

# The influence of gender stereotyping and demographic factors on academic choice: The case of the University of Debrecen

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## RESEARCH ARTICLE

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## ABSTRACT

Education is the proven guarantor of gender equality and sustainable development. Empirical evidence from previous studies in European countries (Favara, 2012; Geerdink & Dekkers, 2011; OECD, 2009) shows that women are incompletely represented in many areas of technical and scientific education. This study examined the impact of gender stereotypes and factors related to family background, university criteria, and the main factors influencing students' academic choices at the University of Debrecen. The research question was: what is the impact of gender stereotypes and demographic factors on students' academic choices? The research relied on a qualitative approach. 12 qualitative interviews were conducted with international students at undergraduate and postgraduate level. The research used semi-structured interviews with five main blocks of questions. The dimensions explored included the following: 1. introduction and context of the interviewee, 2. gender stereotypes, 3. family background, 4. university characteristics, 5. factors motivating academic selection. After data collection, the transcripts were analysed using an open coding method, which involved line-by-line and word-by-word analysis (Khandkar, 2009). This helped to identify the most important factors influencing students' academic choices. The socio-educational role of the family, the scholarship Stendium Hungaricum, the facilities and services of the university, the geopolitical academic location, the UNIDEB ranking, the quality of life and study, the scholarships, the realistic, materialistic goals of future life, and the impact of gender stereotypes expressed by the students (as a product of society, choice and belief, the liberal generation) influenced the academic choice of the international students at the University of Debrecen.

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**KEYWORDS**

gender stereotyping, demographic factors, academic choice, University of Debrecen

**LITERATURE REVIEW**

Education is the proven guarantee of gender equality and sustainable development. Despite the progress of civilisation and the technological growth we are witnessing at the beginning of the second millennium, girls still have fewer opportunities than boys to access, complete, and benefit from quality education. Empirical evidence from previous research in European countries (Favara, 2012; Geerdink & Dekkers, 2011; OECD, 2009) indicates an incomplete representation of women in many areas of technical education. For example, in engineering, science, mathematics, and computers, in contrast, women are more represented in the humanities, language, education, and the arts. Women's representation in education and the arts may enhance children's ideas about typical "feminine" and "masculine" behaviours, thus reinforcing traditional gender roles and increasing the gender inequality gap. Most recent studies indicate that the percentage of women enrolled and graduating in higher education has increased at rates higher than men. However, there are noticeable differences in university majors' choice between men and women. Women are less likely to choose science, technology, and engineering subjects, which creates a gender gap in these subjects in most World Countries (OECD, 2015). According to OCED (2017) reports, the percentage of women enrolled in information and communication technology majors was 19%, and engineering courses were 25%. However, the total number of females enrolled in higher education was 54%. Similarly, in Hungary, the number of women enrolled in higher education in 2011 reached 57%. 23% of this number joined the majors of science, technology, engineering, and mathematics, which created an under-representation of women in these educational fields, which negatively affected the availability of qualified workers from the labour market incited depending on foreign labours. Several previous studies have tried to interpret the existence of differences between men and women in academic choices. There are several explanations for this critical phenomenon among them, explaining it on the basis that students, when making educational choices, considering the expected profits, noted women are less responsive to the regular profits compared to men. Consequently, they are less likely to be enrolled in study programs that lead to higher returns in the labour market, such as STEM programs (Koen, Ghysels, & Varga, 2018). Many gender barriers have diminished over the years, but gender stereotypes continue to create problems for the advancement of women's activities. Although Men's and women's perceptions of gender roles associated with gender stereotypes within contemporary societies have changed over time (Bhatia & Bhatia, 2021; Eagly, Nater, Miller, Kaufmann, & Sczesny, 2020; Lopez-Zafra & Garcia-Retamero, 2021). The potential for employment opportunities for women is still heavily influenced by gender stereotypes that shape management ethics and workplace expectations as patriarchal expectations. Globally, there are only 29 percent of women in leadership positions (Tabassum & Nayak, 2021). Other studies have investigated the role of gender differences in abilities. Paglin and Rufolo (1990) found that mathematical ability is the reason for the difference between the genders in academic selection. The study conducted by (Gneezy et al., 2003) indicated that women withdraw from choosing science and mathematics due to their aversion to risks and their lack of confidence in their



