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Gender and Selection of Undergraduate Programs: Factors Affecting Career Aspirations of Females in Prishtina District

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Gender and Selection of Undergraduate Programs: Factors Affecting Career Aspirations of Females in Prishtina District

Honors Society Project
Presented to
The Academic Faculty

By
Fjolla Kacaniku



Under the supervision of:

Prof. Dr. Brian Bowen

Technical advisors

Prof. Dr. Venera Demukaj

Prof. Dr. Nita Luci

Prof. Edona Maloku Berdynaj

In Partial Fulfillment of the Requirements for Membership in the Honors Society of the
American University in Kosovo

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Abbreviations

STEM- Science, Technology, Engineering, and Mathematics

AUK- American University in Kosovo

MDG- Millennium Development Goals

MASHT- Ministry of Education, Science, and Technology

Executive Summary

This Honors Project assesses the problem of student career development in Kosovo nowadays. It involves assessment of females and the emerging issues and challenges in Prishtine District. The study targeted 120 students from which 60 of them were high school students, 30 males and 30 females, while 60 were University students, 30 males and 30 females, in Prishtina area. The data was analyzed with these numbers.

Many scholars and policy makers have noted that females have historically been underrepresented in the fields of science, technology, engineering, and math (STEM fields). According to research, females' Undergraduate Programs selection both nationally and internationally has always been expected to be characterized with Liberal Arts, whereas males' degree decision encompass fields not limited to STEM (Science, Technology, Engineering and Mathematics). Although the number of females entering STEM degrees has increased, the necessity for supplementary emphasis with regards to females' authority in the decision-making is decisive. Females in the labor market have tended to follow occupations such as Education (24.4%), Nursing (18.4%), Public Administration (10%), and others only with (8.3%). Men dominate in the labor market in the professions of Engineering and Medicine.

Through this Honors Research Project data, was gathered by the means of a standardized survey, consisting of two sections, A and B by using stratified random sampling methodology. Section A surveyed 60 high school students, 30 males and 30 females, while section B surveyed 60 University students, 30 males and 30 females. There was a 100% response rate to the questionnaire. A breakdown of the responses and main findings is portrayed below in Table 1.1.

It can be clearly seen from the results presented that the four main factors impacting students Undergraduate Programs selection are parental influence, financial constraints, low high school involvement, and societal perceptions regarding gender (stereotyping). These main factors are only limited to Prishtina District. This Honors Project showed a strong correlation among these four main factors and students' Undergraduate Program selection. Hence, these four main factors resulted to be major components in student's decisions on the selection process of Undergraduate Programs based on numerical outcomes from the primary research that has been conducted.

Table 1.1- Summary of the Results Displayed Through the Frequency of Impact from the Four Main Factors

Parental Influence		
Queries	Frequency in STEM	
	Males	Females
Positive assistance on which University degree students plan to attend	40.50%	2.50%
Parental influence on which degree to study	13.34%	41.67%
Input appreciated from parents	29.17%	7.50%
Occasions discussed with parents in regards to the selection of an Undergraduate Program	1.67%	40.83%
The effectiveness of parental input	13.33%	1.67%
Different parental input	6%	33.34%
Financial Constraints		
Financial Constraints	31.67%	46.67%
Low High School Involvement		
Inaction of the STEM related activities in high school	35.84%	47.50%
Variety of STEM activities in high school	19.84%	4.17%
Participation on high school activities	28.7%	1.67%
Social Influence		
Occupations for men/women only	40.84%	9.17%
Considering STEM as an Undergraduate program	45.84%	20.84%

The most important recommendations of this Honors Research Project are:

- 1) The creation of a nation-wide Vocational Guidance Program Available in High Schools for assisting students, females in particular in Career Choice
- 2) An extension of the survey work to include the whole of the country

The secondary recommendations of this Honors Research Project are:

- 3) Use Female Role models
- 4) Rework the Ministry of Education, Science and Technology curriculum
- 5) Combat stereotypes

Chapter 1- World-Wide Issues on Gender and STEM Undergraduate Programs

This chapter will provide significant information with respect to the problem of how particular factors distinguished as barriers affect students, especially females' choices on selecting an Undergraduate Program. The literature background will support factually that this problem persists, and also numerically will convey to the reader how severe the consequences are world-wide.

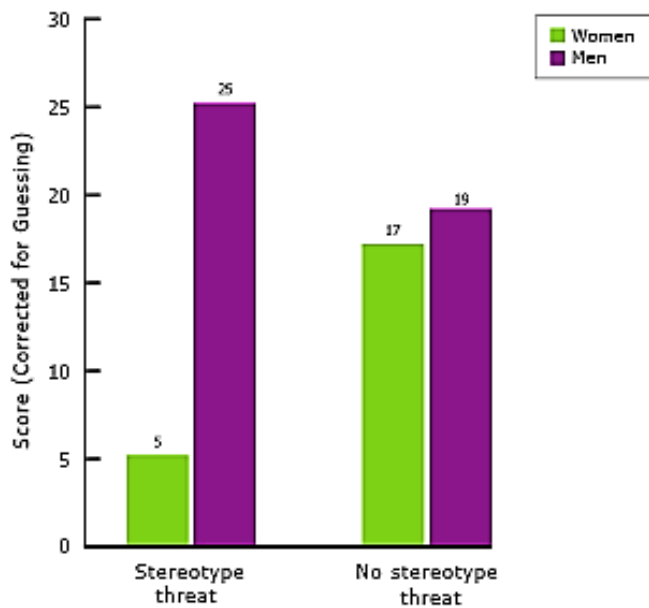
Many scholars and policy makers have noted that females have historically been underrepresented in the fields of science, technology, engineering, and math (STEM fields). Perpetually, females' occupations have been expected to be unpretentious, dealing with fields of social studies, whereas male's occupations are associated with STEM (Science, Technology, Engineering and Mathematics) [4]. Although, the number of females entering STEM degrees has increased, and the occupation gap among genders is narrower, still the necessity for additional emphasis on female's involvement in these particular degrees is essential [14]. Society has been one of the determinants that disable females to let them decide upon their free will with regards to certain Undergraduate Programs, but rather pushes them to choose social studies undergraduate programs, instead of a profession of their verdict and aptitude [5].

It is often suggested that stereotypes can be a crucial determinant in determining females' opinions towards Undergraduate Program choices [22]. A stereotype indicates that all affiliates of a certain group of the social order retain specific attributes (e.g., adolescents are reckless), or execute definite roles (e.g., women are bad drivers) [11]. According to a stereotype, regardless of whether the individual possesses the generalized traits that a group is characterized of, s/he will be identified as being part of that. Females, as such, remain the most chattered group of society that demolishes as a prey of stereotypical judgments, especially regarding choices of their degree [5]. Hence, this issue considers the influence of the society's expectations, through stereotypical judgments, so that females ought to follow social studies programs, which in most cases, translates into females' inability to do math, engage in science, or even develop a software package [22].

For instance, an experiment observing females comprised of 30 female and 24 male, first year, psychology students, at the University of Michigan with high ability in mathematics which was

measured through their grades. The entire student participants in this sample testing were intensely acknowledged with their skills in math. The division of the students was done in two groups, and the researchers monitored a math test to examine these students. One group was told that males performed better than females on the test (the threat condition), and the other group was told that there were no gender differences in test performance (the no threat condition). Burke & Mattis believed that “if stereotype threat could explain gender differences in performance, then presenting the test as free of gender bias would remove the stereotype threat, and females would perform as well as males” [3]. However, if being a female resembles low performance in math than female students would have performed worse even in the group where the stereotype threat had been lifted. As a result, the study’s outcomes show that females performed poorer than males in the threat situation whereas the gender difference almost disappeared in the nonthreatening condition [3]. The figure shows the results of this disparity when stereotyping perception plays a crucial role.

Figure 1.1 Stereotype Threat and Women's Math Performance, University of Michigan



Source: Burke, R., & Mattis, M. (2007). Women and Minorities in Science, Technology, Engineering and Mathematics.

Theoretically, all fields of expertise, and also numerous positions within those fields ought to be vacant mutually for both genders; nevertheless, this is not always considered conjoint to females' disposal [5]. This discernment ascends mainly due to the impact of the gender role stereotypes on the attitudes of both genders suitable actions, for the most part, especially considering occupational choices [18]. Even though, females might consider themselves capable for a certain position, their specific issue appears to be the social stereotypical expectations so that females stand back and attain less than their potential. The problem persists to the extent that the particular position or a certain career is considered more suitable for men, since certain professions are known as "man dominated fields" such as STEM [8].

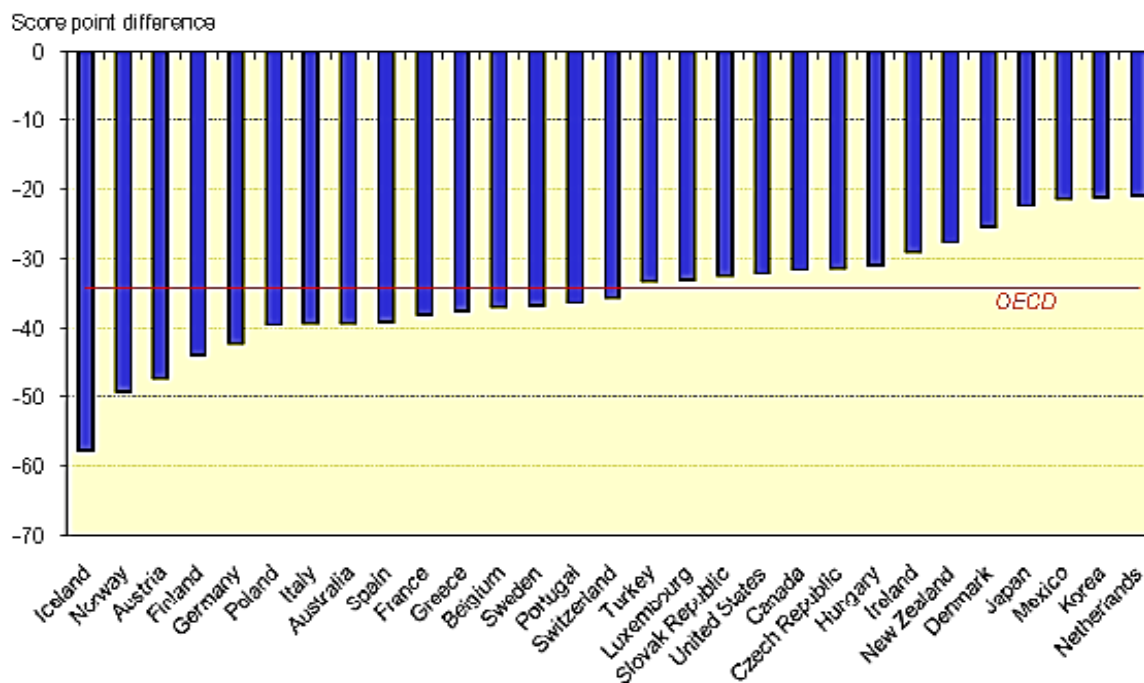
"Discrimination on the basis of sex may be based on the differential treatment of women because of stereotypical assumptions, such as tracking women into low-level jobs on the assumption that they are unwilling to commit as much time to their work as men" [5].

Abolishing disparities in education among females and males has been a precedence of progress establishments and the global community for numerous years [21]. The Millennium Development Goal (MDG) aims to "eliminate gender disparity in primary and secondary education, preferably by 2005, and in all levels of education no later than 2015" and such establishment is preserved by World Bank and the United Nations [21]. Consistent with the World Bank and the UNDP, "there is no investment more effective in achieving MDGs than educating girls" [6]. Equality in educational opportunities amongst males and females has also been acknowledged in the Universal Declaration of Human Rights of 1948 [6]. As such, it can be comprehended how important it is for the society to improve the gender gap by allowing equal participation of females and males in the desired degrees. Moreover, narrowing down the problematic even further, it is highly desired to maintain an equal participation of males and females in STEM [21].

Despite the fact that education has become one of the main goals of numerous countries which allows them achieving sustainable economic improvement, a relatively high disparity among gender in school participation is evident [23]. While, considering poor countries, they are still facing a high gap among female/male participation in schools, whereas, in rich countries females are showing to outnumber males. A cross-national study done regarding literacy achievement from UNDP, which visualizes how female participation in schools has enabled the contraction of

the gap drastically, and this is presented on the figure below. Girls outperforming boys is more persistent in some countries where girls perform better in reading than boys. This gender discrepancy is particularly large in Iceland, Norway, Austria and Finland and less deceptive in nations such as Korea and the Netherlands [15]. Hence, this gap does not have to do anything with lack of attributes on the female’s side; nonetheless, it is the social order pressure that affects females decisions most [18].

Figure 1.2 Gender Differences between (Boys-Girls) in Student Performance in Reading, OECD



Source: UNDP. (2012). Gender and Sustainable Development MAXIMISING THE ECONOMIC, SOCIAL AND ENVIRONMENTAL ROLE OF WOMEN. 180-180.

Females perusing STEM as a degree is considered to be one of the predominant enrichment resources nowadays [21]. It is important considering the fact that technology has become a main factor for economic enhancement [6]. There is an increasing request for STEM employees, and job expansion in this arena is apparent [3]. However, the number of females becoming part of STEM remains very small. It is believed that “Greater female participation in computer science, engineering and technology-oriented jobs would spur innovation and economic advances in all countries” [23]. Yet again, the issue of females not participating in STEM degrees can also be

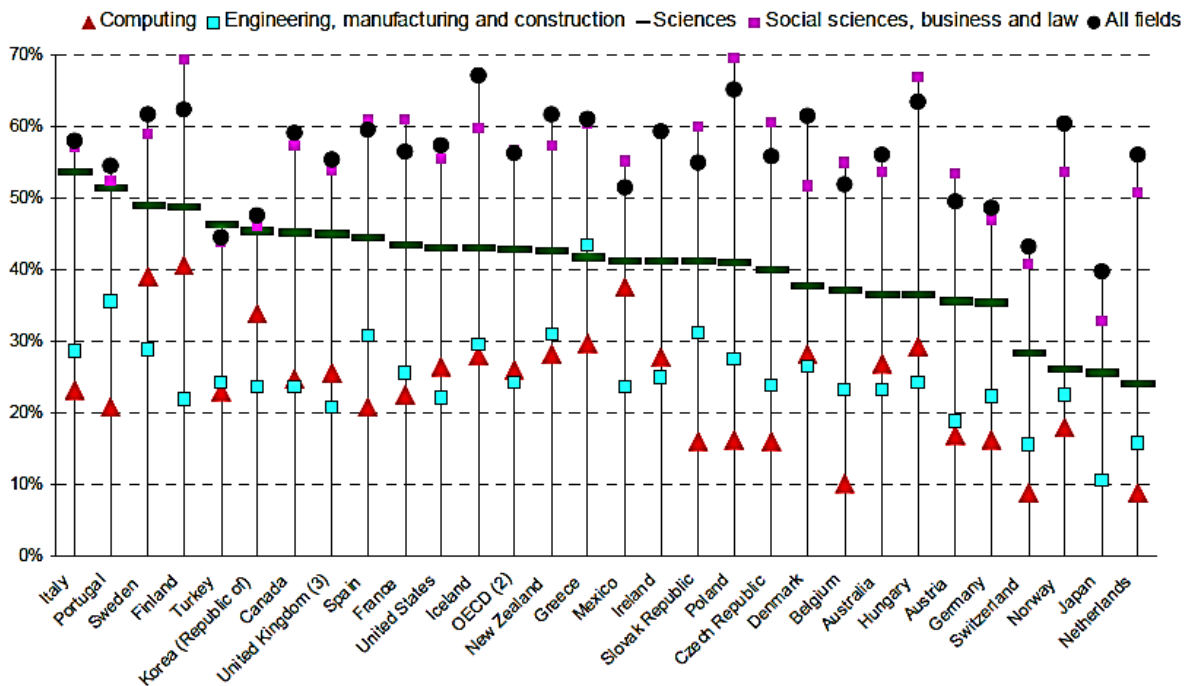
witnessed in early stages of female's development. Female participation in science based on subjects such as advanced mathematics is poor in primary and secondary school [3]. Computer knowledge is increasing vastly, but the gender gap is still very significant in these programs [21].

If the society is able to attract more females into STEM degrees, it will enrich the pillars of growth improvements, and effectiveness [6]. Today, Scientists and Engineers are working to disentangle the utmost disturbing challenges, such as, dealing with issues of searching cures for diseases, attempting alterations on global issues, enabling access to sanitation, and so on [7]. Literature suggests that, having male participants as well as equal female participants in resolving these existing concerns will enable the appraisal to be considered from both perspectives [13]. In other words, having a female's say in all these prospects will enable both sides of the argument to be verified. Engineers, as well, establish numerous equipment that society uses on a day to day basis—buildings, bridges, computers, cars, wheelchairs, and so on. If females are not involved in the proposals of projects, the needs and desires of females are not being taken into account. For instance, some early voice-recognition systems were calibrated to typical male voices [12]. As a consequence, female voices remained disregarded. Analogous instances are contemporary in numerous supplementary industries [13]. Further, a predominantly male group of engineers tailored the first generation of automotive airbags to adult male bodies, resulting in avoidable deaths for females and children [12]. Diverse labor force enables different standpoints of the problem solutions of scientific and technological products, services, where results are probable to be superior designed and also evocative for a wide range of users [7].

In the United States, only 15% of females are registered in computer science modules [20]. Considering the literacy of these females it shows a similarity to males [20]. It is not about the deficient abilities of females, but rather due to social stereotypical perceptions on what should females concentrate of studying [18]. Intrinsically, males tend to perceive science as something more approachable to them, while society's expectations for females are much less probable for them to major in computer science, engineering or physical sciences. Although females receive more than half of University degrees worldwide, they only justify for 30% of STEM (Science, Technology, Engineering, and Mathematics) degrees [21]. The portion of females unloading computing-related degrees fluctuates amongst countries, varying below 10% for Belgium,

Switzerland, Netherlands, Belgium to 40% in Finland and Sweden. The graph below explains precisely the share of female graduates by field, thus, it can be noticed that participation on STEM in amongst lowest percentages.

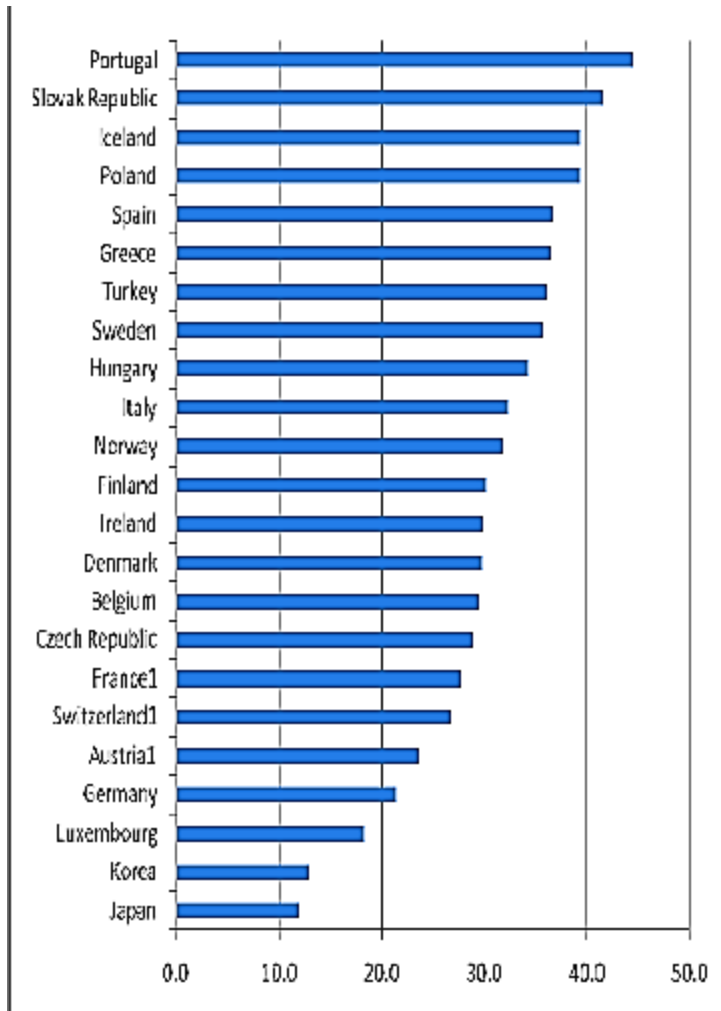
Figure 1.3 Share of Female Graduates by Field



Source: UNDP. (2012). Gender and Sustainable Development MAXIMISING THE ECONOMIC, SOCIAL AND ENVIRONMENTAL ROLE OF WOMEN. 180-180.

The segment of the female that graduate from STEM degrees are even less involved in research [21]. According to some cross national statistics displayed in the figure below, females embody only 30% of STEM researchers in most developed countries and only 12% in countries such as Korea and Japan. These females tend to be concentrated in education, nursing, while men choose STEM Undergraduate Programs. Hence, lacking the opportunity to engage in research restricts the shared gender perspectives on current world issue resolutions [21].

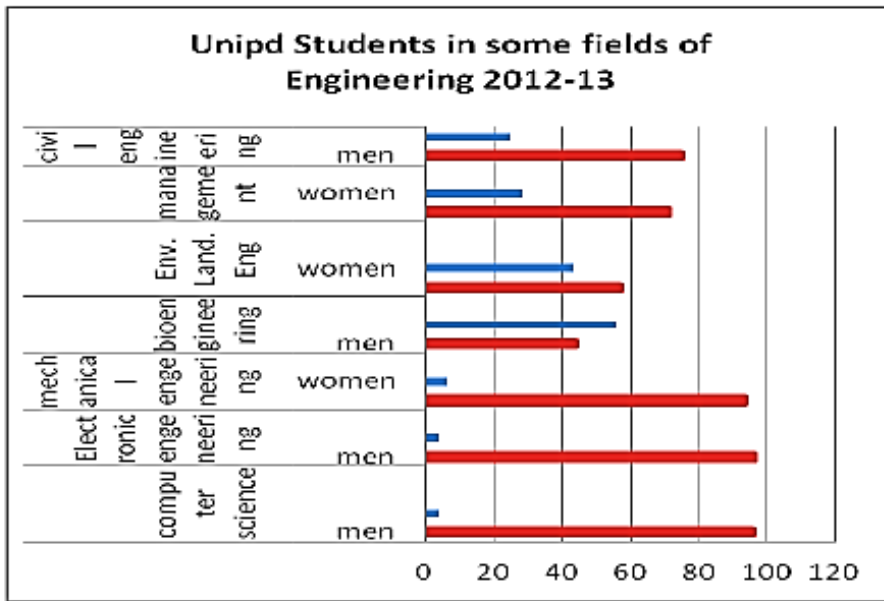
Figure 1.4 Women Researchers as Share of Total



Source: UNDP. (2012). Gender and Sustainable Development MAXIMISING THE ECONOMIC, SOCIAL AND ENVIRONMENTAL ROLE OF WOMEN. 180-180.

