a female student and of Nigerian culture and having increased levels of perceived discrimination lead to an increase in acculturative stress. On the other hand, having higher levels of perceived social support from family, friends, and significant others was associated with lower levels of acculturative stress. In fact, findings reveled that perceived social support mediated the relationship between perceived discrimination and acculturative stress in international students. These findings highlight the importance of having perceived social support networks in the host and home society to help reduce the level of perceived discrimination and buffer against acculturative stress. These findings have important implications for universities, especially their international offices, and the state's department concerning migration in North Cyprus. Activities and programs that help international students build social support networks and promote positive student interactions with native students and members of the host society are crucial. Furthermore, workshops can be organized by counselors to help international students learn the necessary social skills required for effective interactions with the local population. This will help decrease perceived discrimination and buffer against acculturative stress in international students.

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APPENDICES

Appendix A: Demographic Questionnaire

Dear Participant, this questionnaire has two sections; Section I asks for your personal information and section II asks about your proficiency in the Turkish language. Please read each statement and answer carefully.

Section I: Personal Information

1. Age   _____.

2. Sex: Female O   Male O

3. Marital status:

   Married O   Widowed O   Divorced O   Separated O

   Single, but cohabiting with a significant other   O   Single, never married   O

4. Please state your race/nationality. _____

5. Where were you born? _____

6. Where were you raised? _____

7. How many years have you been in Cyprus? _____

8. Are you currently studying at EMU?   Yes O   No O

   If yes, please state your department _____

   and select your degree: undergraduate O graduate O PhD student O

9. Do you have family or relatives with you in Cyprus? Yes O   No O

   If yes, who is here with you? _____and for how long will they stay with you? _____

10. What is your present wellspring of financing for your studies?

   Graduate Research/ Teaching assistantship O   Scholarship   O

   Family funds O   Other   _____

11. Parental education:

   11a. Please indicate the highest educational level earned by your father_____

   11b. Please indicate the highest educational level earned by your mother _____

12. Parental employment:

   12a.Is your father currently employed? If yes, please state your father's current occupation

   _____

12b. If your father is currently not employed, please indicate your father's previous occupation

_____

12c. Is your mother currently employed? If yes, please indicate your mother's occupation

_____

12d. If your mother is currently not employed, please indicate your mother's previous occupation

_____

Section II: Language Experience and Proficiency

13a. Please indicate your level of ability in listening, understanding, speaking, and reading in the Turkish language. Use the scale between 0 to 10 where 0 is the minimum level and 10 is the maximum level.

Listening _____   Speaking _____   Understanding _____   Reading _____

13b. Please indicate to what extent you are currently exposed to this language on a daily basis _____%

13c. In which circumstances do you most frequently use Turkish? _____

14. How many words do you estimate you can say in Turkish?

- o   0
- o   1–21
- o   22–40
- o   41–100
- o   101–200
- o   201–300
- o   301–400
- o   Over 400

15. How many words do you estimate you can understand in Turkish?

- o   0
- o   1–21
- o   22–40
- o   41–100
- o   101–200
- o   201–300
- o   301–400
- o   Over 400

Appendix B: Acculturative Stress Questionnaire (ASSIS)

Instructions: We are keen on how you feel about the accompanying articulations. It would be ideal if you read every announcement precisely. Circle a number 1, 2, 3, 4, 5 which demonstrates how much the announcement connected to you in the course of recent months. There is no "privilege" or "wrong" reply. Please response how you feel and what you think at this moment. The rating scale is as per the following:

1=Strongly Disagree 2=Somewhat Disagree 3= Neutral 4= Somewhat Agree 5= Strongly Agree

Question 1-8 is about your perception toward discrimination	1 Strongly disagree	2 Somewhat disagree	3 Neutral	4 Somewhat agree	5 Strong agree
1	I feel that my people are discriminated against.					
2	I am treated differently because of my race.					
3	I am treated differently because of my color					
4	Many opportunities are denied to me.					
5	I am treated differently in social situations.					
6	Others are biased toward me.					
7	I feel low because of my cultural background.					
8	I feel that my status in this society is low due to my cultural background.					
Question 9-12 is about homesickness						
9	I don't feel a sense of belonging here.					
10	I feel that I receive unequal treatment.					
11	I am denied what I deserve.					
12	I feel angry that my people are considered inferior here.					
Question 13-17 is about your perception toward Hate/Rejection						
13	I feel some people don't associate with me because of my ethnicity.					
14	Homesickness bothers me.					
15	I feel sad living in unfamiliar surroundings.					

