

Perceptions and Attitudes of Saudi Arabian Female Students' Metacognition for Higher Education

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Abstract

This research examines the perceptions and attitudes of Saudi Arabian female students' metacognition for higher education. The problem statement of this research will focus on the extrinsic factors that hinder Saudi female students from continuing their higher education. The purpose of this study is to examine different extrinsic and intrinsic motivational factors that could facilitate pursuing higher education for Saudi female students. This study also will examine to what extent motivational factors such as self-efficacy, attributions, and self-regulation of learning contribute to the pursuit of higher education by Saudi Arabia's female graduates. This study is an ethnographical research following the mixed methods design that combines quantitative and qualitative data collection and analysis. The methodology used in this study is a closed-ended e-survey and interviews for Saudi postgraduate females of the University of Dammam to identify motivational factors that influence their tendency towards postgraduate studies. The random pilot of this research consists of (30) master and doctoral students studying at University of Dammam in the Eastern Province of Saudi Arabia. The research results and findings showed that there is a positive relationship between extrinsic and intrinsic motivators and perceptions and attitudes of female graduates at the cognitive level. These correlations indicate that a postgraduate's GPA can be improved by giving her external and internal motivation. This research will enable universities' stakeholders to gain a better understanding of graduate students' needs, so that they can improve their strategies and programs to match those demands.

Keywords: Motivation, theories of motivation, higher education.

1. Introduction

The Saudi Ministry of Education was established in 1954 for all levels of education concentrating on male education only; no formal schooling was available for Saudi females at that time. Moreover, Saudi higher education emerged with the establishment of King Saud University in Riyadh in 1957. Realizing the importance of educating females, King Saud Bin Abdul Aziz, the Saudi King at that time, asked for support from the religion's scholars, since they were highly respected, to start education for girls. The result of his fruitful efforts was the opening of the first female school in 1960 and the availability of free education for Saudi and non-Saudi, male and female students (Alamri, 2011). Despite this fact, the illiteracy level in the Arabic language was very high in Saudi Arabia but this did not go for long. In 1990, statistics have shown that the percentage of educated people was 66.2% and increased to 77.9% in 2002. The Saudi government encouraged education greatly and thus the level of literacy in the Arabic language was improved to 78.8% in 2003 (Central Intelligence Agency, 2011). The Saudi government exerted tremendous efforts since 1957 to decrease the illiteracy level in the Kingdom. By 2009, the percentage of illiteracy declined from 60% in 1972 to 13.4%. Since formal schooling became compulsory for all male and female Saudi students, almost 98.7% of Saudi people had formal education by 2012 (Ministry of Higher Education, 2010).

Higher education, however, was still exclusively provided for Saudi citizens with paid fees during the early periods of the Saudi education (Alamri, 2011). Higher education was gradually improving but with slow steps until 2005, when the Ministry of Higher Education announced one of its most prominent and renowned programs called King Abdullah Scholarship Program. This educational program aims at carrying out the needs of Saudi labor markets and the shortage of Saudi faculty members. It is available for both males and females in higher educational levels, such as bachelors, masters, and PhDs of different disciplines. The program is responsible for the students' tuition, living allowance and health insurance in various countries (Alamri, 2011).

In 2010, the Ministry of Higher Education sponsored Saudi students into private Saudi universities (Alamri, 2011) such as Prince Mohammad Bin Fahd University in the Eastern Province. This movement led to an increase in the number of graduate students in Saudi Arabia (Ministry of Higher Education, 2014).

The Ministry of Higher Education plans to encourage Saudi females to seek distinguished roles and positions in society (Ministry of Higher Education, 2010). Therefore, access to female higher education has been enhanced by the Saudi government through the establishment of Noura Bint Abd Al-Rahman University to become the world's largest center for female higher education (Ministry of Higher Education, 2010). Statistics show that there are about 37,632 female students enrolled in various Master programs and 15,074 in Ph.D. programs (General Department of Statistics & Information, 2013). Moreover, 34% of Saudi females joined postgraduate programs in 2012 (Fanack, 2012). This percentage brings Saudi Arabia to closer ranks with advanced countries such as the United States of America which witnessed an increase in the percentage of

graduate females to 58% from 2002 to 2012 (Gonzales, Allum, & Sowell, 2013).

Nowadays, Saudi women are striving to pursue their higher education for better employment and to become more active citizens. For Saudi females, education means personal improvement and intrinsic growth as well as a door that leads to potential financial success for them and their families and ultimately to the nation's development (Ministry of Higher Education, 2010).

There are two types of motivations that drive students to apply for a postgraduate degree; those motivations can be either intrinsic or extrinsic. A student is intrinsically motivated to engage in an academic task when he or she passionately wants to learn about something or for the pleasure and satisfaction gained. In contrast, students who are extrinsically motivated engage in academic tasks in order to earn some type of reward or to avoid an externally imposed punishment (Anderman, E. & Anderman, L., 2010). These intrinsic as well as the extrinsic motives are driving Saudi females to apply for higher education degrees (Ministry of Higher Education, 2010). Therefore, this research examines the perceptions and attitudes of Saudi Arabian female students' metacognition for higher education.

Problem Statement

Motivation is part of the teaching and learning mechanism for enhancing students' productivity. They are either motivated intrinsically or extrinsically to accomplish the desired tasks. Despite the demotivating extrinsic factors, Saudi female students are driven toward higher education by the effects of intrinsic motivational factors. The research problem will focus on the extrinsic factors that hinder Saudi female students from continuing their higher education.

1.1 Purpose Statement

The purpose of this study is to examine different extrinsic and intrinsic motivational factors that could facilitate pursuing higher education for Saudi female students. According to Savenye and Miltiadou (2003), intrinsic motivation is a tendency to overcome any challenge to achieve personal interests, so individuals who are intrinsically motivated do not need any incentives to reach specific goals. However, extrinsic motivation stimulates learners to work on tasks to attain greater knowledge or receive praise from their teachers. Thus, there are different motivational theories that could influence people's actual performance and the effort that learners exert to perform any activity. This study will examine to what extent motivational factors such as self-efficacy, attributions, and self-regulation of learning contribute to the pursuit of higher education by Saudi Arabia's female graduates (Savenye & Miltiadou, 2003).

2. Literature Review

2.1 Higher Education

The Saudi government provides opportunities to Saudi females to enroll at all levels of higher education throughout their years of study. According to Al-Munajjed (2009), there are more than thirty-eight educational institutes, ten private colleges and eight universities available for females which are directly under the patronage of the Ministry of Education. Females represent more than fifty-eight percent of the total number of Saudi university students and the Saudi Government statistics showed that the total number of female students who are enrolled at the university level is more than tripled from 93,486 in 1995–96 to 340,857 in 2005–06. By the early 2000s, private sector launched a number of private universities for females, based on the efforts of individuals and private institutions under the supervision of the Ministry of Education (Al-Munajjed, 2009).

Many Saudi people believe that Saudi female's education will allow them to be actively involved in their society, both at home and in the marketplace (Hamdan, 2005). Since access to education provide each person with the opportunity to gain an understanding of one's self as well as the society and its resources, the Saudi Ministry of Higher Education should provide opportunities for postgraduate programs to empower Saudi females with the required skills and knowledge to be competitive in the marketplace and the global market as well.

According to Alamri (2011), not all degrees are offered in Saudi Arabia and this increases the burden on the students, especially females, who are interested to pursue higher degrees in their fields of study. There are several degrees that are offered to male students only which may interfere with social justice. Moreover, higher education in Saudi Arabia is missing central components which depend on motivation factors in empowering female students to pursue their higher education and achieve the objectives of the programs offered in Saudi Arabia (Alamri, 2011).

2.2 Intrinsic Motivation

According to Grusec (1992), Bandura's social cognitive theory addresses how people use cognitive processes in social situations and how these processes affect their behavior and improvement. This is one aim of this study to analyze whether Saudi females benefit from their postgraduate studies in holding social positions and to be effective members in their society.