academic abilities. The differences in university majors between males and females mainly attributed to the differences in tastes between male and female students and females and males' different attitudes (Zafar, 2013). Gender patterns affect academic and vocational choices, and this has proven during many studies conducted in this field. Still, there are indications that gender-role models have an active role in reducing gender-stereotypical behaviour among girls when choosing a course or professional choice. It can be active at any age. We find the applications of these anti-sexual roles are abundant in the university academic community where there are models for successful women, aspirants, and they are examples of perseverance and completeness (Olsson & Martiny, 2018). The family and its members collectively have significant impacts on acquiring behaviours related to gender roles, especially since children in the early stages of life imitate models in their environment to the point of reincarnation. The study conducted by (Kancaniku, 2015) added that the family factors were at the forefront of education's reasons after secondary education. The influence of parents and gender stereotypes was also influential factors followed by financial constraints and low student participation in a secondary school that Compulsory education developed, and the elements are closely related. The child's parenting and socialisation in the early stages of his/her life prepare him/her to form their first impressions on what a man and woman should have. Moreover, in the early stages, those that precede the school stage and acquire what is known as a gender identity means the child knows that he is male or female and follows the stereotyping of his/her behaviour. The stereotypical behaviours continue with the child, and his awareness of the stereotyped gender roles expands through media, games, and picture books (Ertl, Luttenberger, & Paechter, 2017). That shows the stereotypical behaviours and stories told by adults, and the stereotypical behaviours appear strengthened and reinforced more with all the sensory, auditory, and visual stimuli surrounding him. According to (Igbo, Onu, & Obiyo, 2015), referring to the model called the (Family School Relationship), developed by (Ryan & Adams, 1999) explains the impact of the school and the family on each other. Also, they refer to other variables, such as positive gender stereotypes that lead to higher educational achievement for children. In contrast, harmful gender stereotypes lead to a decrease in academic performance for children, and they concluded that stereotypes of nationality are the ones that decide a wide range of psychological and social functions for children. Family education. The way people are brought up creates ideas. It can be difficult to change the stereotypical thinking that has been with you since childhood. Fagot, Leinbach, and O'Boyle (1992) points out that gender awareness is acquired at a young age and that gender identity is heavily influenced by social interactions with the situation. Tabassum and Nayak (2021). concluded that the development of a child's personality occurs primarily in the family environment but is strongly influenced by social factors. A child's personality is shaped by his or her parents' attitudes towards him or her, and society plays an important role in the parents' behaviour. In this way, children learn gender stereotypes at an early age and reproduce them through their own behaviour (Endendijk et al., 2014). Negative opinions about human performance or ability can lead to inequality or unintentional discrimination, that is, treating certain employees differently because they belong to a group with negative views. For example, the belief that women lack mathematical or math skills can lead to inequality if women are not assigned tasks that require math skills. Similarly, the gender stereotype that clearly drives human judgment affects women's work and career opportunities. Unfortunately, it is believed that when women become parents, they prioritize caring for their children in addition to their work responsibilities, unlike men (Ellemers, 2018). It can be said that inequality is a precursor and



outcome of gender inequality. The development of gender roles in society over time changes the perceptions of the characteristics and behaviours of men and women. Also, gender pay gap persists in the workplace, in part because women specialize in fields that lead them to lower-paying jobs compared to fields associated with men's chosen fields of study. Women appear to be more likely than men to not enter or leave jobs in male-dominated subjects, as well as STEM when they underperform (Kugler, Tinsley, & Ukhaneva, 2021; Austin & Sutton, 2014).

Complex and multidimensional constructs such as socioeconomic status, parent education, and peers have a significant influence in student's education. Moreover, how does parent education affect the plans of their children during their transition to higher education? Garg, Kauppi, Lewko, and Urajnik (2002) found that personal factors (grads, parenting, academic expectations, and self-efficacy) substantially influence educational aspirations. It had a strong direct influence on educational aspirations and the effects of background and family involvement on educational aspirations mediated through personal factors. Parental intervention is a form of social capital that is positively associated with college enrolment regardless of the level of individual and school resources (Perna & Titus, 2005). The appearance of parental engagement, its concentration at various frames of their child's academic career, and its effects on child educational progress have been the subject of many types of research, investigations, and studies for many years. Education is crucial for a society to be an advanced and successful one: a well-organised and developed society resulting from educated people. The family has a tremendous responsibility to socialise their children to make them educated, programmed, and prolific community members. The more the parents are involved in allowing education, the more they might excel academically and become competent society member. Parents today see themselves accountable for guiding and instructing their children to make better subjects for their careers by keeping their interests and future demands in mind. Parents also understand that they may emphasise their self-worth to fulfil their child's knowledge (Hunt, 2008).

Epstein (1995) initiates the platform by defining parent representation as families and communities who take an influential role in forming a caring educational atmosphere by presenting education to their children. She also acknowledges that those parents involved with their children's education continually interact with the teachers, cooperate with the educational community, exhibit good parenting skills, volunteer their time to educational institutes, and take an active role in decision-making. Decisive factors that have a significant and essential role in determining study paths on the transition to university education, in addition to student's self-interest and potential income, are the decisions of students' parents about their future study (Stock & Stock, 2019). The study results of Jabeen, Khalid, and Kalsoom (2020) showed that parents' educational level, family structure/marital status, and income range positively affect students' academic potential and achievements. Students whose parents have higher educational levels performed higher on standardised tests than parents with lower educational levels. This research showed that socioeconomic factors significantly influence new students' academic potential and achievement in Iowa, USA. Within one family, children during adolescence, older siblings approaching age may assist as examples to follow or become different. The sibling relationship's key traits that may increase similar sibling outcomes include the sibling's closeness, support by the older sibling, younger sibling image of the older sibling, and self-reported social learning and differentiation. The study results (Dagys, 2013) provided evidence that older siblings' academic participation is a significant aspect of support for older siblings related to younger siblings' academic achievement and the importance of sibling and family variables in