16	I miss the people and country of my origin.					
17	I feel sad leaving my relatives behind.					
Question 18-21 is about Fear						
18	People show hatred toward me nonverbally.					
19	People show hatred toward me verbally.					
20	People show hatred me through actions.					
21	Others are sarcastic toward my cultural values.					
Question 22-24 is about Culture Shock/Stress Due to Change						
22	Others don't appreciate my cultural values.					
23	I fear for my personal safety because of my different cultural background.					
24	I feel insecure here.					
Question 25-26 is about your perception toward guilt						
25	I frequently relocate for fear of others.					
26	I generally keep a low profile due to fear.					
Question 27-36 is about some other significant factors						
27	I feel uncomfortable to adjust to new foods.					
28	Multiple pressures are placed on me after migration.					
29	I feel uncomfortable to adjust to new cultural values.					
30	I feel guilty to leave my family and friends behind.					
31	I feel guilty that I am living a different lifestyle here.					
32	I feel nervous to communicate in English.					
33	I feel intimidated to participate in social activities.					
34	It hurts when people don't understand my cultural values.					
35	I feel sad to consider my people's problems.					
36	I worry about my future for not being able to decide whether to stay here or to go back.					

Appendix C: The Everyday Discrimination Scale (EDS)

Please read each description carefully. Chose a number 0, 1, 2, 3 which specifies how much the description applied to you. Please answer to how you feel or what you think or at this moment. The rating scale is as per the following:

0=never, 1= rarely, 2= sometimes, 3= often

	Items on the Everyday Discrimination Scale	0 never	1 rarely	2 sometimes	3 often
1	"You are treated with less courtesy than other people"				
2	"You are treated with less respect than other people"				
3	"You receive poorer service than other people at restaurants or stores"				
4	"People act as if they think you are not smart"				
5	"People act as if they are afraid of you"				
6	"People act as if they think you are dishonest"				
7	"People act as if they are better than you are"				
8	"You or your family members are called names or insulted"				
9	"You are threatened or harassed"				

Appendix D: Multidimensional Scale of Perceived Social Support

Instructions: We are keeping on how you feel about the following descriptions.

Read each description carefully. Specify your feeling about each descriptions.

Circle the "1" if you **Very Strongly Disagree**
Circle the "2" if you **Strongly Disagree**
Circle the "3" if you **Mildly Disagree**
Circle the "4" if you are **Neutral**
Circle the "5" if you **Mildly Agree**
Circle the "6" if you **Strongly Agree**
Circle the "7" if you **Very Strongly Agree**

1. There is a special person who is around when   1   2   3   4   5   6   7
    I am in need.

2. There is a special person with whom   1   2   3   4   5   6   7
    I can share my joys and sorrows.

3. My family really tries to help me.   1   2   3   4   5   6   7

4. I get the emotional help and support   1   2   3   4   5   6   7
    I need from my family.

5. I have a special person who is a   1   2   3   4   5   6   7
    real source of comfort to me.

6. My friends really try to help me.   1   2   3   4   5   6   7

7. I can count on my friends when   1   2   3   4   5   6   7
    things go wrong.

8. I can talk about my problems with my family.   1   2   3   4   5   6   7

9. I have friends with whom I can share   1   2   3   4   5   6   7
    my joys and sorrows.

10. There is a special person in my life who   1   2   3   4   5   6   7
    cares about my feelings.

11. My family is willing to help me   1   2   3   4   5   6   7
    make decisions.

12. I can talk about my problems with my friends.   1   2   3   4   5   6   7

Appendix E: Eastern Mediterranean University Psychology Department's Ethics and Research Committee Approval Letter

Eastern Mediterranean University

The Department of Psychology **Eastern Mediterranean University** **Research & Ethics Committee** **Senel Husnu Raman-Chairperson**	**Famagusta, Turkish Republic of Northern Cyprus** **Tel: +(90) 392 630 1389** **Fax: +(90) 392 630 2475** **e-mail: shenelhusnu.raman@emu.edu.tr** **Web: http://brahms.emu.edu.tr/psychology**

Ref Code: 16/04-02

Date: 04.04.2016

Dear Elaleh Kefayati,

Thank you for submitting your revised application entitled *The relationship between acculturative stress, perceived discrimination, and perceived social support among international students.* Your application has now been *approved* by the Research & Ethics Committee on 14.04.2016.

If any changes to the study described in the application or supporting documentation is necessary, you must notify the committee and may be required to make a resubmission of the application. This approval is valid for one year.

Yours sincerely,

Assoc. Prof. Dr. Senel Husnu Raman
On Behalf of the Research & Ethics Committee
Psychology Department
Eastern Mediterranean University