Bandura (as cited in Wigfield & Eccles, 2002) suggests that the social cognitive model of motivation refers

to the importance of human perceptions of efficacy and agency. Self-efficacy addresses the perception that people have about their abilities in specific situations such as solving a problem or performing a task. Agency addresses an individual's expectations of the means required to achieve a particular outcome. Importantly, Bandura (1997) differentiates between two types of expectation beliefs; the first is called outcome expectation which indicates that specific behavior patterns will result in a specific outcome and the second is efficacy expectation which addresses an individual's expectations about the importance of performing certain behaviors to generate the desired outcome (Wigfield & Eccles, 2002).

Bandura's views are relatively related to one aim of my study that tests whether Saudi females are able to fulfill their expectancies of their postgraduate studies or not. Do those higher degrees help them in their self-development by getting the expectations of desired outcome? One question of the study wonders whether female graduates' expectations impact their outcomes in the presence of extrinsic and intrinsic motivators or not. This is clearly crucial in Bandura's thought and theories.

Bandura (as cited in Tollefson, 2000) argues that students interpret and deduce the factors or causes that lead them to succeed or fail in certain tasks, which in turn help them achieve their goals. Bandura believes that individuals try to avoid practicing activities that they believe they are unable to perform. He also proposes that students create their personal goals and use them as personal standards by which to evaluate their performance. Bandura argues for two types of self-efficacy. The first is high self-efficacy, which is when individuals persist in doing and performing specific tasks. The other is low self-efficacy, which applies to people who give up easily and do not exert a lot of effort on tasks.

Here, we have to think deeply about Bandura's theories when we discuss my issue relating to the Saudi females and their tendency towards postgraduate studies. Will those studies help them to gain that kind of self-efficacy that enables them to be competitive in the national and global markets and positions? Or it is just a matter of acquiring a degree without any remarkable achievement in their life? Why do they have headstrong desire to pursue their higher education if those degrees will add nothing new to their skills, knowledge and efficacy?

Tollefson (2000) argues that when learners have high outcome expectations and high self-efficacy, they are more persistent in academic tasks because they want to succeed and believe that they have the capabilities and skills to do so. Similarly, DeGroot and Pintrich (1990) conducted a study that analyzed the responses of seventh-grade students to the Motivated Strategies Learning Questionnaire. The authors concluded that there is a correlation between students' high self-efficacy and their academic achievement. This is related to one question of my study whether there is a relationship between Saudi females acquired GPA and their intrinsic and extrinsic motivators? Tollefson, DeGroot and Pintrich above assert the relationship between the academic outcome and motivation and we intend to analyze the same idea in my study.

Bandura (as cited in Tollefson, 2000) supposes that there are four ways to produce self-efficacy in individuals: accomplishment of performance, observing the performance of others, social impact (e.g., verbal persuasion), and physiological arousal states that are responsible for judgment of personal abilities. Importantly, Zimmerman (as cited in Wigfield & Eccles, 2002) argues that the types of learning and performance goals might affect an individual's self-efficacy. Wigfield and Eccles (2002) believe that in different domains, the construct of self-efficacy influences behaviors in different places such as in school and sports.

A moment only is needed to think about Bandura's ideas and relate them to our Saudi females' case. Let's ask an important question in my study; what are the general weaknesses and strengths of those extrinsic and intrinsic motivators on female graduates' cognitive process when they are introduced in the classroom motivation? Do those degrees impact their behaviors and attitudes positively or negatively? The findings of this study may help to answer the question.

According to Grusec (1992), Bandura proposes the observational learning theory, which includes paying attention to the model to store the observed behavior in the learner's memory in a visual or verbal form. When this occurs, a learner will start to imitate the image in his or her imagination. Additionally, Bandura suggests the concept of reciprocal determinism, which refers to the existence of the relationship between individuals, their behaviors, and their environment. A very interrogative concept comes to our minds concerning the different effects of extrinsic and intrinsic motivators on perceptions and attitudes of Saudi female graduates. Do those motivators impact their tendency towards postgraduate studies? This is what will be revealed by this study.

Weiner's attribution theory was the most important motivational theory during the previous 30 years as stated by Wigfield and Eccles (2002). It focuses on people's interpretations of the causes of certain outcomes. Weiner states that a person's ability and effort, as well as the difficulty of the task, are important attributes of achievement. For Weiner, attributions have three causal dimensions. The first is the focus of control, which has both internal and external motivations. The second is stability. This examines whether the causes change across time. The last is controllability. This dimension refers to whether the causes can be controlled or not.

Tollefson (2000) argues that attribution theories address theories about how different thoughts occur in an individual's life as well as in the lives of others. Weiner posts two interpersonal theories of attribution that he

relates to motivation and achievement. The first theory refers to how people interpret success and failure. The second indicates how individuals interpret the success or failure of others. To explain the interpersonal theories, Weiner uses person's metaphor, so teachers can use these theories to examine their interactions with students and consider improved ways to enhance student achievement. In this regard, we should think about the role of societal and familial support and interpretation to the importance of Saudi females' postgraduate studies. What concepts and interpretations do people and community have about females' tendency towards higher education? What support do they offer for Saudi females to encourage them? Do they help them to continue their studies because of their positive interpretation of the impact of those studies on developing the Saudi society to the better or they hinder Saudi females from attending postgraduate studies. All educators concern about this issue and we hope to answer it.

Self-determination theory is one of the motivational theoretical perspectives. Self-determination theorists study a range of motivated human behaviors. The theory was initially developed by Edward L. Deci and Richard M. Ryan, and has been elaborated and refined by scholars from different countries (Deci & Ryan, 1985). Deci and Ryan defined self-determined behaviors as individual behaviors that are produced independently and there are no observed external factors (Anderman, E. & Anderman, L., 2010).

Self-determination theory is a humanistic motivation theory. The main idea of this theory is that individuals have natural desires for personal development and energy that are either pleased or frustrated by their own environment (Deci, Vallerand, Pelletier, & Ryan, 1991). This theory claims that all students whether they have variances in nationality, age, gender or culture, possess inner incentive that motivates them to pursue their goals. This inner incentive provides a high-quality of the students' engagement in the classroom whether at school or university. Moreover, this theory explains the behavior and the performance of the student in the classroom (Hill, 2011). Also, this theory helps teachers to energize the inner incentive of the students to have an excellent engagement during classes. This reveals the role of educators, universities, community and organizations in motivating and encouraging Saudi females to achieve their own goals and personal-development by getting more postgraduate studies. According to (Reeve, 2012), self-determination theory consists of five mini theories: basic needs theory, organismic integration theory, goal contents theory, cognitive evaluation theory, and causality orientations theory. How do these five theories work together in drawing the desired path for Saudi females? The next explanation may help us in understanding their deep content and how to relate them to the Saudi case.

First, basic needs theory concentrates on the psychological needs and identifies their relation to intrinsic motivation. Basic need theory consists of three psychological needs: the need for autonomy, the need for competence, and the need for relatedness. *Autonomy* is a psychological need by which a student feels a sense of self-directedness and freedom. The students have the choice of making decisions. *Competence* is the need to be efficient in doing tasks and possessing the capability of performing those tasks. *Relatedness* is the need to be connected emotionally with others and getting involved in warm relationships with them (Reeve, 2012).

In the above theory, Saudi females' decision to continue their higher education may relate to many reasons as mentioned by the theory. It may achieve their need for self-independence as ladies who have the right of sharing suitable positions for them, their need for competence and to prove their capabilities and abilities of mastering different kinds of jobs, and the need for relatedness to their societies.

Second, organismic integration theory introduces kinds of extrinsic motivation, and clarifies students effective against ineffective academic socialization. It concentrates on internalization (Reeve, 2012). This shows one reason behind Saudi strong desire of engaging in different social and cultural activities and duties. It is a kind of proving their interpersonal skills when dealing in different situations and they are capable of holding different positions as other females around the world.

