

## Ethnocentrism and Investment in Learning English in Multicultural English Classrooms: A Study of Iranian Medical Students

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Received: 11 January 2022

Revision: 28 February 2022

Accepted: 10 March 2022

Published online: 20 June 2022

### Abstract

Medical practitioners' ethnocentric orientations and English language skills contribute to intercultural communication in the context of health care. The present study is a quantitative survey study and aims to investigate the relationship between ethnocentrism and investment in learning English in the multicultural setting of English classrooms at an Iranian medical university. To this end, 200 Iranian medical students' levels of ethnocentrism and investment were measured using GENE and IELL scales. The data were analysed using descriptive data analysis and correlation analysis. The findings of this study revealed a strong negative relationship between the two constructs. The participants had relatively moderate levels of ethnocentrism and investment, but female medical students were found to be significantly less ethnocentric than male students. However, there were no significant differences between the two genders' levels of investment. Further, considering the importance of context this research, the relationship among ethnocentrism and investment, and various contextual factors such as linguistic loyalty, intercultural contact, and social comfort in multiethnic English classrooms were explored to explain the findings. Among different contextual factors, social comfort in classroom seemed to have the greatest impact on investment. Conclusion, suggestions, and limitations are discussed.

**Keywords:** [ethnocentrism](#), [EAP](#), [EFL](#), [intercultural communication](#), [investment in learning English](#), [Iranian medical students](#)

## 1. Introduction

Cultural diversity in the healthcare industry has increased due to globalization (Van Oudenhoven, Ward, & Masgoret, 2006) and this has made intercultural interactions inevitable in this context. Since intercultural communication (IC) affects both patients' physical and mental wellbeing, IC should be effective and appropriate (Voelker, 1995). In order to provide quality care to patients from diverse cultural backgrounds, medical practitioners need to develop skills "to learn about [patients'] cultural and personal beliefs in a respectful fashion" (Anand & Lahiri, 2009, p. 388). Today, doctors should learn to communicate with people from cultures other than the dominant one effectively (Teal & Street, 2009). According to Gudykunst and Kim (2004), when people confront cultural differences, they often tend to see the people from other cultures as strangers. Ethnocentrism has a key role in initial intercultural interactions (Croucher, 2013; Neuliep, 2012; Pennycook, Cheyne, Koehler, & Fugelsang, 2013). Doctors' ethnocentric tendencies could have an impact on their views of patients from different cultural backgrounds. As Anand and Lahiri (2009) argue, an ethnocentric doctor's "interactions, diagnosis, and treatment will be skewed by his or her biases" (p. 390). Smedley, Stith, and Nelson (2003) point out that "healthcare providers' diagnostic and treatment decisions, as well as their feelings about patients, are influenced by patients' race or ethnicity" (p. 11).

Language barrier is another key factor in the failure of IC in the context of healthcare (Dorgan, Lang, Floyd, & Kemp, 2009; Jacobs & Diamond, 2017; Jain & Krieger, 2011; Schouten et al., 2020). Language discordance could seriously impede the communication process and its results (Jacobs & Diamond, 2017; Schouten et al., 2020). English is the predominant language in the field of healthcare (WHO, 2015) and is the most common language used in IC. Fluency in English becomes important for medical practitioners, especially due to the increased number of migrant patients and foreign-trained staff. Proficiency in English could facilitate adjustment, and lessen the feeling of anxiety during IC (Fantini, 2012; Sajampun & Charoensukmongkol, 2018) while low English proficiency could cause difficulties in deeper levels of IC (Byram & Feng, 2006). Considering that the negative impact of ethnocentrism and limited English language skills on IC in the context of healthcare has been acknowledged (Anand & Lahiri, 2009; de Moissac & Bowen, 2019; Dorgan et al., 2009; Jain & Krieger, 2011; Schouten et al., 2020; Wrench, Corrigan, McCroskey, & Punyanunt-Carter, 2006), improving medical students' English language skills and addressing their ethnocentrism should be underscored in medical education.

Today, several English language courses are integrated in the medical universities' curriculum in Iran to improve medical students' English language proficiency. There seems to be a general belief that Iranian medical students are quite motivated in learning, however, to the best of the researchers' knowledge, their commitment to learning English, i.e. "investment" (Norton, 1997) has not been previously explored in systematic research. According to Darvin and Norton (2015), investment demonstrates the relationship between learner's identity and learning commitment. Despite a dearth of studies investigating ethnocentrism in Iran's healthcare context, ethnocentrism is likely to exist in Iran's medical universities (Nameni, 2020; Nameni & Dowlatabadi, 2019). While a variety of factors could affect medical students' investment in learning English, the researchers are interested in investigating whether Iranian medical students' ethnocentrism contribute to their levels of investment in the multiethnic settings of their classrooms at university. Thus, the present study strives to measure these students' levels of ethnocentrism and investment, and seeks to explore whether there is a meaningful relationship between these two constructs. In addition, this study will explore several contextual factors such as medical students' intercultural contact, which could potentially affect these students' ethnocentrism and/or investment. The findings of this study could provide a better understanding of the status and the relationship between ethnocentrism and learning English as a foreign language (EFL) in multiethnic settings. This study will conclude with suggestions and directions to discourage ethnocentrism and promote investment among medical students, as two key factors in successful IC in the context of healthcare.

## 2. Review of the Literature

### 2.1 IC in Healthcare

Today, cultural diversity has increased in the context of health care due to globalization (Van Oudenhoven et al., 2006). Medical tourism has increased dramatically in Iran (Baghbanian, Safdari, Erfannia, & Zokaei, 2021; Rahimi Zarchi et al., 2018), and this country's medical tourism industry is expected to develop rapidly (Baghbanian et al., 2021). This could make IC between doctors and patients from other countries and cultural backgrounds inevitable in Iran's hospitals. While WHO (2010) highlights the need for a patient-centered healthcare system, the cultural differences between doctors and patients could make effective communication quite challenging (Betancourt, 2006).