influencing younger siblings' achievement. In comparing the relative influence of different sources of information on student's choice of University, the results of a survey of students showed that parents, along with other family and friends, were the most influential information sources. On the other hand, the student's visit to the campus was awe-inspiring. Surprisingly, social media has not been rated highly effective compared to traditional media. Unexpectedly, faculty members and university staff had a tremendous influence on students' academic choices (Johnston & State, 2010). Concerning the most influential factors expressing the educational institution's success and the spread of its good reputation, the extent of student satisfaction with the institution has to be emphasised. Researchers frequently rely on measuring student satisfaction with the educational institution in most of the research they conduct. The essential points noted and compared are the students' opinions and expectations before studying and the experience during the study period in any foreign country. The university-related educational satisfaction factors overlap with other factors related to lifestyle outside the University, which are no less critical than the university-related factors. International students who study abroad are new members of an educational institution, and at the same time, members and individuals in contemporary society and place of life. Their lifestyle and social relationship contribute to their educational institutions' satisfaction (Azzone & Soncin, 2019; Kéri & Revesz, 2019). The quality of university facilities, faculty members, degrees program, employees and administrators, the University's location, and the University's image all lead to higher student satisfaction levels (Weerasinghe & Fernando, 2018). Due to Hungary's unique situation and its geographical location, being located in the heart of Europe, it also has a unique language and national identity (Fenyves et al., 2019). According to the OECD (2019), Hungary was one of the most increased countries across OECD countries of international students. The share of international tertiary students has doubled between the years (2010–2017), the percentage of international students enrolled in Hungary's tertiary institutions doubled, from 5% to 10%. International students are coming to Hungarian universities, according to Fenyves et al. (2019), driven by four crucial factors. First geopolitical factors, the country and its location, the ease of safe and unlimited movement in Europe, the geographical location and internationally recognised education, second factor: the ease of obtaining an international profession because of the European degree with a reputation. Third factor: social relations and recommendations such as suggestions of friends, relatives, parents, teachers, and especially friends, classified as a vital factor for 55% of the students, and the fourth factor was related to costs, especially students supported by scholarships, low living costs, and low tuition costs compared to other countries. International students' main motivational areas to study in Hungary are personal motives, geo-academic motives, financial motives, family, and future expectations (Casas, Mohammed, & Saleh, 2020). The Stipendium Hungaricum, the Hungarian government's most prestigious college scholarship program, offers a wide range of courses to international students with excellent academic records. The scholarship aims to support the internationalization and continuous development of Hungarian higher education, strengthen the international relations of the academic and research community, and promote the good reputation and competitiveness of Hungarian higher education worldwide. The program was established by the Hungarian government in 2013 and is overseen by the Ministry of Foreign Affairs and Trade and administered by the Tempus Public Foundation. Affordable tuition and living cost, a wide selection of English-language courses and degrees, easier Admission requirements Meeting eligibility requirements is often much easier in Europe than in the United States. Standardized test scores (e.g., SAT, GRE, GMAT, LSAT) are



often not required by European colleges. Also, US (and certain European) universities usually require a comprehensive admissions package including resume, cover letter, reference letter, complete transcripts, and application fees – unlike Hungarian universities. Thus, making the admissions process less complicated can be a beneficial strategy (Zoltán, 2019).

## METHODS

The first phase of the preparation of this research, which was based on interviews with 12 students of the University of Debrecen studying in the different fields of natural sciences and humanities. The research used a qualitative approach as it is an information-gathering method that gives meaning to the participants in the preparation of the research and meets the requirements of obtaining intersubjective knowledge. While qualitative methods are widely accepted in the social sciences, qualitative work has been labelled as second-rate. Recently, however, qualitative methods have become more widely understood and used to deepen areas of quantitative study and explore areas of research for which qualitative methods are better suited. A qualitative method was used to investigate the influence of gender stereotypes, family background and university criteria in choosing to study at the University of Debrecen. In qualitative research, respondents are asked about their life experiences. The qualitative approach is not based on the structured interview, which puts the participant in a passive and non-interactive position, but on a multi-stage snowball sampling strategy, collecting data. To avoid falling into this relationship, we relied on what (Bryman, 2012) developed for semi-structured interviews. The interview questions were open-ended questions as explained by Fraenkel, Wallen, and Hyun (2012). Open-ended questions allow for qualitative analysis where a kind of familiarity informs the relationship between the researcher and the interviewee, giving the interviewee more space in the analysis of the research problem while foregrounding their views. However, we are aware of the difficulty of overcoming power relations, which ultimately helps us to reflect on how they influence the process of knowledge production (Kalof, Dan, & Dietz, 2008). Qualitative research involves collecting or manipulating text, images, or sounds. It allows for the inclusion of many different types of data collection and analysis techniques and the variety of theoretical and cognitive frameworks associated with qualitative research (Sutton & Austin, 2015).

### Research hypothesis

During the research, we formulated the following hypotheses:

1. The geographical location (for example, European universities) influences the academic choice.
2. The higher the quality of universities, such as ranking, education quality, and providing more English language programs, the more international students' academic choices.
3. The higher the quality of life, the higher students' academic choices.
4. The higher the educational level of parents, the higher desired/targeted educational level of children.
5. The higher the level of sibling's education, the higher levels of students' academic choices.
6. The higher the education of families, the more heightened awareness of releasing from gender stereotyping.





7. The higher the educated societies, the higher educated females.
8. Scholarships are an essential factor in students' academic choices.

## Participants

The sample size in qualitative research strategies is usually smaller than in quantitative studies strategies. This is due to the fact qualitative studies strategies are frequently approximately gaining deeper information of a phenomenon or specializing in meaning (and variations in meaning) – frequently inspecting the how and why of a selected issue, system, situation, sub-culture, scene or group of social interactions. In-intensity interviews aren't always approximately generalizing for a bigger wide variety of parties however, is inductive and seen in its system. The purpose of interviews is to produce facts after which examine the relationships among the categories, taking note of how the existing experience of the studies individuals is understood (Dworkin, 2012). Experts in qualitative studies agree that there is no direct answer to the question of how much and that the length of the sample depends on more than a few things related to cognitive, methodological and meaningful issues. Morse (2000) hypothesizes that the more usable facts gathered from each participant, the fewer contributors are needed. He urges researchers to remember standards related to the extent of observation, the nature of the subject (i.e., complexity and accessibility), the quality of the facts, and the design of the observation. Evidence suggests that the extent of question form in qualitative interviews controls the richness of the facts generated and therefore requires attention. Empirical studies suggest that open-ended questions asked at a later stage within the interview tend to produce richer facts. The sample of this research is (BA, MA, and PhD) students of Debrecen University. The number of respondents was 12 students (5 males and 7 females). The age of the students ranged from (21–40) years. The respondents have been interviewed primarily based totally on their willingness to take part inside the facts series groups and their capacity to talk English because the system required an oral response. They have been all worldwide college students and had plenty of academic backgrounds. Each interview lasted between 20 and 25 min.