Another study that enlightens high disparity among female-male participation on STEM degrees, particularly in Engineering, is best represented by the graph below. Based on the visualized representation of the graph, it can be seen how mostly males attend Engineering major. The red color indicates the participation of males in the Engineering degree, whereas blue represents the “minority”, which are female students majoring in Engineering. This study was prepared with the purpose of understanding the expectations of the society towards females versus the abilities of males and females in attending Engineering field [1].

Figure 1.5 Students in the Faculty of Engineering fields, USA



Source: Badaloni, S. (2014). Gender Based Segregation in Education: New and Old Behaviors. 120-120.

The chance to pursue a career in science, technology, engineering, and mathematics is also a matter of wage impartiality [21]. Occupational apartheid accounts for the preponderance of the wage gap, and even though females may make a lower amount when compared to males earning in science and engineering fields, as they do on average in the overall workforce, females in science and engineering tend to earn more than females earn in other sectors of the workforce [19]. As such, in U.S. the average starting salary for someone with a bachelor's degree in mechanical engineering, for example, is nearly over \$59,000 [14]. In contrast, the average starting salary for an individual with a bachelor's degree in economics was just under \$50,000 [14].

Females are below par embodied in the STEM labor market [1]. Natural Sciences, Engineering and Mathematics professions are considered to have the bottom segment of female's participation. "Females do occupy more than 60% of STEM related jobs, but these are mostly secretarial and clerical positions" [21]. With regard to STEM expert positions, which encounters the ones who improve and preserve computer hardware and software, females partake only with a fraction 10-20% of positions and this share is decaying in numerous nations [1]. As a result, literature endorses how Social values impact Undergraduate Programs selection [18].

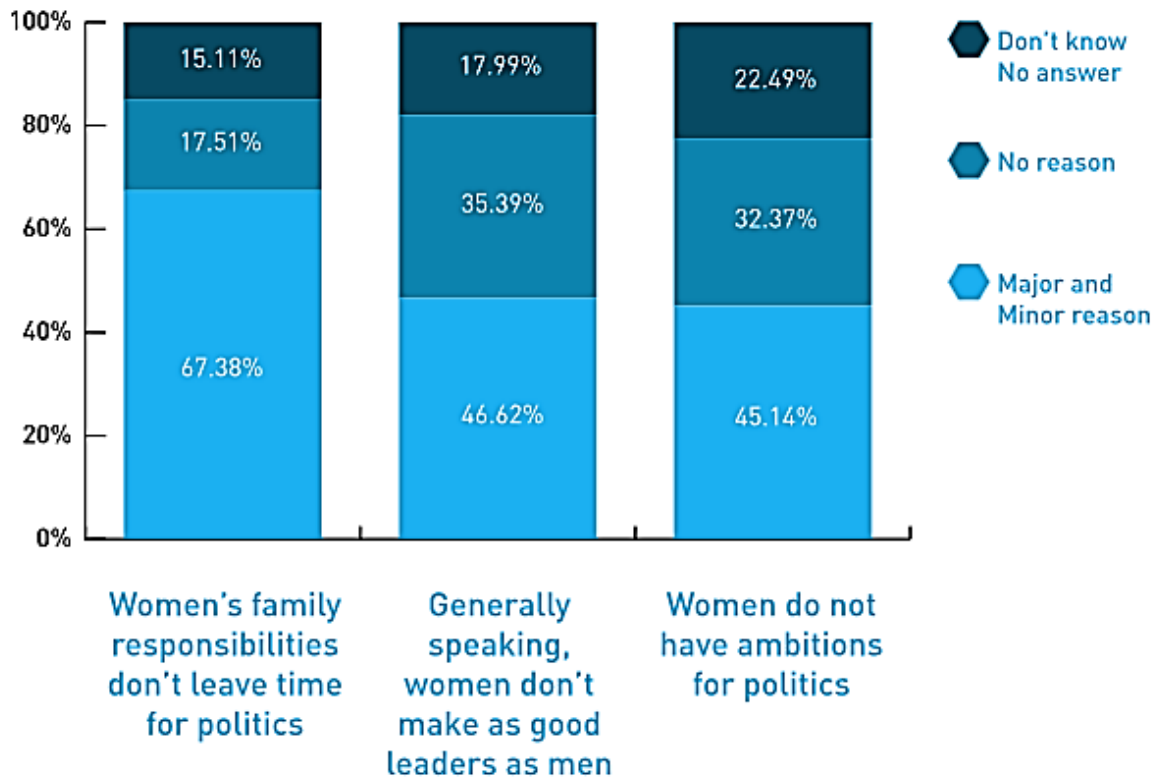
Chapter 2- Apprehensions on Gender and STEM Undergraduate Programs in Kosovo

This chapter will provide significant information with respect to the problem of how particular factors distinguished as barriers affect students, especially females' choice in selecting an Undergraduate Program. The literature background will support through evidence that this problem persists, and also numerically will convey to the reader how severe the consequences are in Kosovo.

As conveyed in numerous policy documents, females are frequently an entity of discernment where they are embodied as the most fragile fraction of the inhabitants [2]. Prevailing studies regarding gender differences in Kosovo have distinguished that in comparison to other neighboring countries, females in Kosovo are at the peaks of disadvantage in terms of educational achievements and their employment opportunities [16].

When the case of Kosovo is analyzed in terms of social values and judgments for females on their occupational choices, the graph below captures the Kosovar society's idea of female capabilities. According to this study conducted by the UNDP in Kosovo, when the respondents were questioned as to why females do not equally achieve high-ranking positions as men, the following fraction of 46.62% stated that females do not represent good leaders when compared to men, which signifies the concern that society is built upon many layers and barriers that hold back females aspirations [9].

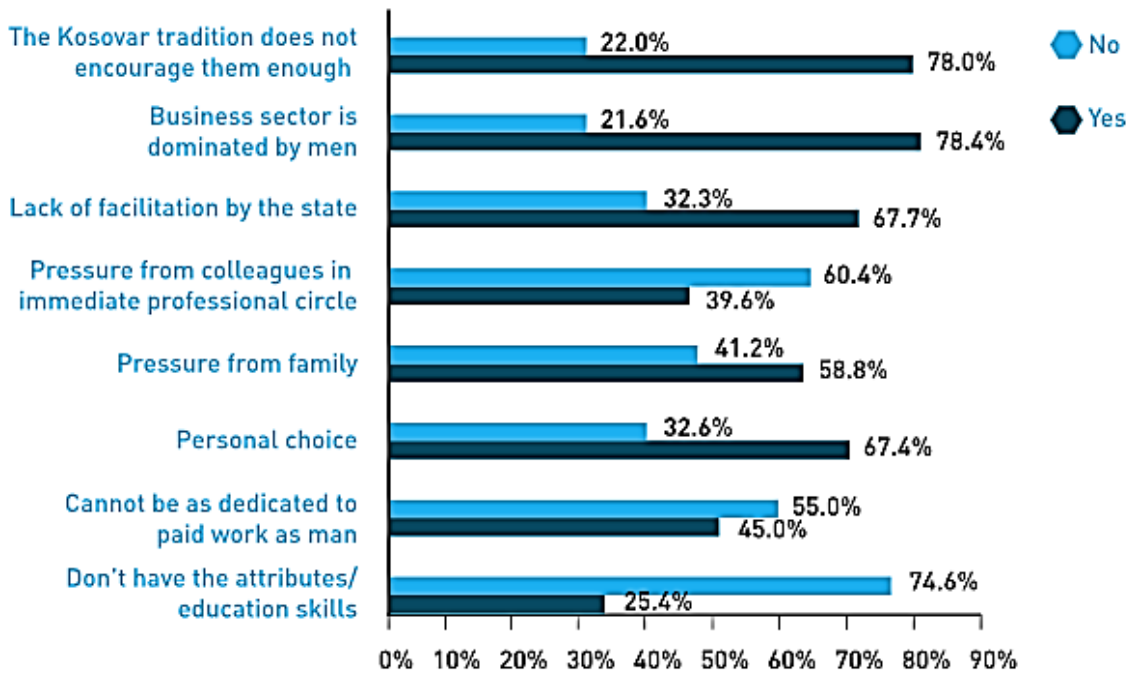
Figure 2.1 Opinions of Why Fewer Women Are in Decision-Making Positions



Source: Haskuka, M., & Duri, I. (2014). The Leadership and Participation of Women in Politics.

Some of the factors that hinder Kosovar females to choose an Undergraduate Program of their verdict are precisely enlightened with the study conducted by the UNDP analyzing some of the barriers presented in the figure below. Moreover, this study has been conducted mainly for the purpose of understanding particular social factors that explain the reason why females are part of a bottom down percentage participation in leadership and decision making positions. Some of the social barriers that show high significance impacting females are the following, the Kosovar tradition does not encourage them enough, business sector dominated by men, lack of facilitation by state, and pressure from family, which verifies that it is not a matter of attributes and educational skills that prevents females from perusing an occupation of their choice, nonetheless, is the society's stereotypical anticipations towards their decisions [9].

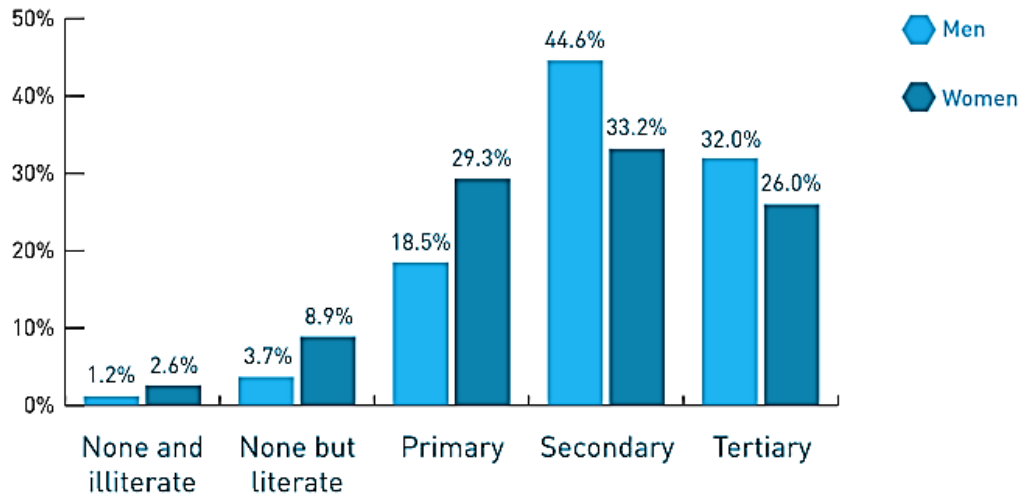
Figure 2.2 The Main Factors Hindering Females in Their Careers



Source: Haskuka, M., & Duri, I. (2014). The Leadership and Participation of Women in Politics.

Considering the recognized prominence of education for females' contribution in politics, decision-making and leadership, and especially in STEM (Science, Technology, Engineering, and Math), it is a countless social inadequacy that females in Kosovo significantly lag behind males in this area [9]. The Kosovo wide information gathering conducted in 2012 displayed that 77% of the 59,624 individuals above the age of 15, without any formal education, are females in comparison to 23% that are males. Conversely, out of the 75,213 people with bachelor degrees, females account for only 39%. The outcomes of the inquiry exhibited that males in Kosovo acquire higher levels of education whereas females acquire less. The results are statistically significant and stand equally for secondary and tertiary education; nevertheless, the uppermost difference is perceived at the tertiary level. This displays that males are more prone to acquire secondary and tertiary education and females are twice as prone not to have any education which presented in the figure below. However, there are marks that this educational divergence among males and females is decreasing based on the statistically significant observation that younger female respondents have higher education levels [9].

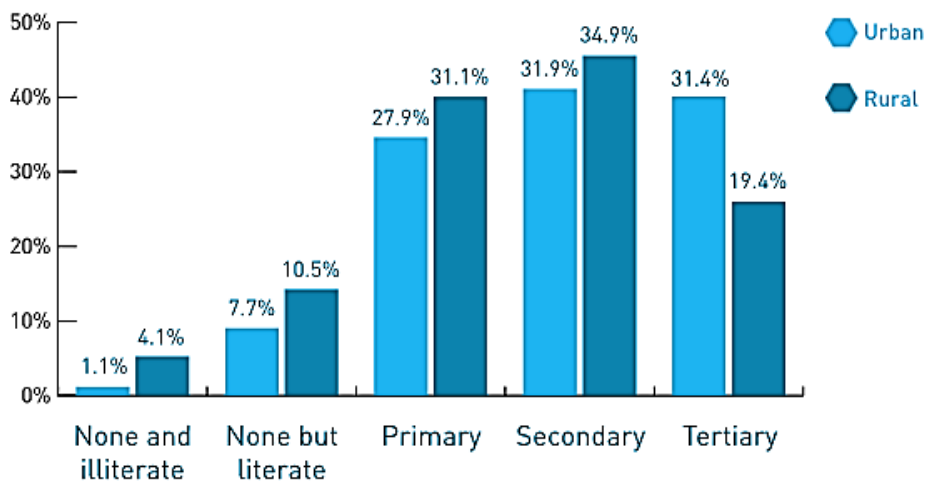
Figure 2.3 Education Attainments by Gender



Source: Haskuka, M., & Duri, I. (2014). The Leadership and Participation of Woman in Politics.

Additionally, the analysis shows that females living in rural areas are less educated; there is a significant discrepancy between the educational levels of females living in cities opposed to females living in villages. Encountering the eminence of education for the participation of females in decision-making processes, this further contributes to the disadvantages of females in rural areas [9].

Figure 2.4 Educational Attainments among Women Living in Rural and Urban Areas



Source: Haskuka, M., & Duri, I. (2014). The Leadership and Participation of Women in Politics.

Narrowing down the problematic of the participation of the females in University of Prishtina, STEM Undergraduate Programs, the outcomes are displayed in the table below. The Faculty of Electrical Engineering consists of 235 female participants, whereas 838 male participants in this Undergraduate Program. Moreover, Faculty of Civil Engineering comprises of 323 females, where males outnumber females with 1030 partaking. Also, the Faculty of Mechanical Engineering encompasses of only 82 females and 682 males. In contrast, social studies type of degrees are characterized with higher number of female, such as, Faculty of Education has a fraction of female participants of 1574, whereas males only with 495. Further, this disparity is acute in Faculty of Teaching and Training, as well, where females outnumber males with a fraction of 118 and 31 respectively. These statistical outcomes confirm the low participation of Kosovar females in STEM [17].

Table 2.1 Students in the University of Prishtina

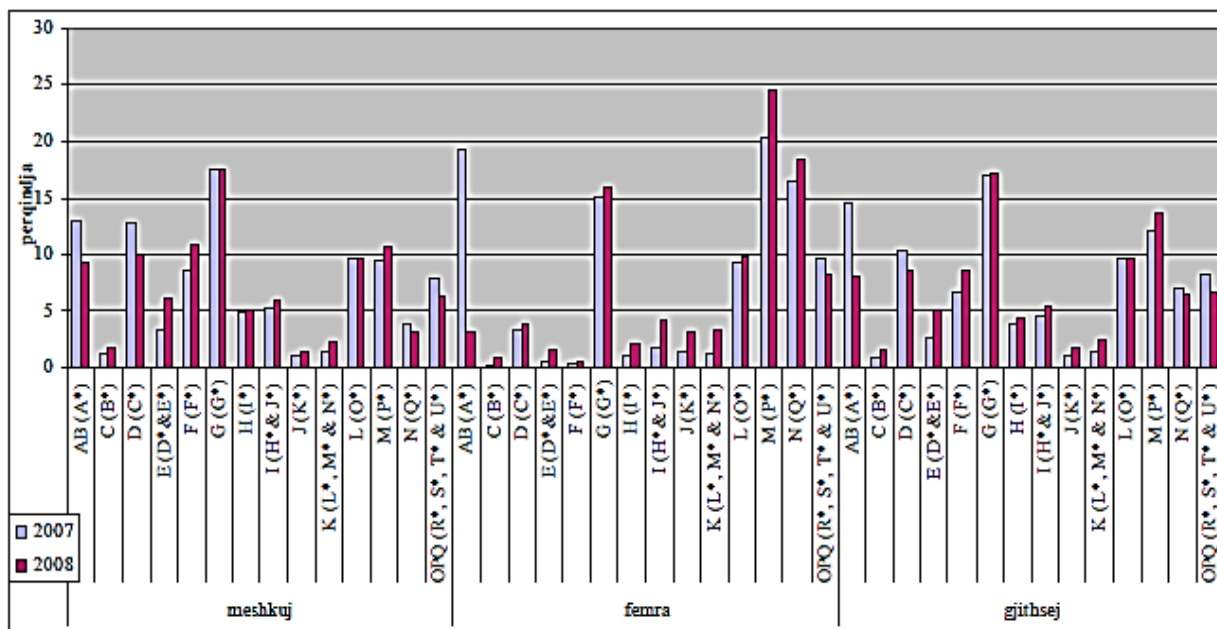
No.	Faculty	Females	Males	Total
1	Faculty of Philosophy	1124	1034	2167
2	Philological Faculty	1451	991	2442
3	Faculty of Law	1322	1950	3272
4	Faculty of Economics	1735	2502	4535
5	Faculty of Civil and Engineering and Architecture	323	1030	1353
6	Faculty of Electrical Engineering	235	839	1076
7	Faculty of Mechanical Engineering	82	883	965
8	Medical Faculty	1027	914	1941
9	Faculty of Arts	155	156	311
10	Faculty of Agriculture	107	430	587
12	Faculty of Education	1540	537	2177

Source: Rexhepagiq, J., Koliqi, H., Nimani, S., Hoti, D., Shatri, B., & Halim, D. (2005). THE UNIVERSITY OF PRISHTINA.

Another study, comprised in the figure below explains high disparity among males and females in particular professions such as STEM. It can be perceived that participation of females in the labor market follows with profession such as Education Sector 24.4%, Nursing 18.4%, Public

Administration 10%, and others only with 8.3%. Whereas, men are present in the labor market with professions such as: Engineering, Medicine, and so on [10].

Figure 2.5 a) Employment by economic activity and gender



Source: Labor Market Statistics in Kosovo

Figure 2.5 b) Employment by Economic Activity and Gender

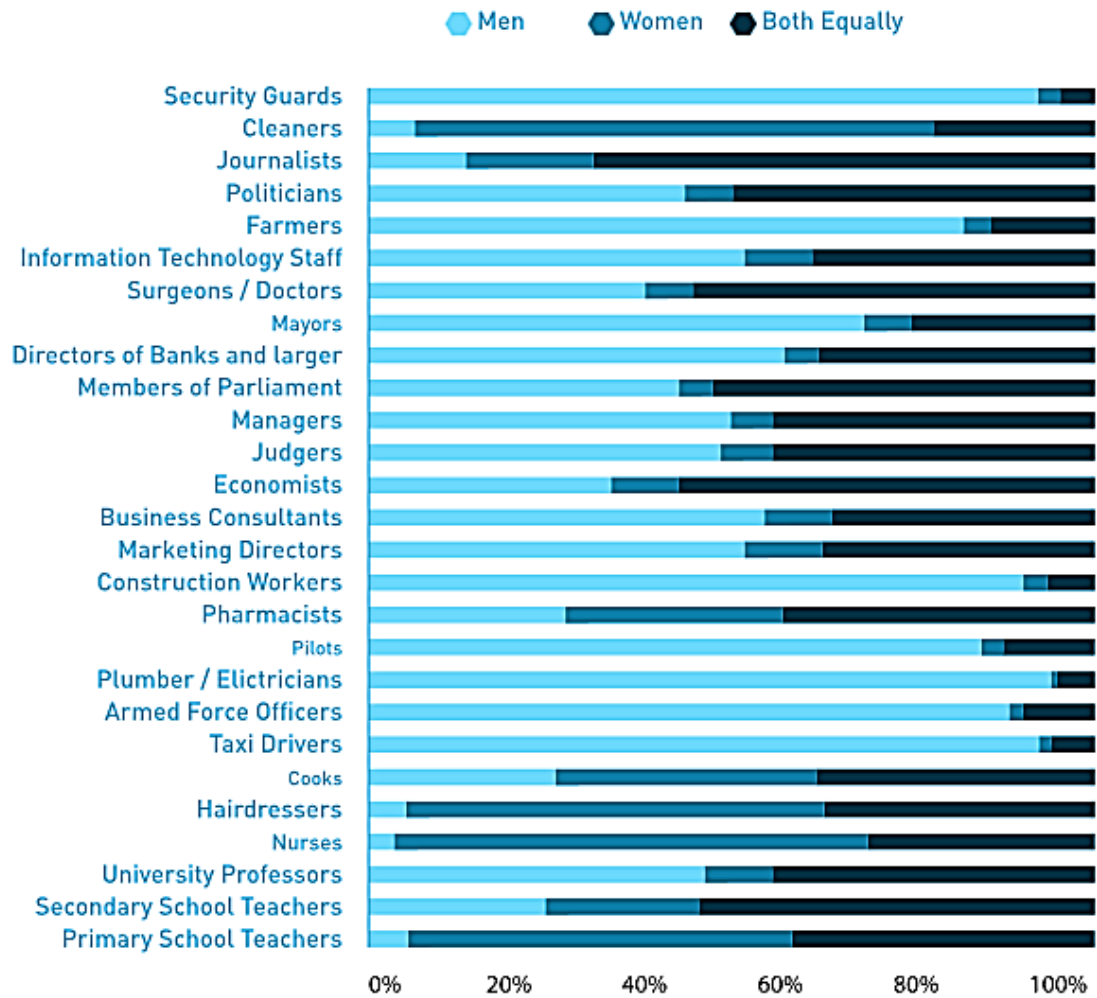
Category	Description
A	Agriculture, forestry and fishing
B	Mines and quarries
C	Manufacturing
D	Electricity, gas and water
E	Water supply, sewerage, waste management and repair activities
F	Construction
G	Wholesale and retail trade, repair of motor vehicles and motorcycles
H	Public Administration
I	STEM

J	Teaching positions
K	Health and social work

Source: Labor Market Statistics in Kosovo

Enormous gender discrepancies in Kosovo’s labor market carry on regardless of the contemporary economic development of the country [10]. Respondents specified that they subordinate certain occupations taking gender into account. In general, the outcomes recommended that numerous respondents associated males with leadership positions, predominantly in STEM. To systematize the responses, occupations were divided into three distinct groups, based on whether they are traditionally held more by males and/or females. As such, the survey outcomes categorize those professions into traditionally held by men, traditionally held by women, and traditionally neutral professions. Regarding more “traditionally male” occupations factually adapt more by males than females (i.e. armed force officers, taxi drivers, electricians or plumbers, pilots, construction workers, security guards, etc.), respondents commonly associate these professions with men. The same stands also for “traditionally female” occupations that have been factually practiced by females (i.e. nurses, primary school teachers, hairdressers and cleaners). Regardless of their gender, ethnicity and age, participants still associate these professions with females. The results were more equally dispersed regarding traditionally perceived neutral professions. Professions associated equally with men and women included pharmacists, secondary school teachers, economists and journalist. Figure beneath encompasses all three of divisions and further visualizes the occupation groping that stands in Kosovo [9].

