



Research article

Challenges and social adaptation of international students in Saudi Arabia

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ABSTRACT

Adapting to university life in Saudi Arabia can be difficult for international students. This qualitative research, based on the social adaptation framework, explore in detail the problems that international students experience during their enrolment at Al-Imam Mohammad Ibn Saud Islamic University (IMSIU), which is located in Riyadh, Saudi Arabia. Utilizing purposeful sampling, 20 students participated in the semi-structured interviews. The interviews contained 16 questions to elicit the students' perceptions about the challenges they encountered faced during their residence in Saudi Arabia. Findings revealed that international students experienced language barriers, had to deal with issues regarding culture shock, and had episodes of depression, nostalgia, stress, loneliness, and homesickness. However, these international students retained positive attitudes about their social adaptation and were satisfied with the resources and facilities provided at IMSIU. It was strongly suggested that student affairs officers, academic professionals, and social work practitioners, who interact with overseas students, should strive to help international students overcome possible language, communication, lifestyle, and institutional barriers. The implication is that international students should utilize various counseling and professional guidance resources to assist them adapt to the new lifestyle in the host country. This study could be replicated using a mixed-methods approach for future investigators.

1. Introduction

Given the recent trends in globalization of economic systems, the enrollment trends of international students have increased steadily, with over six million students enrolled in higher education abroad in 2019 [1], and is forecast to be eight million by 2025 [2]. International students are people who leave one culture for another for a given length of time [3], and are often stressed about the changing circumstances [4] and have to overcome language barriers, stark cultural differences, unfamiliar social norms, homesickness, and an inability to establish social networks [5,4,6].

The initial year of enrollment at a university poses the most serious stress for international students since "the transition to another environment is referred to as one of the most horrible phases in an individual's life" [7]; p.33). If host institutions fail to resolve the unique needs of international students, they may feel unfulfilled and even exhibit symptoms of acculturative stress, for instance depressive disorder, anxiety, chronic joint/limb/back pain, fatigue, changes in appetite, symptoms of gastrointestinal problems, sleep disturbance, identity crisis, and substance abuse [8,9]. To avoid the negative consequences, personnel in the host institutions must foster frameworks and strategies that will support international students socially, financially, scholastically, and mentally [10].

Saudi Arabia is now increasingly committed to international education [11]. Recently, the country's Ministry of Education

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proposed to improve studying conditions for international students as one of the key strategies for improving the quality of education, fostering a positive experience, and creating a competitive environment among students and staff [12]. Over the last few decades the number of international students in Saudi universities has increased, and the total approached 70,000 as of 2020 [1]. In spite of this development, only research has been undertaken regarding what they need and the challenges encountered [13]. For this reason, it is essential to examine international students' experiences of studying in non-Western universities, and this can be done by referring to a framework that guides and supports this critical and specific group in the education sector.

1.1. Statement of the problem, purpose of study and research questions

Scholars have not comprehensively investigated international students' experiences and the challenges they face while studying in Saudi universities. Although previous research (e.g. Refs. [13,11], have investigated international students' challenges regarding studying in Saudi Arabia, there is paucity of analyses concerning the impact of such challenge on their academic progress and their perceptions of study long-term goals in Saudi Arabia. Considering these deficiencies in our knowledge, this paper aims to address this discrepancy in the literature and poses two research questions: (1) What challenges do international students face when studying at a Saudi university? and (2) What adaptation strategies do international students employ while studying at a Saudi university? The current study is important because it investigates serious issues that international students encounter and helps address their social adaptation experiences during their stay in Saudi Arabia.

1.2. Theoretical framework

The theoretical framework for social adaptation is a guiding foundation for this research. Social adaptation theory relates to people's ability to adapt to changes in the social environment [14]. Adaptation is a process that influences an individual's progress and prosperity and entails accepting the existing norms of a society they are generally not familiar with [14]. The goal of social adaptation is to utilize social processes to bring individuals' and society's interests together. Adaptation makes it possible for an individual to grow in any situation, including the most unfavorable [14]. Individual growth is the only way to achieve social advancement, in which each individual is an assessed value "element" in the overall development of or progress made in the community [14].

2. Literature review

2.1. International students in Saudi Arabia

As stated previously, Saudi Arabia is now increasingly committed to international education [11]. Recently, the Ministry of Education decided to make the globalization of higher education one of the key strategies for improving the quality of education, fostering a positive experience, and creating a competitive environment among students and staff [12].

The scholarship program which is funded by the Saudi government is one of the world's largest, and it helps international students participate in various academic programs offering various degrees such as Bachelor's, Master's, and PhD qualifications [11]. There are two types of government scholarships for international students who desire to study in Saudi Arabia: first, internal scholarships for non-Saudi students with legal residency in Saudi Arabia; and second, external scholarships for non-Saudi students from other countries [15]. As well as scholarships, the deanship of student affairs for scholarships at public universities in Saudi Arabia, such as IMSIU, provides support and essential services to international students who are accepted into Saudi Arabia, including health care, financial rewards upon arrival, on-campus housing, social and academic support, annual travel tickets, and good quality meals. These services and benefits offer support, meeting international students' social needs. In general, positive experiences with these services and opportunities can help international students achieve academic and social success, creating satisfaction with their university and the community by feeling a sense of belonging [16].

Despite support and essential services provided by the host universities, international university students in Saudi Arabia may still undergo psychological issues because of distinct differences between Saudi culture and their home country [13,5,11]. Students may also experience economic problems such as insufficient funding and limited on-campus housing (off-campus housing is an option but it would incur higher living costs due to expensive rent and commuting expenses), feel lonely for being away from families and friends, and encounter language barriers and unfair treatment from locals [13,5,11]. In the following section, challenges commonly encountered by foreign students in the host countries will be discussed.

