Exploring STEM Cultural Attitude and its effect on Career path in the GCC Countries

By

Ahmed Mehrez

Dept. of Management and Marketing, College of Business & Economics, Qatar University, Doha - Qatar

Abstract

Oil countries always attract professional employees in different fields due to clear shortage among these countries' own people in such fields. This research explores cultural attitude of people in these oil countries joining/studying scientific majors. This investigation is likely to be done by examining three of these countries; namely Emirates, Qatar and Kuwait, attitude related to self-influence, parents influence, and society influence where these cultural variables would affect career path. Findings show that nationals in theses counties attitudes are mostly affected by self-influence and society influence, but not necessarily by parental influence. In addition, no major difference was found in respect to contextual factors including gender and nationality.

Key words: Attitude, Oil countries, Science and Math, Self-influence, Parents influence, Society influence

Introduction

Most of rich oil producer countries are in the Arabian Gulf. These countries always seek skilled personnel with an intensive scientific and/or mathematical background in order to assist these countries in oil production process. Gulf Cooperation Council (GCC) countries like Saudi Arabia, Iraq, Kuwait, United Arab Emirates and Qatar are amongst the world highly income countries and at the same time amongst the highest in demanding scientific qualified workers. While national visions of these countries include more focus to be paid on health and education aspects, there is still a considerable shortage among these countries nationals in joining professions that depend on science domain. With an expansion in all areas of life in these oil countries, an ongoing effort is highly concentrating on the education system. This should provide people; especially nationals with world class education system that would give them readiness to acquire the required knowledge and skills to better contribute to the development of these countries.

It is apparent that the main development and prosperity of these oil countries depends highly on the exploration and production of oil and gas. This in turn would require an ever increasing focus and improvement of the STEM (Science, Technology, Engineering, and Math) education system. However, some recent reports show that GCC nationals tend to pursue non-scientific majors when joining different schools and universities either inside or outside the country. According to statistics out of Qatar University for example; the main national and largest University in the state of Qatar, slightly less than 18% of all Qataris enrolled in Universities join scientific majors annually. In addition, this percentage tends to decrease year after year.

As a result, local and international companies working in Qatar struggle to fill in technical and scientific vacancies with local talents. This is why more and more expatriates are hired to fill such vacancies. This paper explores national attitude towards science majors in three of these countries, Emirates, Qatar and Kuwait. It aims to investigate possible reasons behind such an attitude.

Literature Review

It can be argued that larger investments are spent by developed countries in order to enhance these countries' abilities related to science and technology. Education is not far from this. Demands on STEM education and STEM workforce continues to grow up, however, Wang and Degol (2013) state that there is failure in meeting this on-going increasing demand. Many researches have been conducted in order to improve STEM education. Most of these researches confirmed the importance of attitude in creating and developing a positive manner toward science subjects (Nasr & Soltani, 2011).

Attitiude can be defined as "a concept, which arises from the attempt to account for the observed regularities in the behaviour of individual persons, the quality of which is judged from the observed evaluative responses one tends to make." (Oluwatelure & Oloruntegbe, 2010). In this manner, a positive attitude toward science education can be defined as, "favourable or unfavourable feelings about science as a school subject" (Craker, 2006). Nasr and Soltani (2011) argues that the concept of attitude towards science may be somehow vague. According to Yunus and Ali (2012), attitude in educational systems is the way students behave and think and it is not static and can be changed, and it can be formed at early ages. That's why it is important to realize that when parents and teachers observe negative attitude towards learning science among young students; necessary actions can be taken to make change in their attitude towards science.

Since attitudes are not directly observable, social psychologists developed various methodologies for assessing attitudes. Use Likert scales which provides a range of responses to a given question or statement has turned common in such manner. In general, Likert scales are very useful as they are built in a degree of sensitivity and differentiate responses while still generating numbers and they are commonly used in educational and social researches (Baser, 2013). One of these famous scales is the one developed by Fennema-Sherman and named after them. This attitude Scale was developed in 1976 and has turned to be one of the most common tools used in measuring attitudes towards numeracy. In addition, Fennema-Sherman Attitude Scale was developed also to evaluate students from different backgrounds and genders. It was also used to evaluate different academic levels (Bramlett & Herron, 2010).