Third, goal contents theory concentrates on the meaning of motivation, the students' goals that they want to achieve in order to differentiate internal from external goals. This theory illustrates how internal goals affect the psychological need gratification and encourage happiness and how external goals do not support psychological need gratification and encourage sadness (Reeve, 2012). One may think reasonably about the goals that stand behind Saudi females' desire towards postgraduate studies. Do they join those programs to satisfy their desire of personal development goals, their goals that related to familial and societal variables or their goals to enhance their career development? What goals will be revealed by this study? This is firmly related to the goal orientation theory that will be mentioned below in the next few paragraphs.

Fourth, cognitive evaluation theory describes how external actions such as reward can influence intrinsic motivational procedures. These external actions can support or frustrate students' mental need and their perspectives of autonomy and competence needs (Reeve, 2012). This is definitely related to the external support of their surroundings that works beside the intrinsic motivators. They need support from their jobs, universities, governmental and non-governmental organizations. What actions do they take in order to encourage them achieving their dreams? Do Saudi universities empower the Saudi ladies with required skills and knowledge to make them competitive in the national and international markets? How do they feel after getting their degrees? Is frustration or motivation all around them?

Finally, causality orientations theory identifies how persons motivate themselves differently. Some students depend on self-determined and self-directed guides whereas others depend on skillful and naturally determined guides (Reeve, 2012). This theory interprets how do Saudi females motivate themselves positively and try to overcome various barriers that they face when studying as a way to satisfy their orientation towards higher studies.

Goal orientation theory has become a significant perspective in academic motivation. This theory emphasizes the features that raise these motivational directions. Goal orientation is defined as situated orientations for action in an accomplishment task (Ames, 1992). It concentrates on what people strive for. The theory started with the early work created by Kurt Lewin and improved by Dr. Edwin Locke in the 1960's (Locke & Latham, 1990). Goal setting theory has two sides: mastery and performance goals (Ames & Archer, 1988).

Mastery goals orientation is a personal purpose of self-improvement and developing proficiency (Ames, 1992). Mastery-oriented students concentrate on learning, comprehending, and mastering the information they learn. Mastery goals orientation is related to different positive results such as self-efficacy as they are trying to exert effort for academic achievement, challenge in order to compare it with their previous academic work, and self-regulated learning. Performance goals orientation is a personal purpose of demonstrating proficiency (Ames, 1992). Performance-oriented students concentrate on how others judge their ability in comparison with others. Performance goals orientation is related to a maladaptive pattern of cognition, affect, and behavior (AviKaplan & Maehr, 2006). A question comes to the surface; do postgraduate studies help Saudi females to show their mastery and performance that qualify them to achieve their desired goals? Do those studies qualify them to be more competitive locally and globally?

Expectancy-value theory is one of the theoretical perspectives of academic motivation. John William Atkinson created The Expectancy-Value Theory in the 1950s and 1960s in an exertion to comprehend the accomplishment inspiration of individuals. In the 1980s, (Eccles, 1983) extended this examination into the field of education. According to (Atkinson, 1957) expectancy-value theory is concerned with both persons' expectations of their success or failure in performing certain tasks and persons' valuing of different tasks (Anderman, E. & Anderman, L., 2010). This theory is related to the individuals' beliefs about themselves and their capability in performing a task whether to succeed or to fail at it. This kind of motivation could be affected by teachers. As teachers motivate their students and construct their belief about their performance in the classroom (Wigfield, 1994). Relating expectancy-value theory to the Saudi case, we ask some serious questions that affect it. What expectations are expected from the Saudi community about the effect of females' postgraduate studies? Does our society expect a tremendous change by getting those studies or slight change that does not impact the community? What expectations are expected from their jobs, families and friends? Will they be effective leaders as expected from them or the negative thoughts of the society will be dominant and deprive them from achieving their desires?

2.3 Extrinsic Motivation

Extrinsic motivations are like verbal, tangible, and other incentives and rewards that influence students' academic performance. Motivation plays an important role in developing leaders and personal traits. According to cognitive evolution theory, intrinsic motivation is the genuine psychological needs for competence and self-determination. Deci, Koestner, and Ryan (2001) emphasized the influence of external events such as rewarding, teacher evaluation, setting deadline, and other inputs on individual perceptions and believes toward one's ability. Verbal rewards refer to the positive feedback that is part of the external motivation method. People would be engaged in certain activities to gain praise and shape the interpersonal context wither to be informational or controlling. Moreover, tangible rewards are another type of endorsement that engaged individuals in certain type of behavior. It should be conditioned and expected to meet the internal motivation. The role of extrinsic motivation is to enhance the intrinsic motivation (Deci, Koestner, & Ryan, 2001). One essential idea poses itself here to emerge the role of extrinsic support beside the intrinsic one. This idea relates to the Saudi organizations' participations in increasing the numbers of Saudi postgraduate females in order to encourage more of them. What responsibilities do they have about facilitating their tendency? Do they offer more opportunities for employed students, initiate more academic majors, and provide financial help? These are some factors that impact their intrinsic motivators and will be included in my survey.

The history emphasized the ongoing relation between extrinsic and intrinsic motivation. The early research shed light on the misuse of extrinsic incentives that would undermine the internal interest. Extrinsic motivation shows an influence on individuals' task performance. Family support is an influential extrinsic motivation that helps in developing intrinsic motivation. Extrinsic motivation comes into different shapes and degrees to accomplish academic goals and impose individuals' own value system. The academic research emphasized the role of social extrinsic motivation to empower students' academic performance (Lepper, Sethi, Dialdin, & Drake, 1999).

Let's stop for a while in this last destination to ask about the extrinsic variables that impact the Saudi females' desire for getting higher degrees. What external pressures do they encounter when continuing their studies? What are the most difficult constraints that they come across when they study? We wonder about the domains of their constraints whether they relate to the time, family and societal responsibilities, financial needs, universities' discouraging environment, not available new academic majors or current job duties. Hopefully, all those interrogatives will be answered in this mixed method study that is available in your hands.

3. Methodology

This is an ethnographical research following the mixed methods design that combines quantitative and qualitative data collection and analysis. Various instruments used for this study. The first is a closed-ended e-survey for Saudi postgraduate females of the University of Dammam to identify motivational factors that influence their tendency towards postgraduate studies. The survey used in this study was sent by email to the targeted postgraduate pilot study including an introduction that explains the aim of the study and its importance. It consists of nine close-ended questions and one open question about their GPA. Eight questions are multiple choice ones and two of them are questions using a five-point Likert type scale which is mostly used in this type of surveys to measure the perceptions, attitudes and subjective reactions (statistical analyses, quantitative method).

Second, interviews with some postgraduate students from the University of Dammam are conducted (descriptive, qualitative method).

Finally, literature review will be considered as the secondary resources to correlate with primary resources in order to be consistent with desired end results.

3.1 Research Sample

The random pilot of this research consists of (30) master and doctoral students studying at University of Dammam in the Eastern Province of Saudi Arabia.

3.2 Research Questions

- Q1/ What are the intrinsic and extrinsic motivators that motivate Saudi females towards postgraduate studies?
- Q2/ What is the relationship between a female graduate's GPA and intrinsic and extrinsic motivators?
- Q3/ Do extrinsic and intrinsic motivators have different effects on perceptions and attitudes of female graduates?
- Q4/ Do female graduates' expectations impact their outcomes in the presence of extrinsic and intrinsic motivators?
- Q5/ What are the major area of weaknesses and strengths of extrinsic and intrinsic motivators on female graduate's cognitive process when they are introduced in the classroom motivation?

3.3 Research Hypothesis

- Null hypothesis:

There is a positive relationship between extrinsic and intrinsic motivators and perceptions and attitudes of female graduates at cognitive levels.

- Alternative:

Extrinsic and intrinsic motivators do not have high influences on the perceptions and attitudes of female graduates at cognitive levels.

3.4 Variables of the Study

- Independent variables: extrinsic and intrinsic motivators.
- Dependent variables: perceptions, attitudes.
- Moderator variable: cognitive processes.
- Control variables: gender, education level, may be the type of university.