2.2. Challenges of international students

Previous studies indicated that international students experience many challenges, primarily cultural differences and the closely associated issues (e.g., language obstacles, difficulty adapting to religious beliefs and the associated restrictions on lifestyle, customs, and unacquainted food) and personal issues such as isolation/loneliness and difficulty forming friendships within the local community, while studying abroad [13,11,9].

2.2.1. Cultural differences

International students "who immigrant from other parts of culture confront significant changes in many facets of their life" [17]; p.23). Using interview data from 17 international students in a US public institution [9], stated that several students pointed out the

various beliefs, behaviors, languages, practices and expressions between the US and their home country [9]. concluded that these cultural differences were caused by the lack of understanding and exposure to other lifestyle, customs, and traditions.

Noticing cultural differences starts when international students first arrive in the host country [6] and they have to swiftly adapt to the practices, language, traditions and assumptions of the host society [18,19]. During the process of acculturation, international students try to embrace the new culture in order to satisfy their daily needs and intercultural living in their new environment, which may result in acculturative stress [20,8,21]. [13] carried out interviews with 16 foreign students at a university in Saudi Arabia, finding that 11 students had encountered culture shock (i.e., anxiety emanating from not comprehending what to do in a new society) in the process of adaptation. It should also be noted that even though students can overcome the initial shock of cultural differences, researchers discovered that international students may still experience some negative consequences, such as not feeling welcomed by others, inequality, and a hard time in terms of academic and cultural adaptation [22,23,18].

This study examines in detail international students' learning experience in Saudi Arabia, a country whose culture differs immensely from their own home country. As a nation with a majority Muslim population, Saudi Arabia's culture (which is generally conservative) may clash with the student's home culture in which Islam is likely to be a minority religion. Culture can be conceptualized as "the shared attitudes, values, norms and practices, practices, patterns of interaction, perspectives, and language of a group of people" [24]; p. 147). Therefore, cultural differences experienced by international students may result in language obstacles, difficulty adapting to religious beliefs and the associated restrictions on lifestyle and customs, and unfamiliar food, as discussed in the following sections.

2.2.1.1. Language barriers. Language is perceived as a barrier for international students since it may decrease students' chances to engage with the local philosophy [25,26,27]. Language is of great cultural significance, as it not only functions as a communication device, but also contains irreplaceable cultural heritage and knowledge [28,29]. Language barriers are regarded as the most serious and common challenge encountered by foreign students [30,23,8,9]. [5] interviewed six male Saudi international students enrolled in universities in Australia, and all of them stated that language was a big challenge [6]. conducted fieldwork over one year at a small United States (US) university to examine the lives and circumstances of 38 international students from East Asia. The author reported that more than half of the students stated that language (i.e., English) was their main problem while studying abroad [31]. pointed out that international students in Saudi Arabia could find extra difficulties in communicating using Arabic due to the stark differences between the Arabic letters and the Roman letters.

It should be noted that communication takes two forms: firstly, verbal through spoken or written words) and non-verbal through sign language (i.e., language that involves using signs and signals); and secondly, body language (i.e., language involving certain observations in a person's behavior, such as voice, gestures, body movement and posture, eye contact, etc. [32]. Since there is no international consensus regarding body language, cultural differences between the host and the home countries may introduce additional difficulty in non-verbal communication for international students [32,27].

Language obstructions are not limited to reading/writing skills at the college level, but also influence foreign students socially due to a limited ability for listening and speaking [30,9,33]. The development of international students' language skills often focuses on the ability required to adapt to their current academic environment (e.g., understanding lectures, taking notes, and orally expressing their opinions in classrooms) [34,8]. However, they often ignore the fact that they are expected to have some ability in using the language in a casual, non-scholarly context [30,5]. The absence of social language may likewise influence international students in classrooms since they may not comprehend informal language and the various accents utilized by their teachers [30,8].

2.2.1.2. Difficulty adapting to religious beliefs and the associated restrictions on lifestyle and customs, and unacquainted food. Islam is the official religion of Saudi Arabia and all its citizens are required to practice Islam [35,36]. Islam is not simply a religion for Saudi Arabians but is in fact a complete way of life [37,36]. Since the religious leaders in Saudi Arabia have the authority to participate in most political decisions, these leaders have formulated some aspects of the Saudi culture that differentiate it from other countries, including other Islamic nations [30,5,38] and created unique issues regarding lifestyle and customs international students regularly encounter when studying in Saudi Arabia [4,39]. There are many differences between the lifestyles and customs of Saudi Arabia and foreign countries [40,39]. pointed out that, according to the teachings of Islam, selling alcohol is not tolerated in Saudi Arabia, and when it is prayer time in the mosques, most stores will remain closed until the prayers are over. Some types of restrictions on food choices are evident in religion (e.g., Islam), and Saudi women are required to wear of Hijab.

In a study conducted by Ref. [5]; Saudi international students studying in Australia indicated that unlike in their home country, women can be seen everywhere and not required to address in certain ways and one can consume alcohol easily. Several studies emphasized that unacquainted food is also a unique issue international students regularly encounter [4,41,42]. [40] asserted that this issue may be more serious for international students in Saudi Arabia since religious practice does put some types of restrictions on food choices. For example, during the holy month of Ramadan, Muslims must consume food before or after regular dining hours, which may lead to limited dining options for international students [13]. interviewed 16 international students in a Saudi university and, in total, found 12 experienced challenges related to local food.