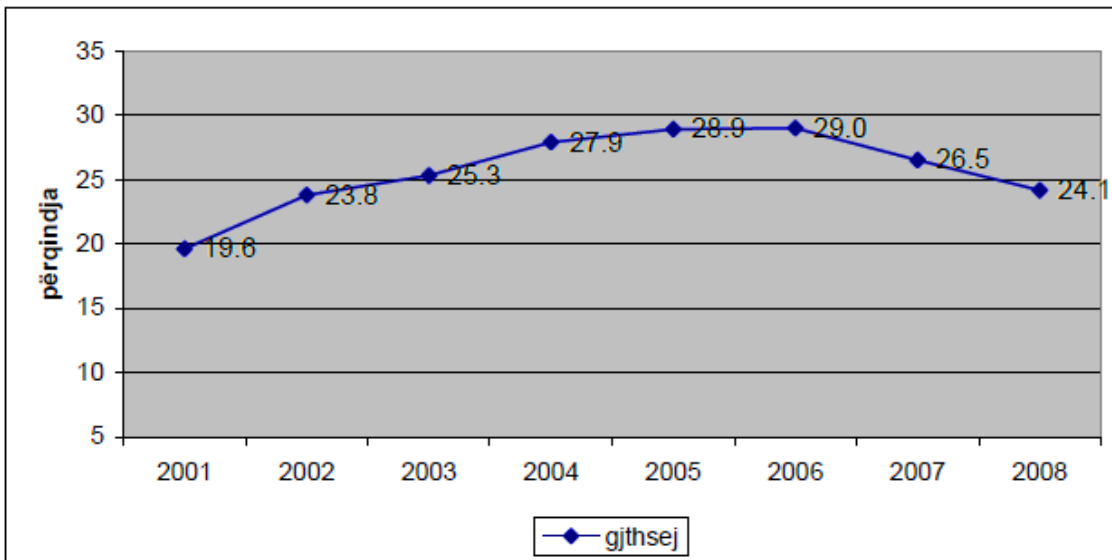
Figure 2.7 Occupations Traditionally Held by Men, Women, or Both Equally, Kosovo



Source: Haskuka, M., & Duri, I. (2014). The Leadership and Participation of Women in Politics.

Yet, when the trend analysis through the years is observed in the figure below can make all comprehended that gender employability gap has contracted, and the inclinators shows to path progressively. This indicates how from 2001 where the employability gap was higher, in the coming years the gap was reduced with an increased percentage of equal employment opportunities [10].

Figure 2.8 Gender Employability Trend



Source: Labor Market Statistics in Kosovo

Chapter 3- Methodology of Data Gathering

This chapter restates the problem statement and explains what the project will be addressing. The chapter contains information on the steps and sequencing of the data collection, problems, and difficulties all of which are listed in an understandable manner. Finally, this research has encountered various strengths and weaknesses through the course of data gathering.

This Project will be addressing the problem of how particular factors such as: parental influence, financial constraints, low high school involvement, and social values regarding gender (stereotyping) affect students' choice on selecting an Undergraduate Program.

3.1 Goals of the Research Project

Goals of this project encounter the following:

1. Justify, or correct the assumptions regarding why there is a disparity of low female participation in STEM.
2. Challenging the stereotype ways of thinking regarding females going into STEM.

This research examines the positive correlation between the following factors, social values regarding gender (stereotyping), parental influence, financial constraints, low high school involvement, and undergraduate program selection.

3.2 Steps and Sequencing of Data Collection Process

The Honors Research Project involves the gathering of relevant information through conducting a standardized survey, which consisted of two sections, A and B. This research uses a stratified random sampling methodology. A stratified random sampling was used in order to ease grouping of respondents, meaning that, since the survey accounts for two sections (i.e. high school students and University students), it is more understandable to have such a division. Then, the students were randomly selected without any specific criteria.

Conducting a study as such will require surveying sample representatives of this research topic which includes surveying senior high school students, as well as University students. This research project includes both sections of students since it aims to understand the main factors that influence both groups to choose a particular Undergraduate Program. Hence, reaching to the

desired answers will require both perspectives to be taken into account (i.e. high school and University students).

Section A surveyed 60 high school students, 30 males and 30 females, with the objective of understanding the extent to which the following factors: social values regarding gender (stereotyping), family influence, financial constraints, and low high school involvement influence these high school students in their Undergraduate Program choice. This section of the survey involves stratified random sampling methodology, where three high schools in Prishtina were chosen, Xhevdet Doda (Public high school, science based), Mehmet Akif college (Private high school, science based), Gjin Gazulli (Public high school, professional based). The selection of these high schools was based on the willingness of the high school officials to allow gathering of the data in their schools, and also the must/want criteria presented in the table below. Hence, these three high schools were the ones that have granted the permission to conduct the study with their students, since many other high schools were not willing to allow the data collection process in their high school environments. Subsequently, students were surveyed based on random sampling, where the surveys were just given to the principals of each high school and distributed randomly to the high school students. It can be noticed that the number of participants is 60 (i.e. 30 males and 30 females), and this number is random as well. In other words, due to time limitations of this research project, the study cannot comprise a larger sample size. As such, since 60 students participated during the data collection, meaning that the principles of high schools managed to assign 60 students to respond, that is how the number of 60 students made a sample size for the section A-high school students. That number assigned allowed allocating a sample of 60 students in the section B (University students) also.

The table below explains the main criteria that were used to select these high schools as strata of the data gathering. The must criteria include students being seniors, have diverse backgrounds, and to come from Prishtina area. As a consequence, it can be observed that only these three high schools fulfil the criteria stated in order for them to be selected. While, the want criteria is a lighter criteria, meaning that high schools might not be able to fulfil that, but still it is desirable, such that, high GPA, AP courses, and extracurricular activities.

Table 3.1 Must and Want Criteria for High School Student Selection

Must Criteria	Scale	Mehment Akif college	Xhevdet Doda high school	Gjin Gazull high school	Ali Sokoli high school
Seniors	Yes /	Yes	Yes	Yes	Yes
Diverse backgrounds	No	Yes	Yes	Yes	No
Prishtina area		Yes	Yes	Yes	
Want Criteria	Scale	Mehment Akif college	Xhevdet Doda high school	Gjin Gazull high school	Ali Sokoli high school
High GPA		2	2	1	
AP courses		1	1	1	
Extracurricular activities		2	1	1	

Scale	1	2	3
High GPA	Low	Med	High
AP courses	>2	2	1
Extracurricular activities	> 1 week	> 1 day	< 1 day
Community impact	Low	Med	High

While, the section B allowed surveying 60 University students, 30 males and 30 females, with the objective of understanding the main reasons behind their Undergraduate Program choices. This section of the survey involves stratified random sampling methodology as well, where initially University of Prishtina and American University on Kosovo were chosen as strata;

afterwards, students were surveyed based on random sampling. There was not any procedural permission being granted by either one of the Universities, since this data collection did not need such means; therefore, the study was done very smoothly. As explained, the number 60 was assigned to section B also, due to the exact participants in the section A sample. This consistency of equal samples (i.e. 60 high school students and 60 University students) was needed for the comparative analysis among both sample sections.

Also, for section B (University students), must and want criteria, presented in the table below, was used in order to correctly distinguish which Universities best fit as sample representatives for this research project. As such, must criteria for this student selection encountered the following: they have to be current students in order for them to participate in the survey. Students have to come from diverse backgrounds; this research is mainly focused on understanding what are the factors on students choosing a particular Undergraduate program, and as such by having numerous backgrounds it is easier to acquire diverse responses as well. Lastly, the University has to be located in Prishtina area since the research is only focused in this part of Kosovo. Even though, there are certain want criteria, all of them are only anticipated, but not required, such as, high school GPA, stem courses, extracurricular activities (conferences, guest speakers), and so on.

Table 3.2 Must and Want Criteria for University Student Selection

Must Criteria	Scale	A.U.K	University of Prishtina	AAB University
Currently students	Yes / No	Yes	Yes	Yes
Diverse backgrounds		Yes	Yes	No
Prishtina area		Yes	Yes	
Want Criteria	Scale	A.U.K.	University of Prishtina	AAB University
High GPA		3	2	
STEM courses		2	2	
Extracurricular activities (conferences)		2	2	

Scale	1	2	3
High GPA	Low	Med	High
AP courses	>2	2	1
Extracurricular activities	> 1 week	> 1 day	< 1 day
Community impact	Low	Med	High

Section A survey accounts for students' backgrounds (e.g., high school involvements) and career aspirations, whereas the Section B Survey encourages students to reveal their post bachelor goals. Both survey sections are essentially comprehensive with regards to students' academic, social, and personal development, as well as, their family influences, peers, faculty, and other meaningful factors in students' lives and long-term trajectories.

3.3 Problems and Shortcomings that Aroused through the Data Collection

Conducting a study as such involves also getting permissions from high schools board members and the willingness of students to participate. Hence, it can be argued that this research process involves many difficulties. One of the problems experienced during the course of the research entangled the delayed permission to survey high school students (i.e. Xhevdet Doda high school, Mehte Akif college, and Gjin Gazulli high school), from the panel representatives. Encountering such delays slows down the research process. Nonetheless, once the consent was granted, the data collection started in those three high schools, and the practice can be distinguished to be efficiently completed.

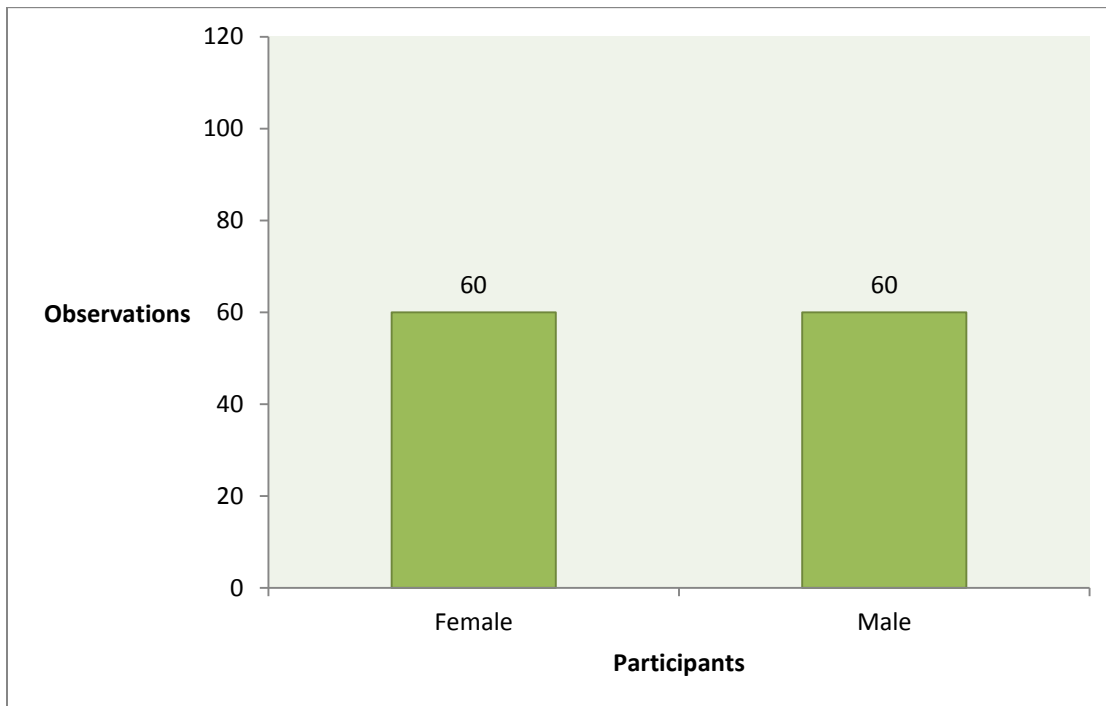
While, the ease this research embraced was through surveying Survey B representatives (i.e. University of Prishtina, and A.U.K. students). Data process collection for the section B (University students) did not request for permission per se, to collect the data. Therefore, it can be said that a benefit of the project was being an A.U.K. student myself, and also having networks with University of Prishtina students.

3.4 Encouraging and Uncomplimentary Aspects of the Research Project

There were numerous strengths of the project such as, survey research allowed higher number of participants to be surveyed as compared to interviews which limit the number of respondents due to the time constraint. For instance, such study endorsed 120 participants from both sections to be questioned- high school and University students. Also, another strong point of the research can be considered the ease of the attitude questions asked in the survey. In other words, more understandable answers are gained while asking the attitude questions in a survey format. Further, the survey layout is useful for obtaining data that allow quantitative predictions to be made easily. In addition, the researcher may construct a situation that eliminates the confounding influence of many variables, permitting one to more credibly establish cause-and-effect relationships.

The weaknesses of this research process involved the following, small sample size, which due to the time limitations, this research allowed surveying only 120 representatives. However, in the recommendations part, the suggestions will be such that, more studies should be done in regards to “Gender and Selection of Undergraduate Programs” so that the discussion and conclusion will be more precise. Lastly, the accuracy of what was being told was another weakness of the collection data procedure, since Kosovar society is more prone to give socially accepted answers, rather than a personal opinion.

Figure 3.1 Participants Based on Gender



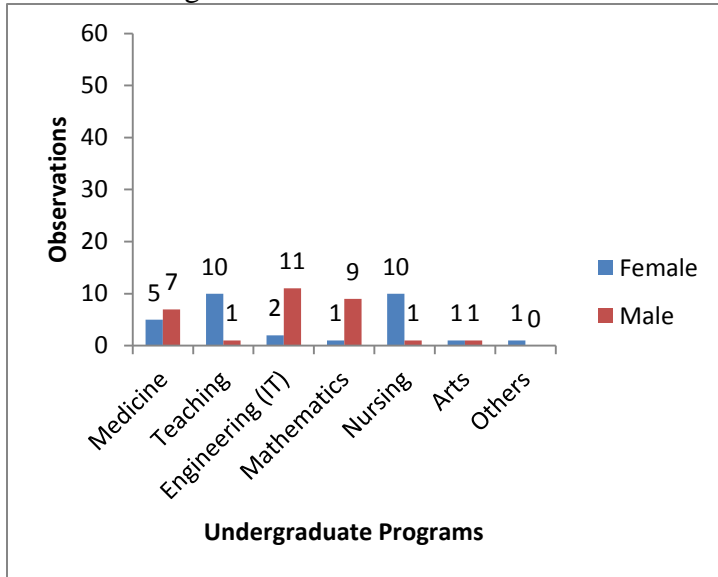
This research comprises of sample representatives high school and University students. As such, 120 students participated in the investigation where 60 the responded derived from section A-high school students, while the other 60 resulted from section B-University students. In percentage terms, high school students participated with 50% males and 50% females. The same is also true for University participants, 50% males 50% females.

Chapter 4- Results Regarding Parental Influence

This chapter focuses on one of the factors found to have a direct impact on students' decision in selecting a particular Undergraduate program, which is parental influence. Some of the questions asked in the survey, which are presented graphically in the chapter are the following, which University degree are you planning to attend; did your parents have an influence on your decision on which degree to study; did you appreciate all the input from your parents; on how many occasions did you discuss the selection of an Undergraduate Program with your parents; and Did your parents provide input by. These questions allow examining how parental impact affects students Undergraduate Program selection, which is a matter deliberated throughout this chapter.

Figure 4.1 Which University Degree Students Plan to Attend

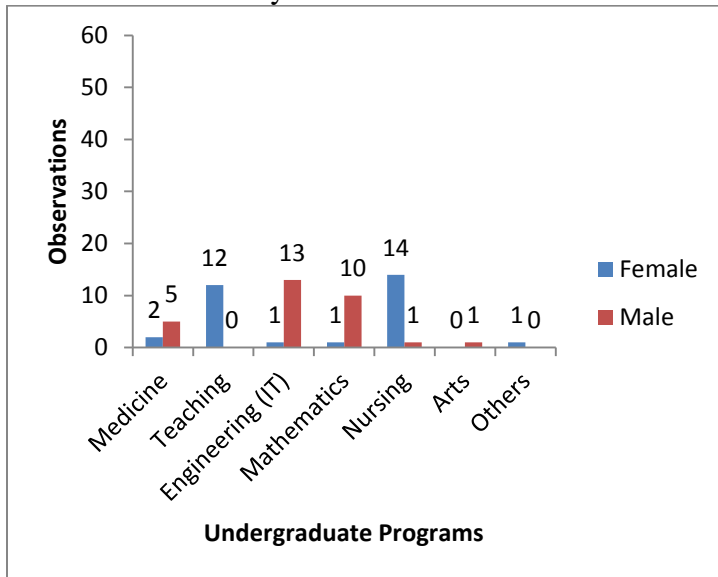
Section A- High School Students



When the question “Which University degree students plan to attend” was asked, section A females responded as follows: Medicine 8.33%, Teaching 16.67%, Engineering (IT) 3.33%, Mathematics 3.33%, Nursing 1.67%, Arts 1.67%, Others 1.67%, whereas, males replied: Medicine 11.67%, Teaching 1.67%, Engineering (IT) 18.33%, Mathematics 15%, Nursing 1.67%, Arts 1.67%, and Others 0.

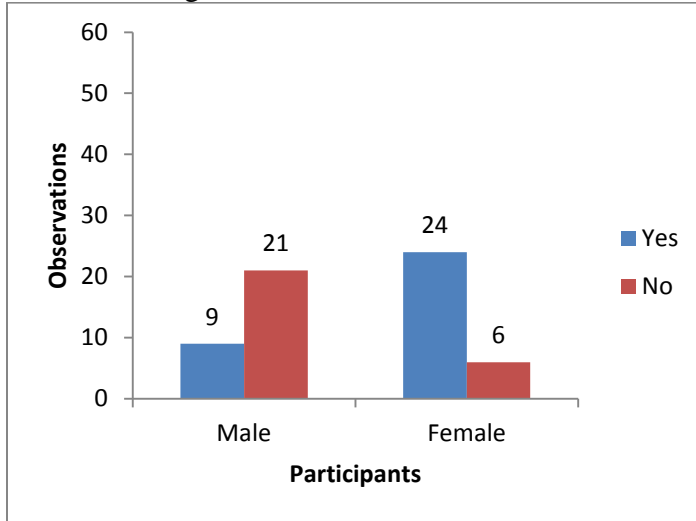
Figure 4.2 Which University Degree Students Plan to Attend

Section B- University Students



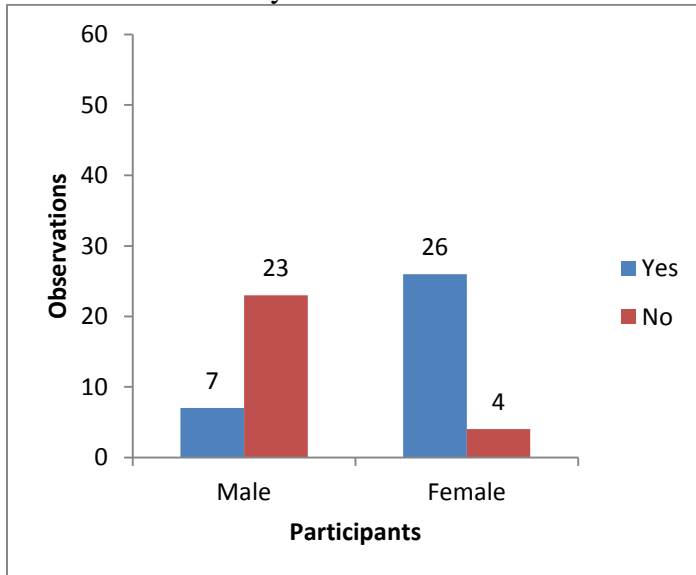
When the question “Which University degree students plan to attend” was asked, section B females responded as follows: Medicine 3.33%, Teaching 20%, Engineering (IT) 1.67%, Mathematics 1.67%, Nursing 23.33%, Arts 0%, Others 1.67%, whereas males replied: Medicine 28.33%, Teaching 1.67%, Engineering (IT) 30%, Science and Mathematics 16.67%, Nursing 1.67%, Arts 1.67%, and Others 0.

Figure 4.3 Parental Influences on Students' Degree of Study
Section A- High School Students



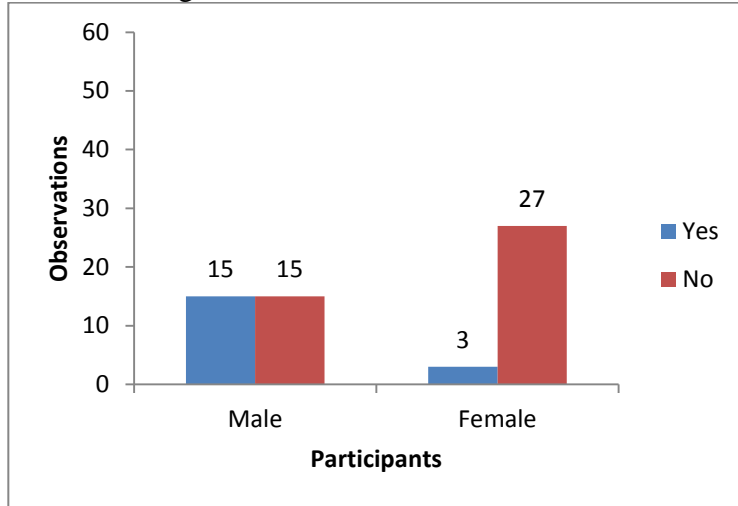
The survey asked the question “Did your parents have an influence on your decision on which degree to study” and according to Section A 15% of males agree that their parents influence on their University selection decision, while 35% of them disagree. 40% Females, on the other hand, suggest that their parents influence their University selection decision, whereas only 10% disagree.