4. Discussion and Analysis

In this research paper, we have found by using SPSS program that the reliability of the questionnaire is high since its Cronbach's alpha (α) is equal to 0.821 more than 0.5 as shown in the following Table (1-1):

Table (1- 1): Reliability Statistics

Cronbach's Alpha	Cronbach's Alpha Based on Standardized Items	N of Items
0.821	0.821	10

The reliability of this questionnaire reflects the reality and accuracy of the measurement. We have used the SPSS program for testing the null hypothesis statistically by conducting independent samples T- Test, one-way ANOVA, and Pearson correlation techniques. The null hypothesis (H_0) stated that there is a positive relationship

between extrinsic and intrinsic motivators and perceptions and attitudes of female graduates at the cognitive levels. On the other hand, the alternative hypothesis (H_1) indicated that the extrinsic and intrinsic motivators do not have high influences on the perceptions and attitudes of female graduates at the cognitive levels.

The first part of the questionnaire showed that there are two heterogamous groups of postgraduates that are not dependent on each other, distinguished by the mean of postgraduate's personal development variables as shown in Table (1-2): **Group Statistics:**

Table (1-2): Group Statistics

Independent variable	Degree of post-graduate	N	Mean	Std. Deviation	Std. Error Mean
Personal Development Variables	Master	30	5.03	.183	.033
	PHD	5	3.00	1.871	.837

Independent samples T-Test is used to determine the effect of intrinsic motivators in terms of personal development variables on perceptions and attitudes of postgraduates at cognitive levels as the following table shows:

Table (1-3): Independent Samples Test

	Levene's Test for Equality of Variances		T-Test for Equality of Means						
	F	Sig.	t	df	Sig. (2-tailed)	Mean Difference	Std. Error Difference	95% Confidence Interval of the Difference	
								Lower	Upper
Personal Development Variables	163.304	.000	6.250	33	.000	2.033	.325	1.371	2.695
Equal variances assumed			2.428	4.013	.072	2.033	.837	-.289	4.355
Equal variances not assumed									

As shown in Table (1-3), it is clear that there is a significant positive relationship between personal development variables as intrinsic motivators and perceptions and attitudes as dependent variables of postgraduates at the cognitive levels since the value of p (0.00) at t (6.250) is less than α at 0.05. In addition, since the value of F (163.304) is greater than α at 0.05, the homogeneity of variances of both two groups is the same. PHD students have higher personal development variables than those of master students since the mean of PHD students is higher than that of master students by about 2.03 indicating that as the academic level of students is promoted to higher levels, they have higher self- efficacy in terms of personal development towards their perceptions and attitudes at the cognitive levels.

Independent samples T-Test is also used to determine the effect of extrinsic motivators in terms of receiving support on perceptions and attitudes of postgraduates at cognitive levels.

Table (1-4): Group Statistics

Independent variable	Degree of post-graduate	N	Mean	Std. Deviation	Std. Error Mean
You receive support mostly from	Master	30	2.27	1.911	.349
	PHD	5	2.20	.447	.200

Table (1-5): Independent Samples Test

	Levene's Test for Equality of Variances	t-test for Equality of Means								
		F	Sig.	t	df	Sig. (2-tailed)	Mean Difference	Std. Error Difference	95% Confidence Interval of the Difference	
									Lower	Upper
You received support mostly from	Equal variances assumed	12.875	.001	.077	33	.939	.067	.868	-1.700	1.834
	Equal variances not assumed			.166	28.709	.869	.067	.402	-.756	.889

According to Table (1-4) and Table (1-5), perceptions and attitudes as dependent variables of postgraduates is related significantly to receiving support as an independent variable at the cognitive levels since the value of p (0.01) at t (.077) is less than α at 0.05. In addition, since the value of F (12.875) is greater than α at 0.05, the homogeneity of variances of both two groups is the same. PHD students have higher tendency to receive support than those at the master level since the mean of PHD students is higher than that of master students by about 0.07. This indicates that the academic level of students is a crucial factor affecting the independent variable in terms of receiving support which in turn affects their perceptions and attitudes at the cognitive levels. As a result, the null hypothesis is not rejected in both cases in terms of the effect of extrinsic and intrinsic motivators on postgraduates' perceptions and attitudes at the cognitive levels.

Moreover, one-way ANOVA analysis is used to determine whether postgraduate students' GPA is influenced by intrinsic and extrinsic motivators or not.

Table (1- 6): GPA of Postgraduates (ANOVA)

	Sum of Squares	df	Mean Square	F	Sig.
Between Groups	.474	3	.158	.398	.756
Within Groups	12.329	31	.398		
Total	12.804	34			

According to Table (1-6), the differences in sample variance between two groups of postgraduates are almost the same since the significant p (.756) is greater than α at 0.05 indicating that the homogeneity of variances in both groups is the same. Therefore, extrinsic and intrinsic motivators have the same influence on master students as well as PHD students. As a result, we cannot reject the null hypothesis.

Pearson correlation is another technique used in this research paper to determine whether postgraduates' perceptions and attitudes are related directly to extrinsic and intrinsic motivators at cognitive levels or not. As showing in Table (1-26), postgraduate's GPA is significantly related to receiving support as an extrinsic motivator and personal development variables as intrinsic motivators because the values of Pearson correlation coefficients between Postgraduates GPA and independent variables are positive indicating that intrinsic and extrinsic motivators are critical factors influencing postgraduates' perceptions and attitudes at the cognitive levels.

In this research paper, the sample consists of thirty Saudi female master students and five PHD students. An e-questionnaire that consists of ten questions was distributed among them through emails. In the first part which consists of two questions, participants indicated their type of study as Table (1-7): Degree of post-graduate shows and to state their postgraduates GPA as illustrated in Table (1-8): Postgraduates' GPA

Table (1-7): Degree of post-graduate

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Master	30	85.7	85.7	85.7
	PHD	5	14.3	14.3	100.0
	Total	35	100.0	100.0	

Table (1-8): Postgraduates' GPA

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	4.5-5	15	42.9	42.9	42.9
	4-4.49	9	25.7	25.7	68.6
	3.5-3.99	5	14.3	14.3	82.9
	3-3.49	6	17.1	17.1	100.0
	Total	35	100.0	100.0	

Looking at Table (1-8), we can see that almost all of the participants' GPA was very high; it ranges from 5 to 3 based on the 1-5 scale of GPA. Thus, in the rest of the figure, we are going to analyze whether there is a relationship between this high average and Saudi females' intrinsic and extrinsic motivators to pursue their higher studies and their perceptions and attitudes at the cognitive levels.

Table (1-9): Personal Development Variables (Question 3)

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	To satisfy my desire in self-improvement	2	5.7	5.7	5.7
	To achieve my educational goal	2	5.7	5.7	11.4
	All of the above	30	85.7	85.7	97.1
	None of the above	1	2.9	2.9	100.0
	Total	35	100.0	100.0	

Looking at Table (1-9) which is related to the third question of the survey, we can identify that the percentage of Saudi females who pursued their higher studies for personal development variables is 97%. On the other hand, the percentage of those who pursued their higher studies for non-personal development variables is only 3%. This indicates that the Saudi females are intrinsically motivated to pursue their higher studies more than extrinsically.

Table (1-10): Career Enhancement Variables (Question 4)

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	To earn higher compensation	3	8.6	8.6	8.6
	To provide opportunity for more challenging work	5	14.3	14.3	22.9
	To get promoted to a higher position	2	5.7	5.7	28.6
	To remain competitive in the business field	1	2.9	2.9	31.4
	To change occupation area or current career path to a new one	3	8.6	8.6	40.0
	All of the above	17	48.6	48.6	88.6
	None of the above	4	11.4	11.4	100.0
	Total	35	100.0	100.0	

Table (1-10) which is related to the fourth question of the survey shows that the percentage of Saudi females who pursued their higher studies for career enhancement is 88.6%. On the other hand, the percentage of those who pursued their higher studies for causes other than career enhancement is only 11.4%. This indicates that the Saudi females are also extrinsically motivated to pursue their higher studies.