In sum, getting familiar with new surroundings, religious beliefs, customs, and social norms are essential tasks for international students [30,4]. It is most likely the case that international students will encounter many challenges upon their arrival in Saudi Arabia due to the great differences between the cultures. International students may struggle in relation to their culture and religious background [13,38]. The immense difference in lifestyle while studying abroad can take its toll and the aggregate effect of the estranging alienating experiences can: firstly, cause a frustrating transition; and secondly, create personal challenges as discussed in the

following sections.

2.2.2. Personal challenges

2.2.2.1. Feelings of isolation/loneliness. International students can encounter a profound sorrow as they have to depart from their family and friends to study overseas. It may lead to their mental well-being being threatened [43,8,44]. Due to a lack of social support and homesickness, foreign students could encounter confusion about social customs, anxiety, fatigue, isolation, grief, loneliness, and depression [45,6,43,46,47], which may further prevent them from forming close relationships with people in local communities [44, 9].

2.2.2.2. Difficulty forming friendships. One of the incessant worries for international students is having trouble making friends [48,9, 49]. Language barriers and cultural differences can obstruct their ability to interact with local peers [30,23,8,9]. [6] noted when East Asian students arrived in the US, they struggled and “failed to integrate into the local culture, and chose to interact with co-ethnic or other international students” (p.189) [50]. demonstrated that students from collectivistic societies, for example countries in Asia (i.e., India, China, South Korea, and Japan) and countries in South America (i.e., Argentina and Brazil), often have a harder time connecting with local American students, as American culture focuses on self-confidence, individuality, and independence. Due to the difficulties of forming friendships, international students may suffer discrimination and practical challenges related to cross-cultural adaptation distress [51,52,53].

2.3. Approaches to help the adaptation of international students

Although international students have a weak or no connection to the local community, they often demonstrated strong involvement in their host campus [23,54]. [55] discovered that for academic success, having a feeling of connection to the community vital. To increase international students’ sense of connection to the community, host universities should provide the necessary economic support (e.g., scholarship, housing assistance, etc.), transportation assistance, and healthcare to ensure their basic needs are met [13,6, 56]. Universities should provide on-campus services (e.g., gyms, libraries, and student clubs) and on-campus jobs to help international students develop strategies for adapting to new cultures in their host country, which would in turn help international students rapidly cope with the new community [57,58,59].

The host universities should encourage international students to participate in diversity-related co-curricular activities, which have been proven to be a strong measure of behavioral contact between domestic and international students, according to longitudinal research [55] and cross-sectional studies [60,61,62]. International students participating in collaboration, team-oriented programs reported higher levels of personal and social growth and more favorable evaluations of the collegial environment, had more opportunities for language practice, socialized with domestic students more regularly, and were more likely to succeed academically [60,55, 61,62].

For international students, social support and positive relationships with peers are significant to their success in a new environment and critical factors for their mental health [63,64,59]. The number of friends an international student makes in their new surroundings significantly influences how well he or she does [65,9]. Various research papers have shown that the more often international students retain contact with people from the local communities, the quicker they adapt [4,6]. Therefore, besides relying on the assistance of the host universities, international students could embrace strategies that can improve their social and speaking skills, such as going out off-campus and visiting public places, interacting with the community and people, and making friends with native language speakers [4,65,6,9,59].

3. Methodology

3.1. Research design and setting

Each year, around 1000 male international students enrolled in IMSIU, where they first take the intensive Arabic Language course before they are ready to start the undergraduate or graduate program. This research was conducted qualitatively using a case study method [66] to explore international students’ experiences at IMSIU, in Riyadh, Saudi Arabia.

A case study is “an empirical inquiry about a contemporary phenomenon, set within its real-world context-especially when the boundaries between phenomenon and context are not clearly evident” [67]; p. 18). This type of research is an especially advantageous approach when a study needs to attain an in-depth, multi-faceted understanding of a specific phenomenon, in its actual context [68]. The phenomenon (i.e., the case) under scrutiny was challenges faced and adaptation used by international students when studying at a Saudi university.

Case studies can be as either multiple (i.e., a study involves several cases) or single (i.e., a study involves only one case) in character [67]. Whether single or multiple, the case can be holistic or embedded (Yin, 2014). In this study, the single holistic case study approach was used because: (1) the goal of here was to evaluate the general characteristics of the case [69]; and (2) several case studies can be extremely costly and take too much time to complete [70].

According to Yin (2014), case studies can serve to explain and explore events or phenomena in everyday contexts. Therefore, case studies can offer rich descriptions for the existence of certain phenomenon [71] and function as the basis for theoretical generalizations

[72], which can be valuable to theory testing and development [73]. Furthermore, case studies can offer additional insights into a relationship between two things caused by a new service initiative or policy development [74]. Consequently, a case study helps us to understand which challenges international students face and suggest social policy recommendations to improve their social adaptation experiences while they are learning in Saudi Arabia.

Despite their known advantages, sometimes case studies can suffer from a lack of clear rigor/credibility and basis for generalization, for which they are criticized. In other words, the findings in a case study may be hard to transfer to other settings (Yin, 2014). Being fully detailed about a case study's procedures (e.g., describing and documenting the process of case and data collection, and analysis methods) throughout the research process can help address these concerns [74,75]; Yin, 2014). Case studies require systematic gathering of data, rigorous procedures for data analysis, and ensuring that the findings ensure the overall credibility, validity and reliability of what has been argued. Only then is it possible to generalize the data to other situations through analysis that is not only statistical (Yin, 2014; [69]. Analytical generalizations require the use of the theoretical framework of a study to institute a rational that could be applied to other situations, while statistical or numerical generalization implies that findings from a small set of samples can be generalized to any larger context or population (Yin, 2014). The remaining sections of the methodology will describe the case study's procedures in details.