## Data analysis

After interviewing the students and gathering information, the recorded interviews were converted into written copies, and initial opinions began to emerge during the transcription process. Interviews were examined separately to learn more about emerging themes from the data. Similar themes were grouped and coded. Coding is an important stage of the analysis process and shows how researchers segment their data to make a difference. In qualitative research, coding is “the manner you outline what the data you're analysing are approximate” (Gibbs, 2007). Coding is a technique of figuring out a passage of textual content or different data elements (photograph, image), seeking out and figuring out concepts and locating relationships among them (Khandkar, 2009). Coding is consequently now no longer pretty much labelling, however, approximately linking the data to the concept and to different other data. Data sets are compared to find connections and similarities and then labelled with appropriate symbols for further analysis. The data examined shows in a detailed way the factors of family background, university criteria and gender stereotypes that influence the choice of major at the University of Debrecen in Hungary. Pseudonyms were used in the study at the request of the respondents.



The study used the unaltered reproduction of the text responses of the respondents to derive the results of the study and compare them with the results of previous studies.

## RESULTS

The socio-educational role of families, scholarship Stepindium Hungaricum, university facilities and services, geopolitical academic, UNIDEB ranking, quality of life and studies, realistic, materialistic, goals of future life and the influence of gender stereotypes expressed by students (As a product of societies, choice and belief, liberal generation) influenced the academic choice of international students at the University of Debrecen.

### Personal demographic data of respondents

Demographic data allows you to better understand certain background characteristics of a target audience, whether it's their age, race, ethnicity, income, employment situation, or marital status. Demographic data provides data on research participants that is necessary to determine if the individuals in a particular study are a representative sample of the target population for generalization purposes. Demographic variables are independent variables because they cannot be manipulated (Salkind, 2010). Questions on personal demographic factors included self-identification, gender, age, country, level of education, source of student funding, and place of residence (city, town, capital, village ...). See (Table 1).

### Family background factors

Socio-educational roles of families and family involvement in academic concerns.

The second group of interview questions related to the influence of family background in the choice of field of study and, the questions related to family support, educational level of parents and siblings, the role of the family in the choice of education and other people such as teachers,

Table 1. Personal demographic data of student's

N	Faculties	Country	Age	Level of studying	Gender	Type of studying fund	Place of residence
1	Agriculture	Jordan	23	Undergraduate	Male	S-expense	Capital
1	Business	Turkey	33	Master	Male	Scholarship	City
1	Law	Iraq	40	Doctorate	Male	Scholarship	Capital
1	Engineering	Kenya	23	Undergraduate	Male	S- expense	City
1	Public health	Iran	21	Undergraduate	Female	S- expense	City
1	Biology	Egypt	34	Master	Female	Scholarship	City
1	Pharmacy	Lebanon	22	Undergraduate	Female	S- expense	Capital
1	Pharmacy	Russia	21	Undergraduate	Female	S- expense	Town
1	Pharmacy	Pakistan	23	Undergraduate	Female	S- expense	Capital
1	Pharmacy	Sudan	22	Undergraduate	Female	S- expense	Small city
1	Medical	Nigeria	24	Undergraduate	Male	S- expense	City
1	Medical	Romania	22	Undergraduate	Female	S- expense	Capital
12	#	#	21-40	#	#	#	#





relatives and friends who influence the choice of study. See (Table 2). Due to the strong relationship between educational choice and the influence of family and its members, the result of coding led to the designation under the title of the socio-educational role of family factors and family involvement in the academic concerns.

**Parents education.** It was found that the indicators of the high educational level of parents strongly influence the choice of students in the university. It was found that the indicators of the high level of education of the parents of the students have a great influence on the choice of students. There were five female students (BSc of medicine and pharmacy) who were from families with high educational levels. This result is consistent with a study by (Jabeen et al., 2020). This result also is in line with the research hypothesis that the higher the educational level of the parents, the higher the desired/aspired educational level of the children. For the rest of the respondents, the educational level of parents was relatively high except in the case of (Iraq and Egypt) Low educational level of parents as opposed to the high educational level of children. This shows that the children are independent and have their own income, they are not dependent on their parents' care and money at the age of (40 years PhD student and 34 years student) and they both have scholarships. in general, the families played a positive and influential role in supporting their children's academic choices. See (Table 1).

**Family support.** Families of the respondents were fully supportive of them, even if they came from different and distant places, some of which were rather closed societies, marked by traditions and customs. Of the students' responses that stunned me, Ashraf from Pakistan, 23 years old (Pharmacy student), said, "My family has always supported me in everything I do. I did not get a GPA to study medicine in my home country, so my family sent me to Hungary." These findings are consistent with the findings (Epstein, 1995; Garg et al., 2002; Hunt, 2008; Jabeen et al., 2020; Perna & Titus, 2005).