The main concept after this scale is that there are many factors that could affect students' attitude towards science. Some of the factors are parents' influence, gender, age, students' cognitive styles, career interest, societal view of science and scientists, methods of teaching, teachers' attitude with students, and social implications of science. However, the changing environment could also affect attitudes of students (Yunus & Ali, 2012). Nowadays, young people around the world are overtaken by computer gadgets and online social networking which may decrease their interest in learning science. Students these days like to spend lot of times on the internet and playing with their gadgets rather than doing revision on academic subjects. Gadgets appear to be more interesting than school work. This is an environmental challenge that future communities are facing in this era (Yunus & Ali, 2012).

It can be hypothesised then that people may select their education and work settings. This is likely to cope with their personality characteristics. In cope with this, many authors confirmed the importance of personality factors in choosing the appropriate academic major and even future career (Balsamo, Lauriola, & Saggino, 2013). According to (Bramlett & Herron, 2010), numerous studies have focused on attitudes and mathematics. The main conclusion after these studies is that students may think that they are unable to achieve mathematics. This is why their attitude toward mathematics may turn to be a self-fulfilling vision that would result in such a lack of interest in any career involving mathematics. Consequently, many students may find that they are not able to get a degree in mathematics or science in general which may result in a gap between career and academic opportunities.

In addition, Arcidiacono, found out that choosing a major in academic may follow future earnings. They concluded that sorting occurs, either on expected earnings or on individual perceptions of personal abilities in performing homework in particular majors. Their model estimated that expected earnings would act of great importance for students in choosing what to study, even after controlling for ability and career preferences. Nevertheless and out of these variables affecting attitude toward science, gender has been searched intensively. Studies show steady influence of gender in choosing science education. Moreover, differences among persons in beliefs and confidence about their own abilities may be affected by motivation and historical academic achievements. Generally speaking, individuals may believe that their abilities would be an inner trait so they turn desperate when facing a challenging assignment. Simply some may sometimes give up more easily.

A study in Al-Husn College (Abdullraouf, 2002) aimed at identifying scientific orientations based on major and gender effects found that there are clear differences and statistical significances regarding how students' performance affects their choice of scientific majors they prefer to study according to their cultures. Regarding gender as a reason to exclusively choose some scientific majors, researchers have found that gender has no effect upon choosing scientific majors (Abdullraouf, 2002). Cultural influence has a significant effect on students' attitudes towards science and science-related careers such as medicine, forensic science, agriculture and so forth among different countries. Cultural context has several components that determine and shape young people's attitudes towards science and even their achievements in science. These components consist of elements such as linguistics, social, political, economic, philosophical, and religious aspects. Evidently, cultural attributes are associated with organizational hierarchy, needs and beliefs of people, and even family influence. Furthermore, gender effect on science attitudes can be also considered as a part of cultural attributes because of socio-cultural influences which play an important role for males and females to establish either a positive or a negative attitude towards science (Örnek, 2015).

Furthermore and as families are important core of culture, families can raise their children with their cultural essences so embedded into children's lives. Therefore, family has a significant influence on students' choice whether these families are liberal families or authoritarian families. In both cases, families strongly influence students' attitudes towards science and science-related choices in either a positive or a negative fashion. In many studies (Breakwell & Beardsell, 1992; Osborne, Simon, & Collins, 2003; Talton & Simpson, 1985, 1986), positive relationships between children's attitudes towards science and science-related choices and parents' attitudes towards science and science-related careers were investigated.

Research Model and Research questions

It can be concluded then that attitude toward Science major could be affected by three different variables; namely self-confidence, Parents-influence and Society influence. In respect a research model can be suggested as in figure 1.

In essence, this research aims to explore reasons that Oil GCC nationals may not join science majors. This exploration is likely to be searched according to the following research questions:

Research Questions

1.   Do GCC nationals have self-confidence in majoring science?
2.   Do parents influence GCC nationals' attitude towards science major?
3.   Do the GCC society influence nationals' attitude towards science?
4.   Is there any difference between GCC males and females attitudes in majoring science?
5.   Is there any difference among Qataris, Emiratis, and Kuwaiti nationals attitudes toward majoring science?