3.2. Ethics

[76] in their work defined ethics as "a matter of principled sensitivity to the right of others" (p. 359). Approval for this study was obtained from the Human Research Ethics Committee, and deanship of student affairs at Al-Imam Mohammad Ibn Saud Islamic university prior to conducting it; following the obtained approval, the research emailed all respondents and invited them to take part in the study. The research prepared an information sheet and attached the questionnaire, which help make the study clear to the participants and ensure them that taking part was voluntary and their identities would not be divulged. Those who expressed interest were scheduled to be interviewed and signed a consent form. All interview sessions were undertaken in a classroom at IMSIU. At the beginning of each interview the researcher explained the interview's purpose and the objectives of the study to the participants. The researcher confirmed with the participants that the information provided during the discussion would remain confidential and anonymous. The researcher disclosed that he would record the interview and all participants gave consent about the recording. The researcher used pseudonyms and codes to protect participants' identity and to ensure their anonymity. The researcher also used the codes to refer the participants during data analysis and results presentation. Finally, the researcher made sure that information regarding all necessary ethics approvals, such as names of the ethics committee, the associated institution, and the approval number (IMSIU-HEC-22-370), was included in the manuscript.

3.3. Sampling and participants

The participants were selected through the technique known as purposeful sampling [77]. Employing this method provides a more in-depth understanding as well as insights concerning international students' perceptions of their first year of study at IMSIU. The inclusion criteria of the participants for this study were: 1) any male international student at IMSIU who is 18 years of age or older; 2) full-time first-year students admitted to undergraduate, graduate, and postgraduate programs; 3) on campus during the interview; and 4) received only external scholarships as a non-Saudi student.

The IMSIU deanship of student affairs was contacted directly for permission and assistance to recruit international students. The

Table 1
Demographics details of the Study Participants.

ID	Name	Age	Nationality	Education level	Language proficiency	Income ability to living style
1	OM	35	Pakistan	Second year of Arabic program	Fair	Financial reward
2	A1	30	Pakistan	Bachelor	Fair	Financial reward
3	MO	25	Pakistan	First year of Arabic program	Very poor	Financial reward
4	A2	40	Pakistan	Second year of Arabic program	Fair	Financial reward
5	HA	28	Afghanistan	First year of Arabic program	Poor	Financial reward
6	MO1	33	Bangladesh	Second year of Arabic program	Fair	Financial reward
7	AL	34	Mauritania	Second year of Arabic program	Fair	Financial reward
8	A2	38	Somalia	Master's degree	Good	Financial reward
9	A3	30	Chad	Bachelor	Fair	Financial reward
10	KA	29	Chad	First year of Arabic program	Very poor	Financial reward
11	AB	31	Eritrea	Second year of Arabic program	Poor	Financial reward
12	ID	28	Mali	First year of Arabic program	Fair	Financial reward
13	O1	33	Nigeria	Second year of Arabic program	Fair	Financial reward
14	CH	36	Nigeria	Second year of Arabic program	Poor	Financial reward
15	QA	29	Somalia	Second year of Arabic program	Fair	Financial reward
16	IA	29	Canada	Second year of Arabic program	Fair	Financial reward
17	M2	34	Bosnia and Herzegovina	Bachelor	Fair	Financial reward
18	ZE	30	Mauritania	Master's degree	Good	Financial reward
19	AL	29	Indonesia	Bachelor	Fair	Financial reward
20	AB	40	Djibouti	Ph.D.	Very good	Financial reward

deanship sent an email to all first-year international students, inviting them to participate in this research. In total, 20 male international students from different countries (see Table 1) agreed to take part. They were aged between 18 and 40 years with a mean of 32.05 ($SD = 4.16$). Nearly two-thirds of this study's participants were in the first year (20%, $N = 4$) and 2nd year (45%, $N = 9$) of Arabic program. The majority of participants (75%, $N = 15$) had at least fair language skills. All students (100%, $N = 20$) depended on scholarships to maintain their living arrangements.

3.4. Instruments and data collection

To explore international students' opinions regarding their first year studying at IMSIU, semi-structured interviews were conducted. Each interview contained 16 open-ended questions aiming to elicit the students' perceptions and attitudes about the challenges they encountered while adapting to how life is lived in Saudi Arabia. Semi-structured interviews are particularly useful when little is known about the topic and serve to investigate respondents' perceptions of the topic of interest [78]. The researcher prepared specific questions to help explore international students' opinions regarding their first year studying at IMSIU. A place and time were arranged to interview the participants individually for approximately 1 h. When the interview commenced, once the objectives of the study were explained, participants were asked if they agreed to participate. During the interview, the researcher asked the prepared list of questions and respondents talked freely about their experience at IMSIU. The researcher listened carefully in order to not disrupt or distract interviewees [78].