Table 2. Family background effect on the academic choice of students

Qu.	Father Edu.	Mother Edu.	Sibling Edu.	Family role	Parents support	Another person
Jordan	BA.	Teacher	School	Student	E. R	Sister
Turkey	MD	PharmD	MD	Brother	E. R	BRO.
Iraq	High school	Primary	BA	Sister	E. R	NO
Kenya	BA	Teacher	BA.	Brother	E. R	teacher.
Iran	M.sc	BA.	BA	Sister	E. R	Friend
Egypt	Primary	Primary	BA.	Brother	E. R	Friends
Lebanon	MA	PhD.	PharmD	Sister	E. R	NO
Russia	M.SC	PhD.	MD	Sister	E. R	NO
Pakistan	PhD.	Teacher	BCE	Sister	E. R	Cousin
Sudan	PhD.	PhD.	MD.	Brother	E. R	NO
Nigeria	BA	B.SC	School	Students	E. R	NO
Romania	MD	PhD.	BA	Sister	E. R	NO

Notes: E. R: means effective role.

Qu: means questions.



**Family role.** The respondents' families played an active and important role in their educational decisions, especially their parents. Most students relied on their parents' opinions in choosing their field of study. Relatives, friends or others did not play a significant role in their decision to study, with the exception of their parents. Ali from Iraq, aged 40, a (PhD law student), said, "My parents always told me that if you become a lawyer, you will get a good salary and become famous in the society." Kemya a (BSc public health) student from Iran, 21 said "My uncles were against going to Europe to study. But my parents supported me in choosing my studies and destination. I am very grateful to them". These findings are consistent with the findings of (Epstein, 1995; Garg et al., 2002; Hunt, 2008; Jabeen et al., 2020; Johnston & State, 2010; Perna & Titus, 2005; Stock & Stock, 2019).

**Siblings education.** The educational levels of siblings of the respondents were also relatively high, and this is an indication of the encouragement of the older brothers for their siblings in their studies or educational achievements and also provides motivation and support for them to simulate them in work or specialisation. This result corresponds with results from the study of (Dagys, 2013). Also communicates with the research hypothesis, the higher level of sibling's education, the higher levels of students' academic choices.

**Other persons effect on student's academic choice.** Most of the people who influenced students' decisions besides their parents were friends and siblings. Most students indicated that their parents played the most important role in their academic decisions, without outside interference. Siblings' family members played an influential role in influencing their siblings' decisions. Ahmed from Jordan, 23 years old, (Ba Agriculture student) said: "My sister strongly encouraged me to make study decisions." In addition to friends, they also played an important role in their friends' study decisions. These findings are consistent with the study of (Johnston & State, 2010). In addition to parents and siblings, other people such as teachers and relatives also played a role in students' academic decisions. See (Table 2). This result is consistent with the findings of (Johnston & State, 2010; Perna & Titus, 2005).

### University criteria factors

This group of interview questions explored the sources of knowledge about the university, the suitability of the location, the reputation of the University of Debrecen, satisfaction with services and the choice of Hungarians.

**Stipendium Hungaricum.** The first question related to the sources of knowledge about the college and the chosen course of study. Eight out of 12 students, three of whom received scholarships, answered that they had obtained information about the college and the degree program through the website of the Hungarian Scholarship Program (Stipendium Hungaricum). Based on this premise, the coding of (Stepinduim Hungaricum) was created, as it is one of the most attractive factors for students in Hungarian universities according to the current research. The non-scholarship students also planned to receive the scholarships in the next year after studying their subjects. Adam from Kenya (Ba engineering student), 23 years old said: "I am studying this year on my own and plan to get the scholarship next year." Other responses include hearing about the study program and scholarship opportunities from their family and friends. Lulu (BSc Pharmacy student) from Lebanon, 22, said: "My dad told me to study this year and apply for the scholarship next year." A clear indication of how important the Hungarian



scholarship (Stipendium Hungaricum) is in defining Hungarian universities and introducing the world to the quality and opportunities of education in Hungary. For young people around the world, the importance of the program is to attract students to study in Hungary. This result is in line with the (Casas et al., 2020; Fenyves et al., 2019; Zoltán, 2019). It is also consistent with the research hypothesis that scholarships are an important factor in students' choices of study.

**University's facilities and services.** The second question was about satisfaction with the services of the university. Students were satisfied with the services provided by the university to a great extent and, mentioned their preferred areas. All the students agreed on the quality of the Coordination Centre. They were also satisfied with the examination system which gives them more than a chance to succeed. They emphasised the rigour and zeal of the teaching staff, the quality of medical treatment, and the teaching methods. For example, the following students' answers to the question: are you satisfied with the university services within your study choice Asma from Egypt, 34 years old, said, "Yes, especially the laboratory and its equipment." Kemya from Iran, (BSc public health student) 21 years old, said, "Yes, the academic staff is very strict and very concerned about teaching". Adam from Kenya (BA engineering student), 23 years old: "Yes, the administrative staff of the university is excellent". Ali from Iraq (a law PhD student) 40 years old, said, "Yes, especially in medical treatment". These results are consistent with the findings (Azzone & Soncin, 2019; Kéri & Revesz, 2019). This is consistent with the research hypothesis: the higher the quality of the university's facilities, the higher the academic choice.