Figure 4.4 Parental Influences on Students' Degree of Study
Section B- University Students



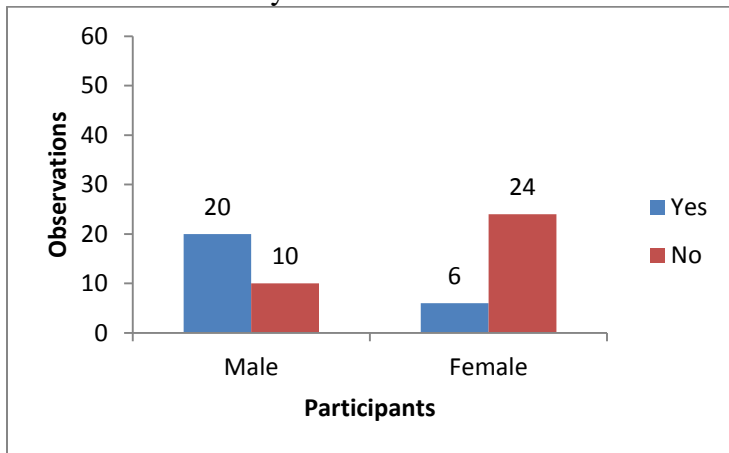
The survey asked was “Did your parents have an influence on your decision on which degree to study” and according to Section B, University students, 11.67% of males agree that their parents influence on their University selection decision, while 38.33% of them disagree. 43.33% females suggest their parents influence their University selection decision, whereas only 6.67% disagree.

Figure 4.5 Students' Appreciation towards Parental Input
Section A- High School Students



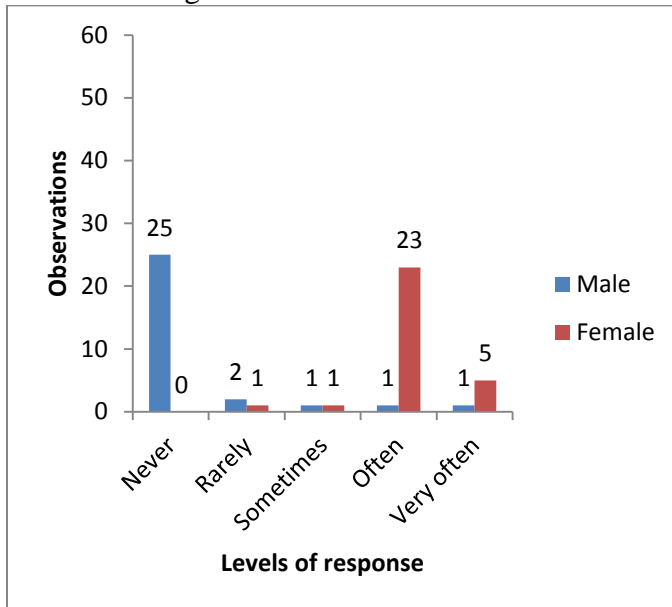
Conferring to the question, “Did you appreciate the input from your parents” Section A, high school males responded with 25% appreciating their parents input, while the other 25% did not. While, in regards to females, 5% did appreciate their parents input, while 45% did not.

Figure 4.6 Students' Appreciation towards Parental Input
Section B- University Students



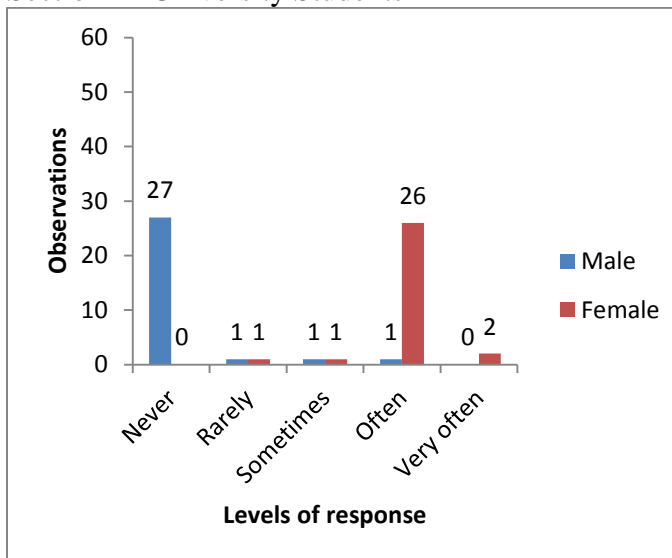
From the question, “Did you appreciate the input from your parents” Section B, University students Males responded with 33.33% appreciating their parents input, while the other 16.67% did not. While, in regards to females, only 10% did appreciate their parents input, while 40% did not.

Figure 4.7 Number of Times Students Discussed the Selection of an Undergraduate Program with Their Parents
Section A- High School Students



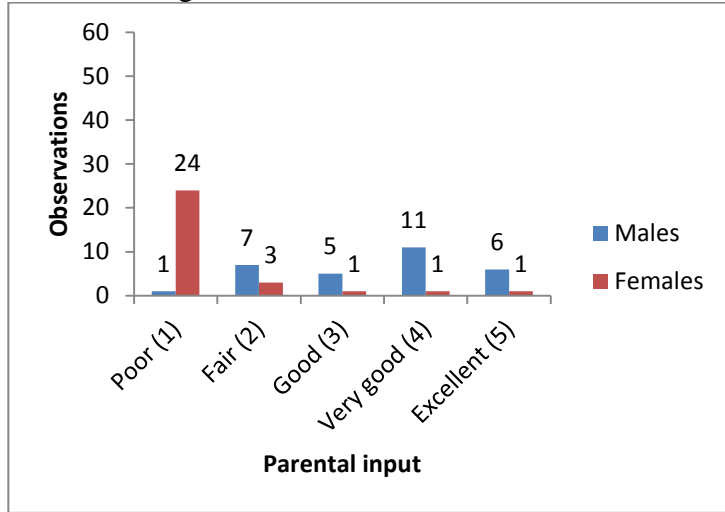
Section A and B survey asked the question “On how many occasions did you discuss the section of an Undergraduate Program with your parents, and high school students (i.e. section A) males responded as follows: never 41.67%, rarely 3.33%, sometimes 1.67%, often 1.67%, very often 1.67%. While, females answered with the following percentages: never 0%, rarely 1.67%, sometimes 1.67%, often 1.67%, very often 8.33%.

Figure 4.8 Number of Times Students Discussed the Selection of an Undergraduate Program with Their Parents
Section B- University Students



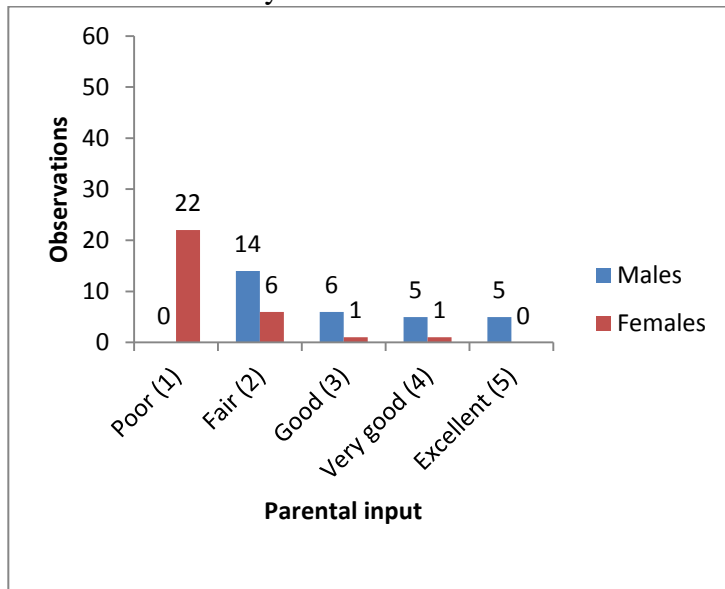
Another question these Sections asked was “On how many occasions did you discuss the selection of an Undergraduate Program with your parents, and University students (i.e. section B) males responded as follows: never 45%, rarely 1.67%, sometimes 1.67%, often 1.67%, very often 0%. While, females answered with the following percentages: never 0%, rarely 1.67%, sometimes 1.67%, often 43.33%, very often 3.33%.

Figure 4.9 Rating Parental Input Ranging from Poor to Excellent
Section A- High School Students



The figure on the left presents the outcomes of the high school students on how effective would they rate their parents input. As such males follow up with poor 1.67%, fair 11.67%, good 8.33%, very good 18.33%, and excellent 10%. While females respond with: poor 40%, fair 5%, good 1.67%, very good 1.67%, and excellent 1.67%

Figure 4.10 Rating Parental Input Ranging from Poor to Excellent
Section B- University Students



On the left, a presentation of the outcomes of the University students on how effective would they rate their parents input, is shown. As such, males follow up with: poor 0%, fair 23.33%, good 10%, very good 8.33%, and excellent 8.33%. While, females respond: poor 36.67%, fair 10%, good 1.67%, very good 1.67%, and excellent 0%

Figure 4.11 Different Parental Input
Section A- High School Students

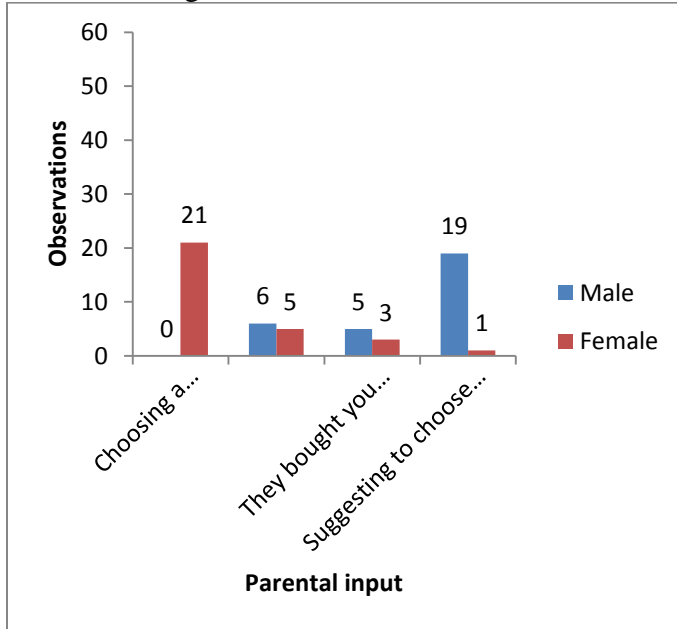


Figure 4.11 presents the following information on male respondents: Choosing a career for you 0, suggesting that you should choose their career 10%, they bought you books related to the subject 8.33%, suggesting to choose a career that is demanded in the labor market 31.67%. While females respondents follow with: Choosing a career for you 35%, suggesting that you should choose their career 8.33%, they bought you books related to the subject 5%, suggesting choosing a career that is demanded in the labor market 1.67%.

Figure 4.12 Different Parental Input
Section B- University Students

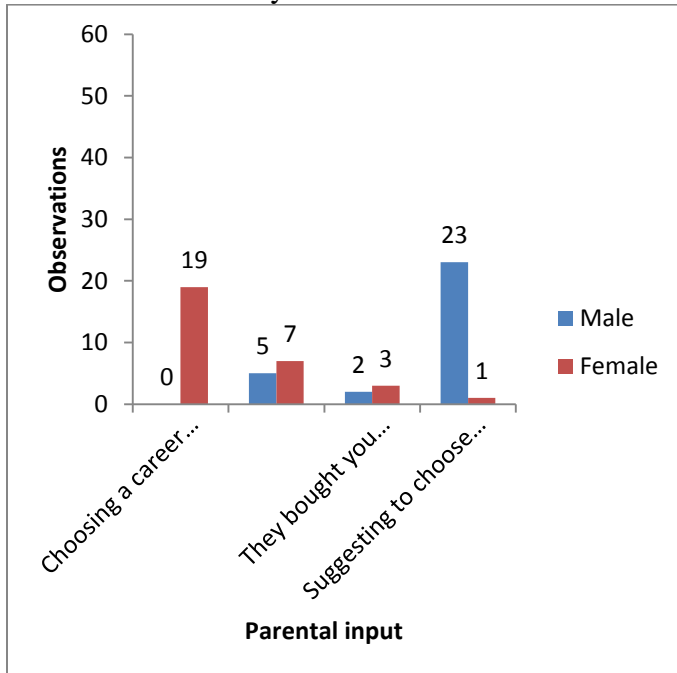


Figure 4.12 represents the following information on male respondents: Choosing a career for you 0, suggesting that you should choose their career 8.33%, they bought you books related to the subject 3.33%, and suggesting choosing a career that is demanded in the labor market 38.33%. While, females: Choosing a career for you 31.67%, suggesting that you should choose their career 11.67%, they bought you books related to the subject 5%, suggesting choosing a career that is demanded in the labor market 1.67%.

Results Regarding Financial Constraints

Figure 4.13 Financial Constraints Affect Students' Decision
Section A- High School Students

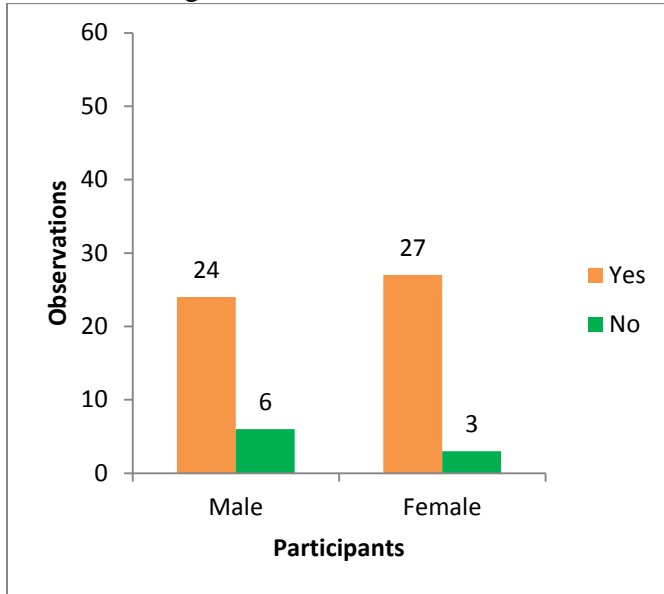


Figure 4.13 presents the financial constraints that affect high school student's decisions. As such, 40% of males responded positively to the financial matter remaining a concern to continue to bachelor studies, while, 10% of them is not affected by the financial matters. Female respond 45% to financial matters remaining a factor, while 5% of them not being affected by the financial restrictions.

Figure 4.14 Financial Constraints Affect Students' Decision
Section B- University Students

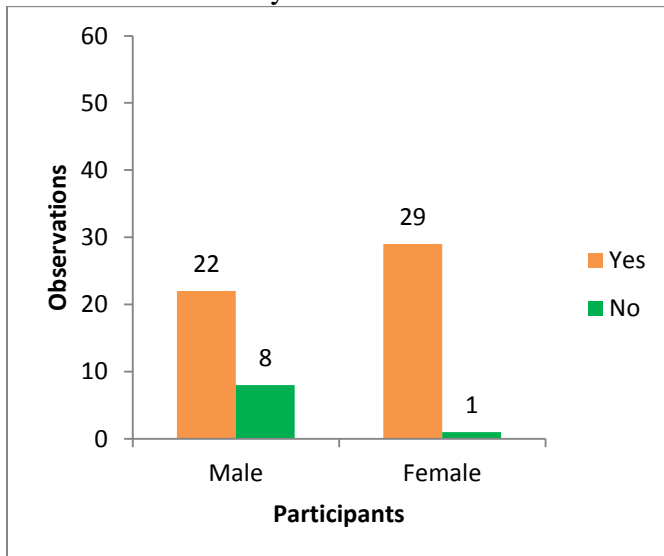
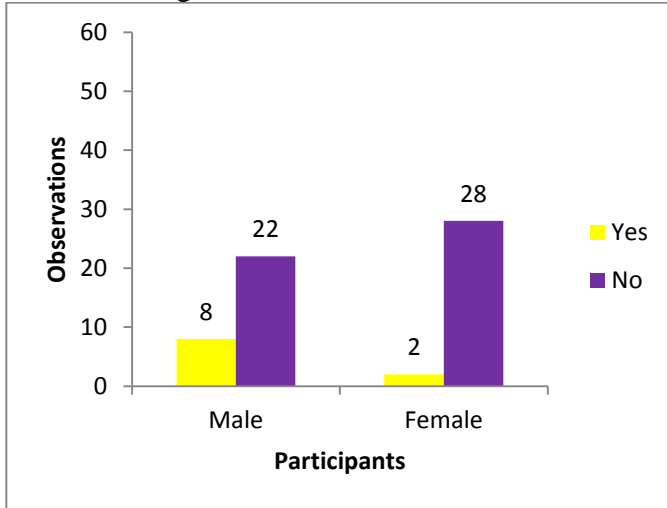


Figure 4.14 presents the financial constraints that affect University student's decisions. So, 36.67% of males responded positively to the financial matter remaining a concern to continue to bachelor studies, while, 13.33% of them is not affected by the financial matters. Female respond 48.33% to financial matters remaining a factor, while 1.67% of them not being affected by the financial restrictions.

Chapter 5- Results regarding Low High School Involvement

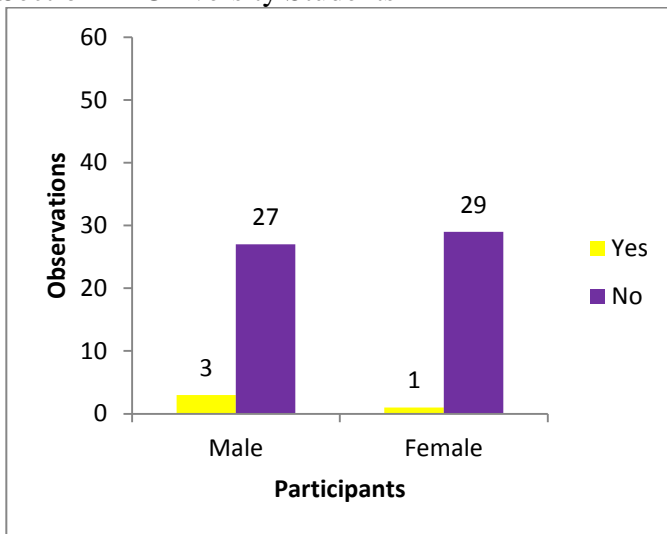
This chapter focuses on one of the factors found to have a direct impact on students' decision in selection a particular Undergraduate program, which is low high school involvement. Some of the questions asked in the survey, which are presented graphically in the chapter are the following, are there any STEM related activities in your school; identify the types of STEM activities planned for females in your high school; and on how many STEM activities did you participate during high school. Through these questions, this chapter tries to get out the results in percentage terms on how low high school involvement influences high school students in selection a particular Undergraduate program.

Figure 5.1 STEM Related Activities in High School
Section A- High School Students



The information derived from the figure 5.1 explains whether high school students have had the opportunity to engage in STEM related activities in their high schools, and as such males responded: yes 13.33%, no 36.67%. While, females, on the other hand, quantified such as: yes 3.33%, no 46.67%.

Figure 5.2 STEM Related Activities in High School
Section B- University Students



The information on figure 5.2 explains whether University students have had the opportunity to engage in STEM related activities in their high schools, and as such males responded: males: Yes 5%, No 45%. While, females responded as: Yes 1.67%, No 48.33%.

Figure 5.3 STEM Activities in High School
Section A- High School Students

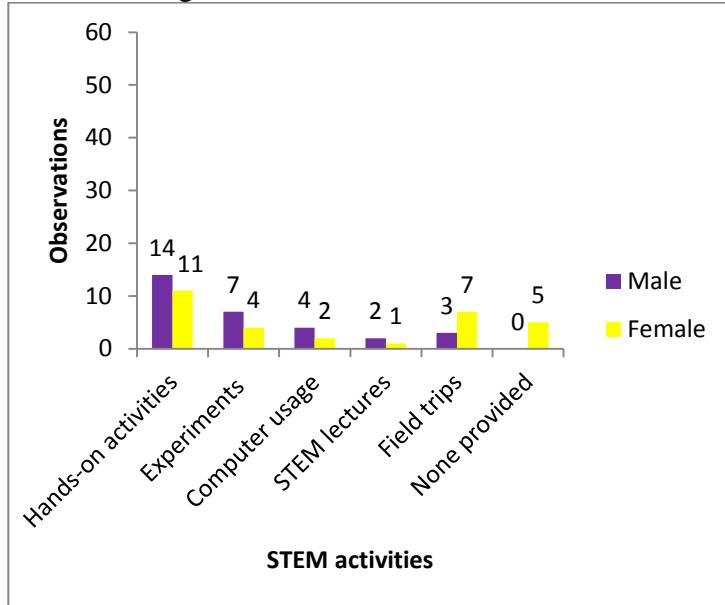
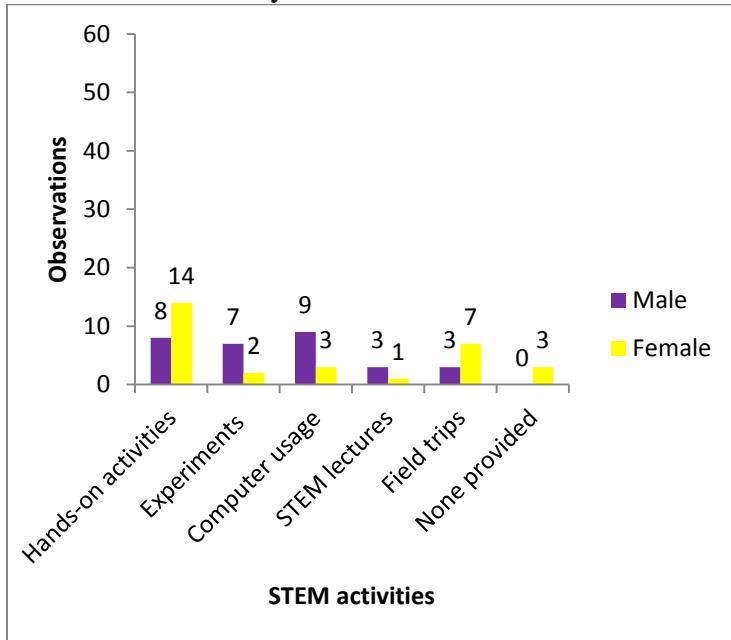


Figure on the left conveys information on identifying the types of STEM activities for females in high school, and the males answered: hands-on activities 23.33%, experiments 11.67%, computes usages 6.67%, STEM lectures 3.33%, field trips 5% none provided 0. Whereas, females answered: hands-on activities 18.33%, experiments 6.67%, computes usages 3.33%, STEM lectures 1.67%, field trips 11.67%, and none provided 8.33%.