3.5. Coding and analysis

The interviews were recorded, transcribed, and investigated using thematic analysis [79]. NVivo 12 Pro (QSR International Pty

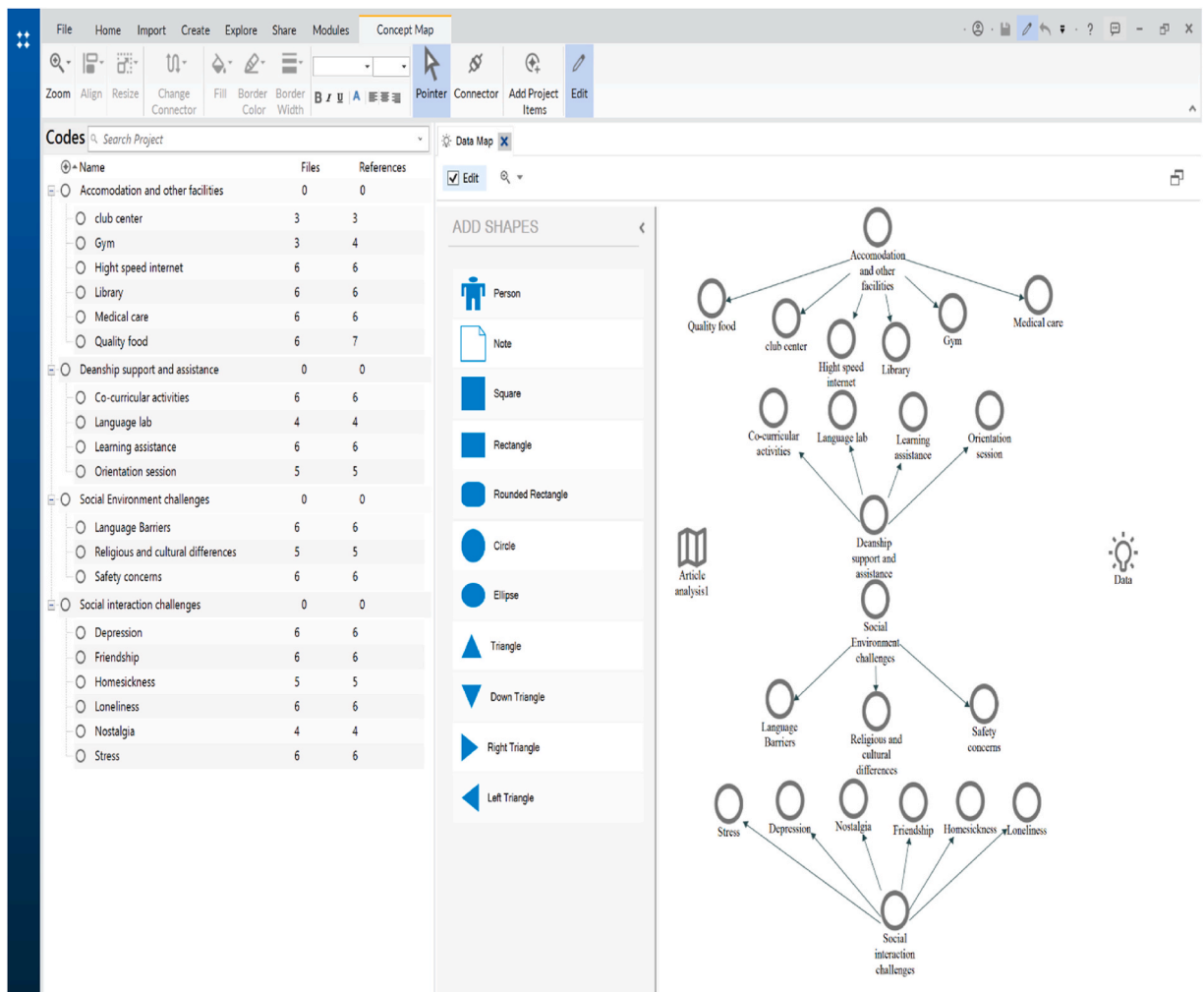


Fig. 1. Thematic mapping from the NVivo.

Ltd., Doncaster, Australia) served to help uncover the data (see Fig. 1).

The researcher applied the thematic analysis process advocated by Ref. [79] for analyzing the interview transcripts. These steps are discussed as follows.

Step 1: Getting familiar with the data.

Based on the suggestion made by Ref. [79]; the researcher carefully went over the interview transcripts three times to make himself familiar with the interview data. The researcher did not take any notes or perform any coding during the first two readings of the interview transcripts. This process permits the researcher to understand the breadth and depth of the interview data. During the third reading, the researcher consistently and methodically made notes about what was important about each participant's responses, and created codes for different topics according to how they were discussed.

The researcher followed the suggestion of [79] by not making any assumptions about the topics and created codes for as many potential themes/patterns possible. During this coding stage, it was not uncommon for the same interview responses to be included in more than one topic [80]. When this occurred, these responses falling into several topics were coded under these associated topic headings. For example, if a response discussed the topics of language barriers and support programs, then this response was coded under each relevant topic, i.e., language barriers and support programs. According to Ref. [81]; the act of coding topics enabled the researcher to subgroup the data and ultimately categorize the interview data into themes. At the end of this process, the research made sure that each interview response was associated to at least one topic.

Step 2: Searching, defining and naming the themes.

During this second phase of analysis, a list of topics was created, based on the responses emerging in the first step of thematic analysis. Then, the researcher arranged the interview responses into meaningful and proper groups by categorizing the interview responses that were within each topic together [79]. For instance, all interview responses regarding language barriers were organized together and placed under the topic heading "language barriers". This analysis process allowed the researcher to systematically make the interview data meaningful [82]. After generating the topics and associated interview responses to each topic, the researcher carefully arranged the topics into different themes. In order to determine the themes, the researcher reviewed all topics coded and how the topics relate to each other [81]. The researcher conscientiously examined the topics and appraised how they can be assigned to different theme [79]. According to Ref. [83]; a theme in thematic analysis is a composition of all the topics that can be grouped under that specific headline. For instance, in this study, the topics regarding language barriers and religious differences were placed under the theme of social environment. During this stage of analysis, a theme called 'miscellaneous' was devised to include all the topics that did not belong to any specific themes.