Table (1-11): Familial and Societal Variables (Question 5)

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	To fulfill family's expectations	7	20.0	20.0	20.0
	To obtain qualifications as regulated by law	7	20.0	20.0	40.0
	To act in accordance to social values	5	14.3	14.3	54.3
	All of the above	9	25.7	25.7	80.0
	None of the above	7	20.0	20.0	100.0
	Total	35	100.0	100.0	

Table (1-11) which is related to the fifth question of the survey shows that the percentage of Saudi females who pursued their higher studies for familial and societal variables is 80%. On the other hand, the percentage of those who pursued their higher studies for causes other than familial and societal purposes is 20%. This indicates that although the familial and societal impact is influential on the Saudi females' choice to pursue their higher studies, still one-fifth of the participants did not choose it as a cause for their choice.

Table (1-12): Challenges Encountered during Higher Studies (Question 6)

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Time constraints	5	14.3	14.3	14.3
	Family and societal duties	4	11.4	11.4	25.7
	Financial difficulties	2	5.7	5.7	31.4
	Discouraging universities' learning environments	2	5.7	5.7	37.1
	Current job duties and responsibilities	3	8.6	8.6	45.7
	All of the above	16	45.7	45.7	91.4
	None of the above	3	8.6	8.6	100.0
	Total	35	100.0	100.0	

Table (1-12) which is related to the sixth question of the survey shows that the 91% of Saudi females were pressurized mostly by time constraints, family and societal duties, financial difficulties, discouraging universities' learning environments and current job duties and responsibilities while pursuing their higher studies. On the other hand, only 9% of the participants did not face such challenges. This indicates that Saudi females were able to overcome challenges and move on to pursue their higher studies and acquire high GPA despite difficulties.

Table (1-13): Support Receive (Question 7)

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Family members	20	57.1	57.1	57.1
	Friends	4	11.4	11.4	68.6
	Supervisors and colleagues	3	8.6	8.6	77.1
	Community organizations	6	17.1	17.1	94.3
	None of the above	2	5.7	5.7	100.0
		Total	35	100.0	100.0

Table (1-13) which is related to the seventh question of the survey shows that the 94.3% of Saudi postgraduate females received support either from family members, supervisors, colleagues and community organizations while pursuing their higher studies. On the other hand, only 5.7% of the participants did not receive support from any social organization. This indicates that Saudi females are extrinsically motivated to pursue their higher studies.

Table (1-14): Organization's Support (Coalitions). (Question 8)

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Initiate academic majors demanded by the global work market	3	8.6	8.6	8.6
	Facilitate opportunities for employees from all sectors	3	8.6	8.6	17.1
	Facilitate opportunities for employees from all sectors	6	17.1	17.1	34.3
	Eliminate financial and career restrictions for employees who wants pursuing	2	5.7	5.7	40.0
	All of the above	20	57.1	57.1	97.1
	None of the above	1	2.9	2.9	100.0
		Total	35	100.0	100.0

Table (1-14) which is related to the eighth question of the survey shows that 97.1% of Saudi postgraduate females believe that in order to increase the number of Saudi postgraduate females, Saudi organizations should initiate academic majors demanded by the global work market, facilitate opportunities for employees from all sectors, and eliminate financial and career restrictions for employees who want to pursue their higher education. Only one of the participants thought that coalition with the community organizations is not a major factor in encouraging Saudi females to pursue their postgraduate studies.

Table (1-15): The Ministry of Higher Education Role (Question 9)

The Ministry of Higher Education provides opportunities for postgraduate programs to empower Saudi females with the required skills and knowledge to be competitive in the global market

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Agree strongly	7	20.0	20.0	20.0
	Agree	6	17.1	17.1	37.1
	Neutral	10	28.6	28.6	65.7
	Disagree strongly	5	14.3	14.3	80.0
	Disagree	7	20.0	20.0	100.0
	Total	35	100.0	100.0	

Table (1-15) which is related to the ninth question of the survey, shows that 37.1% of Saudi postgraduate females agree that the Ministry of Higher Education provides opportunities for postgraduate programs to empower Saudi females with the required skills and knowledge to be competitive in the global market while 34.4 disagree with that. The rest of the participants are neutral. This can be attributed to their unawareness of the efforts exerted by the Ministry of Higher Education.

Table (1-16): Extrinsic vs. Intrinsic Factors Hindering Saudi Females from Higher Studies

In your opinion, the extrinsic factors hinder Saudi female students from continuing their higher studies more than intrinsic factors (Question 10)

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Agree strongly	7	20.0	20.0	20.0
	Agree	11	31.4	31.4	51.4
	Neutral	14	40.0	40.0	91.4
	Disagree strongly	1	2.9	2.9	94.3
	Disagree	2	5.7	5.7	100.0
	Total	35	100.0	100.0	

When asked about their personal opinion in the tenth question of the survey, more than half of Saudi females agree that the extrinsic factors hinder Saudi as shown in *Table (1-16)*. On the other hand, 40% of the participants are neutral and only 8.6% disagree with the previous notion. This means that the majority of the Saudi females believe that extrinsic factors are hindering the Saudi female students from continuing their higher studies more than the intrinsic factors.

Table (1-17): Personal Development Variables Correlation

Correlation (r)	Career Enhancement Variables	Familial and Societal Variables	Challenges	Receiving support	Organizations	Ministry of Higher Education	Extrinsic factors hinder more than intrinsic factors	Postgraduate's GPA
Personal Development Variables	0.563	0.47	0.518	.107	0.616	0.443	0.401	.251

Table (1-17) represents the correlation coefficient between the personal development variables and the other variables. The highest positive value occurs mainly between the personal development variables and the coalitions with the various academic and non-academic organizations. This means that the more collaboration takes place between the academic and non-academic organizations, the more Saudi females pursue their higher studies for personal development. The same is true for most of the other variables but the least positive correlation takes place between the personal development variables and the support received from external sources such as families or friends. This indicates that when Saudi females are intrinsically motivated, the impact of the external factors is less significant .

Table (1-18): Career Enhancement Variables

Correlation (r)	Personal Development Variables	Familial and Societal Variables	Challenges	Receiving support	Organizations	Ministry of Higher Education	Extrinsic factors hinder more than intrinsic factors	Postgraduate's GPA
Career Enhancement Variables	0.563	0.923	0.956	-0.387	0.96	0.822	.329	0.619

This Table (1-18) represents the correlation coefficient between the career enhancement variables and the other variables. The highest positive value occurs mainly between the career enhancement variables and the challenges that face the Saudi females as well as the familial and societal causes and the coalitions with the various academic and non-academic organizations. This means that the more challenges the Saudi females are faced with and the more familial and societal causes they have, the Saudi females become more motivated to pursue their higher studies to enhance career causes. Unlike the personal development, it seems that the career enhancement is related positively to the extrinsic motivations as Figure 11 shows. The same is true for most of the other variables. On the other hand, there is a negative correlation between the career development variables and the support received from external sources such as families or friends. This indicates that the less support Saudi females receive, the more they pursue their higher studies for career enhancement.

Table (1-19): Familial and Societal Variables

Correlation (r)	Personal Development Variables	Career Enhancement Variables	Challenges	Receiving support	Organizations	Ministry of Higher Education	Extrinsic factors hinder more than intrinsic factors	Postgraduate's GPA
Familial and Societal Variables	0.47	0.923	0.903	-0.401	0.913	0.792	0.387	0.605

This Table (1-19) represents the correlation coefficient between the familial and societal variables and the other variables. The highest positive value occurs mainly between the familial and societal variables and the challenges that face the Saudi females as well as the career enhancement causes and the coalitions with the various academic and non-academic organizations. This means that the more challenges the Saudi females are faced with and the more career enhancement causes they have, the Saudi females become more motivated to pursue their higher studies for familial and societal causes. Unlike the personal development, it seems that the familial and societal is related positively to the extrinsic motivations as Figure 12 shows. The same is true for most of the other variables. On the other hand, there is a negative correlation between the familial and societal variables and the support received from external sources such as families or friends. This indicates that the less support Saudi females receive, the more they pursue their higher studies for familial and societal causes.