In this essence, five hypotheses could be developed as follows:

(RH1): Nationals' attitude in Emirates, Qatar and Kuwait toward majoring science is positively affected by these nationals self-influence.
(RH2): Nationals' attitude in Emirates, Qatar and Kuwait toward majoring science is positively affected by parental-influence in these countries.
(RH3): Nationals' attitude in Emirates, Qatar and Kuwait toward majoring science is positively affected by societal-influence in these countries.
(RH4): There is a significant difference between males' and females' attitude towards majoring science in Emirates, Qatar and Kuwait.
(RH5): There is a significant difference among Emirati, Qatari and Kuwaiti nationals attitudes in majoring science.

In order to answer the above questions and to investigate research hypotheses, a modified survey questionnaire was settled which was developed by (Sira & Pawlak, 2010). The mian objective of this questionnaire was to measure students' attitudes towards mathematics. This original attitude scale was modified to measure attitude toward Science. This survey questionnaire has three scales and divided into three sections. These sections serve the main hypotheses developed by this research and include: self- confidence in learning science, parents' influence, and the society's influence.

This survey was tested for internal consistency where Cronbach Alpha was used. Chronbach Alpha is a considered a reliability measure that is expressed as a number between 0 and 1 and expresses the extent to which the items in a group are closely related. Measuring reliability of current questionnaire shows an alpha coefficient of 0.73 (table 1) which indicate that there is a high internal consistency. Therefore, this questionnaire can be considered reliable and valid.

Sample size included year 12 national students from the three countries; Emirates, Qatar and Kuwait. National and Private schools were randomly sent an invitation to participate in this survey. A total number of round 300 paper-based questionnaires were distributed in each country; as stated, randomly. Putting into consideration that this research is limited to nationals

only, responses were filtered to exclude any resident or non-national. Out of the total number of received questionnaires, number and percentages of valid responses were; 123 Emirati with a percentage of 41%, 118 Qatari with a percentage of 39%, and 115 Kuwaiti with a percentage of 42%. These numbers of respondents would normally acting not to represent the whole society, but due to the exploratory nature of the research, this sample would be considered reasonable for recognising research main problem.

Findings and Results

As earlier discussed, five hypotheses were suggested in this research. Findings and results can be divided in two sections, descriptive data and testing the hypotheses.

Descriptive data

As previously shown, a total number of 356 valid responses were received. Out of the whole sample, 107 males with a percentage of 30% and 249 are females with a percentage of 70%. Numbers and percentages of Males and females in the three countries are illustrated in table 2 where in Emirates, number of males are 34 with a percentage of 28% and number of females is 89 with a percentage of 72%. In Qatar, number of males is 38 with a percentage of 32% and number of females is 80 with a percentage of 68%. In Kuwait, number of males is 35 with a percentage of 30% and number of females is 80 with a percentage of 70%. It is apparent that commonalities can be noticed when comparing numbers and percentages of valid respondents among the three countries which reflect the similarity nature among GCC countries.

Testing hypotheses:

Five hypotheses were suggested to explore the research main problem. Results of testing hypotheses are as follows:

(RH1): Nationals' attitude in Emirates, Qatar and Kuwait toward majoring science is positively affected by these nationals self-influence.

This hypothesis assumes that majoring science can be affected by self-influence and confidence. In order to test this hypothesis, a very simple descriptive statistics were used where the Mean (M.), Standard Deviation (S.D.) and Coefficient of Variance (C.V.) were calculated to each statement and a total number is summed up (Table 3). In addition, Mann Whitney Test was used to compare results out of the three countries under investigation (Table 4).

Reviewing the results of each statement indicate that the average responses in the three countries are: 3.97, 4.08 and 4.03 with standard deviations of 0.89, 0.86 and 0.88. It can be generally considered as a positive response as it is beyond the average. However, statements like: science is hard subject and that majoring science will not get an easy job looked less than this average. Generally, respondents indicate an agreement in respect to having confidence to learning science. They also have shown an ability to influence their own attitude towards science majors. This is why this hypothesis would be accepted.