Step 3: Reviewing the themes.

After topics were organized into different themes, the research created a figure to show all the potential themes and the relevant topics [79]. The researcher then consistently reviewed all the responses and examined the validity and meaning of the interview responses for each theme [79]. During this reviewing process, the researcher carefully examined if any topics were neglected or misplaced during the previous coding process. Specifically, in this analysis stage it was ensured that all interview responses were properly placed into the appropriate themes. Furthermore, the researcher examined topics under the 'miscellaneous' theme to determine if these topics could be placed into a specific theme. At the end of this analysis process, the themes retained by the researcher were those that emerged from the interview data and subsequently deployed in the next step to generate the analysis results.

The researcher identified the following themes that reflected social adaptation.

- Theme 1 - Accommodation facilities/services: facilities/services available on-campus for accommodating international students' daily needs;
- Theme 2 - Support programs and assistance offered by the deanship of student affairs: orientation sessions, co-curricular activities, language labs, and learning assistance offered for international students;
- Theme 3 - Social environment: challenges international students encountered regarding the social environment, such as language barriers, religious and cultural differences, and safety concerns;
- Theme 4 - Social interactions: international students' experiences regarding social interactions, including depression, nostalgia, stress, loneliness, homesickness, and friendships.

Step 4: Producing the report.

As suggested by Ref. [79]; the objective of presenting results for a thematic analysis is "to tell the complicated story of your data in a way which convinces the reader of the merit and validity of your analysis" (p. 23). For this study, the analysis results were presented according to the order of the themes. The statements cited in the results are direct ones made by the participants during the interview, which provided evidence for the researcher's identification of the themes [79]. The researcher eliminated any possible identification information that study participants may have used during their interview (e.g., names used in the interview) in order to ensure the anonymity of interview participants [84].

3.6. Integrity of research trustworthiness

To ensure the integrity of this study, the researcher followed several strategies, such as NVivo software reliability, memorizing and notes, and debriefing [85]. Analytical notes were written at the end of every interview to help ensure reflection, and re-engagement of the data. During the coding process, the researcher utilized NVivo as inter-coder reliability to ensure consistency. All transcripts were coded separately and then the researcher double-checked for dissimilarities because these needed to be corrected through the

debriefing stage. At the conclusion, the researcher debriefed participants on the key findings of the interviews. The researcher was aware that his position as the dean of student affairs at IMSIU may affect how participants express their opinions. To avoid bias and encourage participants to respond honestly, they were all assured that their anonymity/confidentiality would be protected and taking part would have no bearing on their academic standing.

4. Results

All participants were satisfied with studying in Saudi Arabia. One student from Pakistan (OM) remarked, "I am very happy to choose to study in Saudi Arabia. I hope I can stay there after my graduation." International students generally praised the accommodation facilities/services provided by the university (Theme 1) and support programs and assistance offered by the deanship of student affairs (Theme 2). However, they also faced challenges regarding the social environment (Theme 3) and social interactions (Theme 4).

4.1. Theme 1: accommodation facilities/services

Many international students had positive perceptions regarding the facilities/services IMSIU provided to accommodate their daily needs, including on-campus inhabitants ($N = 20$), satisfactory serving of quality food ($N = 18$), students' club center ($N = 15$), gym ($N = 14$), library ($N = 16$), high-speed internet ($N = 20$), and medical care ($N = 15$). For example, a student from Djibouti (AB) commented, "I spend a good time on campus because there are many things I can do during my free time like going to the gym and playing different kinds of sports." A student from Somalia (QA) echoed a similar claim, "Before I came I thought there is no social activities, but after I moved to the campus after one month of living I found many activities like student clubs, free courses, and good food." Students were also satisfied with the housing and medical care they received on-campus, as these two services "take care of the very basic needs for living abroad."

4.2. Theme 2: support programs and assistance from the deanship of student affairs

All interview participants ($N = 20$) found that programs and assistance provided by the deanship of student affairs, such as orientation sessions, co-curricular activities, language laboratory, and learning assistance (e.g., "Get Help", learning support center), helped them acclimatize to Saudi Arabia. When they first arrived at the university, orientation sessions were provided. According to a student from Nigeria (CH), "The orientation sessions were useful and helped us to explain everything about Saudi society's culture, education system, accommodation, activities on campus, legal systems, and social life in general."

The deanship of student affairs also offered co-curricular activities throughout the entire school year to enhance international students' experience, establish their soft skills, and provide healthy methods for stress coping. The co-curricular activities participants joined in included "community service" (e.g., cleaning up around campus), "social activities" (e.g., trips), "sports competition" (e.g., basketball), "artistic activities" (e.g., painting), "intellectual activities" (e.g., engineering contests), and "religious activities" (e.g., introduction to Islam). All participants ($N = 20$) fully enjoyed these extra-curricular activities. In addition to orientation sessions and co-curricular activities, language labs and learning assistance helped international students improve their studying experiences at IMSIU. For example, one student from Pakistan (A1) said, "I like the language labs that help me and other international students to understand Arabic language."