Figure 5.4 STEM Activities in High School
Section B- University Students



The information on the figure to the left identifies the types of STEM activities for females in high school, and the males answered: hands-on activities 13.33%, experiments 11.67%, computes usages 15%, STEM lectures 5%, field trips 5% none provided 0. While, females responded: hands-on activities 23.33%, experiments 3.33%, computes usages 5%, STEM lectures 1.67%, field trips 11.67%, and none provided 5%.

Figure 5.5 Participation in STEM Activities
Section A- High School Students

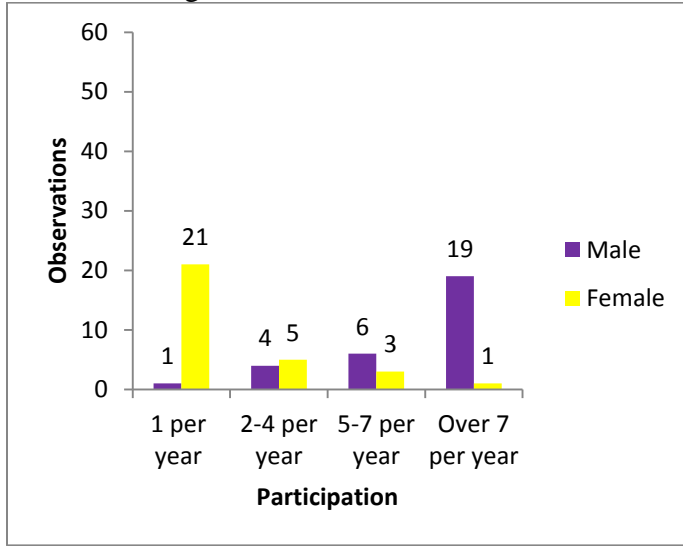
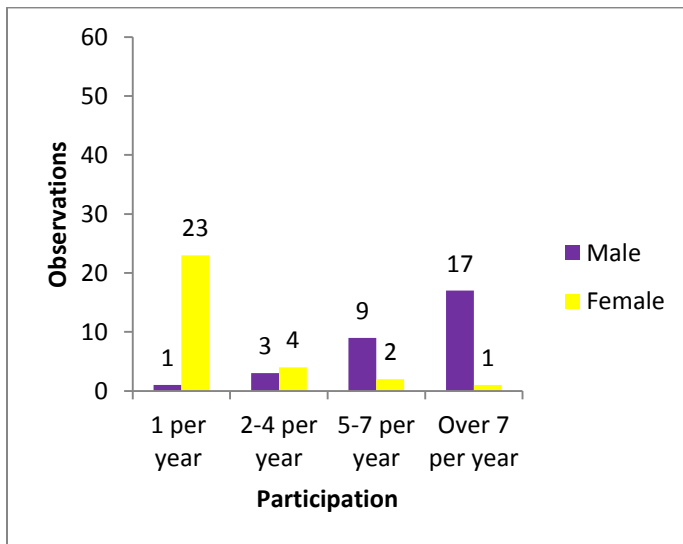


Figure on the left conveys information on identifying the number of STEM activities that students have participated during their high school and males responded: 1 per year 1.67%, 2-4 per year 6.67%, 5-7 per year 10%, and over 7 per year 31.67%. While, females responded: 1 per year 35%, 2-4 per year 8.33%, 5-7 per year 5%, and over 7 per year 1.67%.

Figure 5.6 Participation in STEM Activities
Section B- University Students



The information on the left explains the number of STEM activities that University students have participated during their high school and males responded: 1 per year 1.67%, 2-4 per year 5%, 5-7 per year 15%, and over 7 per year 28.33%. While females responded: 1 per year 38.33%, 2-4 per year 6.67%, 5-7 per year 3.33%, and over 7 per year 1.67%.

Chapter 6- Results regarding Social Values

This chapter focuses on one of the factors found to have a direct impact on students' decision in selecting a particular Undergraduate program, which social values influence. Some of the questions asked in the survey, which are presented graphically in the chapter are the following, do you believe that there are occupations for men or for women only; stereotyping perceptions on male/female designated occupations, what do you think affects females' choice on the field of study; which of those qualities do males/ females or both equally possess; have you ever considered STEM as an Undergraduate Program. Combating social values/stereotypes as an investigation (simply allowing females from tapping into their true potential) lies more on the personal values rather than on a change program. Thus, it is not easy to challenge problems as such. Still, when developing this research project to its final stages', recommending particular "accepted wisdom" is crucial. Hence, the chapter conveys results on how this particular factor (social values) impact students Undergraduate Program selection.

Figure 6.1 Occupations for Men/Women Only
Section A- High School Students

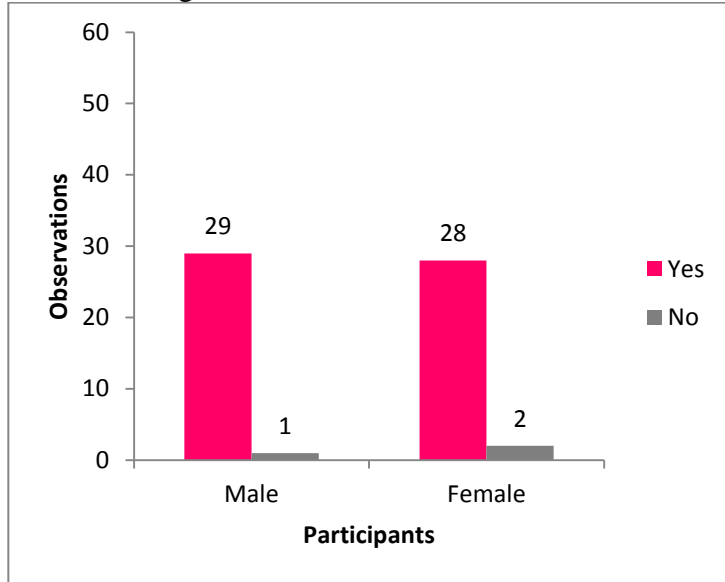


Figure on the left carries evidence on whether high school students believe that there are occupations for men or for women only, and 48.33% of males said yes they believe that statement, and only 1.67% said no. Whereas 46.67% of females believe that statement, and 3.33%

Figure 6.2 Occupations for Men/Women Only
Section B- University Students

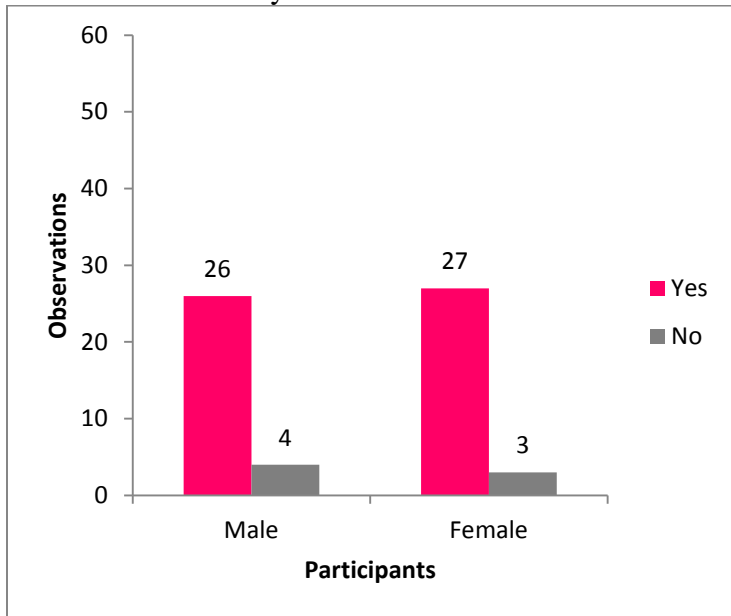


Figure on the left delivers facts on whether University students accept as true that there are occupations for men or for women only, and 43.33% of males said yes they believe that statement, and only 6.67% said no. While 45% of females believe that statement, and 5%

Table 6.1 Stereotyping Perceptions on Male/Female Designated Occupations

	Doctor	Economist	Engineer (IT)	Journalist	Lawyer	Mathematician	Nurse	Politician	Teacher	University Professor
Male occupations	45	35	49	36	34	71	22	35	27	35
Female occupations	37	34	37	34	35	26	60	35	34	33
Neutral occupations	38	51	34	50	51	23	28	50	59	52

Based on the table above, high school students, part of section A, and University students, part of section B were asked to categorize the perceptions on male/female designated occupations. As such, occupations that were mostly male were 35 out of 120 suggest that Engineer (IT) is males occupation, 45 out of 120 suggest that Doctor is males occupation. Whereas, female occupations are targeted to be where 60 out of 120 suggest that nurses are females, and 34 out of 120 for teacher respectively.

Table 6.2 What Affects Females' Choice on the Field of Study
Section A-High School Students

Reasons	Strongly disagree	Disagree	Neutral	Agree	Strongly agree
Easier subject matter	2	7	3	37	11
Allows for career family balance	0	4	2	13	41
Are naturally more able to prefer it	14	27	12	7	0
Females are not competitive enough	0	4	3	40	13
Gender discrimination in particular professions (i.e. STEM)	0	3	5	38	14

When high school students were asked to identify the reasons that affects female's choice of the field of study, they have responded by agreeing mostly on easier subject matter with 61.67%, allows for career family balance strongly agree 68.33%, are naturally more able to prefer it they disagree with 45%, females are not competitive enough agree with 66.67%, and gender discrimination in particular professions (i.e. STEM) agreeing with 63.33%.

Table 6.3 What Affects Females' Choice on the Field of Study
Section B

Reasons	Strongly disagree	Disagree	Neutral	Agree	Strongly agree
Easier subject matter	1	4	9	36	10
Allows for career family balance	2	4	3	12	39
Are naturally more able to prefer it	13	30	10	7	0
Females are not competitive enough	0	5	2	38	15
Gender discrimination in particular professions (i.e. STEM)	0	2	6	35	17

When University students were asked to identify the reasons that affects female's choice of the field of study, they have responded by agreeing mostly on easier subject matter with 60%, allows for career family balance strongly agree 65%, are naturally more able to prefer it they disagree with 50%, females are not competitive enough agree with 63.33%, and gender discrimination in particular professions (i.e. STEM) agreeing with 58.33%.

Table 6.4 Qualities that Males/ Females or Both Equally Possess
Section A-High School Students

Qualities	Male	Female	Both equally
Fragile	7	42	11
Vulnerable	4	47	9
Emotional	5	37	18
Compassionate	11	35	14
Creative	15	14	31
Intelligent	33	14	13
Honest	17	29	14
Manipulative	27	12	21
Hard-working	37	17	6
Outgoing	29	13	18
Ambitious	38	11	11
Decisive	35	17	8
Stubborn	41	7	12
Arrogant	37	6	17

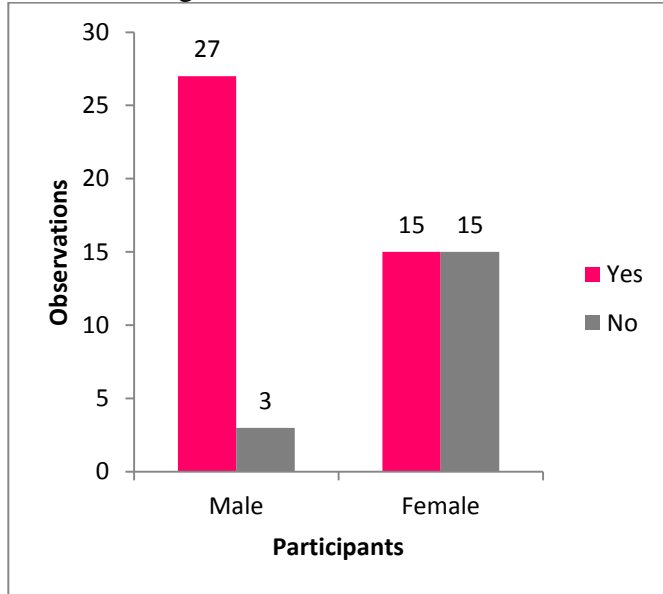
When high school students were asked to identify the succeeding qualities males and females possess, males are qualified with traits such as: intelligent 55%, manipulative 45%, hard-working 61.67%, ambitious 63.33%, while females, are more characterized with the following: fragile 70%, vulnerable 78.33%, emotional 61.67%, compassionate 58.33%, and so on.

Table 6.5 Qualities that Males/ Females or Both Equally Possess
Section B- University Students

Qualities	Male	Female	Both equally
Fragile	10	41	9
Vulnerable	8	45	8
Emotional	6	35	20
Compassionate	9	41	10
Creative	15	15	30
Intelligent	31	16	13
Honest	13	29	18
Manipulative	31	13	16
Hard-working	35	6	19
Outgoing	29	13	18
Ambitious	31	5	24
Decisive	37	14	9
Stubborn	39	4	17
Arrogant	41	10	9

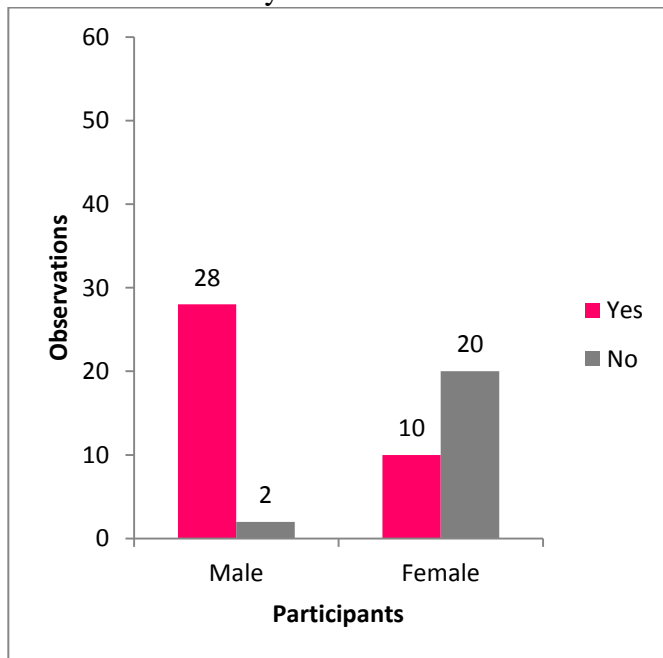
When high University students were asked to identify the following qualities males and females possess, males are qualified with traits such as: intelligent 51.67%, manipulative 51.67%, hard-working 58.33%, ambitious 51.67%, while females, are more characterized with the following: fragile 68.33%, vulnerable 75%, emotional 58.33%, compassionate 68.33%, and so on.

Figure 6.3 Considering STEM as an Undergraduate Program
Section A- High School Students



The survey also asked the question whether the sample A representatives, high school students, have ever considered STEM as an option for an Undergraduate program, and in this case 45% of males have considered STEM as an choice, while only 5% never considered STEM. Females, however, 25% have considered STEM as an opportunity, while 25% have never considered STEM as such.

Figure 6.4 Considering STEM as an Undergraduate Program
Section B- University Students



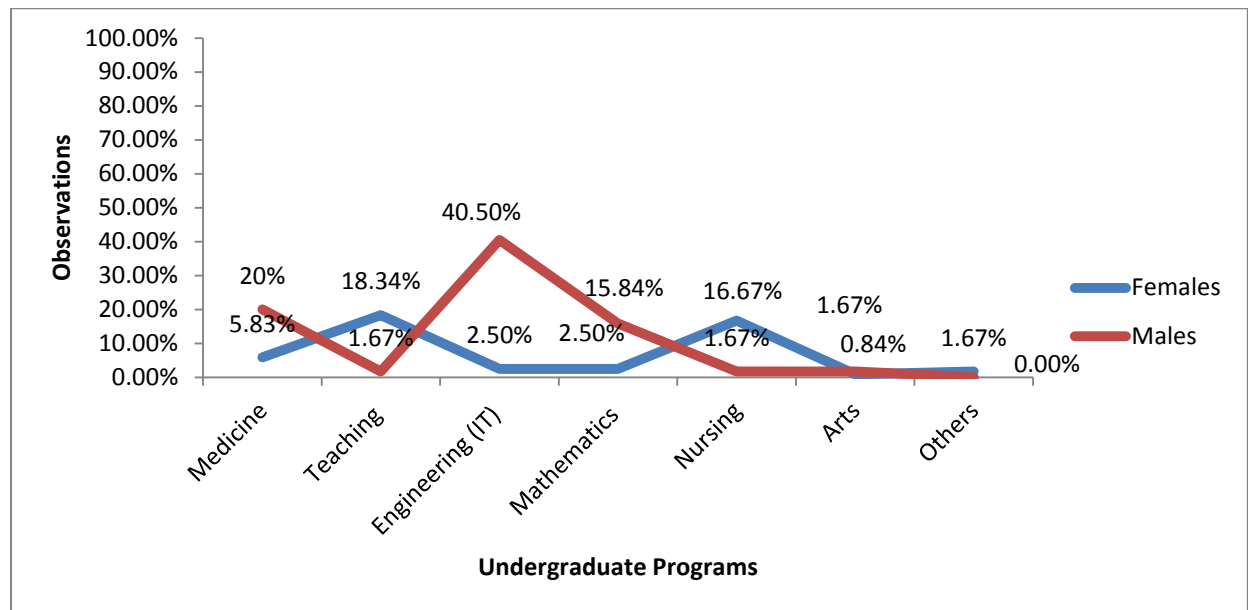
A question designated for sample B representatives, University students, asked whether those students ever considered STEM as an option for an Undergraduate program and in this case 46.67% of males have considered STEM as a choice, while only 3.33% never considered STEM. While, females responded with 16.67% that have considered STEM as an opportunity, while 33.33% have never considered STEM as such.

Chapter 7- Analysis of the Data Outcomes

This chapter focuses on deriving the main analysis towards a better understanding as to why gender is a crucial factor in students' Undergraduate Program selection. From the previous chapter, four factors impacting the selection process were determined. The following are the factors that trigger students into choosing a particular Undergraduate Program over the other, parental influence, financial constraints, low high school involvement, and societal perceptions regarding gender (stereotyping). Upon completion, this chapter will provide a decent understanding of the analysis on the data outcomes, meaning that, it will determine why particular factors including parental influence, financial constraints, low high school involvement, and societal perceptions regarding gender (stereotyping) affect students' choice on selecting an Undergraduate Program.

7.1 Analysis Regarding Parental Influence

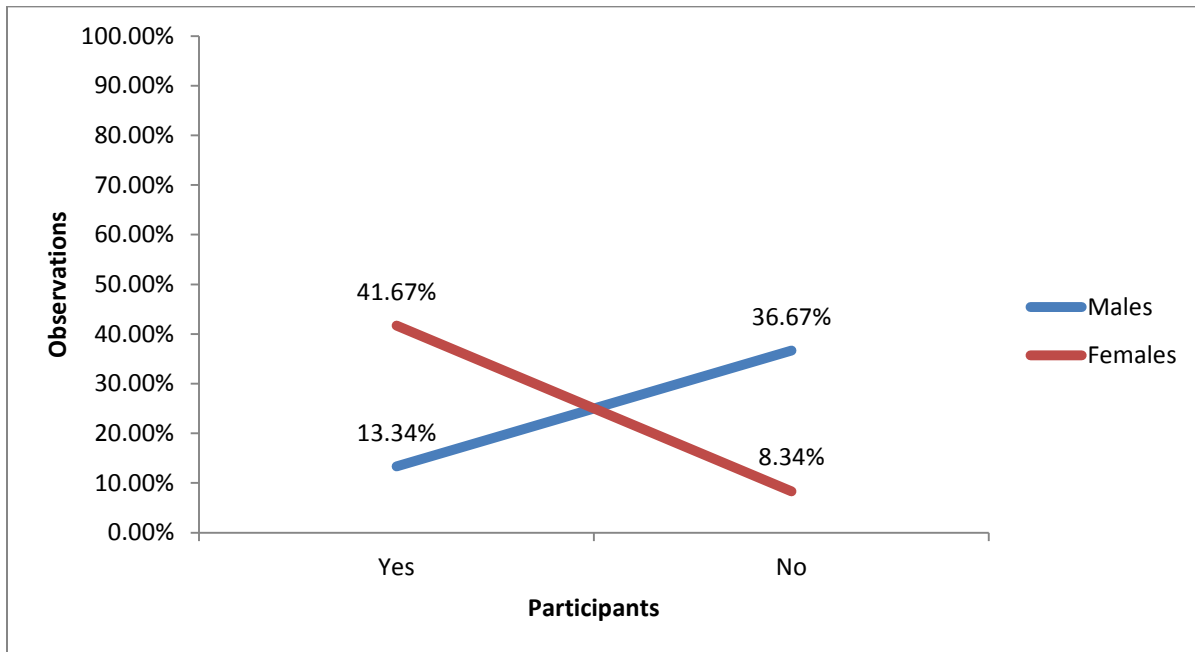
Figure 7.1 Which University Degree Students Plan to Attend



When the question “Which University degree students plan to attend” was asked, on average, males from both sections responded as follows: Medicine 20%, Teaching 1.67%, Engineering (IT) 40.50%, Mathematics 15.84%, Nursing 1.67%, Arts 1.67%, Others 0%, whereas, females replied: Medicine 5.83 Teaching 18.34%, Engineering (IT) 2.5%, Mathematics 2.5%, Nursing 16.67%, Arts 0.84%, and Others 1.67%. As such, it can be understood that, overall, females have

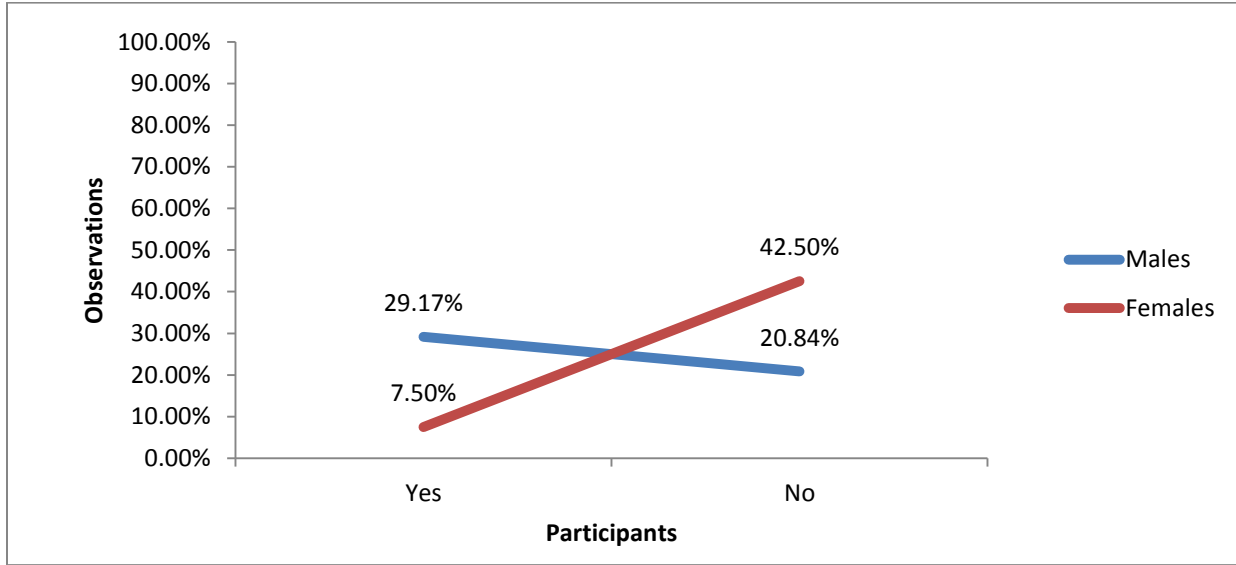
a lower tendency in selecting STEM based Undergraduate Programs which is displayed with very low percentages in the figure above. The question digests to a higher level, with more direct observations towards this persisting issue which will be analyzed in the further parts of the assessment.