**Geopolitical academic factors.** The question referred to the correspondence between the location of the university and the location of the students' homes. Most respondents felt that the location of the university matched their place of residence, especially those who had received a Hungarian scholarship. The location of the university was not a problem for them. They were optimistic that they would get an internationally recognised university degree and find a job after graduation. For them, it was of great importance that the location was ideal to move to the neighbouring European countries and to the location of the University of Debrecen. Adam from Kenya (BA engineering student), 23 years old, said, "The location of the university is not close to the country, but the good point is that there are no distractions in Debrecen that detract from focusing on studies, such as entertainment venues." Nadia from Russia, (BSc Pharmacy student) 21 years old, said: "The location is perfect for moving to other countries." Amina from Sudan, (BSc Pharmacy student) 22 years old, said: "It is far from my home country, but I want to get certified to work in Europe". These findings are consistent with previous research (Casas et al., 2020; Fenyves et al., 2019). This result is consistent with the research hypothesis that geographic location (e.g., European universities) influences study choice.

**Ranking of UNIDEB.** The fourth question related to whether the reputation of the university influenced their academic choices. Most students felt that the reputation of the University of Debrecen played an important role in their choice of field of study, especially medical fields. They emphasised that the medical faculty of the University of Debrecen is the best in the country, referring to its good reputation and ranking among European and international universities. This increases their job opportunities after graduation and the university's reputation. This was evident from the students answers, for example Ozan from Turkey (MA student in Business), 33 years old, said: "Debrecen University is the second-best in Hungary and the 500th best in the world." Ana from Romania (BSc Medical student), 22 years old, said: "I was attracted



by the quality of the university” and Wisdom from Nigeria (BSc Medical student) 24 years old, said, “I always cared about the quality of education to get the best job.” Nadia from Russia (BSc Pharmacy student) 21 years old, said, “I always cared about the quality of education to get the best job”. These results are consistent with the findings (Fenyves et al., 2019; Zoltán, 2019).

**Quality of life and study, scholarships, and geographic location.** The final question from this group was why they chose Hungary. All answers mentioned the ease of life and security, as well as the low cost of living. The quality of studies, the certificates, the beauty of the cities, the study programs available in English, the possibility to study without a high average. The availability of Hungarian scholarships, providing accommodation, monthly salary, parents and relatives of some students. The Hungarian relations with neighbouring countries. Especially the possibility of moving between European Union countries without a visa and the desire of some students to move to other European countries to work after graduation. Ana, (BSc Medical student) 22 years old from Romania, said: “Neighbouring country, I know its language, and we have things in common”. Amina from Sudan, (BSc Pharmacy student) 22 years old, said: “It is a European country in the European Union, you can travel to many countries from Hungary without a visa, and that is important.” Adam from Nigeria, (BSc Medical student) 24 years old, said: “Safety, peace and beauty, the cost of living is good, the program in English.” Ozan from Turkey, (MA in Business) 33 years old, responded, “I was thinking about education in Europe, then I came across the scholarship in Hungary.” These findings are consistent with previous findings (Casas et al., 2020; Fenyves et al., 2019). They are also consistent with the research hypothesis that the higher the quality of life, the greater the academic choice of students.

### Academic choice factors – realism, materialism, and future life goals

The academic reasons for choosing the field of study were varied and overlapping. They were categorised and coded in the study as materialism, realism, and future life goals. But the first question of the academic choice factors was related to the students’ satisfaction with the field of study and location of the University of Debrecen.

**Satisfaction with major and University of Debrecen.** The questions were related to the major, satisfaction with major, age at choosing major, major reasons for choosing major, and the impact of University of Debrecen location the students’ responses about their majors were (Agriculture 1, Business 1, Law 1, Engineering 1, Pharmacy 4, Medicine 2 and Biology 1 and Public Health 1) see (Table 1). Moreover, they were satisfied with their chosen specialisations, had many future dreams to achieve through their specialisation and love all details. The age at which they chose their specialisation was early. The youngest age at which they planned a future career was 11 Ali (a law PhD) from Iraq, 40 years old, while the highest age was 19. Nadia from Russia (BSc Pharmacy student) 21 years old. Perhaps their satisfaction with their major is related to the fact that they chose their specialisation early and are satisfied with the university they are studying at. There is no doubt that the interaction between satisfaction with educational institution and satisfaction with academic staff and administration increases student satisfaction; this result agrees with (Weerasinghe & Fernando, 2018).

**Realism.** The actual reasons for choosing academic specialisation were broad. Students were motivated by a love of specialisation since childhood, helping people, dreaming of travelling to



America, acquiring a particular brand, developing new medicines, love of chemistry and the laboratory, and finding a job. Ali from Iraq (a law PhD student) 40 years old, said: *"I want to study European law to increase my chances of working at university."* Adam from Kenya (Ba engineering) 23 years old, said: *"I have been fascinated by technology since I was a child."* Asma from Egypt (MSc Biology) 34 years old, said: *"to get a high-quality certificate to get a good job"*. Nadia from Russia (BSc Pharmacy) 21 years old, said: *"I want to make my own cosmetic brand"*. Wisdom from Nigeria (BSc Medical) 24 years old, said: *"I want to help needy people in my country"*. These findings are consistent with the findings of (Casas et al., 2020; Fenyves et al., 2019).

**Materialism.** The most important reasons for students' academic choices were financial independence, fame, money, and a job in Europe. They were planning to obtain a scholarship, making up for their families, working in Hungary, getting a job with a European certificate degree, working with international organisations in Europe, and the lower costs of the study than other European countries. Lulu from Lebanon (BSc Pharmacy) 22 years old, said: *"I want to make up for my family by work after graduation"* Nadia from Russia (BSc Pharmacy) 21 years old, said: *"To travel to France after graduation and work there"* Wisdom from Nigeria (BSc Medical) 24 years old said: *"to work with WHO in Europe"*. These findings are consistent with the findings of (Casas et al., 2020; Fenyves et al., 2019).