4.3. Theme 3: social environment

During the interviews, participants discussed the social environment such as language barriers, religious differences, cultural variations, and safety concerns, regarding their first year at IMSIU. All participants ($N = 20$) experienced certain degrees of communication challenges on-campus with their instructors and classmates and off-campus with the general public, owing to language limitations. One student from Bangladesh (MO1) described the language barrier he encountered in class: "Sometimes it is difficult for me to understand the Arabic language. I need to translate the information into my language so that will help me to understand it and participate in class ..." Also, a student from Nigeria (CH) shared the experience of an unfriendly encounter off-campus due to language barriers: "When I went off campus like going to a mall or public place and I want to ask some people who try to understand my accent and help me, but some of them were not polite; they were using accentuated bullying ... most of these happened off-campus."

Because of the disparities in lifestyle, religious sects, and languages faced in Saudi Arabia, many international students ($N = 14$) suffered from culture shock and expressed that they experienced unexpected traditions compared to their own. For example, one student from Nigeria (O1) said that: "It is my first time in Saudi Arabia and I got shocked because I have no idea about how to speak Arabic; greet people, and deal with the education system; however, right now I go over it and tackle it." Although culture shock is a common experience felt by international students, some students ($N = 6$) pointed out that if one already has had experience with the culture (e.g., "visited Saudi Arabia for Hajj and Umrah before"), then it is in fact easier to adapt to such differences.

4.4. Theme 4: social interactions

Over half of the international students ($N = 13$) suggested they have experienced nostalgia, depression, stress, and loneliness during their first-year study at IMSIU. However, the remaining seven participants indicated they only experienced minor degrees of these

symptoms because they had brought other family members (e.g., wife and children) with them ($N = 5$) or had close friends living in Saudi Arabia ($N = 2$). All participants ($N = 20$) felt homesick and missed their families in their home countries during their first year of study at IMSIU. These students appeared to utilize the free high-speed internet on-campus to call and see their family and share news with their family using different kinds of social media.

Despite the negative feelings (e.g., depression, loneliness, etc.), participants made efforts to form friendships with locals. Many students ($N = 13$) reported that they had positive relationships with peers and instructors on campus and neighbors outside the university. The reasons might be that teachers, colleagues, and university administrators were “polite,” “knowledgeable,” “accessible,” “friendly,” and “helpful”, which made students feel they can “go to them [peers and instructors] for help” when they encounter issues.

5. Discussion of findings

The study found that all participants experienced language barriers on-campus with their instructors and classmates and off-campus with the general public, which aligned with the findings from other studies showing that language barriers are prevalent among international students [31,30,5,23,6,8,9] and language obstructions are not limited to academic settings, but also influence international students' social lives [30,5,8,9,33]. The main reason behind this language obstacle may be a weak command of the host-country language before traveling to study abroad [5].

Language barriers constitute a critical aspect contributing to international students' success. To help international students overcome language barriers, universities in Saudi Arabia could provide an Arabic-language curriculum tailored to these students. Other practices, such as co-curricular activities, language labs, and learning assistance as reported in this study, have also proven to be quite beneficial [60,55,61,62].

The study also observed that international students suffered from culture shock due to disparities in lifestyle, religious sects, and languages used in Saudi Arabia. The findings aligned with past research regarding culture shock experienced by international students [13,4,18,6,8,9]. International students had to struggle with diverse value systems, patterns of communication, and socializing when they moved to a new society [4,18,20,8,21,19]. Subsequently, international students may not embrace the host culture's traditions, which discourages their assimilation into Saudi society [22,23,18,8]. University experts in Saudi Arabia could set up short courses to show international students the intellectual and social obstacles they will confront. The adaptation phase will be significantly aided by concurrently recognizing international students' cultures and origins while connecting them to the host culture. It is also critical to educate the host university students about the international students' cultures and origins [13,65,9]. If authorities inform their students about other cultural standards, there will be only minor misunderstandings and more mutual acceptance between Arab residents and non-Saudi resident students.

Participants of this study indicated that they had experienced depression, nostalgia, stress, loneliness, and homesickness. These symptoms were similar to what has been reported in past research regarding international students' experiences [45,6,43,46,8,44,47]. Typically, individuals experiencing these symptoms may separate themselves from the new culture which may deter prevent international students from forming close associations or relationships with people in the local communities [44,9]. However, those who took part in this study revealed they had positive relationships with their peers and instructors on campus and neighbors outside the university. The reason why participants could develop friendships with the locals may be because of the positive attitudes of teachers, colleagues, and university administrators, as stated by the interviewees. It makes the life of international students in Saudi Arabia more comfortable. Other reasons may be: firstly, the high-speed internet provided on campus, which allows international students to contact and monitor their families whenever; and secondly, other services/facilities, such as on-campus inhabitants, quality food, students' club center, gym, library, and medical care. These facilities accommodate international students' daily needs, and hence they can reduce tensions, and further improve their academic and social life.

All in all, participants perceived Saudi Arabia's higher education sector as epitomizing high standards by providing a good system in which they enroll, democratic procedures, an opportunity for critical analysis, and the latest technology. Orientation sessions, preparatory classes, and foreign office employees all assisted international students in understanding and adapting to the situation. Based on their expertise the students were satisfied to study with being in Saudi Arabia. They must at the same time improve their adaptation by getting to grips with the environment and not simply leaving it to the institution to deal with. The institution provides socialization opportunities, but it is up to the individual to participate and actively engage in these activities. According to the research, having different social connections with international students leads to much necessary intercultural social protection, boosts a person's psychological well-being, and supports the individual in the transitional period [4,63,65,6,9,59].