In addition, table 4 shows results of Mann Whitney Test among the three countries. Two pairs of countries were compared simultaneously in order to explore if differences could be traced among the three countries nationals attitude in respect to self-influence.

It can be concluded from table 4 that there is no significant differences among the three countries in respect to national's attitudes toward studying science from the perspective of self-influence.

(RH2): Nationals' attitude in Emirates, Qatar and Kuwait toward majoring science is positively affected by parental-influence in these countries.

This hypothesis assumes that majoring science can be affected by parental-influence where parents may affect their own kids' attitude toward a specific behaviour like majoring science. In order to test this hypothesis, a very simple descriptive statistics were used where the Mean (M.), Standard Deviation (S.D.) and Coefficient of Variance (C.V.) were calculated to each statement and a total number is summed up (Table 5). In addition, Mann Whitney Test was used to compare results out of the three countries under investigation (Table 6).

Reviewing the results of each statement indicate that the average response is in the three countries are: 2.34, 2.31 and 2.31 with standard deviations of 1.21, 1.23 and 1.24. These results can be considered as a negative response as it is below the average. Most respondents indicate that parental influence is not that effective in their choices in majoring. This is why this hypothesis would be rejected. However, a need to more studies on parental influence would be recommended so that understading this phenomenon.

In addition, table 6 shows results of Mann Whitney Test among the three countries. Two pairs of countries were compared simultaneously in order to explore if differences could be traced among the three countries nationals attitude in respect to self-influence.

It can be concluded from table 6 that there is no significant differences among the three countries in respect to national's attitudes toward studying science from the perspective of Parental-influence. Close culture is so obvious from the perspective of this test as the three nationals show no effect of their parents in their decision of studying a specific major of science.

(RH3): Nationals' attitude in Emirates, Qatar and Kuwait toward majoring science is positively affected by societal-influence in these countries.

This hypothesis assumes that majoring science can be affected by societal-influence where society may affect nationals' attitude toward a specific behaviour like majoring science. In order to test this hypothesis, a very simple descriptive statistics were used where the Mean (M.), Standard Deviation (S.D.) and Coefficient of Variance (C.V.) were calculated to each statement and a total number is summed up (Table 7). In addition, Mann Whitney Test was used to compare results out of the three countries under investigation (Table 8).

Reviewing the results of each statement indicate that the average response is in the three countries are: 3.64, 4.08 and 4.10 with standard deviations of 1.02, 0.84 and 0.82. These results can be generally considered as a positive response as they are beyond the average. In general, respondents indicate an agreement in respect to social effects to learning science. This is why this hypothesis would be accepted.

In addition, table 8 shows results of Mann Whitney Test among the three countries. Two pairs of countries were compared simultaneously in order to explore if differences could be traced among the three countries nationals attitude in respect to self-influence. It can be concluded from table 8 that there is still no significant differences among the three countries in respect to national's attitudes toward studying science from the perspective of Societal-influence. This reflects the common Close culture among nationals of the GCC countries.

(RH4): There is a significant difference between males' and females' attitude towards majoring science in Emirates, Qatar and Kuwait.

In order to test the differences between males and females, T-test was used. T-test is a statistical tool that can be used to find out if differences can be traced between two groups of respondents toward the same statements. Results show that there is no significant difference between males and females attitudes towards science majors (table 9).

Table 9 shows that there is no significant difference between males and females in majoring science. Both genders having nearly the same self-confidence and having the same parental-influence and society affects them both in the same way. This is why this hypothesis would be rejected.

(RH5): There is a significant difference among Emirati, Qatari and Kuwaiti nationals attitudes in majoring science.

In order to test this hypothesis, Mann Whitney Test was conducted as indicated in tables 4, 6 and 8. As previously shown, statistical results show no differences among the three countries national in respect to any of research variables. This is why hypothesis 5 is to be accepted.

Summary and Conclusions

In conclusion, the main objective of this paper is exploratory where three influencers on Emiratis, Qataris, and Kuwaitis attitudes towards majoring science were examined. Self-confidence, parental-influence and societal-influence on these countries nationals' attitudes towards science majors may play a significant role in these nationals' future choices. Based on findings, it has been found out that the effect of self-influence and society-influence is remarkable, however, parents-influence was not that effective.