**Future life goals.** The last question in this part of the interview was: did the geographical location of the University of Debrecen influence your choice of studies? In what way? The location of the University of Debrecen was not the deciding factor in the students' choice, as they found the city beautiful and quiet. They have many friends in Debrecen, it is not crowded and it is an excellent place to live compared to other European countries. However, the most important influence was the university and its fame, not the location. Kemya from Iran (BSc Public health), 21 years old, said: *"You can say I have a lot of friends here"*. Wisdom from Nigeria (BSc Medical) 24 years old *"I am here because the major that I want was in University of Debrecen"*. These findings are consistent with the findings of (Casas et al., 2020; Fenyves et al., 2019).

## Gender stereotyping factors

The first interview questions on gender stereotyping included 26 personality characteristics and asked students to rank the characteristics according to their masculinity and femininity or neutral. By analysing the data from all respondents' answers, we can decide which personality traits are masculine, feminine, and neutral. see (Table 3).

In the study, the personality characteristics that received more than six out of 12 votes were classified as masculine characteristics. The same technique was used for the feminine and neutral personality characteristics. The responses were neutral and to some extent expressive. Nevertheless, young academics (both female and male) consider some personality characteristics such as weakness, shyness, emotionality, softness, self-criticism and caution to be purely female traits. Moreover, some personality traits such as aggressiveness and lack of emotion, assertiveness and flirting are purely masculine traits, which could be due to socialisation, society and gender stereotypes that have become ingrained in the minds of people in the society. We can say that students chose weakness for women and aggressiveness for men as personality traits due to habitus, a component of social capital according to Pierre Bourdieu, which manifests itself in





Table 3. Personality characteristics (feminine, masculine and neutral) according to students' opinions

#	PC.	%	Turkey	Iraq	Kenya	Iran	Egypt	Lebanon	Russia	Pakistan	Sudan	Nigeria	Jordan	Romania
			M	M	M	F	F	F	F	F	F	M	M	F
1	Self-confident	N	N	M	N	N	N	N	N	N	F	N	N	N
2	Assertive	M	M	M	F	N	M	M	N	N	M	N	M	F
3	Shy	F	F	F	F	N	N	F	N	F	F	F	F	F
4	Strong	N	M	M	N	N	N	N	N	N	F	M	M	N
5	defends own beliefs	N	N	M	M	N	N	N	M	N	F	N	N	M
6	Dependent	N	N	M	F	N	N	M	N	N	N	N	N	F
7	Motional	F	F	F	F	N	F	F	F	N	F	N	F	F
8	Reliable	N	M	N	F	N	N	N	N	N	F	N	M	F
9	Gullible	N	N	F	F	N	N	M	F	F	M	N	N	F
10	Self-critical	N	F	N	M	N	N	N	N	F	F	N	F	M
11	Gentle	M	M	M	M	N	N	M	M	F	F	M	M	M
12	Careful	F	N	F	F	N	F	F	F	F	F	F	N	F
13	Submissive	F	F	N	M	N	N	M	F	F	F	F	F	M
14	Aggressive	M	M	F	M	N	M	M	M	M	M	M	M	M
15	Flirtatious	M	M	F	M	F	N	M	M	N	N	M	M	M
16	Weak	F	F	M	F	N	N	F	N	N	N	F	F	F
17	Soft	F	N	F	F	F	F	F	F	F	F	F	N	F
18	Non-emotional	M	M	N	M	N	M	M	M	M	N	N	M	M
19	Soft-spoken	F	N	M	F	N	F	F	F	F	F	F	N	F
20	Experienced	N	N	F	M	N	N	N	N	N	N	N	N	M
21	Independent	N	N	F	M	N	N	F	N	N	N	N	N	M
22	Competitive	N	F	N	M	N	N	N	M	N	N	N	F	M
23	Active	N	M	M	N	N	N	N	F	N	N	N	M	N
24	Sensitive	F	F	F	F	F	F	F	F	F	F	F	F	F
25	Accepting	F	N	F	F	N	F	N	F	F	N	F	N	F
26	Passive	N	N	F	F	N	M	M	M	N	N	N	N	F



behaviour, habits, and individual lifestyle. Others, such as social support, are acquired through their presence in the social environment. In the community in which we live, it is impossible to escape or avoid it, because it has become a habit from the beginning, part of daily life; According to the values and traditions of society that promise it, it is essential to follow and obey it. Another component of social capital, Pierre Bourdieu, is symbolic violence, which refers to power structures that lead to the internalisation of humiliations and legitimations of hierarchy, resulting in self-blame for misfortunes and the naturalisation of the status quo. Symbolic violence describes a type of non-physical violence that manifests itself in a power imbalance between social groups. It is often unconsciously agreed upon by both parties and manifests itself in imposing the norms of the group that has more social power on those of the subordinate group. Symbolic violence can manifest itself in different social domains such as nationality, gender, sexual orientation or ethnic identity. For example, all women and men agree that women are weak and less intelligent than men (Navarro, 2006).

**Gender stereotypes are a product of societies.** In answering the question of what determines the existence of gender stereotypes in human societies, the students' responses were as follows. Students believe that gender stereotyping habits are old and restrict society, and we must get rid of them, and differences still exist, but they are different. Depending on the environment and community that it adopts in all societies, even the open ones, men have more freedoms than women, and education is sufficient to reduce gender stereotyping in all communities, no matter how undeveloped they are. Ozan from Turkey (MA Business) 33 years old, said, "*I think the society is deciding the thoughts of gender stereotyping*". Kemya from Iran, (BSc Public health) 21 years old "*Unfortunately, we are facing a lot of genders stereotyping in our society*". This result is corresponding with the research hypothesis, the higher educated societies, the higher educated females and the results of (Fagot et al., 1992; Tabassum & Nayak, 2021).