Figure 7.2 Parental Influences on Student’s Degree of Study



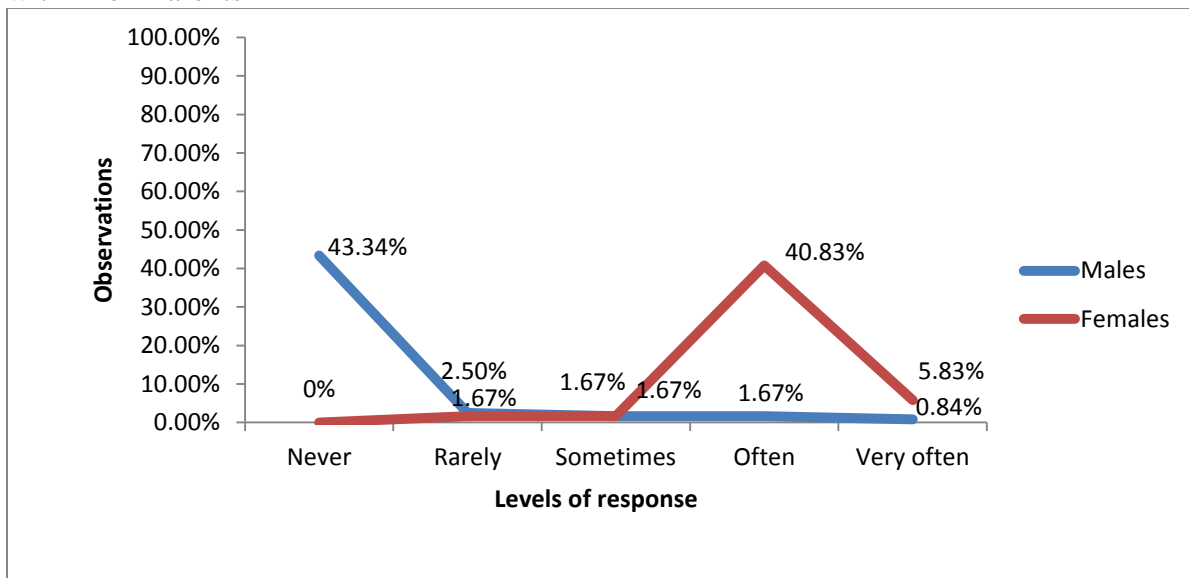
The survey asked the question “Did your parents have an influence on your decision on which degree to study” and according to both sections 13.34% of males agree that their parents influenced their University selection decision, while 36.67% of them disagree. 41.67% Females, on the other hand, suggest that their parents influenced their University selection decision, whereas only 8.34% disagree. These results indicate that females feel more pressure from their parents in the process of selecting a particular Undergraduate Program from the results acquired from the figure.

Figure 7.3 Students Appreciation towards Parental Input



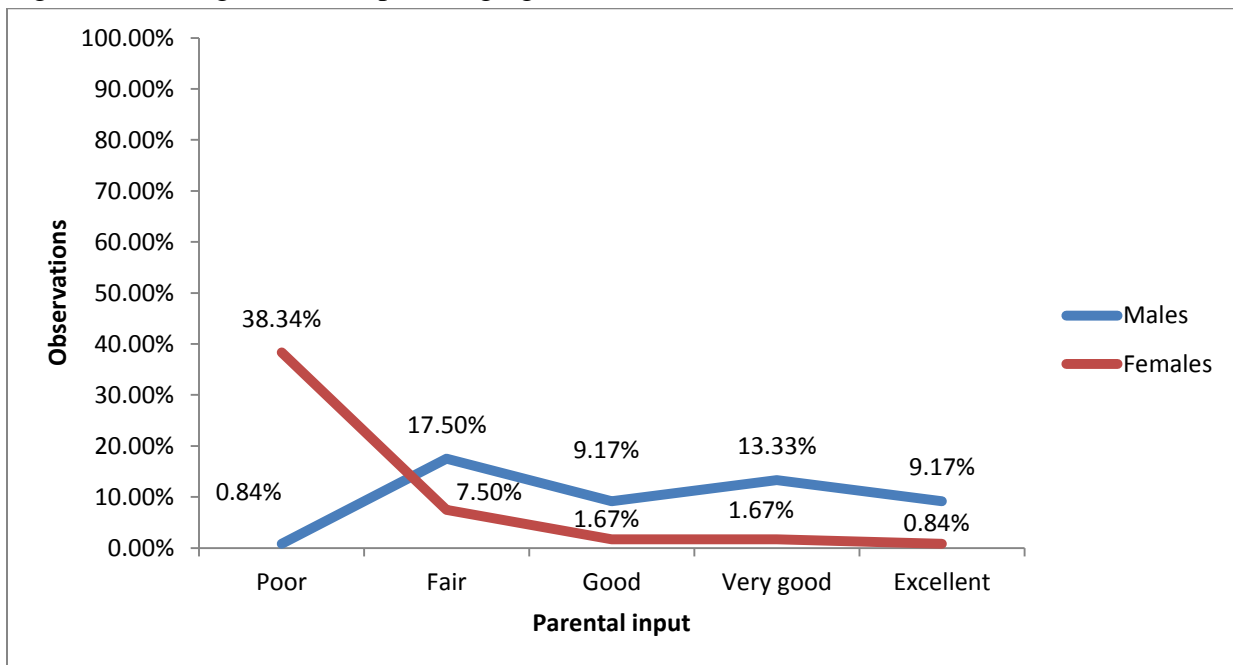
Referring to the question, “Did you appreciate the input from your parents” on average both sections of males responded with 29.17% appreciating their parents input, while the other 20.84% did not. While, in regards to females, 7.5% did appreciate their parents input, while 42.5% did not. Females in this case appreciate less of their parental interference as compared to males, which indicates that the parental input is not beneficial for females. Hence, as per parents, they ought to have either equal impact to their children, or not at all.

Figure 7.4 Number of Times Students Discussed the Selection of an Undergraduate Program with Their Parents



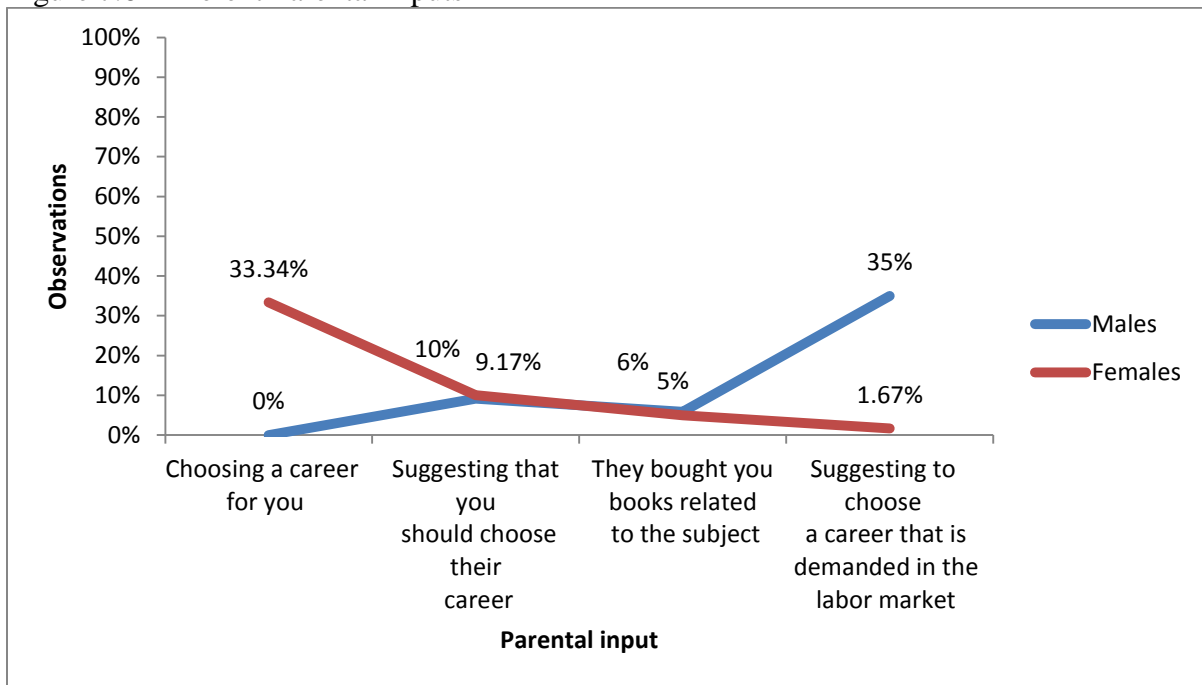
Based on the question “On how many occasions did you discuss the section of an Undergraduate Program with your parents, and males responded as follows: never 43.34%, rarely 2.5%, sometimes 1.67%, often 1.67%, very often 0.84%. While, females answered with the following percentages: never 0%, rarely 1.67%, sometimes 1.67%, often 40.83%, very often 5.83%. From the results derived, this automatically indicates that parents force more input to females’ decisions as compared to males. Therefore, females are less free to make their judgments based on their own Undergraduate Program preferences, but rather their decisions follow-on parental submissions.

Figure 7.5 Rating Parental Input Ranging From Poor to Excellent



The figure above represents the results as to how effective would the participants’ rate their parents input. As such, males follow up with poor 0.84%, fair 17.50%, good 9.17%, very good 13.33%, and excellent 9.17%. While, females respond with: poor 38.34%, fair 7.50%, good 1.67%, very good 1.67%, and excellent 0.84%. Also, when the rating is taken into account, it proves the hypothesis of the parental input for females being poor. Recalling the problem: why particular factors such as: parental influence and other affect student’s choice on selecting an Undergraduate Program, is automatically portrayed in this graphical analysis.

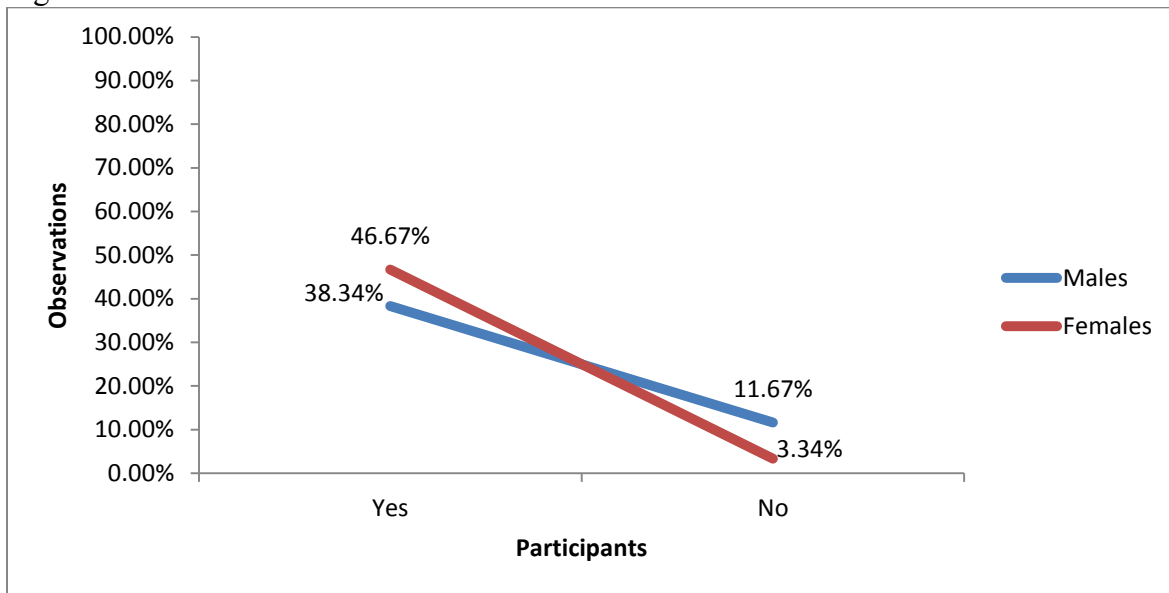
Figure 7.6 Different Parental Inputs



The figure above presents the following information on male respondents: Choosing a career for you 0, suggesting that you should choose their career 9.17%, they bought you books related to the subject 6%, suggesting to choose a career that is demanded in the labor market 35%. While, females respondents follow with: Choosing a career for you 33.34%, suggesting that you should choose their career 10%, they bought you books related to the subject 5%, suggesting choosing a career that is demanded in the labor market 1.67%. Intrinsically, the parental input for males versus females differs also in terms of what parents suggest to females and males respectively. Consequently, the proposals for females are more compulsory statements from their parents, while, for males are purely suggestions. This matter results in the females' diminished ability of self-judgment and selection their desired Undergraduate Program.

7.2 Analysis Regarding Financial Constraints

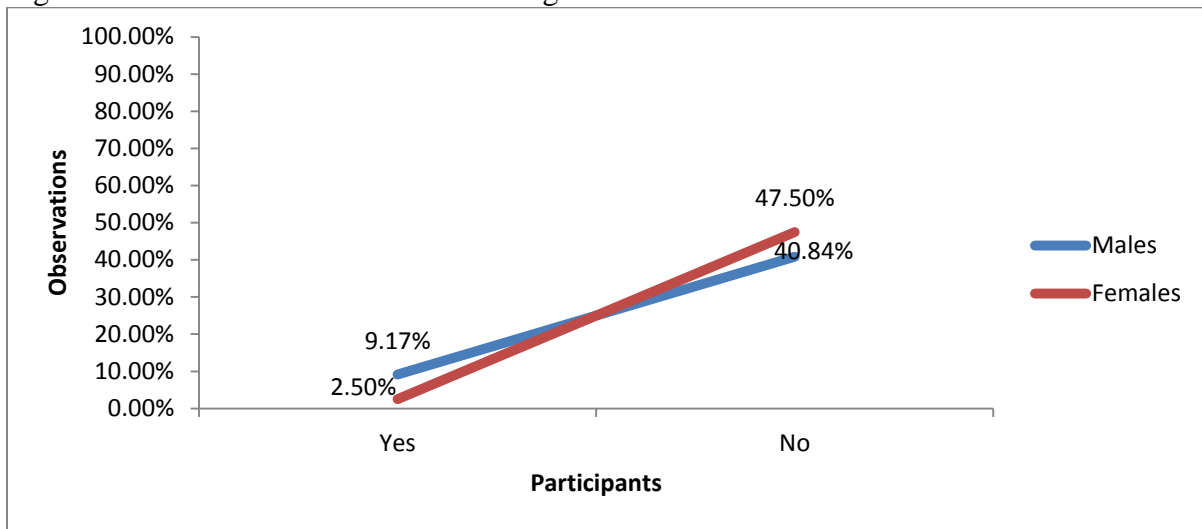
Figure 7.7 Financial Constraints Affect Students' Decision



The above figure reflects the financial constraints that affect students' decisions. As such, 38.34% of males responded positively to the financial matter remaining a concern to continue to bachelor studies, while, 11.67% of them is not affected by the financial matters. Female respond 46.67% to financial matters remaining a factor, while 3.34% of them not being affected by the financial restrictions. The numerical representations show that even though financial constraints remain a problem for both genders, high percentage of this barrier is observed in the female's side. In other words, females face higher constraints financially than males while trying to pursue an undergraduate program.

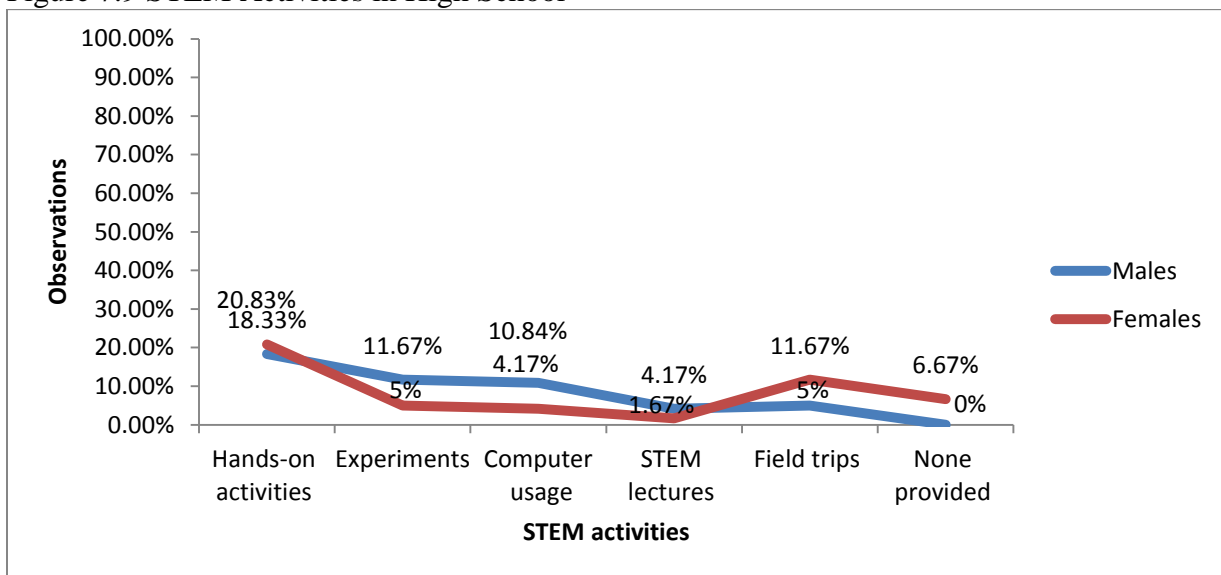
7.3 Analysis Regarding Low High School Involvement

Figure 7.8 STEM Related Activities in High School



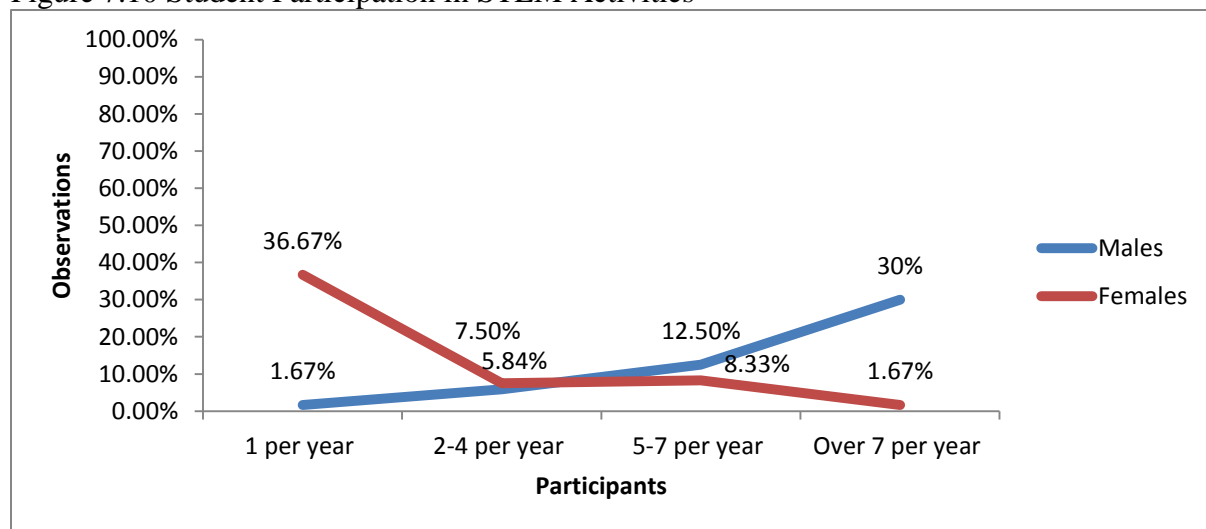
The information derived from the figure above explains whether students have had the opportunity to engage in STEM related activities in their high schools, and as such males responded: yes 9.17% no 40.84%. While females, on the other hand, quantified such as: yes 2.50%, no 47.50%. Overall, STEM related activities provided from high schools remains very low; however, STEM activities provided to females is a persistent concern. This automatically indicates that high schools pose higher effort for particular activities offered to males rather than females.

Figure 7.9 STEM Activities in High School



The figure above conveys information on identifying the types of STEM activities for females in high school, and the males responded: hands-on activities 18.33%, experiments 11.67%, computes usages 10.84%, STEM lectures 4.17%, field trips 5% none provided 0. Whereas, females answered: hands-on activities 20.83%, experiments 5%, computes usages 4.17%, STEM lectures 1.67%, field trips 11.67%, and none provided 6.67%. As a result, males do more in-depth related STEM experiments while females do more superficial STEM related activities. This matter then resulted in the current percentage of skills gap while comparing males and females.