Miscommunication, maladaptive behaviors, and interpersonal conflicts could potentially be caused by cultural diversity (Klingler & Marckmann, 2016; Schouten & Meeuwesen, 2006).

Possibilities of misunderstanding and poor communication become much greater when people communicate throughout a cultural boundary. Yet, effective and appropriate IC in healthcare is essential because “the intensely personal nature of the services offered often touch the core of patients’ and providers’ culturally influenced values, beliefs, and attitudes” (Anand & Lahiri, 2009, p. 387). Meanwhile, ethnocentrism and language barriers have been shown to have a negative impact on IC in the context of health care (Anand & Lahiri, 2009; de Moissac & Bowen, 2019; Smedley et al., 2003; Wrench et al., 2006). Thus, it seems possible that medical students’ ethnocentric orientations and language skills could determine their success in IC later on as doctors at least to some degree.

## 2.2 Ethnocentrism and Iranian Medical Students

Neuliep (2017b) defines ethnocentrism as “the degree to which persons use the customs and values of their native culture as the barometer to evaluate and judge other cultures” and argues that “ethnocentric persons hold attitudes and behaviors toward ingroups that are biased in favor of the ingroup, often at the expense of the outgroup” (p. 331). Neuliep (2017a) explains that ethnocentric people’s attitudes toward the ingroups is positive and that they view ingroups as superior to outgroups; and while they cooperate with ingroup members, they often compete with outgroups. Contemporary conceptualization of ethnocentrism views it as a natural phenomenon (Gudykunst & Kim, 2004; Neuliep 2017b; Neuliep, Chaudoir, & McCroskey, 2001; Neuliep & McCroskey, 1997). Thus, everyone is to some extent ethnocentric (Neuliep, 2012), but high ethnocentrism is “an obstacle to effective IC” (Neuliep, 2015, p. 28).

Similarly, in the healthcare context, high ethnocentrism could impede IC (Arasaratnam & Banerjee, 2007; Wrench et al, 2006) and decrease doctors’ ability to provide health services in a culturally appropriate manner (Campinha-Bacote, 2003; Harris & Cummings, 1996; Smedley et al., 2003). Doctors’ explicit and implicit bias against patients from different ethnic backgrounds could lead to disparities in healthcare (Penner, Blair, Albrecht, & Dovidio, 2014). Doctors’ ethnocentrism could lead to unawareness of patients’ needs (Bucher, Klemm, & Adepoju, 1996; Harris & Cummings, 1996). According to Andrews (1992), “ethnocentric beliefs by health care providers have resulted in misdiagnosis, alienation of patients, failure to adequately provide pain relief, and arrest of parents accused of child abuse because of culturally based practices” (p. 7).

Iran society is “multi-ethnic and multi-cultural” (Akhbari & Zolfeghari, 2009, p. 45). There is a great ethnic diversity in Iran and each ethnic group has its own cultural norms. Medicine is one of the most prestigious and popular fields of study in Iran, and a wide range of students, both male and female, from different ethnic backgrounds enroll in Iranian medical universities every year (Nameni, 2020). Thus, Iranian medical universities enjoy a great cultural and ethnic diversity. While there is a dearth of studies investigating ethnocentrism in Iran’s medical context, ethnocentrism is likely to exist in Iran’s medical universities since different Iranian ethnic groups are quite highly ethnocentric (Asgharzadeh, 2007; Haghish et al., 2012; Heydari et al., 2014; Roustakhiz & Naderi, 2020; Nameni, 2020). Various contextual factors could potentially contribute to Iranian medical students’ ethnocentrism.

According to Hofstede (2021), Iran is considered a collective society, i.e. Iranians are likely to have long-term commitment to the fellow members of their “group” and value loyalty to their “group” more than other societal rules and regulations. In addition, Iranians seem to tend to strongly avoid uncertainty, i.e. they are likely to “maintain rigid codes of belief and behavior and [are likely to be] intolerant of unorthodox behavior and ideas” (Hofstede, 2021). Attitudes towards one’s own ethnic group and the outsiders can influence linguistic choices, and a strong sense of loyalty to one’s first language (L1) could be associated with ethnocentrism (Riley, 1975, 1980). Persian, the official language of Iran, is considered a second language (L2) to many ethnic groups in this country (Mahootian, 2018). About 50 to 70 languages, and approximately 70,000 different dialects exist in Iran (IRNA, 2015). Some medical students come from families that speak other languages than Persian at home, e.g. Turkish. Pandit (1975) argues that “verbal interaction in a speech community is a cultural event [and] it reinforces sense of belonging and asserts one’s existence in a community” (p. 178). Students from different ethnic backgrounds may have an accent when speaking Persian.

Accent is considered to be a powerful ingroup and outgroup indicator since it suggests regional origin and ethnic group membership (Kinzler et al., 2009). Neuliep and Speten-Hansen (2013) argue that when the degree of ethnocentrism increases, perceptions of a nonnative accent speaker’s attractiveness, credibility, and homophily decrease. The strength

of accent could depend on different factors, one of which is the individual's desire to be associated with their ingroups or the outgroups (Gluszek, Newheiser, & Dovidio, 2010). Medical students from different ethnic groups could either assert their cultural background or conceal their cultural differences from others by modifying their accent when speaking Persian. Some studies suggest that more ethnocentric Iranians tend to view accents other than that of their own as less pleasant or prestigious, and to view people speaking with accents as less intelligent, friendly, or trustworthy (Kianpour & Nasser, 2015; Mirshahidi, 2017).