When it comes to self-influence and confidence in learning science subjects, the research findings indicates that there is an agreement among the respondents in the sample of study with a mean of round 4.00. Such finding is in line with the Expectancy-Value Theory which states that there is in fact psychological influence on achievement related choices. Also, such alignment is found with the assumptions of (Balsamo et al., 2013) that people make choices on their education and work settings according to their personality characteristics. It does not come as a surprise that GCC nationals influence their own education and career related choices. In fact they are the main drivers for it. GCC nationals nowadays are well-educated and well-raised especially with the economic boom and technological advancement which have driven all the opportunities for them to make sound choices as it fits their personality and desire. GCC nationals, in general, are becoming more and more independent and able to make education and career choices on their own.

In addition, parents influence on attitudes towards science majors has not shown high effect. The mean came less than 2.5 which indicate that most of the respondents neither agree nor disagree that parents actually have some influence on their decision and attitudes towards science. That can be attributed to the fact that GCC nationals are becoming more independent in their career and education choices and parents are more open minded to encourage their children to pursue education and career path as they desire. It is also worth mentioning that the rate of significance for this piece of information is not high, which means that there are not enough evidence to prove parents role is minimal or none existent. Other researches and in contrary to this study, revealed the role parents play in encouraging students joining science majors. Parents mostly provide their kids with information about their experiences of different disciplines. These experiences would be kept by students and may lead to a certain choice. In essence, these motivational values would affect persons' engagement in various educational activities, as well as future occupational desires (Wang & Degol, 2013).

As for the society influence on the attitudes of GCC nationals towards science majors, the data collected from the questionnaire demonstrated a mean of about 4.00 which indicates that respondents do agree that the society plays a role in influencing their decisions and attitudes towards science majors. Society consists of culture, norms, values and beliefs; thus GCC nationals believe that such factors of the society shape their attitudes and decisions. They think twice before making education or career choices to ensure they are not undervalued or negatively perceived by the society. Alignment between the research findings and previous studies can be demonstrated according to Örnek (2015) who states that cultural context has several components that determine and shape young people's attitudes towards science and even their achievements in science. These components consist of elements such as linguistics, social, political, economic, philosophical, and religious aspects. Evidently, cultural attributes are associated with organizational hierarchy, needs and beliefs of people, and even family influence.

In respect to testing if difference between males' and females' attitude towards science". This research found out that there are no significant differences between males and females when it comes to self-influence, parents-influence, and society influence. This came as a surprise because most of the reviewed literatures in this paper demonstrate that males were significantly more confident than females in studying science subjects, as confidence is a major determining factor for attitude toward science. Of all the elements that may influence attitudes toward science, gender has generally been shown to have a consistent influence. Some researchers suggest that men are biologically primed to outperform women in mathematical tasks, particularly dimensional representations, theorizing that male superiority in performance is likely responsible for the overrepresentation of men in science professions (Wang & Degol, 2013). Despite that; some researchers concluded that women's ability to perform or under perform in science subjects can't be explained by gender differences by itself. In accordance, no difference was noticed among the three countries; Emirates, Qatar and Kuwait. It reflects the close culture that Arabian Oil countries have and the strong cultural bond among these countries especially in the Arabian Gulf spot.

Reference

Abdullraouf, Z. (2002). Scientific Attitudes Among Students of Al-Husn College and The Impact of Specialization and Gender. Education Collage Journal.

Balsamo, M., Lauriola, M., & Saggino, A. (2013). Work values and college major choice. Learning and Individual Differences, 24, 110-116. https://doi.org/10.1016/j.lindif.2012.12.022

Baser, M. (2013). Attitude, gender and achievement in computer programming. Online Submission, 14(2), 248-255. https://eric.ed.gov/?id=ED542330

Bramlett, D., & Herron, S. (2010). A Study of African-American College Students' Attitudes Towards Mathematics. Journal of Mathematical Sciences and Mathematics, 43-51.