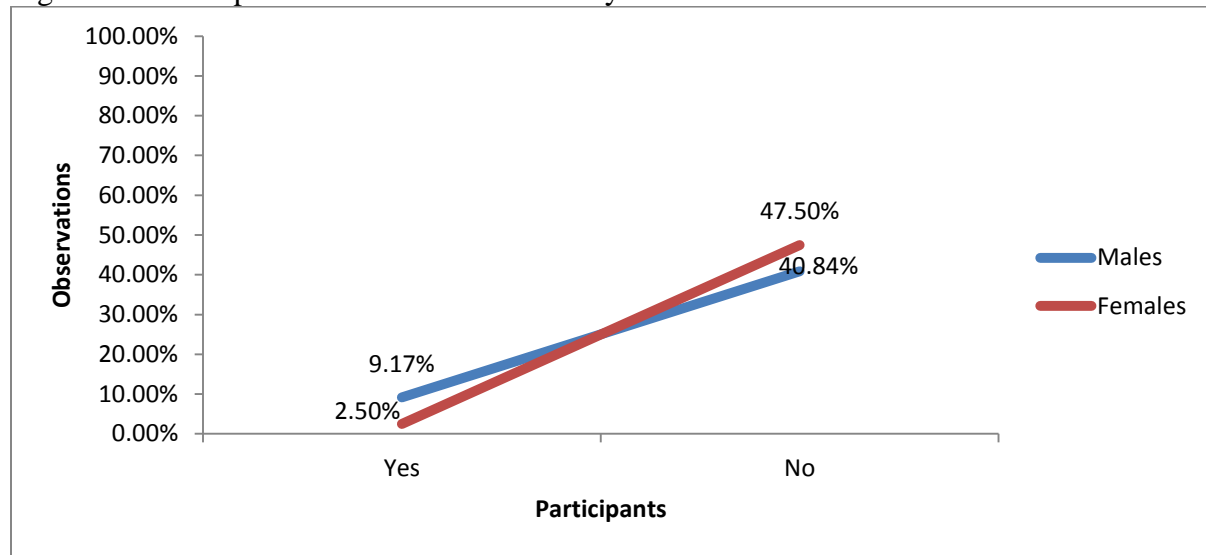
Figure 7.10 Student Participation in STEM Activities



Conferring the information presented in the figure above is about identifying the number of STEM activities that students have participated in during their high school and thereby males responded: 1 per year 1.67%, 2-4 per year 5.84%, 5-7 per year 12.50%, and over 7 per year 30%. While, females responded: 1 per year 36.67%, 2-4 per year 7.50%, 5-7 per year 8.33%, and over 7 per year 1.67%. This analysis of the results shows the discrepancy among males and females, where females are observed to participate in STEM activities mostly once per year, while males mostly participate in a more than seven per year basis. Hence, females are less encouraged to participate in STEM activities as compared to males.

7.4 Analysis Regarding Social Values

Figure 7.11 Occupations for Men/Women Only



The figure above carries evidence on whether students believe that there are occupations for men or for women only, and 40.84%, of males admitted they believe that statement, and only 9.17%, denied, whereas, 47.50% of females believe that statement with a 2.50%. The society in general believes that there are occupations for males or for females only, which directly indicates the stereotypical judgment for particular Undergraduate Programs designated for males and females specifically.

Table 7.1 Stereotyping Perceptions on Male/Female Designated Occupations

	Doctor	Economist	Engineer (IT)	Journalist	Lawyer	Mathematician	Nurse	Politician	Teacher	University Professor
Male occupations	45	35	49	36	34	71	22	35	27	35
Female occupations	37	34	37	34	35	26	60	35	34	33
Neutral occupations	38	51	34	50	51	23	28	50	59	52

Based on the table above high school students, part of section A, and University students, part of section B were asked to categorize the perceptions on male/female designated occupations. As such, occupations that were mostly male were 35 out of 120 suggest that Engineer (IT) is males occupation, 45 out of 120 suggest that Doctor is males occupation. Whereas, female occupations are targeted to be where 60 out of 120 suggest that nurses are females, and 34 out of 120 for education concentrations such as teachers respectively. These numerical representations indicate

that there are several occupations that are male dominated such as STEM, while more female dominated occupations are social sciences. As such, society itself has created this division, so that, disables females to feel free in their Undergraduate Program selection.

Table 7.2 What Affects Females' Choice on the Field of Study

Reasons	Strongly disagree	Disagree	Neutral	Agree	Strongly agree
Easier subject matter	2	7	3	37	11
Allows for career family balance	0	4	2	13	41
Are naturally more able to prefer it	14	27	12	7	0
Females are not competitive enough	0	4	3	40	13
Gender discrimination in particular professions (i.e. STEM)	0	3	5	38	14

When asked to identify the reasons that affects female's choice of the field of study, females have responded by agreeing mostly on easier subject matter with 61.67%, allows for career family balance strongly agree 68.33%, are naturally more prone to prefer it they disagree with 45%, females are not competitive enough agree with 66.67%, and gender discrimination in particular professions (i.e. STEM) agreeing with 63.33%. From the table analysis, it can be observed that society is assured that females are less able then makes to manage, organize, and run, thus, this stereotypical judgment directly prevents females' self-verdict.

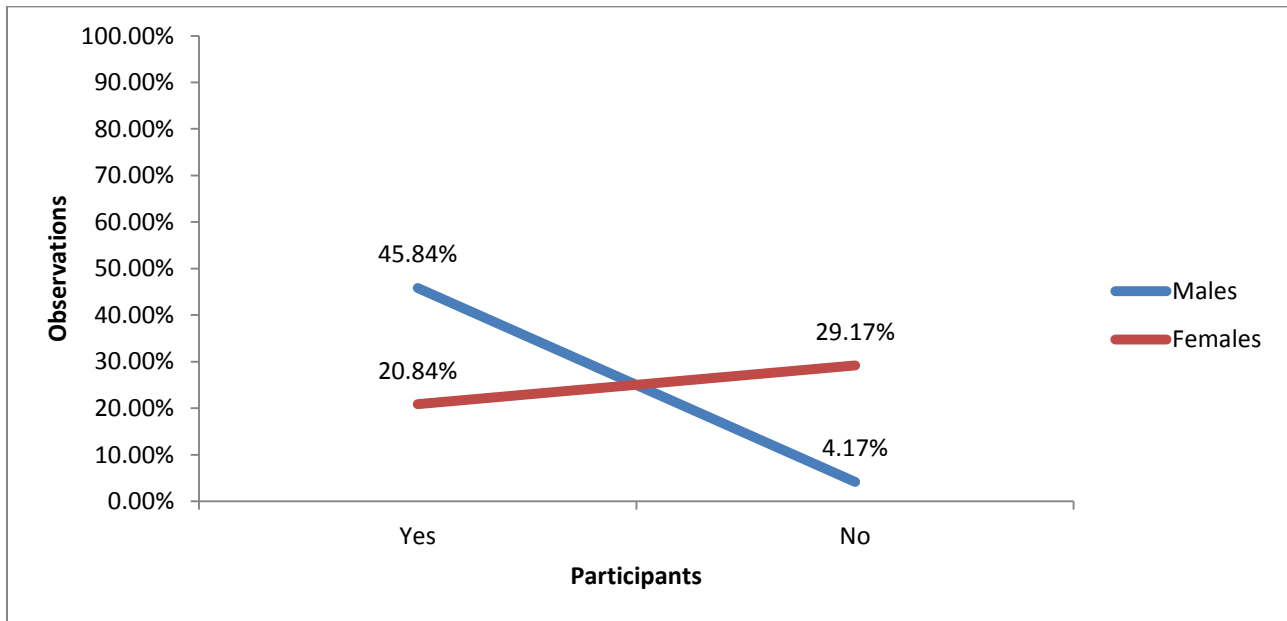
Table 7.3 Qualities that Males/ Females or Both Equally Possess

Qualities	Male	Female	Both equally
Fragile	7	42	11
Vulnerable	4	47	9
Emotional	5	37	18
Compassionate	11	35	14
Creative	15	14	31
Intelligent	33	14	13
Honest	17	29	14
Manipulative	27	12	21
Hard-working	37	17	6
Outgoing	29	13	18
Ambitious	38	11	11
Decisive	35	17	8
Stubborn	41	7	12
Arrogant	37	6	17

When students were asked to identify the succeeding qualities males and females possess, males are qualified with traits such as: intelligent 55%, manipulative 45%, hard-working 61.67%, ambitious 63.33%, while females, are more characterized with the following: fragile 70%,

vulnerable 78.33%, emotional 61.67%, compassionate 58.33%, and so on. This automatically suggests that society itself categorizes females as fragile, vulnerable, emotional, which on the comparative basis does not make them intelligent, hard-working, and ambitious, thus, stereotypical judgments from the society limit females to show that they should not be generalized and put in the same box. All in all, they have to be allowed from the society to show their potentials.

Figure 7.12 Considering STEM as an Undergraduate Program



The survey also asked the question whether student participants, have ever considered STEM as an option for an Undergraduate program, and in this case 45.84% of males have considered STEM as a choice, while only 4.17% never considered STEM. Females, however, 20.84% have considered STEM as an opportunity, while 29.17% have never considered STEM as such. As such, when you ask females whether they consider STEM, it can be seen that they do consider STEM, but the problem lies in the factors not allowing them to choose it which were discussed in the each analytical graph along the chapter.

Chapter 8- Discussion on the Data Outcomes

This chapter covers the discussion in regards to the data outcomes for “Gender and Selection of Undergraduate Programs”. Further, the discussion will re-emphasize the goals of the project which enables the comparison with the outcomes of the project. In addition, the four factors influencing students in selecting a particular Undergraduate Program: parental influence, financial constraints, low high school involvement, and social values regarding gender (stereotyping) reflect to the discussion.

8.1 Goals of the Research Project

Goals of this project encounter the following:

1. Justify, or correct the assumptions regarding why there is a disparity on low female participation in STEM.
2. Challenging the stereotyping ways of thinking regarding females going into STEM.

8.2 Discussion in Regards to Parental Influence

Table 8.1 Main Findings with Regards to Parental Influence

Queries	Frequency in STEM	
	Males	Females
Positive assistance on which University degree students plan to attend	40.50%	2.50%
Parental influence on which degree to study	13.34%	41.67%
Input appreciated from parents	29.17%	7.50%
Occasions discussed with parents in regards to the selection of an Undergraduate Program	1.67%	40.83%
The effectiveness of parental input	13.33%	1.67%
Different parental input	6%	33.34%

Discussing in respect to the outcomes and the additional analysis prepared in the preceding chapter, it can be claimed that family is a decisive component into the children's decision-making process, which captures choosing an Undergraduate Program. Also, as presented in the table above, which portrays the main findings with regards to parental influences on children's career choices, it clearly proves the problem of high disparity among gender and Undergraduate Program Selection.

From the numerical demonstrations, the project concludes that, in general, females have less tendency in selecting STEM based Undergraduate Programs due to their parent's control upon them. The investigation rises to a more advanced level which enables more conclusive explanations towards understanding the depth of this ongoing concern. In other words, with more analysis to be done, it is clearer that parents do perform a particular power over their female child, which on the contrary to the male child; they are unrestricted to elect for themselves. Additional outcomes indicate that females are on pressure from their parents while choosing one of the various Undergraduate Programs available for her. In other worlds, there are tons of choices for her. However, there are only certain options from which the female can choose. Hence, the participation of females in STEM per se, is lower in comparison with males.

Discussion in regards to females appreciating their parents input suggests that in this case females are prone to appreciate less of their parental input as compared to males, which indicates that the parental input is not perceived advantageous for females. Therefore, as per parents, they ought to have either equal impact to their children, or not at all. As a consequence, the output from their parents to females comprises only orders and incontrovertible suggestions. From the results derived, also the discussion automatically indicates that parents force more input to female's decisions as compared to males. Therefore, females are less free to make their judgments based on their own Undergraduate Program preferences, but rather their decisions follow-on parental submissions.

Correspondingly, when the participants were asked to rate the parental input, in fact, it turned out to prove the hypothesis, since females categorize their parents input as being poor. Evoking the problem, which comprises of the concern- why particular factors such as: parental influence and

other affect student’s choice on selecting an Undergraduate Program, is automatically portrayed through the results gained from the respondents. As such, parents’ inputs for females in targeted as being negative, while for males is considered to be from fair to excellent. Intrinsically, the parental input for males versus females differs also in terms of what parents suggest to females and males respectively. As a consequence, the proposals for females are more compulsory statements from their parents, while, for males are purely suggestions. Hence, this matter results in the females’ diminished ability of self-judgment and selection their desired Undergraduate Program.

8.3 Discussion in Regards to Financial Constraints

Table 8.2 Main Findings with Regards to Financial Constraints

Queries	Frequency in STEM	
	Males	Females
Financial Constraints	31.67%	46.67%

The numerical representations show that even though financial constraints remain a problem for both genders, high percentage of this barrier is observed on the female’s side. In other words, females face higher constraints financially than males while trying to pursue an undergraduate program. This suggests that if parents have to decide upon sending only one of their children to school, due to their financial situation, the male child’s future will be a priority.

8.4 Discussion in Regards to Low High School Involvement

Table 8.3 Main Findings with Regards to Low High School Involvement

Queries	Frequency in STEM	
	Males	Females
Inaction of the STEM related activities in high school	35.84%	47.50%
Variety of STEM activities in high school	19.84%	4.17%
Participation on high school activities	28.7%	1.67%

Although, there is some evidence on the gender difference in STEM performance, which is shrinking over time, there is more evidence on the gender disparity on equal opportunities

provided to both genders. As presented from the outcomes, in the “Low High School Involvement” section, it can be concluded that high schools in Prishtine do very less in terms of encouraging students, and especially female’s students to pursue STEM Undergraduate Programs. Overall, STEM related activities provided from high schools remains quite low; however, STEM activities provided to females is a persistent concern, since males are able to benefit more from the few activities provided than females. As such, this matter indicates that high schools do additional work for particular activities offered for males as compared to the ones accessible for females.

When comparing the type of activities in which students in high schools are engaged, males do more in-depth related STEM experiments while females participate in more superficial STEM related activities. This matter then result is the current percentage of skills gap when comparing males to females, and especially in the area of STEM programs.

The discussion also looks at the discrepancy among males and females in STEM activities participation, where females are observed to participate in STEM activities mostly once per year, while males mostly participate on a more than seven per year basis. Hence, from the discussion of the outcomes presented, it turns out that females are encouraged less to participate in STEM activities as compared to males. This then results in a lower enrolment of females in STEM Undergraduate Programs. Hence, high schools take some part of responsibility on lacking the equal opportunities provided to both genders, which in this case they favor males and prepare more form STEM programs.

8.5 Discussion in Regards to Social Influence

Table 8.4 Main Findings with Regards to Social Influence

Queries	Frequency in STEM	
	Males	Females
Occupations for men/women only	40.84%	9.17%
Considering STEM as an Undergraduate program	45.84%	20.84%

Females in STEM fields can experience bias that negatively influences their progress and participation. Although instances of explicit bias may be decreasing, implicit bias continues to have an adverse effect. Implicit biases may reflect, be stronger than, or in some cases contradict explicitly held beliefs or values. Therefore, even individuals who espouse a belief of gender equity and equality may harbor implicit biases about gender and hence, negative gender stereotypes about women and girls in science and math persist.

The society in general believes that there are occupations for males or for females only, which directly indicates the stereotypical judgment for particular Undergraduate Programs designated for males and females specifically. In this case, the outcomes presented indicate that, since the society has already made up their minds about particular occupations belonging to males and/or females, which explains a lot why Kosovar society suffers from inefficiency in Undergraduate Program selections by youngsters. In other words, if the society expects from females to attend Liberal Arts degrees, as such, that automatically disables them to work at their potential. Thus, society, through their beliefs, is not giving females the opportunity to demonstrate their capacities in any given Undergraduate Program endeavor.

Further numerical representations indicate that there are several occupations that are male dominated such as STEM programs, while more female dominated occupations are Liberal Arts. As such, society itself has created this division, so that, disables females to feel free in their Undergraduate Program selection.

From the table analysis, it can be observed that society is assured that females are less able than males to manage and organize. Therefore, this stereotypical judgment directly prevents females' self-verdict. This automatically suggests that society itself categorizes females as fragile, vulnerable, emotional, which on the comparative basis does not make them intelligent, hard-working, and ambitious, thus, stereotypical judgments from the society limit females to show that they should not be generalized and put in the same box. All in all, they have to be allowed from the society to show their potentials and capacities. As such, when you ask females whether they consider STEM, it can be seen that some of them do actually consider STEM, but the problem lies in the factors not allowing them to choose their desired Undergraduate Program on their own.

Chapter 9-Recommendations Available in the Kosovo Region

This chapter will be discussing the recommendations available in the Kosovo region with regards to Gender and Selection of Undergraduate Programs, more specifically, particular remarks that should be considered in adjusting the problem of how particular factors such as: parental influence, financial constraints, low high school involvement, and social values regarding gender (stereotyping) affect student's choice on selecting an Undergraduate Program.

9.1 Project Development

The proposals are represented as follows:

1) The creation of a nation-wide Guidance Program in High Schools Intended to Assist Students, Females in Particular, in their Career Choices

In Kosovo, there are no Vocational Guidance Programs available at students' disposal. According to the main findings under the section of "Low High School Involvement" it turns out that high school institutions do very less with regards to encouraging and advising female students, but also student body in general to show their full potential by selecting the appropriate Undergraduate Program that fits their background. Hence, one of the recommendations that this Honors research project provides to Kosovar community is establishing a vocational guidance program available in high schools all around Kosovo with regards to assisting students, females in particular, in career choice.

By establishing a project, as such, will require close collaboration with the Ministry of Education. This recommendation will be a project plan to be sent to the Ministry, so that, through an overlook and further investigation in this respect, they might think of approving and establishing the proposal.

9.2 What is Career Counseling?

Career development for the general public is an enduring process. There is a variety of factors that influence peoples' career development, including the interests, abilities, values, personality, background, and circumstances. Career Counseling is a process that will help students to distinguish and comprehend initially themselves and the world of numerous Undergraduate Programs available, in order to make career, educational, and life decisions.

Career development is more than just deciding on a major and what Undergraduate Program students desire to choose. It really is a lifelong process, meaning that, throughout their lives students might deal with circumstances that change their way of thinking. Hence, it is crucial that beforehand, they will make a long-term sustainable decision in choosing the appropriate Undergraduate Program. The goal of Career Counseling is to not only help students to make the decisions, but to make them aware by highlighting their knowledge and skills-set they possess.

9.3 What Should Students Expect From Career Counseling?

The Career Counselor will:

- Help students figure out who they are and what they expect from education, career, and life.
- They will be available to discuss matters such as: thoughts, ideas, feelings, and concerns about career-oriented and educational choices, that will help the student sort out, organize, and make sense of their future.
- Help students identify the factors influencing their career development, and help them assess their interests, abilities, and values.
- Help them locate resources and sources of career information.
- Assist them in determining next steps and develop a plan to help them achieve their goals.

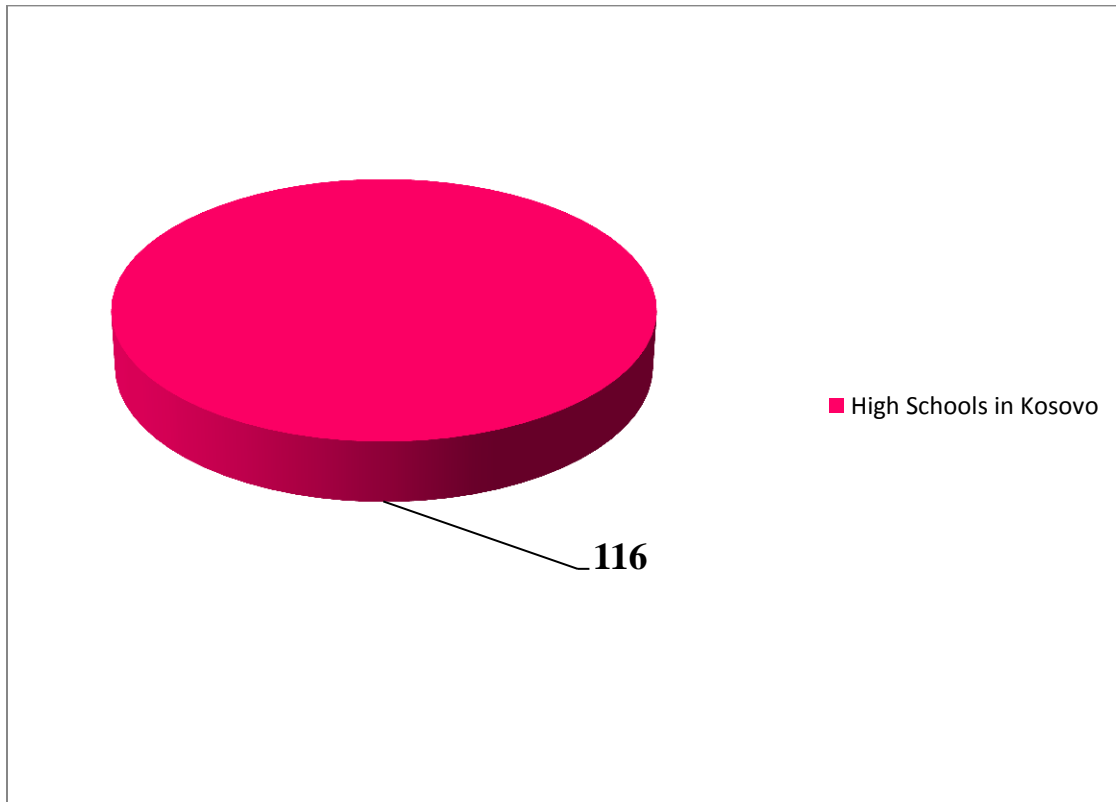
9.4 Who Needs Career Counseling?

Since career development is an ultimate process, Career Counseling can be appropriate for anyone, including freshmen, sophomores, juniors, seniors, and even alumni that have not yet chosen a particular Undergraduate Program. The earlier students start to make intentional decisions about their future, the better prepared they will be. The vocational guidance program recommends all freshmen to come in and visit with the Career Counselor.