Despite the increased cultural diversity in big cities in Iran, some parts of Iran seem to be less ethnically diverse, which could possibly lead to fewer direct IC. Since medical students come from all different regions in Iran, ranging from big cities to small rural areas, they are likely to have different levels of exposure to other cultures, and could probably have different amounts of experience in IC. It has been suggested that the amount of IC is related to ethnocentrism (Allport, 1958; Binder et al., 2009; Dixon, Durrheim, & Tredoux, 2005; Pettigrew & Tropp, 2008; Turner, Hewstone, & Voci, 2007). However, it should be noted that according to the contact theory, intercultural interactions can reduce prejudice if they occur under specific conditions, such as being regular and frequent, being free from competition, and between individuals who share equality of status (Dixon et al., 2005). This highlights the role of cross-cultural friendship in reducing prejudice. Cross-cultural friendship could help people gain cultural knowledge, broaden their perspectives, and break stereotypes. Even extended contact, such as indirect friendships could reduce negative attitudes toward outgroups (Gareis, 2017; Page-Gould, Mendoza-Denton, & Tropp, 2008; Turner, Hewstone, Voci, & Vonofakou, 2008). Accordingly, Iranian medical students who have more friends from other ethnic backgrounds could possibly have lower levels of ethnocentrism.

There seems to be few opportunities for Iranian medical students to have direct IC with people from other countries inside Iran. Post-Revolution Iran appears to be very apprehensive of non-Islamic cultural values and has peculiar foreign relations (Borjian, 2013; Davari & Aghagolzadeh, 2015; Iranmehr & Davari, 2017; Nameni, 2020, 2022; Perwaiz, 2007). Considering the restrictions imposed on Iran due to the sanctions the tourism industry in this country has suffered (Seyfi & Hall, 2019; Seyfi, Hall, & Vo-Thanh, 2020). Yet, currently, about 780 foreign students are studying at Tehran University of Medical Sciences (TUMS, International Students, 2021). However, these students attend separate classes from Iranian students and stay at separate dormitories, making interaction between them and Iranian students less likely to happen on campus (Nameni, 2020). Therefore, there are few opportunities for many Iranian students to experience direct IC or become friends with people from other countries on or off campus. This could potentially lower the chances for interacting with others using English as a lingua franca (ELF), and getting involved with foreign cultures.

It should be added that despite the limited direct IC with people from Western countries inside Iran, globalization and advancements in technology, especially the internet and social media, have increased Iranians' exposure to Western culture (Ghanbari & Abu Hassan, 2010; Shoraka & Omidi, 2002). Although almost all popular international websites and social media, like YouTube and Facebook, are blocked in Iran, Iranians commonly use circumvention tools to access these platforms (Berger, 2021; Bowen & Marchant, 2015; Sinaiee, 2021). Despite the rigid control over the internet, approximately 70% of Iran population regularly uses internet (Internet World Stats, 2017). Thus, medical students could probably experience IC with foreigners online.

Gender differences could possibly have a different impact on male and female medical students' ethnocentrism. Bem (1981) argues that gender roles are learned from cultures and people control their own behavior so that it "conforms to the culture's definitions of maleness and femaleness. And sex-typed behavior, in turn, further reinforces the gender-based differentiation of the self-concept through the individual's observation of his/her own behavior" (p. 355). In general, women are often more sociable, emotionality positive, and cautious, while men are often more emotionally stable, dominant, and assertive (McCrae et al., 2005; Schmitt, Realo, Voracek, & Allik, 2008; Stanek & Ones, 2018). Women often have higher interpersonal sensitivity than men (Hall, 1978; Hall & Schmid Mast, 2008; Pitterman & Nowicki, 2004), are more approachable, and are more accurate at nonverbal communication (Hall, 1978). Thus, female medical students with such qualities could potentially be more open to IC. Female Iranian medical students have been shown to have higher levels of IC competence (ICC), and to be less ethnocentric than male students (Nameni, 2020; Nameni & Dowlatabadi, 2019).

Civil norms of tolerant but superficial interaction on campus can produce discomfort and intercultural apprehension, which in turn can hinder meaningful interaction and learning (Bernstein & Salipante, 2017). Thus, it is possible that

medical students with different levels of ethnocentrism could possibly feel differently about learning English in culturally diverse settings of their classrooms at university.

### 2.3 Investment in Learning English & Iranian Medical Universities

Investment could be defined as “the commitment to the goals, practices, and identities that constitute the learning process and that are continually negotiated in different relations of power” (Darvin, 2019, p. 241). Norton (2013) defines identity as “how a person understands his or her relationship to the world, how that relationship is structured across time and space, and how the person understands possibilities for the future” (p. 45). The construct of investment theorized by Norton is different from instrumental motivation. Norton’s notion of investment “recognizes that language learners have complex, multiple identities, changing across time and space, and reproduced in social interaction” (Darvin & Norton, 2017, p. 20). Darvin and Norton (2017) believe that “an investment in the target language is an investment in the learner’s own identity” (p. 3).

Norton (2019) believes that despite being highly motivated, when “classroom practices are racist, sexist, [...] the learner may have little investment in the language practices of the classroom and demonstrate little progress in language learning” (p. 303). In fact, learners invest in L2 when they believe learning it would provide a wider range of material and symbolic resources, and increase the value of their cultural capital and social power (Darvin & Norton, 2017). However, “if learners feel marginalized in a classroom or community because of their race, gender, ethnicity, [...] they may not be invested in the language practices of these learning contexts, notwithstanding high levels of motivation” (Darvin & Norton, 2021, p. 2).

Darvin and Norton (2015) developed a model of investment which puts investment at the intersection of identity, capital, and ideology and highlights the connections between identity, capital, and ideology, and the conditions under which language learners invest in learning (Darvin & Norton, 2015). Building on this model, Soltanian, Ghapanchi, Rezaei, and Pishghadam (2018) developed a model and questionnaire of investment in order to quantify this construct in Iran as an EFL context. Soltanian et al. (2018) model of investment relies heavily on Norton (1995, 2000) and Darvin and Norton (2015) conceptualization of investment, and consists of six components: commitment to learning, identity, legitimacy, capital, agency, and emerging selves. These components are very similar to the components of Darvin and Norton’s (2015) model. Commitment to learning specifies the learner’s dedication in learning English. Identity, a core factor leading to the creation of the construct of investment, indicates how the shifting identities of learners might affect their language learning. Legitimacy emphasizes the argument that language learners should be identified as legitimate members who can claim the right to speak. Capital encompasses the capital gained through language learning. Agency states the language learner’s agency and responsibility in the language classroom, and emerging selves specifies the different selves that language learners may form.