Table (1-20): Challenges Encountered during Higher Studies

Correlation (r)	Personal Development Variables	Career Enhancement Variables	Familial and Societal Variables	Receiving support	Organizations	Ministry of Higher Education	Extrinsic factors hinder more than intrinsic factors	Postgraduate's GPA
Challenges	0.518	0.956	0.903	-0.511	0.939	0.843	0.353	0.697

This Table (1-20) represents the correlation coefficient between the challenges the Saudi females encounter during their higher studies and the other variables. The highest positive value occurs mainly between the challenges the Saudi females encounter during their higher studies and the familial and societal variables as well as the career enhancement causes and the coalitions with the various academic and non-academic organizations. This means that the more challenges the Saudi females face, the Saudi females become more motivated to pursue their higher studies for familial and societal causes and career enhancement and the more coalition with the various academic and non-academic organizations is needed as Figure13 shows. The same is true for almost all

the other variables. On the other hand, there is a negative correlation between the challenges the Saudi females encounter during their higher studies and the support received from external sources such as families or friends. This indicates that the less support Saudi females receive, the more challenges the Saudi females encounter during their higher studies.

Table (1-21): Support Received Correlation

Correlation (r)	Personal Development Variables	Career Enhancement Variables	Familial and Societal Variables	Challenges	Organizations	Ministry of Higher Education	Extrinsic factors hinder more than intrinsic factors	Postgraduate's GPA
Receiving Support	.107	-0.387	-0.401	-0.511	-0.376	-0.387	.050	0.126

This Table (1-21) represents the correlation coefficient between the support the Saudi females receive during their higher studies and the other variables. The highest positive value occurs mainly between the support the Saudi females receive during their higher studies and the personal development variables as well as the student's GPA. This means that the more the support the Saudi females receive during their higher studies, the Saudi females become more motivated to pursue their higher studies for personal development causes and the better GPA they acquire as Figure 14 shows. On the other hand, there is a negative correlation between the support the Saudi females receive during their higher studies and almost all the other variables. This indicates that the more support Saudi females receive, the fewer challenges the Saudi females encounter during their higher studies and the less coalition is needed.

Table (1-22): Organization's Support (Coalitions) Correlation

Correlation (r)	Personal Development Variables	Career Enhancement Variables	Familial and Societal Variables	Challenges	Receiving Support	Ministry of Higher Education	Extrinsic factors hinder more than intrinsic factors	Postgraduate's GPA
Organization	0.616	0.96	0.913	0.939	-0.376	0.824	0.43	0.653

This Table (1-22) represents the correlation coefficient between the organization's support and the other variables. The highest positive value occurs mainly between the organization's support and the challenges the Saudi females encounter during their higher studies, the familial and societal variables as well as the career enhancement causes. This means that the more coalitions with the various academic and non-academic organizations takes place, the more challenges the Saudi females face and the Saudi females become more motivated to pursue their higher studies for familial and societal causes as well as career enhancement as Figure 15 shows. The same is true for almost all the other variables. On the other hand, there is a negative correlation between the coalitions with the various academic and non-academic organizations and the support received from external sources such as families or friends. This indicates that the less support Saudi females receive, the more coalition with the various academic and non-academic organizations is needed.

Table (1-23): Correlation of the Ministry of Higher Education Role

Correlation (r)	Personal Development Variables	Career Enhancement Variables	Familial and Societal Variables	Challenges	Receiving Support	Organization	Extrinsic factors hinder more than intrinsic factors	Postgraduate's GPA
Ministry of Higher Education	0.443	0.822	0.792	0.843	-0.387	0.824	.292	0.37

This Table (1-23) represents the correlation coefficient between the role of the Ministry of Higher Education and the other variables. The highest positive value occurs mainly between role of the Ministry of Higher Education and the challenges the Saudi females encounter during their higher studies, the career enhancement causes and the coalitions with the various academic and non-academic organizations. This means that the more empowerment from the Ministry of Higher Education the Saudi females receive, the more they become motivated to pursue their higher studies for career enhancement and the more coalition with the various academic and non-academic organizations is needed as Figure 16 shows but the more challenges they face during

their studies. The same is true for almost all the other variables. On the other hand, there is a negative correlation between the role of the Ministry of Higher Education and the support received from external sources such as families or friends. This indicates that when the Ministry of Higher Education does not play a great role in the empowerment of the Saudi females, the more support they need.

Table (1- 24): Factors Hindering Saudi Females from Continuing their Higher Studies Correlation

Correlation (r)	Personal Development Variables	Career Enhancement Variables	Familial and Societal Variables	Challenges	Receiving Support	Organization	Ministry of Higher Education	Postgraduate's GPA
Extrinsic factors hinder more than intrinsic factors	0.401	.329	0.387	0.353	.050	0.43	.292	0.378

This *Table (1- 24)* represents the correlation coefficient between extrinsic factors hindering Saudi females from continuing their higher studies and the other variables. The highest positive value occurs mainly between the factors hindering Saudi females from continuing their higher studies and the personal development variables and the coalitions with the various academic and non-academic organizations. This means that the more extrinsic factors hinder Saudi females from continuing their higher studies, the more they become motivated to pursue their higher studies for personal development as Figure 17 shows but the more challenges they face during their studies and the more support from external societies they need. The same is true for almost all the other variables. Surprisingly, there is no negative correlation between the extrinsic factors hindering Saudi females from continuing their higher studies and any other variable.

Table (1-25): Postgraduate's GPA Correlation

Correlation (r)	Personal Development Variables	Career Enhancement Variables	Familial and Societal Variables	Challenges	Receiving Support	Organization	Ministry of Higher Education	Extrinsic factors hinder more than intrinsic factors
Postgraduate's GPA	.251	.619	.605	.697	-.680	.653	.370	.378

This *Table (1-25)* represents the correlation coefficient between the postgraduate's GPA and the other variables. The highest positive value occurs mainly between the postgraduate's GPA and the challenges that face the Saudi females, the coalitions with the various academic and non-academic organizations and the familial and societal variables as well as the career enhancement causes. This means that the more challenges the Saudi females are faced with and the more career enhancement causes they have, the higher their GPA becomes. Similarly, it seems that the coalitions with the various academic and non-academic organizations as well as the familial and societal causes are related positively to the student's GPA as Figure18 shows. The same is true for almost all the other variables. On the other hand, there is a negative correlation between the postgraduate's GPA and the support received from external sources such as families or friends. This indicates that the less support Saudi females receive, the higher their GPA becomes.

	Personal Development Variables	Career Enhancement Variables	Familial and Societal Variables	While pursuing your higher studies, you pressurized mostly by one of the following challenges	You receive support mostly from	To increase the number of Saudi postgraduate females, Saudi organizations should	The Ministry of Higher Education provides opportunities for postgraduate programs to empower Saudi females with the required skills and knowledge to be competitive in the global market	In your opinion, the extrinsic factors hinder Saudi female students from continuing their higher studies more than intrinsic factors	Postgraduate's GPA
Personal Development Variables	1	.563	.470	.518	.107	.616	.443	.401	.251
Career Enhancement Variables	.563	1	.923	.956	-.387	.960	.822	.329	.619
Familial and Societal Variables	.470	.923	1	.903	-.401	.913	.792	.387	.605
While pursuing your higher studies, you pressurized mostly by one of the following challenges	.518	.956	.903	1	-.511	.939	.843	.353	.697
You receive support mostly from	.107	-.387	-.401	-.511	1	-.376	-.387	.050	-.680
To increase the number of Saudi postgraduate females, Saudi organizations should	.616	.960	.913	.939	-.376	1	.824	.430	.653
The Ministry of Higher Education provides opportunities for postgraduate programs to empower Saudi females with the required skills and knowledge to be competitive in the global market	.443	.822	.792	.843	-.387	.824	1	.292	.370
In your opinion, the extrinsic factors hinder Saudi female students from continuing their higher studies more than intrinsic factors	.401	.329	.387	.353	.050	.430	.292	1	.378
Postgraduate's GPA	.251	.619	.605	.697	-.680	.653	.370	.378	1

5. Analysis of Interviews

An interview with ten post graduate students from different private and public Saudi universities has been conducted. Some of the interviews were face-to-face while the rest are on-site interviews. Most of the students are master students except two of them are working on their PHD researches. The interviewees are specialized in different scientific and literary subjects such as mathematics, chemistry, and business administration.