6. Conclusion

Although they experienced language barriers, psychological impacts, and sometimes deep culture shock, international students in IMSIU, Saudi Arabia, exhibited high psychological well-being, cultural integration, and academic performance. The findings documented in this research confirmed that all participants experienced language barriers on-campus with their instructors and classmates and off-campus with the general public. The outcomes of this research also demonstrated that international students suffered from culture shock owing to disparities in lifestyle, religious sects, and languages used in Saudi Arabia. Moreover, the outcomes of this study specified that the participants had experienced depression, nostalgia, stress, loneliness, and homesickness. In summary, the participants realized Saudi Arabia's higher education sector as epitomizing high standards by supplying a suitable system in which they register the opportunity for analyzing critically and using the most up-to-date technology. The results also indicated that students must

enhance their adaptation to the environment and not simply leave it to the institution to resolve. The institution supplies socialization opportunities, yet it is up to the students to participate and actively get involved in these tasks.

7. Implications for social work practices

This study's findings revealed that international students in Saudi Arabia experienced challenges such as language barriers, culture shock, and psychological impacts (e.g., nostalgia, depression, stress, and loneliness) during their first-year study at IMSIU. Rooted in social justice principles, social work practices can play an important role in mitigating the challenges international students experience through good support systems and enhanced interventions at the micro, mezzo, and macro levels [86,87]. The key point of this study is that international students should be made aware of various counseling and professional guidance systems in place to help them adapt to their new life in the host country.

At the micro level, social workers can work with students individually to determine the causes of the challenge, its undermining effects and help vulnerable international students draw on their resilience to cope with the challenge and learn how to overcome and prevent it [88]. Meanwhile at the mezzo level, the goal of social work practice is to achieve personal and social/-environmental/political changes, facilitate group learning, and pool together resources [88]. Social workers should work with international students who have encountered the same challenges as a group to develop psychosocial support and raise legal and community awareness, so that strategies can be devised to overcome the challenges and achieve positive changes. Through group interventions (e.g., seminars, conferences, and workshops), students can share their experiences of challenges experienced, learn how others deal with the problems, and what resources they can utilize.

At the macro level, social work practices should aim to create multifaceted cooperation between higher education administration, international student offices, and local government in developing solutions to challenges experienced by international students through proactive and preventive administrative programs and outreach (e.g., social integration strategies) to enhance a friendly and understanding social and academic environment for international students [86]. As such, social work practices could and should be multi-intervention at all levels.

8. Recommendations for future practice in higher education

International students need to learn to identify with the group they are in through socialization, a process for acquiring values and attitudes, skills, and knowledge to become a member of society [89]. It is recommended that authorities and university community members make their campuses more hospitable to international students, with future studies examining how to improve the community spirit on campus. Host universities should also provide institution-related activities that give international students the self-confidence to change and increase their engagement levels in a new environment. Higher education officials in Saudi Arabia should make the effort to eradicate language obstacles for non-Saudi international students, which should help improve their Arabic proficiency and ability to comprehend and communicate with Arabic, and eventually consolidate their academic and social achievements.

The researcher also believed that international students should be informed about the obstacles they may face before coming to Saudi Arabia. University authorities should provide educational documents to students and assist them with overall process awareness, outlining frequent problems and providing contact information for support services if and when they are required. Additionally, the university can set up a committee formed by the local students to volunteer and spend time with foreign students, and in this way assist them in adapting to the host culture. Such a voluntary service can be considered as a form of social security for the local students if the university requires one.

The enrollment of overseas students could strengthen the teaching and learning processes for all students and hence universities and colleges must develop interventions to promote the social integration of both international and domestic students. Faculties should prioritize for all students to have equitable access and learning opportunities.

9. Positive and negative aspects of the study

The implementation of the single case study provided a practical and useful approach to examine complex social issues, i.e., challenges faced and adaptation used by international students at a Saudi university. The case study approach can properly and uniquely supply a variety of evidence, and document the complex issues in the scenario that is being examined, thereby maintaining a comprehensive and real-world perspective. The case study emphasized the importance of systematically documenting the research process which helps to support its reliability and validity. Furthermore, fully detailing the research procedures makes it possible to generalize the case study findings to other situations.

Despite the positive features of the case study, there were negative ones as well. It is crucial to think about the possible burden and risks associated with participation for those who agree to be involved in a case study. The interview process and information provided by the participants might invoke emotive burdens associated with participation (e.g., reminding them the negative feelings (e.g., loneliness, depression, etc.) they experienced during the first year of study abroad). Also, although participants' identities were anonymized, it needs to be recognized that there may still be a small risk that participants could be identifiable to insiders.

10. Limitations of the study and recommendations for future research

Certain limitations to the present study pave the way for research opportunities on this topic in the future. First, the sample was restricted to a small cohort of students enrolled in one Saudi Arabian university, and hence the findings should not be generalized to a population in a different region (e.g., international students in a Western country). However, future studies with a larger data pool and population in different regions are necessary to verify and expand on what this research has found. Secondly, the data of this study were submitted solely for qualitative examination. Future research on international students' adaptability to living and learning in Saudi Arabia (or other nations) might employ mixed-methods research or quantitative approaches.

Author contribution statement

Abdullah Alasmari: Conceived and designed the experiments; Performed the experiments; Analyzed and interpreted the data; Contributed reagents, materials, analysis tools or data; Wrote the paper.

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Data availability statement

The data on which this research was based will be available upon request by third parties.

Declaration of competing interest

The authors declare that they have no known competing financial interests or personal relationships that could have appeared to influence the work reported in this paper

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