Breakwell, G. M., & Beardsell, S. (1992). Gender, parental and peer influences upon science attitudes and activities. Public understanding of science, 1(2), 183. https://iopscience.iop.org/article/10.1088/0963-6625/1/2/003/meta

Craker, D. E. (2006). Attitudes toward science of students enrolled in introductory level science courses at UW-La Crosse. UW-L Journal of undergraduate research IX, 9, 1-6. https://doi.org/10.1.1.484.2322&rep=rep1&type=pdf

Nasr, A. R., & Soltani, A. K. (2011). Attitude towards biology and its effects on student's achievement. International journal of biology, 3(4), 100. https://doi.org/10.5539/ijb.v3n4p100

Oluwatelure, T., & Oloruntegbe, K. (2010). Effects of parental involvement on students' attitude and performance in science. African Journal of Microbiology Research, 4(1), 1-9. http://internationalscholarsjournals.org/journal/ajmr

Örnek, F. (2015). Culture's effect on students' attitudes towards science. Education policy, management and quality, 7(1), 27-44.

Osborne, J., Simon, S., & Collins, S. (2003). Attitudes towards science: A review of the literature and its implications. International journal of science education, 25(9), 1049-1079. https://doi.org/10.1080/0950069032000032199

Sira, N., & Pawlak, R. (2010). Prevalence of overweight and obesity, and dieting attitudes among Caucasian and African American college students in Eastern North Carolina: a cross-sectional survey. Nutrition research and practice, 4(1), 36-42. https://doi.org/10.4162/nrp.2010.4.1.36

Talton, E. L., & Simpson, R. D. (1985). Relationships between peer and individual attitudes toward science among adolescent students. Science Education, 69(1), 19-24. https://eric.ed.gov/?id=EJ312626

Talton, E. L., & Simpson, R. D. (1986). Relationships of Attitudes Toward Self, Family, and School with Attitude Toward Science Among Adolescents. Science Education, 70(4), 365-374.

Wang, M.-T., & Degol, J. (2013). Motivational pathways to STEM career choices: Using expectancy–value perspective to understand individual and gender differences in STEM fields. Developmental Review, 33(4), 304-340. https://doi.org/10.1016/j.dr.2013.08.001

Yunus, F. W., & Ali, Z. M. (2012). Urban students' attitude towards learning chemistry. Procedia-Social and Behavioral Sciences, 68, 295-304. https://doi.org/10.1016/j.sbspro.2012.12.228