### 2.4 English in Iran and TUMS

To have a clearer picture of English language classrooms at Iran’s medical universities, Iran’s view of English should be discussed. Iran seems to directly associate English with the USA and UK (Borjjan, 2013, 2015; Davari & Aghagolzadeh, 2015), and views English as an instrument of cultural invasion (Tajeddin & Chamani, 2020). Iran seems to view English as a threat to the Islamic and national identity of Iranians (Borjjan, 2015; Rassouli & Osam, 2019). This view appears to be central in ELT in Iran’s education system (Borjjan, 2013, 2015; Davari & Aghagolzadeh, 2015). There is a great concern for “linguistic imperialism” (Phillipson, 1992) through English in Iran and ELT is viewed a tool of linguistic and cultural imperialism of the West (Aghagolzadeh & Davari, 2012, 2014; Akbari, 2008; Karimi & Marandi, 2019; Pishghadam & Zabihi, 2012; Tajeddin & Chamani, 2020). According to Iran National Curriculum Document (2009), ELT must “fixate and reinforce Islamic-Iranian identity” (p. 18). Iran’s English language policies are unclear (Iranmehr & Davari, 2017; Tajeddin & Chamani, 2020); yet, in order to confront cultural invasion the content of foreign-published English language textbooks is commonly censored, and locally developed English textbooks do not include anything about non-Islamic or Western cultures (Derakhshan, 2021).

English courses at Iranian universities often focus on facilitating an access to the scientific and academic sources through English (Mirzaei & Forouzandeh, 2013) and are often instrumental in nature. However, contrary to the Iran’s negative view of English, many Iranians do not seem to view it or foreign cultures as inherently harmful, and seem to be aware of the importance of English in today’s globalized world (Mirzaei & Forouzandeh, 2013; Mohammadian-Haghighi & Norton, 2017; Nameni, 2021; Tajeddin & Alemi, 2021). At TUMS, medical students have to pass about a total of 13 credits in English before their National Comprehensive Basic Science Exam (NCBSE) (Nameni, 2020).

When medical students first enter TUMS, they are assigned to one of the four English language course categories, i.e. 1) English 101, 2) English 102, 3) general English for medical sciences, or 4) specialized English for medicine, based on their performance in an English language placement examination (Shabani & Panahi, 2021). The primary goal of English courses in TUMS appears to be increasing medical students' proficiency in reading texts in English. Speaking and writing skills, although included in the classroom practice to some extent, do not seem to receive much attention. English courses curriculum includes both locally developed and foreign textbooks. It seems that these English courses' main objective is increasing students' linguistic proficiency and little, if not any, attention is given to promoting cultural awareness through learning English (Nameni, 2020; Nameni & Dowlatabadi, 2019).

Despite the established necessity of doctor-patient communication and IC training in the medical context worldwide, improving these skills has not received much attention in Iran (Nameni, 2020; Nameni & Dowlatabadi, 2019; Tavakol, Murphy, & Torabi, 2005; Zamani, Shams, & Moazzam, 2004). At TUMS, medical students have to attend a 1.5 credits course entitled "communication skills", which is more of a formality and focuses on rudimentary issues that do not lead to the development of crucial communication skills (Nameni, 2020). Students at TUMS do not attend any workshops focusing on IC or diversity training (TUMS, 2021).

### 2.5 The study

The present study seeks to address the following research questions:

- 1) What are the medical students' self-reported levels of ethnocentrism?
- 2) What are the medical students' self-reported levels of investment in learning English?
- 3) Is there any meaningful difference between male and female medical students' levels of ethnocentrism?
- 4) Is there any meaningful difference between male and female medical students' levels of investment in learning English?
- 5) Is there a relationship between the self-reported levels of the medical students' levels of ethnocentrism and their levels of investment in learning English?

## 3. Methodology

### 3.1 Design of the Study

The present study is a quantitative survey research, which is defined as "the collection of information from a sample of individuals through their responses to questions" (Check & Schutt, 2012, p. 160). This study was conducted using a quantitative research approach through self-report survey questionnaires. The collected quantitative data were analyzed to investigate the research hypothesis and to explore the relationship and the direction of the relationship between the constructs of ethnocentrism and investment (Norton, 1995), and to check the significance of the impact of different contextual factors on these constructs. The quantitative design of this survey study allowed for data collection from a larger number of individuals (Creswell, 2013). Quantitative studies are believed to be more consistent and analytic (Hu & Fan, 2011), and have higher reliability and generalizability (Creswell, 2013).

### 3.2 Participants

A total of 200 Iranian medical students (120 males and 80 females) studying at TUMS took part in this study. The participants were selected through convenience sampling method. Their age ranged between 19 and 25, and they were from five different ethnic backgrounds, i.e. Fars, Azari, Kurdish, Lur, and Mazandarani (see Table 1).

Table 1. Participants' demographic information

Category	Subcategory	Frequency	Percent
Gender	Male	120	60
	Female	80	40
Age	19-21	99	49.5
	21-23	88	44
	23-25	13	6.5
English proficiency (Self- perceived)	Beginner	42	21
	Intermediate	124	62
	Advanced	34	17
Ethnicity	Fars	92	46
	Azari/Turk	54	27
	Kurdish	22	11
	Lur	20	10
	Mazandarani	12	6
First language	Farsi	110	55
	Other	90	45
Moderating accent when speaking Persian	Tehrani accent	117	58.5
	Never/Rarely	22	11
	Sometimes	17	8
	Often/Always	44	22
Place of residence	Live with family	94	47
	Dormitory	76	38
	Other	30	15

N=200

### 3.3 Instrumentation

Data were collected using the DIF, CIF, the Persian back-translated versions of GENE Scale (Neuliep & McCroskey, 1997) and IELL scale (Soltanian et al., 2018) using pen and pencil in class. The DIF collected the participants' background information including gender, age, self-perceived level of English language proficiency, ethnic background, L1, accent, and place of residence. The participants who had an accent were asked to state how often they moderated it when speaking Persian from 1 "never" to 5 "very frequently." In addition, the participants rated their self-perceived levels of English language proficiency by choosing 1 "elementary," 2 "intermediate," or 3 "advanced."