The first question is asked about whether students have positive feeling towards post graduate studying or not. 100% of them show positive feelings toward that because they think it enriches their knowledge and experience, promote their job position, help them in finding better job opportunities and increase their finance resources.

Regarding the second question about factors impacting their tendency towards postgraduate studies, their responses show that they face many difficulties including age, high required GPA, curriculum difficulties and others. In contrast, the responses show a positive support from their society and families.

The interview is ended with a question related to whether Saudi organizations force Saudi females to continue their post graduate studies or not. Three of the students disagree on that; most of jobs do not require more than a bachelor degree. Saudi females pursue their post graduate degrees for personal reasons rather than a job requirement. While the other responses show that they are forced to continue their post graduate studies because they are related to academic careers.

6. Results and Findings

Based on the analysis that has been done for this research purpose, here are the major findings. The null hypothesis (H₀) has been proved by independent samples T- Test, one-way ANOVA, and Pearson correlation methods. However, the reliability of the questionnaires that were distributed is high since its Cronbach's alpha (α)

is equal to 0.821 reflecting the reality and accuracy of the measurement (see Table 1-1). A clear positive relationship has been shown between personal development variables and perceptions and attitudes of postgraduates at the cognitive levels since the value of p (0.00) at t (6.250) is less than the value of α at 0.05 (see Table 1-3).

As the academic level of students is promoted to higher levels, students have higher self-efficacy in terms of personal development towards their perceptions and attitudes at the cognitive levels. Referring to Table (1-3), PHD students have higher personal development variables than master students. Also, the academic level of students is a crucial factor affecting the independent variable in terms of receiving support which in turn affects their perceptions and attitudes at the cognitive levels. Referring to Table (1-4), PHD students have higher tendency to receive support than master students since the mean of PHD students is higher than that of master students by about 0.07.

Extrinsic and intrinsic motivators have the same influence on both master students and PHD students (see Table 1-6). The two heterogeneous groups of postgraduates are intrinsically and extrinsically motivated to pursue their higher studies more than extrinsically (see Table 1-9 Table 1-17 and Table 1-13). However, the majority of the Saudi females believe that extrinsic factors are hindering them from continuing their higher studies more than the intrinsic factors (see Table 1-16). Moreover, the familial and societal impact is influential on the Saudi females' choice to pursue their higher studies (see Table 1-18). They were able to overcome challenges and move on to pursue their higher studies and acquire high GPA despite difficulties (see Table 1-12).

The career enhancement is related positively to the extrinsic motivations. A negative correlation has been clearly shown between the career development variables and the support received from external sources such as families or friends (see Table 1-20). Moreover, the familial and societal is related positively to the extrinsic motivations. A negative correlation between the familial and societal variables and the support received from external sources such as families or friends (see Table 1-19).

The more challenges the Saudi females face, the more they become motivated to pursue their higher studies for familial and societal causes and career enhancement and the more coalition with the various academic and non-academic organizations is needed (see Table 1-22). The more the support the Saudi females receive during their higher studies, the more they become motivated to pursue their higher studies for personal development causes and the better GPA they acquire as graph (see Table 1-21). Moreover, the more coalitions with the various academic and non-academic organizations takes place, the more challenges the Saudi females face and become more motivated to pursue their higher studies for familial and societal causes and career enhancement (see Table 1-25).

Furthermore, the more empowerment from the Ministry of Higher Education the Saudi females receive, the more they become motivated to pursue their higher studies for career enhancement and the more coalition with the various academic and non-academic organizations is needed (see Table 1-23). The more extrinsic factors hinder Saudi females from continuing their higher studies, the more they become motivated to pursue their higher studies for personal development (see Table 1-24). The more challenges the Saudi females are faced with and the more career enhancement causes they have, the higher their GPA becomes (see Table 1-25).

According to research findings, there is a positive relationship between extrinsic and intrinsic motivators and perceptions and attitudes of female graduates at the cognitive level. These correlations indicate that a postgraduate's GPA can be improved by giving her external and internal motivation. The majority of Saudi women pursued higher studies for career enhancement (external motivation), whether to fulfill family expectations, to obtain qualifications as regulated by law, or to act in accordance with social values. Additionally, the majority of Saudi women pursued higher studies for personal development (internal motivation), whether to earn higher compensation, gain opportunities for more challenging work, or change to a new career path or occupation. Therefore, both external and internal motivators positively influence perceptions and attitudes of female graduates.

7. Recommendations for Future Research

The study begins to reveal the motivational factors of Saudi Arabia women graduate students pursuing higher education. The findings proved the impact of different extrinsic and intrinsic motivational factors that could enhance female graduates to pursue their higher education. Researcher worked on developing an instrument that builds on the literature review and the developed hypothesis. Therefore, the instrument designed to answer the research questions and tried to shed light on the lack of extrinsic factors that would hinder Saudi female students from continuing their higher education. The research addressed a phenomenon subject and considered as a successful embrace of the postgraduate female students.

There are some recommendation would be provide to be considered in future researches. The researchers will recommend to cover the influence of application different motivational theories on experiential exercise on a group of student both males and females. In addition, the experiment would provide an in-depth understanding of the motivational factors influence. Further studies, which took these variables into account, will need to be

undertaken. The researchers were limited in their sampling and study provided time. Further research would fill the gaps in the presented research to shed light on the challenges that hinder postgraduate students from pursuing their higher education. Several studies can affirm the organization and community impact on motivating students to endeavor their dreams.

Conclusion

This research is conducted to answer some questions related to intrinsic and extrinsic motivational factors influencing Saudi females' tendency towards postgraduate studies. Motivation is the key factor in influencing their desire to continue their postgraduate studies so an increase in motivation indicates greater propensity towards postgraduate studies while decreasing in motivation results in fewer numbers attending postgraduate programs. Understanding and obtaining knowledge about motivational factors by the Saudi people and community around them can support them to create a motivational atmosphere for their studies and can result in increasing the number of Saudi females attending postgraduate studies next years.

According to Halepota (2005), motivation means an individual's dynamic involvement in something and commitment to accomplishing the recommended results (Halepota, 2005). This shows the perceptions and attitudes of Saudi female students' metacognition for postgraduate studies for fulfilling self-development and to be active members in their societies as well as to obtain knowledge and skills enabling them for global competition.

Statistics of this study show that Saudi females are intrinsically motivated to pursue their higher education more than extrinsically although career enhancement as an extrinsic factor receives the highest percentage by 88.6 % compared with other extrinsic factors. Similarly, the results show that they get different external support by 94.3% from families, friends, supervisors and some community organizations which assist them to seek that kind of higher studies. On the other hand, Saudi females encounter difficulties and challenges while continuing their postgraduate studies by 91% which shows their great enthusiastic willing to overcome those demotivators' (inhibitors') barriers. According to the results of this study, 97.1% of Saudi postgraduate females believe that coalition with community organizations is an important factor that creates a good motivational atmosphere for increasing the number of attendees of postgraduate programs. Also, results show that efforts and services offered by the Ministry of Higher Education is not well realized by Saudi females as 37.1% of them agree that the Ministry should provide more opportunities for postgraduate programs although that the Ministry provides many opportunities with specific conditions and requirements inside and outside Saudi Arabia including "King Abdullah Scholarship Program" and other governmental grants (Ministry of Higher Education, 2014).

Despite all previous facts and data introduced in this study, a valuable fact is added to clarify Saudi females' perceptions and attitudes towards postgraduate studies that relate to the majority of Saudi females' belief of the negative influence of extrinsic factors that impede most of them from attending postgraduate programs by more than 50%. The results of this study show that there are still some misconceptions about what motivates Saudi females towards postgraduate studies so that they receive little support from the familial and societal surroundings. These misconceptions beside other factors that impact Saudi females' desire to pursue their postgraduate studies lead to less tendency so more collaboration is required from external sources as governmental and non-governmental organizations, community, families, friends and others which should work together to create a motivational environment that encourage them for more future higher education.