9.5 Background Information with Regards to the Availability of Career Counseling in Kosovo

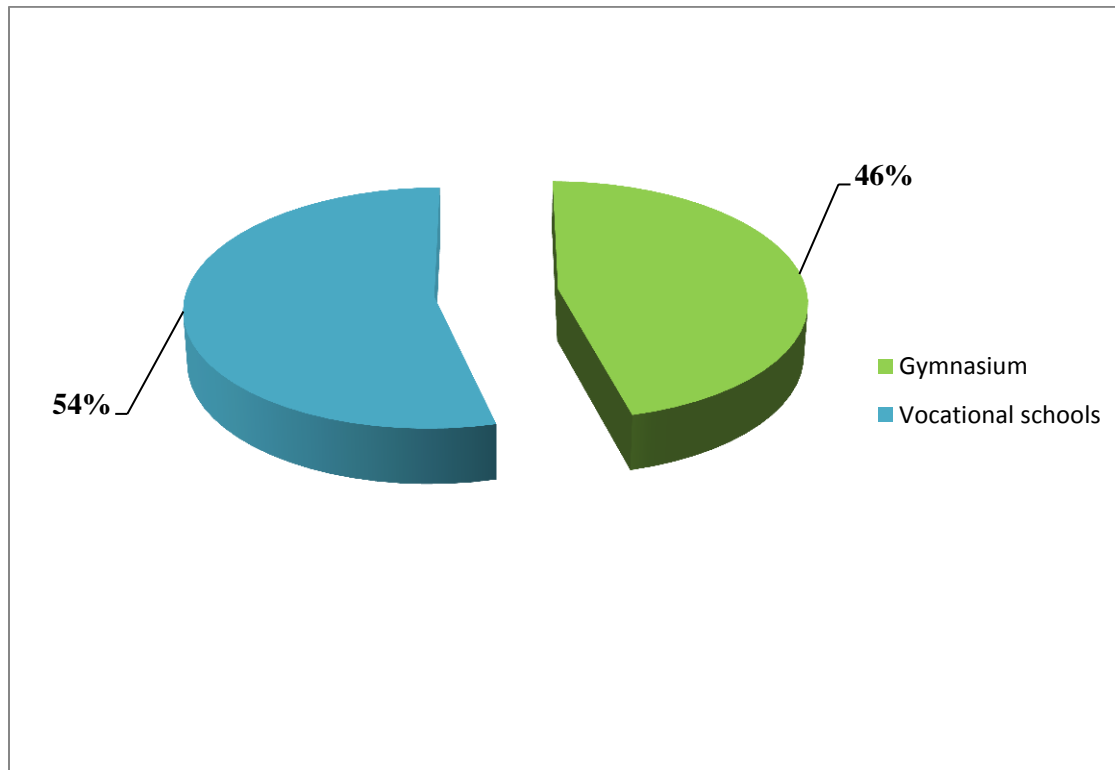
Currently, there are 116 high schools in Kosovo, which enables the employability of 116 counselors, in each high school, all over the country.

Figure 9.1 High Schools in Kosovo



From the figure below, it can be observed that 46% of those high schools are gymnasiums, while 54% are vocational schools. The Vocational Guidance Program will be available for both types of high school students, and the counseling will depend on the individual student basis.

Figure 9.2 Gymnasiums and Vocational Schools in Kosovo



9.6 Objectives of the Career Counseling Program

1. Offer Supportive Feedback

- In a supportive manner, is lets student know the reasons they have concerns. This process involves being specific about what has been observed.

2. Normalize the Student's Experience

- It is not unusual for students to have their first meeting encountering depression or anxiety during this time of transition and life changes. It may help the student understand this process can be stressful and therefore, numerous students experience some temporary depression or anxiety while trying to make the decision. The key factor for the counselor is to stabilize this experience.

3. Clarify Expectations and Roles

- Undergraduate Program selection is a time when students and their parents experience changes in their roles and expectations for each other. In most cases,

students benefit when parents and students clarify their expectations as well as the consequences of not meeting these expectations.

4. Encourage the Student to Meet with a Counselor

- It might help the students to know that they have the opportunity to pay a visit to the Counseling Center for one session to see whether or not counseling is the right solution for them. In other words, coming to the Counseling Center for a consultation meeting does not obligate the student to continue in counseling. The staff is interested in helping each student determine what interventions might work best for them. Sometimes counseling is a very good strategy; at other times, non-counseling strategies are more helpful.

9.7 Three Levels of Counseling

- As a trainee, the employee carries out a range of professional Undergraduate Program counselor assignments while learning the methods of the work.
- The employee performs an expanding range of Undergraduate Program counselling assignments in a developing capacity for students.
- The employee performs a full range of Undergraduate Program counselling assignments in a full-functioning capacity. Considerable independent judgment is required to carry out assignments that have significant impact on services or programs. Guidelines may be available, but require adaptation or interpretation to determine appropriate courses of action depending on the situation with the individual cases with students.

Note: Students, in general, are expected to progress through these series to the experienced level based on satisfactory performance and possession of the required skill set.

9.8 Responsibilities of a Counselor

- The counselor will provide guidance to students in finding the proper type of Undergraduate Program for applicants in conformity with their set of academic background.

- The counselor will recommend standards of performance for acceptance counseling and the application taking process using the given standards.
- The counselor will review, periodically, the application files to ensure that applying students in need for counseling are being referred.
- The counselor will be contacting admissions officers in particular Universities to develop placement opportunities for the students.
- The counselor will be administering and scores general aptitude and proficiency standardized tests to assist students for a better understanding of their Undergraduate Program preferences.
- The counselor will make contacts with schools and community guidance organizations in the development of cooperative plans.
- The counselor will manage group work as well as required.
- The counselor will provide assistance in determining program needs for the agency counseling program and the application-taking process based on evaluations of and changes in occupations, industries, labor force and the economy.
- The counselor will provides assistance in developing and revising training materials and conducting training programs on various phases of the program, and may assist in planning and conducting counseling workshops for all the interested students.
- The counselor will be participating in research studies related to Undergraduate Program counseling and the application taking process, so that it will bring to students the most up to date ways of understanding their preferences.
- The counselor will prepare interviews in a correction community residential center or a parole office to determine their vocational skills, interests, and Undergraduate Program potentials for students.
- The counselor will maintain records and prepare reports and correspondence related to the work.

9.9 Statement of the Problem and/or Need

The Honors Research Project will be addressing the problem of how particular factors such as parental influence, financial constraints, low high school involvement, and social values regarding gender (stereotyping) affect students' choice on selecting an Undergraduate Program. In Kosovo, there is lack of vocational guidance programs available in high schools with regards to assisting students, females in particular, in choosing the appropriate Undergraduate Program for them.

9.10 Costs Associated with Developing a Counseling Program in High Schools Around Kosovo

Table 9.1 Budget Expenditures with Respect to Counselor Salary

Budget Expenditures	
Wage	400
Employer payroll taxes (5%)	(20)
IRA retirement (5%)	(20)
Total payroll cost:	=360EUR

Table 9.2 Direct Labor Calculations for Counselor Employees

Labor	Nr. of workers	Number of working hours/day per worker	Salary/ month	Salary/ Day (20 working days)	Salary/ hour	Nr of students Counseling per hour	Salary per person counseling	Total salaries per counseling
Counselor	116	4	360	18	2.25	2	1.125	130.5 EUR
TOTAL	116							130.5 EUR

Table 9.4 Operating and Non-recurring expenses Calculations for Counselor Employees

Operating Expenses	Costs (yearly basis)
Advertising	5400 EUR
Research and Development	8400 EUR
Salaries and Wages	501,120 EUR
Telephone	6960 EUR
Internet	20,880 EUR
Utilities	34,800 EUR
Non-Recurring Expenses	
Costs	
Computers/laptop	52,200 EUR
Literature	11,600 EUR
Furniture	8700 EUR
Software	13,000 EUR
TOTAL Non-Recurring Expenses	85,500 EUR
TOTAL Operating Expenses	577,560 EUR
TOTAL EXPENSES	663,060 EUR

9.11 Benefits Associated with Developing a Career Counseling Program in High Schools Around Kosovo

1. Motivation to Remain Committed

During the early phases of a career, one develops fundamental skills and completes tasks that may seem divergent to your ultimate professional objective. Few people, however, can dive right into the meat of the career they feel they were born to do. So, an in-depth understanding of what the career entails and the knowledge that your life's work will ultimately be fulfilling, adds to one's motivation to remain committed, even when the rewards seem distant.

2. Enjoyment Meeting High Performance Standards

Successful people are required to meet high performance standards. These pressures come from employers, corporate culture and -- when one is an entrepreneur -- the marketplace. The necessary time, energy and intellectual capital is easier to expend when you love the work you do. From the most basic gauge of job happiness, from getting up in the morning to go to work because you love your job, to pushing yourself to go further in your career, remaining engaged is key to continued success.

3. Developing Innovation

Institutions benefit when their people have a genuine interest in the field they work. In addition to day-to-day motivation, employees are more likely to see their work from a variety of perspectives and bring fresh ideas to the table. This is how innovation occurs. One also benefits from this tendency toward innovation in a career that s/he enjoys: You can strike out on your own or create a niche in your place of employment.

4. Utilizing Your Best Strengths

Very often, career interests align closely with one's strengths. Choosing a career that uses your best skills prevents a situation where hard work only leads to frustration. What you are required to do in a job is not always what you are best at, even if you eventually succeed. Often, people know what they're good at but never utilize the opportunity to apply those skills. Selecting a job

that you will enjoy doing ultimately lets you simply follow your interests in pursuing a career path.

9.12 Positive Macroeconomic Effects of Developing a Career Counseling Program in High Schools Around Kosovo

- Maximizing potential output in an economy, achieving productive efficiency and economic growth
- Reduces inequality and prevents relative poverty from those who are unemployed.
- Full employment will improve business and consumer confidence which will encourage higher growth in the long-term.
- Unemployment is a big cause of poverty, stress and social problems.
- Full employment reduces government welfare spending and enables more income taxes – improving budget position

9.13 Negative Macroeconomic Effects of Developing a Career Counseling Program in High Schools Around Kosovo

- Full employment may cause labor shortages and wage inflation. This can lead to ordinary inflation.
- Attempting to achieve full employment could lead to a boom and bust economic cycle. If growth is above the long run trend rate, the growth will be unsustainable.
- Britain's period of full employment in the 1950s, meant many companies struggled to fill vacancies in unpopular jobs; this labor shortage was partly solved by encouraging immigration.

9.14 Project Lifecycle



A project such as establishing Vocational Guidance Program is a temporary endeavor designed to produce service or result, which involves helping high school students with career guidance. The entire proposal has a defined beginning and an end it which is characterized usually with time-constrained and often constrained by funding or deliverables, undertaken to meet unique goals and objectives, typically to bring about beneficial change or added value. For instance, the above mentioned Project life-cycle encompasses delivering a highly valued service to high school students, which as projected might be challenged through several constraints, such as human, financial, and so on.

2) An Extension of the Survey Work to Include the Whole of the Country

This study was limited to factors affecting career aspirations of students, more particularly females, and emerging issues and challenges in Prishtine district. It would be worthwhile to undertake a similar research in a wider region in order for the findings to give a comprehensive report of the problem in Kosovo. A similar study could also be carried in primary schools with standardized tests, in order to understand even why male students go to math and sciences high schools, while females choose social courses. A study could be conducted in order to understand whether there are additional factors that differentiate gender in the process of Undergraduate Program and further career choices. This Honors Project has managed to identify four main factors that affect students Undergraduate Program selection. Thus, this recommendation suggests that further studies ought to be undertaken as a tool to explore alternative factors that might be potential with regards to the Honors thesis.

3) Use Female Role models

Many females are reluctant to study STEM fields because they think the males have all the experience, and they will appear unprofessional when placed in programs with them. However, numerous Universities are constructing suitable programs to lure in female software engineers. One of the proposed methods for alleviating stereotype threat is through introducing role models. One study found that females who took a math test that was administered by a female experimenter did not suffer a drop in performance when compared to females whose test was administered by a male experimenter. These researchers found that it was not the physical presence of the female experimenter but rather learning about her apparent competence in math that buffered participants against stereotype threat. The findings of another study suggest that role models do not necessarily have to be individuals with authority or high status, but can also be drawn from peer groups. This study found that females in same-gender groups performed better on a task that measured math skills than girls in mixed-gender groups. This was due to the fact that females in the same-gender groups had greater access to positive role models, in the form of their female classmates who excelled in math, than girls in mixed-gender groups.

Similarly, another experiment showed that making group achievements salient helped buffer females against stereotype threat. Female participants who read about other successful females even though these successes were not directly related to performance in math, performed better on a subsequent math test than participants who read about successful corporations rather than successful females. A study investigating the role of textbook images on science performance found that females demonstrated better comprehension of a passage from a chemistry lesson when the text was accompanied by a counter-stereotypic image (i.e., of a female scientist) than when the text was accompanied by a stereotypic image (i.e., of a male scientist). Other scholars distinguish between the challenges of both recruitment and retention in increasing females' participation in STEM fields. These researchers suggest that although both female and male role models can be effective in recruiting females to STEM fields, female role models are more effective at promoting the retention of females in these particular fields.

4) Rework the Ministry of Education, Science and Technology curriculum

An interest in Science and Technology needs to be cultivated at a young age, but many females are standing on the sidelines as the male participate in science fairs. MASHT educators ought to work in order to encourage young females to pursue opportunities in STEM by offering more hands-on workshops for females to learn about Science and Technology. High schools should also consider bringing female Engineers to transmit their knowledge to students with regards to their profession and reach out to young females. This project proposal will be submitted to the Ministry of Education, Science and Technology which will then allow the commission to discuss the possibilities of implementing such change in curricula.

5) Combat Stereotypes

Female Engineers are the brains behind a number of Facebook's features, such as the news feed and the photo viewer. If more females knew this, perhaps they would be empowered to jump into the field themselves. We need more visibility when it comes to the work female engineers have already accomplished, so young females know it is not just males who are behind the technology they use in their everyday lives. This recommendation suggests further female empowerment advertising which will automatically encourage young girls to feel more powerful towards choosing STEM degrees.

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Appendix I

Special Provisions in Establishing a Career Counseling Program

Article 20

The Management Staff

- 2.4. Maintaining documents and records as required by the municipality or the Ministry;
- 2.5. Duties in relation to the curriculum;
- 2.6. Other matters regulated by this Law.

Article 24

The Kosovo Curriculum Framework

- 5.1. Promotes the moral, cultural, mental and physical development of pupils and of society;
- 5.2. Prepares pupils for the opportunities and responsibilities for successful life and work;
- 5.3. Develops knowledge, skills and competences appropriate to the level of education expressed in competencies;
- 5.4. Fosters the spirit of respect, understanding and tolerance among all communities.

Article 26

Textbooks and other educational teaching resources

1. To secure standards and quality of materials used in publicly-funded educational and training institutions, the Ministry shall approve textbooks, other educational teaching resources and learning materials on the advice of the KCSAA and subject to regulations regarding procurement, drafting, review, and publishing set out in a bylaw.
2. No materials except those approved by the Ministry under this Article may be used in publicly funded educational institutions.
3. Governing boards of educational and/or training institutions shall approve, based on the list approved by Ministry, the textbooks, other educational teaching resources and learning materials, based on the proposal of teachers, used in specific institutions.

Article 27

Textbooks in Languages of Communities

1. Textbooks in the Serbian language at levels 1 and 2 shall be used as determined by applicable law and shall be provided free of charge.
2. Textbooks in community's languages in which the teaching is being developed at levels 1 and 2 shall be provided free of charge.

Appendix II

Survey

The data obtained from the respondents will be used only for research purposes and will remain confidential.

If a high school student, go to section A

If a University student, go to section B

Section A

1. Gender
 - a) Male
 - b) Female
2. Are you planning to continue with bachelor studies?
 - a) Yes
 - b) No
3. If yes, which University degree are you planning to attend?
 - a) Medicine
 - b) Teaching
 - c) Engineering (IT)
 - d) Science and Mathematics
 - e) Nursing
 - f) Arts
 - g) Others
4. Did your parents have an influence on your decision on which degree to study?
 - a) Yes
 - b) No
5. On how many occasions did you discuss the selection of an Undergraduate Program with your parents?
 - a) Never
 - b) Rarely

- c) Sometimes
 - d) Often
 - e) Very often
6. Did you appreciate all the input from your parents?
- a) Yes
 - b) No
7. Did your parents provided input by:
- a) Choosing a career for you
 - b) Suggesting that you should choose their career
 - c) They bought you books related to the subject
 - d) Suggesting to choose a career that is demanded in the labor market
8. On a scale from 1 to 5, how would you rate your parents input? (1) poor, (2) fair, (3) good, (4) very good and (5) excellent; where noted.
- a) 1
 - b) 2
 - c) 3
 - d) 4
 - e) 5
9. Are financial constraints affecting you decision?
- a) Yes
 - b) No
10. Are there any STEM related activities in your school?
- a) Yes
 - b) No
11. Identify the types of STEM activities planned for females in your high school (Check all that apply)?
- a) Hands-on activities
 - b) Experiments
 - c) Computer usage
 - d) STEM lectures
 - e) Field trips

f) None provided

12. How many STEM activities did you participate in during high school?

- a) 1 per year
- b) 2-4 per year
- c) 5-7 per year
- d) Over 7 per year

13. Given the types of STEM activities that enables students to select a degree, please rank from the most important being 1 to the least important being 4, activities that would most contribute to students choosing STEM?

- Hands-on activities
- Experiments
- Computer usage
- STEM lectures
- Field trips

14. Do you believe that there are occupations for men of for women only?

- a) Yes
- b) No

15. How would you categorize occupations according to the following?

Please answer the questions to the best of your ability.

Occupations	Male occupations	Female occupations	Neutral occupations
Doctor			
Economists			
Engineer (IT)			
Journalist			
Lawyer			
Mathematician			
Nurse			
Politician			
Teacher			
University Professor			

16. Which of the following qualities do males, females, and both equally possess.

Qualities	Male	Female	Both equally
Fragile			
Vulnerable			
Emotional			
Compassionate			
Creative			
Intelligent			
Honest			
Manipulative			
Hard-working			
Outgoing			
Ambitious			
Decisive			
Stubborn			
Arrogant			

17. What affects female's choice of the field of study?

Reasons	Strongly disagree	Disagree	Neutral	Agree	Strongly agree
Easier subject matter					
Allows for career family balance					
Are naturally more able to prefer it					
Females are not competitive enough					
Gender discrimination in particular professions (i.e. STEM)					

Section B

1. Gender
 - c) Male
 - d) Female
2. Which University are you attending?
 - a) Medicine
 - b) Teaching
 - c) Engineering (IT)
 - d) Science and Mathematics
 - e) Nursing
 - f) Arts
 - g) Others
3. Are you studying the topic that you really wanted to study?
 - a) Yes
 - b) No
4. Did your parents have an influence on your decision on which degree to study?
 - c) Yes
 - d) No
5. On how many occasions did you discuss the selection of an Undergraduate Program with your parents?
 - f) Never
 - g) Rarely
 - h) Sometimes
 - i) Often
 - j) Very often
6. Did you appreciate all the input from your parents?
 - c) Yes
 - d) No
7. Did your parents provided input by:
 - e) Choosing a career for you
 - f) Suggesting that you should choose their career

- g) They bought you books related to the subject
 - h) Suggesting to choose a career that is demanded in the labor market
8. On a scale from 1 to 5, how would you rate your parents impute? (1) poor, (2) fair, (3) good, (4) very good and (5) excellent; where noted.
- f) 1
 - g) 2
 - h) 3
 - i) 4
 - j) 5
9. Were financial constraints affecting you decision?
- c) Yes
 - d) No
10. Were there any STEM related activities in your school?
- c) Yes
 - d) No
11. Identify the types of STEM activities planned for females in your high school (Check all that apply)?
- g) Hands-on activities
 - h) Experiments
 - i) Computer usage
 - j) STEM lectures
 - k) None provided
12. How many STEM activities did you participate in during high school?
- e) 1 per year
 - f) 2-4 per year
 - g) 5-7 per year
 - h) Over 7 per year
13. Given the types of STEM activities that enables students to select a degree, please rank from the most important being 1 to the least important being 4, activities that would most contribute to students choosing STEM?

[] Hands-on activities

Experiments

Computer usage

STEM lectures

14. As what are planning on working after you graduate?

- a) Medical doctor
- b) Teacher
- c) Engineer (IT)
- d) Mathematician
- e) Nurse
- f) Artist
- g) Other

15. Do you believe that there are occupations for men of for women only?

- c) Yes
- d) No

16. How would you categorize occupations according to the following?

Please answer the questions to the best of your ability.

Occupations	Male occupations	Female occupations	Neutral occupations
Doctor			
Economists			
Engineer (IT)			
Journalist			
Lawyer			
Mathematician			
Nurse			
Politician			
Teacher			
University Professor			

17. Which of the following qualities do males, females, and both equally possess.

Qualities	Male	Female	Both equally
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Emotional			
Compassionate			
Creative			
Intelligent			
Honest			
Manipulative			
Hard-working			
Outgoing			
Ambitious			
Decisive			
Stubborn			
Arrogant			

18. What affects female's choice of the field of study?

Reasons	Strongly disagree	Disagree	Neutral	Agree	Strongly agree
Easier subject matter					
Allows for career family balance					
Are naturally more able to prefer it					
Females are not competitive enough					
Gender discrimination in particular professions (i.e. STEM)					

19. If you are you planning to continue on with master degree, are you going to switch the area?

a) Yes

b) No

Thank you very much for your collaboration

Appendix III

Consents



Informed Consent Form for Social Science Research Honors Project

Title of Project: “Gender and Selection of Undergraduate Programs”

Principal Investigator: Fjolla Kacaniku, A.U.K. Student
Ulpiana E 30 C-3/5
044/400-330; fjollak1@aukonline.org

Purpose of the Study: The purpose of this study is to examine the existing correlation among four factors: parental influence, financial constraints, low high school involvement, and social values regarding gender stereotyping, and students Undergraduate Program selection decision.

Procedures to be followed: You will be asked to answer certain questions in regards to this persisting concern in Kosovo. Enclosed you will find the survey.

Duration: It will take about 10 minutes per student to complete the survey

Statement of Confidentiality: Your participation in this research is confidential. The data will be used only for The Honors Research Project at American University in Kosovo. Moreover, with your help, you will enable the researcher to expand the knowledge horizon in regards to “Gender and Selection of Undergraduate Programs”.

Voluntary Participation: Your decision to be in this research is voluntary. You can stop at any time. You do not have to answer any questions you do not want to answer.

If you agree to take part in this Research study and the information outlined above, please sign your name and indicate the date below.

You will be given a copy of this form for your records.

Participant Signature

Date

Person Obtaining Consent

Date