The CIF collected further contextual information. The participants were asked to indicate the ethnic diversity of their place of residence, friends, English classes at university, and English professors at university from 1 "same ethnicity as myself" to 5 "different ethnicity than myself." They stated whether they had any IC or diversity training, and if they preferred to attend English classes where the professors, and classmates were from the same ethnicity as themselves. The participants rated the extent to which they were socially comfortable in their English classrooms from 1 "not comfortable at all" to 5 "very comfortable." They rated the degree to which their linguistic, cultural, social, and material resources were valued in class from 1 "not valued at all" to 5 "strongly valued" in class. The participants also

rated the extent to which they regarded their teacher or classmates as worth listening to or speaking with, and the degree to which they themselves were regarded as worth listening to or speaking with in class from 1 “not worthy at all” to 5 “really worthy.” They indicated whether they 1 “associated English with English speaking countries”, or 2 “considered English a lingua franca” and rated their feeling towards Western culture from 1 “strongly negative” to 5 “strongly positive.. They rated their willingness to use EFL, and Persian as a second language (PSL) for communication from 1 “strongly unwilling” to 5 “strongly willing.” Moreover, they stated the frequency to which they got exposed to foreign cultures via internet and social media, and the frequency of discussing English speaking countries’ culture in classroom from 1 “never” to 5 “very frequently.” The participants were asked to indicate the skill which was given the most importance to in their English classroom at university by choosing 1 “Reading”, 2 “speaking”, 3 “writing”, and 4 “listening.” They also rated their general motivation in learning English from 1 “not motivated at all” to 5 “strongly motivated.” Finally, they indicated the average time they spent studying or doing English homework each week by choosing from 1 “less than 1 hour” to 5 “more than 5 hours.”

GENE scale (Neuliep & McCroskey, 1997) includes 22 items (7 fillers) on a 5-point Likert scale from 1 “strongly disagree” to 5 “strongly agree.” Scores can range from 15 to 75 (mid-point = 45). To further categorize the participants’ ethnocentrism levels, the overall scores of 15–36 were interpreted as “low,” 37–52 as “moderate,” and 53–75 as “high” levels of ethnocentrism. As stated by GENE developers, GENE score and levels of ethnocentrism have a direct relationship, i.e. the higher the score, the higher the ethnocentrism. GENE established a high internal consistency with 0.84 reliability coefficient.

IELL scale (Soltanian et al., 2018) consists of 41 items on a 6-point Likert scale from “strongly disagree” to “strongly agree.” However, for the present study, the number of scales was reduced to five. Scores can range from 41 to 205. To further categorize the participants’ investment levels, the overall scores of 41–98.4 were interpreted as “low,” 98.5–139.4 as “moderate,” and 139.5–205 as “high” levels of investment. Some of the items were reverse-coded before running the computation in SPSS because they were negatively keyed items. The scale established a high internal consistency with 0.78 reliability coefficient.

### 3.4 Data Collection

This study was conducted in accordance with the 2016 APA Ethical Principles of Psychologists and Code of Conduct (American Psychological Association, 2017). Prior to the data collection, the aims of this study were explained to the prospective participants. The participants were given the Persian versions of the demographic information form (DIF), contextual information form (CIF), GENE scale (Neuliep & McCroskey, 1997), and Investment in English Language Learning scale (IELL scale, Soltanian et al., 2018). Data were collected using paper-and-pen questionnaires in class. The form and the questionnaires took about 20 minutes to complete.

The participants’ background information was collected using the DIF, and further contextual information was collected using the CIF, which were both developed by the researchers. The participants’ levels of ethnocentrism and investment were measured using the back-translated Persian versions of GENE scale (Neuliep & McCroskey, 1997) and IELL scale (Soltanian et al., 2018). The instruments were slightly modified for use in the context of Iran.

### 3.5 Data Analysis

Data were analyzed using SPSS v. 20. Descriptive analysis, frequency, and percentage were used for an overall description of the participants. To address the research questions, descriptive statistics, independent-sample t-test, bivariate Pearson correlation analysis, and bivariate Spearman rho correlation analysis were run.

## 4. Results

To answer the first two research questions, the overall ethnocentrism and investment levels of the participants were calculated. The population’s overall ethnocentrism mean score was 48.86, and their overall investment mean score was 139.77. Based on the defined categories which were previously presented, the participants seem to have relatively moderate levels of ethnocentrism and investment in learning English (Table 2).



Table 2. The participants GENE and IELL scores

	Minimum Score	Maximum score	Mean (Std. Deviation)
GENE	18	45	48.86 (12.90)
ILEL	45	205	139.77(44.84)

N=200

To address the third and fourth research questions, independent sample t-test on the male and female participants' scores on GENE and IELL scales were conducted. The results revealed that there was a significant difference between male and female medical students' overall ethnocentrism mean scores ( $t(198) = 3.048, p < 0.01$ ), but there were no meaningful differences between their investment in learning English (Table 3).