Tables and Figures

Figure 1: Research model, Attitude toward science major
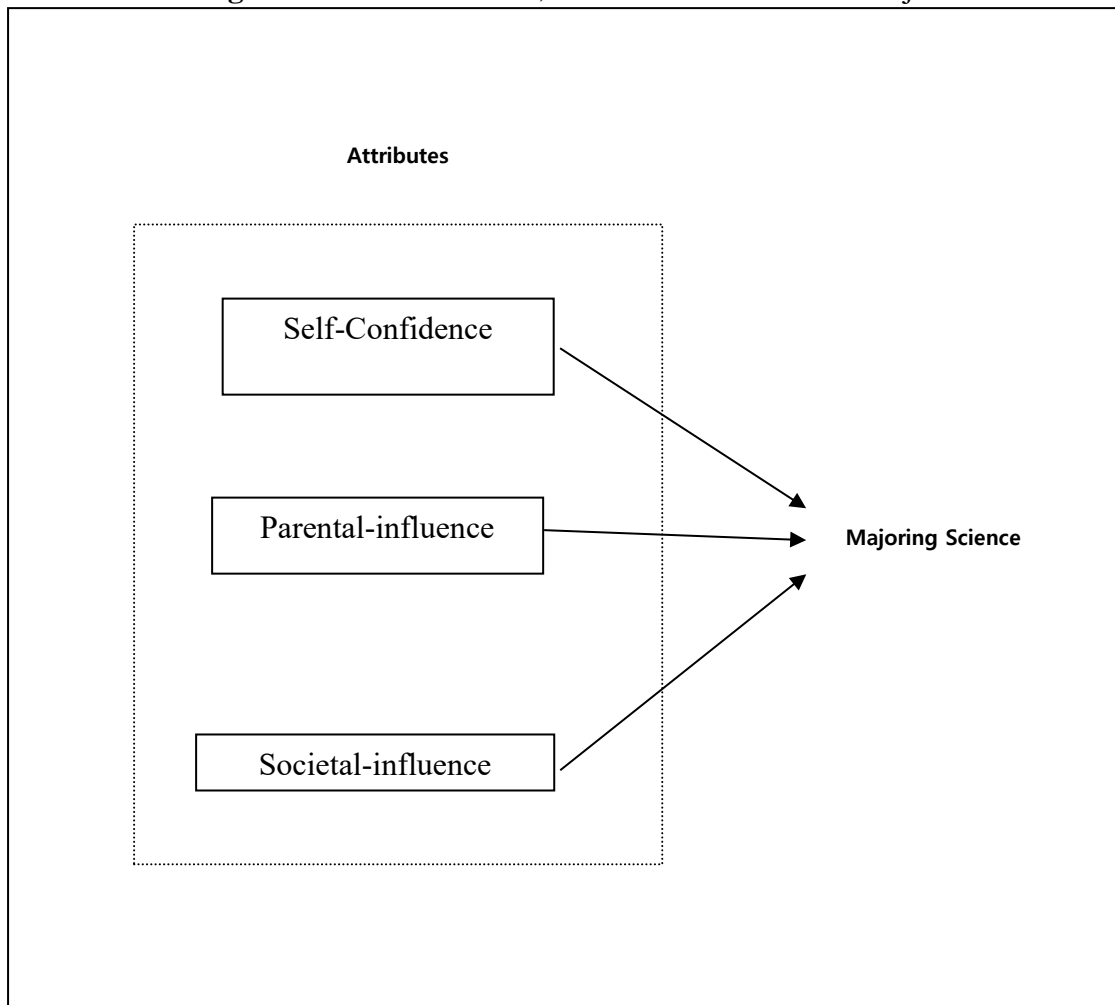
Table 1: Cronbach's reliability test

Cronbach's Alpha	Cronbach's Alpha Based on Standardized Items	N of Items
0.73	0.73	23

Table 2: Demographic data:

		Males	Females	Total
Emirates	Frequency	34	89	123
	Percentage	28%	72%	35%
Qatar	Frequency	38	80	118
	Percentage	32%	68%	33%
Kuwait	Frequency	35	80	115
	Percentage	30%	70%	32%
Total	Frequency	107	249	356
	Percentage	30%	70%	100%

Table 3: Descriptive Statistics for RH1

Items/Statements	Emirates M.	Emirates S.D.	Emirates C.V.	Qatar M.	Qatar S.D.	Qatar C.V.	Kuwait M.	Kuwait S.D.	Kuwait C.V.
1	4.00	.931	23.3%	4.03	.752	18.7%	3.90	.870	22.3%
2	3.97	.983	24.8%	3.97	.983	24.8%	4.26	.893	21.0%
3	3.87	.922	23.8%	4.03	.948	23.5%	4.19	.833	19.9%
4	4.13	.718	17.4%	3.94	.854	21.7%	4.13	.806	19.5%
5	3.87	.957	24.7%	4.19	.910	21.7%	4.00	.931	23.3%
6	3.81	.980	25.8%	4.10	.746	18.2%	3.97	.983	24.8%
7	3.94	.854	21.7%	4.00	.966	24.2%	3.87	.922	23.8%
8	4.13	.922	22.3%	4.23	.805	19.0%	4.13	.718	17.4%
9	4.03	.752	18.7%	4.26	.815	19.1%	3.87	.957	24.7%
Average Total Self Influence	**3.97**	**0.891**	**0.225**	**4.08**	**0.864**	**0.212**	**4.03**	**0.879**	**0.218**

Table 4: Mann Whitney Test, Self-Influence, RH1

	Group	N	Mean Rank	Sum of Ranks
Self Influence	Emirates	123	82.77	12357.00
	Qatar	118	87.92	11485.00
	Kuwait	115	83.36	12631.00
	Total	356		

Test Statistics

	Emirates-Qatar	Emirates-Kuwait	Qatar-Kuwait
Mann-Whitney U	2070.000	2183.000	2211.000
Wilcoxon W	2566.000	2672.000	2521.000
Z	-.519	-.511	-.522
Asymp. Sig. (2-tailed)	.604	.653	.611