**Choice and belief.** In answering the questions, are there masculine or feminine majors? the student's answers were different, although the students were against gender stereotyping ideas. When we asked them if they chose their specialisation according to their gender, the answers were shocking. Most of them chose their academic specialisation according to what suits their gender and what expected according to their societies for men and women and not only according to their capabilities and qualifications. They believed that engineering is a complex subject for women, and it is more suitable for men. Likewise, the profession of pilot and work in the army and navy needs men. Moreover, women will face several difficulties if they choose masculine majors in the future. These findings are consistent with the finding of Kugler et al. (2021) and it's very clear from some of what exactly students said about masculine and feminine jobs. Ali from Iraq (a law PhD student) 40 years old, said, "*There are masculine majors like the pilot and feminine majors like nurse or teacher in the nursery*". Ashraf from Pakistan (BSc Pharmacy student) 23 years old, highlighted, "*Yes, women should choose feminine majors*". From Kenya, 23 years old, Adam said, "*There are masculine jobs is like working in the army is not for women or mechanic*". 22 years old Amina from Sudan (BSc Pharmacy student) mentioned, "*our ideas about masculine or feminine majors depend on the family and the education*". From Romania (BSc Medical student) 22 years old, Ana stated, "*there is no masculine or feminine academic specialisation it decides by society, but education will change that*". These results are consistent with (Gneezy & Rustichini, 2004; Olsson & Martiny, 2018). This result corresponds with the research hypothesis, the higher education of families, the higher awareness of releasing from gender stereotyping.





## Liberal generation

The last question is whether students and their parents hold different ideas about gender stereotyping; most of them answered yes, not encourage gender stereotyping also try as much as possible to alleviate stereotyped ideas in society. The generation that comes may be more liberated than the old ideas that restrict freedom of thought and behaviour. Some students answered their beliefs do not differ from their parents on gender stereotyping because they are liberal and think properly. Amina from Sudan, 22 years old, mentioned, “*My parents are highly educated, and we have the same ideas*”. Ashraf from Pakistan, 23 years old, said, “*I have different ideas, and I hope women liberate*”. This implies that gender stereotypical beliefs about the gender roles of both sexes have changed over time. These results are consistent with the findings of (Bhatia & Bhatia, 2021; Eagly et al., 2020; Lopez-Zafra & Garcia-Retamero, 2021).

## CONCLUSION

This research aimed to identify the most critical factors that affect international students’ choices and the factors of gender stereotyping at the University of Debrecen. The research method adopted to explore the essential factors affecting academic choices was the qualitative method that depends on interviews through snowball samples to identify the participants. The qualitative research based on five dimensions: personal information questions, gender stereotyping, family background, university characteristics, and academic choice. Factors of family background, including the role of parents, siblings, and friends, had a practical impact on the participating students’ academic choices. The students recognised the significant role of their families, their continuous support, and their encouragement to travel abroad to obtain a university degree and in the major they desire. Moreover, the research revealed the significant role of parenting and sibling culture in their academic choices. The students expressed their particular interest in the Hungarian scholarship Stipendium Hungaricum and even the non-scholarship holders hoping to receive the scholarship. They also expressed the extent of their satisfaction with the university services, the coordination office, and teaching quality. They were satisfied with their academic specialisation, which strengthened their satisfaction with the quality of education and certification and the ease of obtaining work after graduation, moreover moving between countries that fall within the European Union due to Hungary’s unique location in Europe. Ease of living and housing, and the university ranking which helped them in their academic choice. Students impression about Debrecen, they described it as quiet and not crowded, and there is nothing in it that distracts our focus from the study, and life is easy and safe. The University of Debrecen’s environment meets their scientific needs for the quality of the study, certificate, and the services it provides. There were realistic reasons that prompted students to their academic choices, such as their love of specialisation and their passion for chemistry or biology long ago. They had chosen their specialisation from a relatively young age their speciality and finding their brand. There was Materialism. Reasons were related to dreams of creating financial fortune, travelling to the United States and working for companies of global reputation and fame, and working with international organisations throughout Europe. Besides their future life goals. In the interview questions related to gender stereotyping and its impact on student’s academic choices, they were against the ideas and habits of gender stereotyping in current societies. They remembered that there is much gender stereotyping regarding profession and specialisation in their communities. Even



perceptions of some jobs linked to gender roles in their societies; gender stereotyping is the creation of communities that adopt it. However, their ideas and their confrontation with ideas of gender stereotyping did not benefit them in the academic choice, as they chose their specialisation based on what suits their genders. Also, when they classified the personality characteristics according to femininity and masculinity, they believed some negative characteristics are pure masculine's like aggression or Purely feminine qualities like weakness and confirmed that they hope for the disappearance of gender stereotyping in their societies. Their ideas are entirely different from their parents about stereotyping and dreaming by breaking free from gender stereotyping ideas. This qualitative research revealed many aspects of the research when standing up to opinions directly with the students while expressing their views. It was not expecting that they would be with this enlightened mentality and the advanced thinking in the answers and the liberating ideas they carry, and their strong objection to the old and retro ideas used in females' treatment. In societies around the world, the research was beneficial with new ideas and developed opinions. It will be fortunate to expand this qualitative research to fill the gaps in this research and use the interview questions with new segments of students; even though the current circumstances in the epidemic represent a challenge to research, the students were very supportive.

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