Table 3. Independent Sample T-Test of male and female participants' ethnocentrism and investment in learning

	T	Sig. (2-tailed)	Mean (Male students)	Mean Difference	Std. Error Difference
Ethnocentrism	3.048	.003	51.41(13.83)	6.370	2.093
Investment	-1.419	.158	135.54(46.22)	10.572	7.448

English

N=200

Moreover, independent sample t-test was conducted on male and female participants' demographic and contextual data to check for any differences. Since none of the participants had attended any courses or workshops focusing on IC or diversity training, this item was excluded. The results showed significant differences between the participants' age ( $t(198) = 3.505, p < 0.01$ ), views of English ( $t(198) = 3.274, p < 0.01$ ), the degree of the ethnic diversity of their friends ( $t(198) = 3.301, p < 0.01$ ), and their views of classmates from other ethnic backgrounds as worth listening to or speaking with ( $t(198) = 2.549, p < 0.05$ ) (Table 4).

Table 4. Independent Sample T-Test of male and female participants' data

	T	Sig. (2-tailed)	Mean (Male students)	Mean Difference	Std. Error Difference
Age	-3.505	.001	22.44(1.007)	-.622	.178
English Proficiency	-.756	.451	1.92(.604)	-.078	.103
Ethnicity	.877	.382	2.10(1.255)	.183	.209
L1	1.226	.222	1.43(.498)	.100	.082
Moderating accent <sup>la</sup>	-1.025	.310	2.21 (1.279)	-.365	.356
Place of residence	.241	.810	1.78(.700)	.028	.115
Ethnic diversity of place of residence	-.848	.398	2.15(.833)	-.111	.131
Friends' cultural diversity	-3.301	.001	2.08(.664)	-.344	.104
View of English	-3.274	.001	1.32(.470)	-.271	.083
View of Western culture	-1.127	.261	3.12(.981)	.261	.158
Willingness to use EFL	-.926	.356	2.59(1.150)	-.174	.188
Willingness to use PSL	-.028	.978	3.06(1.190)	-.008	.277

Exposure to foreign cultures via internet	-.256	.800	2.69(1.046)	.045	.176
Discussing English speaking countries' culture in classroom	-1.415	.159	1.82(.842)	-.228	.161
The most prominent skill taught classroom	-1.318	.190	1.47(.997)	-.233	.177
Perception of the ethnic diversity of class	-1.957	.052	2.94(.826)	-.322	.164
Perception of professor's ethnicity	-1.719	.088	2.88(.557)	-.222	.129
Preferring professors from the same ethnicity	-1.605	.111	2.01(.918)	-.243	.151
Preferring classmates from the same ethnicity	-1.976	.052	1.98(.886)	-.282	.143
Social comfort	-1.413	.160	3.14(.919)	-.206	.145
Learner's resources being valued	-1.712	.089	2.87(1.008)	-.269	.157
Perception of being regarded as worthy	-.976	.330	2.88(1.136)	-.177	.182
View of English professors from other ethnic backgrounds as worthy	-1.159	.248	3.22(.933)	-.168	.145
View of classmates from other ethnic backgrounds as worthy	-2.549	.012	3.14(1.011)	-.388	.152
General motivation	.762	.447	2.72(.719)	.106	.139
Time studying English for class	-.881	.380	.59(.820)	-.125	.145

SD in parenthesis

<sup>a</sup> These items were applicable to some of the participants.

Df = 198

<sup>1</sup> Df =80

<sup>2</sup> Df= 87

To address the last research question, the bivariate Pearson correlation was conducted between the participants' ethnocentrism and their investment in learning English. The results revealed a significant and strong negative relationship between the two constructs ( $r = -.613, p < 0.01$ ) (Table 5).

Table 5. Correlations between ethnocentrism and investment

Ethnocentrism	Investment in English language learning	
	Pearson Correlation	-.613**
	Sig. (2-tailed)	.000

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

Finally, the bivariate Spearman correlation analysis was run between the participants' demographic and contextual data, and their ethnocentrism and investment scores (Table 4.5). The results showed the degree to which the participants with an accent other than Tehrani moderated it when speaking Persian have a significantly strong relationship with their ethnocentrism ( $r = -.701, p < 0.01$ ) and investment ( $r = .467, p < 0.01$ ). The degree of the ethnic diversity of the participants' friends correlated negatively with their ethnocentrism ( $r = -.467, p < 0.01$ ) and positively

with their investment ( $r = .284, p < 0.01$ ). The participants' ethnocentrism and investment correlated with their view of Western culture (respectively  $r = -.785, p < 0.01$ ;  $r = .567, p < 0.01$ ), and viewing English as a lingua franca ( $r = -.527, p < 0.01$ ;  $r = .322, p < 0.01$ ). The two constructs also correlated with the students' willingness to use EFL ( $r = -.476, p < 0.01$ ;  $r = -.373, p < 0.01$ ) and PSL ( $r = -.433, p < 0.01$ ;  $r = .452, p < 0.01$ ).

The participants' ethnocentrism and investment had a significantly strong relationship with the degree of social comfort in classroom ( $r = -.872, p < 0.01$ ;  $r = .559, p < 0.01$ ). In addition, the participants' levels of ethnocentrism and investment correlated with their preference of professors ( $r = -.629, p < 0.01$ ;  $r = .396, p < 0.01$ ) and classmates from the same ethnicity as themselves ( $r = -.564, p < 0.01$ ;  $r = .383, p < 0.01$ ). Moreover, the participants' ethnocentrism and investment correlated with their perception of their resources being valued in class ( $r = -.530, p < 0.01$ ;  $r = .597, p < 0.01$ ), and their perception of being regarded as worthy ( $r = -.556, p < 0.01$ ;  $r = .490, p < 0.01$ ). Ethnocentrism and investment had a significant relationship with view of professors ( $r = -.567, p < 0.01$ ;  $r = .699, p < 0.01$ ), and classmates ( $r = -.518, p < 0.01$ ;  $r = .558, p < 0.01$ ) from other ethnic backgrounds as worthy. The correlation between the participants' view of their English professors from other ethnic backgrounds as legitimate and credible, and their investment ( $r = .699, p < 0.01$ ) appears to be the strongest one in this study. In addition, the medical students' perception of the degree to which their own capital was valued in their classroom had the second strongest and significant relationship with investment ( $r = .597, p < 0.01$ ), which confirms the central role affordances and positioning have in fostering investment as pointed out by [Darvin and Norton \(2015, 2021\)](#).