Table 5: Descriptive Statistics for RH2

Items/Statements	Emirates M.	Emirates S.D.	Emirates C.V.	Qatar M.	Qatar S.D.	Qatar C.V.	Kuwait M.	Kuwait S.D.	Kuwait C.V.
1	2.32	1.155	39.5%	2.22	1.170	40.1%	2.49	1.152	38.5%
2	2.22	1.170	40.1%	2.19	1.152	38.5%	2.13	1.264	43.1%
3	2.31	1.152	38.5%	2.43	1.264	43.1%	2.33	1.243	45.5%
4	2.42	1.264	43.1%	2.53	1.243	45.5%	2.27	1.216	42.4%
5	2.53	1.243	45.5%	2.37	1.216	42.4%	2.24	1.303	47.6%
6	2.21	1.216	42.4%	2.14	1.303	47.6%	2.48	1.294	46.5%
7	2.43	1.303	47.6%	2.28	1.294	46.5%	2.23	1.207	39.5%
Average Total Parental Influence	**2.349**	**1.215**	**0.424**	**2.309**	**1.235**	**0.434**	**2.310**	**1.240**	**0.433**

Table 6: Mann Whitney Test, Self-Influence, RH2

	Group	N	Mean Rank	Sum of Ranks
Parental-Influence	Emirates	123	83.62	12432.00
	Qatar	118	86.81	12561.00
	Kuwait	115	85.42	11742.00
	Total	356		

Test Statistics

	Emirates-Qatar	Emirates-Kuwait	Qatar-Kuwait
Mann-Whitney U	2135.000	2241.000	2167.000
Wilcoxon W	2671.000	2571.000	2491.000
Z	-.521	-.534	-.531
Asymp. Sig. (2-tailed)	.611	.626	.609

Table 7: Descriptive Statistics for RH3

Items/Statements	Emirates			Qatar			Kuwait		
	M.	S.D.	C.V.	M.	S.D.	C.V.	M.	S.D.	C.V.
1	4.03	.922	22.9%	4.30	.744	17.3%	4.29	.739	17.1%
2	4.00	.907	22.7%	4.22	.782	18.5%	4.35	.709	16.2%
3	4.10	.870	21.2%	4.01	.859	21.4%	3.97	.912	22.8%
4	4.08	.892	21.9%	3.91	.882	22.6%	4.00	.775	19.2%
5	3.68	1.034	28.1%	4.03	.875	21.7%	3.97	.912	22.8%
6	3.18	.977	30.8%	4.02	.903	22.5%	3.97	.948	23.7%
7	2.85	1.409	49.4%	4.13	.841	20.4%	4.13	.885	21.3%
8	3.16	1.128	35.7%	4.04	.815	20.2%	4.10	.700	17.0%
Average Total Societal Influence	3.64	1.02	0.29	4.08	0.84	0.21	4.10	0.82	0.20

Table 8: Mann Whitney Test, Self-Influence, RH3

	Group	N	Mean Rank	Sum of Ranks
	Emirates	123	84.53	12561.00
Parental-Influence	Qatar	118	85.73	12431.00
	Kuwait	115	86.61	11891.00
	Total	356		

Test Statistics

	Emirates-Qatar	Emirates-Kuwait	Qatar-Kuwait
Mann-Whitney U	2154.000	2342.000	2289.000
Wilcoxon W	2716.000	2651.000	2516.000
Z	-.532	-.542	-.542
Asymp. Sig. (2-tailed)	.632	.613	.623

Table 9: T-test For Gender-RH4

	Gender	Sample Size	Mean	Std. Deviation	F	Sig.	t	Sig. (2-tailed)
Self	Male	107	3.956	0.89822	1.104	0.296	1.979	.050
	Female	249	4.0669	0.87746			2.133	.036
Parents	Male	107	2.3950	1.03575	0.805	0.372	1.340	.183
	Female	249	2.3631	1.05920			1.257	.214
Society	Male	107	3.8918	.96772	0.843	0.361	-.753	.453
	Female	249	4.0105	.92942			-.793	.430