Table 6. Correlations between the participants' ethnocentrism and investment, and DIF and CIF

	Ethnocentrism		Investment	
	Spearman Correlation	Sig. (2-tailed)	Spearman Correlation	Sig. (2-tailed)
Age	.110	.182	-.120	.144
English proficiency	-.100	.222	.119	.147
Ethnic background	.180*	.027	-.017	.836
L1	.178*	.030	-.100	.225
Moderating accent <sup>1a</sup>	-.701**	.000	.467**	.001
Place of residence	.133	.105	.088	.285
Ethnic diversity of place of residence	-.467**	.000	.284**	.000
Cultural diversity of friends	-.467**	.000	.284**	.000
View of English as LF	-.527**	.000	.322**	.000
View of Western culture	-.785**	.000	.567**	.000
Exposure to English speaking countries' culture via internet	-.214**	.000	.144	.079
Discussing English speaking countries' culture in classroom	-.138	.091	.196*	.016
Willingness to use EFL	-.476**	.000	.373**	.000
Willingness to use PSL	-.433**	.000	.452**	.000
Perception of English professor's ethnicity	-.325**	.000	.186*	.023
Perception of classroom ethnic diversity	-.489**	.000	.249**	.002
Preferring professors from the same ethnic background	-.629**	.000	.396**	.000

Preferring classmates from the same ethnic background	-.564**	.000	.383**	.000
Social comfort	-.872**	.000	.559**	.000
Perception of their resources being valued	-.530**	.000	.597**	.000
Participant's perception of being regarded as worthy	-.556**	.000	.490**	.000
View of professors from other ethnic backgrounds as worthy	-.567**	.000	.699**	.000
Participant' view of classmates from other ethnic backgrounds as worthy	-.518**	.000	.558**	.000
General motivation in learning English	-.051	.534	.156	.057
Time studying English/ doing homework	-.980	.233	.227**	.005

\*Correlation is significant at the 0.05 level (2-tailed). \*\*Correlation is significant at the 0.01 level (2-tailed).

<sup>a</sup> These items were applicable to some of the participants.

df= 200      <sup>1</sup> df= 83      <sup>2</sup> df= 90

## 5. Discussion

The first two research questions sought to measure the medical students' levels of ethnocentrism and investment in learning English. The data analysis revealed that, overall, the participants had relatively moderate levels of ethnocentrism and investment in learning English. These findings seem to be in line with those of Nameni's (2020) study that reported the level of Iranian medicals students' ethnocentrism as moderate, but contradict the finding of several other studies (e.g. Asgharzadeh, 2007; Haghish et al., 2012; Heydari et al., 2014; Roustakhiz & Naderi, 2020). The participants' moderate levels of ethnocentrism could be surprising since they do not have many opportunities for direct IC, have never attended any diversity training workshops, and live in a country where a negative attitude towards other cultures, particularly foreign or non-Islamic cultures is propagated.

The data analysis showed that more ethnocentric medical students tended to come from less ethnically diverse places, and have less exposure to Western culture via internet. The participants' exposure to Western or foreign cultures via the internet could contribute to their lower levels of ethnocentrism. The indirect exposure to foreign cultures via internet could make students more curious about other cultures, and could provide them a platform to explore different aspects of other cultures. This could potentially lead to greater knowledge and awareness about the similarities and differences among foreign cultures and the local culture. Other studies have acknowledged the important role of social media in increasing Iranians' exposure to different aspects of foreign cultures, and assert that this exposure has greatly influenced and shaped Iranians' cultural attitudes and behavior (Nameni, 2020, 2021; Nameni & Dowlatabadi, 2019; Young, Shakiba, Kwok, & Montazeri, 2014).

To address the next two research questions, independent sample t-test analysis were conducted on the data. The female medical students here were less ethnocentric than their male counterparts, but were not significantly different from them in terms of investment in learning English in their classrooms. These findings could be a result of having more friends from diverse cultural backgrounds, and perceiving classmates from other ethnic backgrounds as worthy to communicate with. Less ethnocentric female medical students seem more likely to interact and communicate with their ethnically diverse classmates which could make them more socially comfort in classroom. Moreover, women's qualities such as higher interpersonal sensitivity, openness, and approachability could make them more open to interaction with people from other cultural backgrounds (Hall, 1978; Hall & Schmid Mast, 2008; Pitterman & Nowicki, 2004) and could possibly result in lower levels of ethnocentrism.

The last research question was addressed using correlation analysis. The results showed a strong negative relationship between ethnocentrism and investment in learning English. In other words, more ethnocentric participants were less invested in learning English in their ethnically diverse English classrooms at university compared to their less ethnocentric counterparts. To explain these results, various demographic and contextual factors were taken into account, and the relationship between these factors and the participants' ethnocentrism and investment were explored

using correlation analysis. The results showed a significant relationship between many of these contextual factors and the two constructs under study.

The data analysis revealed that those students who had fewer friends from other cultural backgrounds, got less exposed to English speaking countries' culture, and believed their English professors and classmates were from other ethnic backgrounds than themselves more often had higher levels of ethnocentrism and lower levels of investment. Ethnocentric people have a great sense of superiority and are biased against people from other cultural background (Neuliep, 2002, 2017a, 2017b). Thus, more ethnocentric medical students seem to prefer to work and study with people they see as ingroups. As the data analysis revealed, most of the ethnocentric participants in this study indicated that they did not feel socially comfortable in their multiethnic classrooms and preferred to attend English classrooms where the professor and other students came from the same ethnic background as themselves. Being in a classroom with people who ethnocentric students believe are similar to themselves with a similar language, culture, beliefs, and values could probably give them a greater sense of comfort, security, and satisfaction, and increase their willingness to communicate and cooperate with others. When these students regard their classmates as less legitimate or worthy, they could avoid interaction with them. Being in a culturally diverse environment could increase trigger their ethnocentric orientation that could lead to psychological pressure and a feeling of social discomfort. Thus, these students seem to be more likely to invest in learning in such familiar environment.

The data analysis showed that more ethnocentric students more often believed that their linguistic and cultural resources were not valued in their classrooms. This can be one significant reason why these students were less invested in the language practices of their classrooms since the degree to which teachers recognize learners' resources as symbolic capital has a significant role on the learners' investment (Darvin 2019). At the same time, the data analysis showed that more ethnocentric participants tended to regard their professors and classmates from other ethnic backgrounds as less legitimate and worthy to communicate with, which could greatly lower investment in learning (Darvin & Norton, 2015, 2017, 2021; Norton, 1995, 2000, 2013b, 2019). Not only the degree of being considered as legitimate by the teachers has a great impact on investment, the extent to which learners themselves regard their teachers as legitimate, credible, and worthy influences their investment (Darvin & Norton, 2015, 2021; Norton, 2000, 2013b, 2019). Ethnocentric people keep a social and communicative distance from outgroup members (Lukens, 1978; Peng, 1974). When learners feel marginalized in a language classroom they may not invest in the language practices despite being generally motivated in learning (Darvin & Norton, 2021).

More ethnocentric participants who tended to moderate their accent less often when speaking Persian were shown to invest less in learning English in culturally diverse classrooms. Most of these students were not really willing to use EFL or PSL for communication. More ethnocentric medical students with a greater linguistic loyalty to their first language could possibly choose to use their own language or accent as an act of self-determination when interacting with people from the dominant culture. Students could possibly invest less in learning English due to feeling a large cultural distance from the native speakers of English, and due to seeing those people as outgroups whose language and culture is a threat to the ethnocentric students' language, culture, and values. These students could probably be apprehensive of becoming similar to the Western people or getting associated with them (Hidalgo, 1986).

The same thing could be true about Persian as some ethnocentric students could possibly have negative feelings towards this language. Being unwilling to speak Persian could reduce the likeliness of communication between ethnocentric students and others in ethnically diverse classrooms. By not moderating their accents when speaking Persian, students could increase the chances of being subject to attitudes from the students or even professors who speak Persian with Tehrani accent or ethnocentric students who believe their own accent is the most prestigious and pleasant one (Kianpour & Nasser, 2015; Mirshahidi, 2017). Ethnocentrism could significantly lower the perception of a non-standard accent speaker's physical, social, and task attractiveness, credibility, and perceived homophily (Neuliep & Speten-Hansen, 2013). More ethnocentric medical students could stereotype their peers who speak Persian with other accents or possibly avoid interaction with them. Clearly, this communication avoidance and gap could intensify medical students' negative feelings and social discomfort and could lead to disinvestment in learning.

Considering the findings of this study, lack of social comfort could be viewed as the central factor leading to more ethnocentric Iranian medical students' lower levels of investment in learning English in culturally diverse classrooms. Other factors such as unwillingness to speak Persian, preferring to attend classes where the professor and students come from the same ethnic background, feeling of not being valued in classroom could all lead to a feeling of social discomfort. When students feel a great cultural distance from others in their classroom, they could simply choose to

avoid communication with them and perhaps feel isolated and grow a feeling of not belonging to the classroom. These feelings could make more ethnocentric medical student react by showing greater bias against their professors or classmates, and view them as less legitimate or credible, and these attitudes could lead to disinvestment in the language practices of the class. Finally, the participants' motivation in learning English did not correlate with their investment in this study. This confirms that even motivated language learners do not invest in learning English in all settings (Darvin & Norton, 2015, 2012; Norton, 1995, 2013b).

## 6. Conclusion

This study confirms the negative relationship between ethnocentrism and investment in learning English in multiethnic university classrooms, and highlights the need to address medical students' ethnocentric traits. Doctors' high levels of ethnocentrism and insufficient language skills could cause miscommunication, hinder IC, and harm patients (Arasaratnam & Banerjee, 2007; de Moissac & Bowen, 2019). While investment is a very complicated construct and could be influenced by different factors (Darvin & Norton, 2015, 2017, 2021; Norton, 2019), this study shows that medical students' ethnocentrism could strongly contribute to their investment. In other words, in addition to hindering effective IC (Neuliep, 2015), high ethnocentrism can lower students' investment in learning English, which is the predominant language in medicine and is considered an LF in today's globalized world. Thus, ethnocentrism damage to IC is two-fold. By addressing medical students' ethnocentrism, educators could both promote their investment, and improve their performance as doctors in future.

The importance of integrating culture in English classrooms should be underscored (Byram, 2008; Byram & Wagner, 2018; Dearsdorff, 2009). Iran's fear of linguistic and cultural imperialism seem to be the main reasons why Iran has sought to eliminate exposure to Western culture through ELT (Borjjan, 2013, 2015; Iranmehr & Davari, 2017; Tajeddin & Chamani, 2020). However, as Tajeddin and Chamani (2020) assert, this fear is no longer a legitimate reason for "taking an ambivalent approach to ELT and depriving the nation of its right to economic and cultural development, which are set as national goals in the [official educational] documents [and] if local and global cultures are presented critically, ELT can consolidate the local culture and promote intercultural competence among language learners" (p. 211). Thus, both local and western culture need to be included in English classrooms and addressed critically. By discussing, comparing, and contrasting local cultures and Western culture in English classrooms, medical students can be encouraged to construct their own meanings and reflect on their own culture as well as the Western culture more critically, and move towards ethnorelativism (Tajeddin & Alemi, 2021).

### 6.1 Limitations and Future Research

The present study sample size was relatively small and there were relatively fewer female participants than male participants. Future research could survey a bigger population from more diverse ethnic backgrounds. Further empirical research, particularly a study with mixed-method design, could provide a more clear and multidimensional picture of ethnocentrism in Iran's medical universities. Future studies could investigate the impact of students' religious and political orientations on ethnocentrism and views of English.

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