This research will enrich the Saudi and international research-based educational centers because we encountered much of the insufficient and scarcity of academic studies relating to the same issue in the Saudi research centers when conducting this study. This study also enhances Saudi educators and communities' understanding of the main factors affecting the Saudi females' perception and attitudes towards postgraduate studies and may help in receiving more future support and collaboration from all communal organizations.

References

- Anderman, E. M., & Anderman, L. H. (2010). *Classroom motivation*. Upper Saddle River, New Jersey: Kevin M. Davis.
- Atkinson, J. W. (1957). *Motivational determinants of risk taking behaviour*. In *Psychological Review* (pp. 64, 359-372).
- Bandura. (1986). *Social foundation of thought and action : A social cognitive theory*. Englewood Cliffs .
- Deci, E. L. (1985). *Intrinsic motivation and self-determination in human*. New York: Plenum.
- Eccles, J. (1983). *Expectancies, values, and academic behaviors*. In J. T. Spence, *Achievement and achievement motives: Psychological and sociological approaches* (pp. 75-146). San Francisco: Freeman.
- Gonzales, L. M., Allum, J. R., & Sowell, R. S. (2013). *Graduate enrollment and degrees: 2002 to 2012*. Washington, DC: Council of Graduate Schools.
- Graham, S. &. (1996). *Theories and principles of motivation* . In D. B. R.C. Calfee, *Handbook of educational psychology* (pp. 63-84). New York .

- Heider, F. (1958). *The psychology of interpersonal relations*. New York: Wiley.
- Lepper, M. R., Sethi, S., Dyaldin, D., & Drake, a. M. (1999). *Interinsic and extrinsic motivation: A developmental perspective*. In S. S. Luthar, J. A. Burack, D. Cicchetti, & J. R. Weisz, *Developmental psychopathology: Perspectives on adjustment, risk, and disorder* (pp. 23-50). University of Cambridge.
- Locke, E. A. (1990). *A theory of goal setting and task performance*. Englewood Cliffs: Prentice-Hall.
- Reeve, J. (2012). *A self-determination theory perspective on student engagement*. In *handbook of research on student engagement*. Korea: Korea science and engineering foundation.
- Al-Munajjed, M. (2009). Women's education in Saudi Arabia. *The Path Forward* , 6-10.
- Alamri, M. (2011). Higher education in Saudi Arabia. *Higher Education Theory and Practice* , p.88.
- Ames, C. (1992). Classrooms: Goals, structures, and student motivation. *Journal of Education Psychology* , 84 (3), 261-271.
- Ames, C., & Archer, J. (1988). Achievement goals in the classroom: Students' learning strategies and motivational processes. *Journal of Educational Psychology* , 80 (3), 260-267.
- Atkinson, J. W. (1957). Motivational determinants of risk taking behavior. *Psychol. Rev.* , 64, 359-372.
- Avi Kaplan, & Maehr, M. L. (2006). The contributions and prospects of goal orientation theory. *Educ Psychol Rev* , 141-184.
- Deci, E. L., Koestner, R., & Ryan, R. M. (2001). Extrinsic rewards & intrinsic motivation in education: reconsidered once again. *Review of Educational Research* , 1-27.
- Deci, E. L., Vallerand, R. J., Pelletier, L. G., & Ryan, R. M. (1991). Motivation and education: The self-determination perspective. *The Educational Psychologist* , 325-346.
- Deci, E., & Ryan, R. (1985). Intrinsic motivation and self-determination in human behavior.
- DeGroot, E., & Pintrich, P. (1990). Motivational and self-regulated learning components of classroom academic performance. *Journal of Educational Psychology* , 82 (1), 33-40.
- Dweck, C. S. (1988). A social-cognitive approach to motivation and personality. *Psychological Review* , 95, 256-273.
- Eccles, J. A. (1983). Expectancies, values and academic behaviors. *Achievement and achievement motivation* , 75-146.
- Grusec, J. (1992). Social learning theory and developmental psychology: The legacies of Robert Sears and Albert Bandura. *Developmental Psychology* , 28 (5), 776-786.
- Halepota, H. A. (2005). Motivational theories and their application in construction. *Cost Engineering*, 14-19.
- Hamdan, A. (2005). Women and education in Saudi Arabia. *International Education Journal* , p.54.
- Hill, D. A. (2011). A brief guide to self-determination theory. *Hospitality, Leisure, Sport and Tourism Network* , 1-3.
- Locke, E. A., & Latham, G. P. (1990). *A theory of goal setting and task performance*.
- Nicholls, J. G. (1984). Achievement motivation: Conceptions of ability, subjective experience, task choice, and performance. *Psychological Review* , 91, 328-346.
- Öztürk, E. (2012). Contemporary motivation theories in educational psychology and language learning: An overview. *The International Journal of Social Sciences* , 3 (1), 33-46.
- Savenye, W., & Miltiadou, M. (2003). Applying social cognitive constructs of motivation to enhance student success in online distance education. *AACE Journal* , 11 (1), 78-95.
- Tollefson, N. (2000). Classroom applications of cognitive theories of motivation. *Educational Psychology Review* , 12 (1), 63-83.
- Wigfield, A. (1994). Expectancy-value theory of achievement motivation: A developmental perspective. *Educational Psychology Review* , 6 (1).
- Wigfield, A., & Eccles, J. (2002). Motivational beliefs, values, and goals. *Annual Review of Psychology* , 53, 109-32.
- Central Intelligence Agency. (2011). The world fact book. Retrieved July 1, 2014, from <https://www.cia.gov/library/publications/the-world-factbook/geos/sa.html>.
- Fanack. (2012). Education of Saudi Arabia. Retrieved July 1, 2014, from <http://fanack.com/en/countries/saudi-arabia/>
- General Department of Statistics & Information. (2013). Latest statistical releases. Retrieved July 10, 2014, from <https://www.cdsi.gov.sa>
- Ministry of Higher Education, General Department for Planning & Statistics. (2010, n.d. n.d.). Women in higher education: Saudi initiatives & achievements. Retrieved July 1, 2014, from <http://www.mohe.gov.sa/ar/Ministry/Deputy-Ministry-for-Planning-and-Information-affairs.htm>.
- Ministry of Higher Education. (2010). The percentage of illiteracy in Saudi Arabia. Retrieved from <http://www.alrassedu.gov.sa/index/news/news-action-show-id-15.htm>.
- Ministry of Higher Education. (2014). Internal grants for private Saudi universities and colleges. Retrieved July 14, 2014, from <https://grants.mohe.gov.sa/ApprovedFaculties.aspx?univID=44>

Appendix I

Survey of Perceptions and Attitudes of Saudi Arabian Female Students' Metacognition for Higher Education

Introduction

Nowadays, many Saudi females are motivated to pursue their higher education to get better opportunities in recruitment and to be active members in their societies as well as males. Two kinds of motivations stand behind their tendency of getting higher studies: intrinsic and extrinsic motivators. A student is intrinsically motivated to engage in an academic task when she or he concerns about learning something and involves in a task for its own sake. Students who are extrinsically motivated involve in academic tasks in order to receive some rewards or to avoid an externally compulsory punishment (Anderman, E. & Anderman, L., 2010).

These intrinsic as well as the extrinsic motivators affect Saudi females to apply for higher education (Ministry of Higher Education, 2010). Thus, this research studies the motivational theories that encourage Saudi females to continue their higher studies.

Questions

Dear participant thank you for giving us some of your precious time to answer this survey which will be used in a study about *Perceptions and Attitudes of Saudi Arabian Female Students' Metacognition for Higher Education* that will be introduced to Prince Mohammed Bin Fahd University.

1-Degree of post-graduate:

- Master.
- PHD

2-Your GPA is:

3- Personal Development Variables:

- To satisfy my desire in self-improvement.
- To gain more respect from others.
- To gain more self-confidence.
- To achieve my educational goal.
- All of the above.
- None of the above.

4- Career Enhancement Variables:

- To earn higher compensation.
- To provide opportunity for more challenging work.
- To get promoted to a higher position.
- To remain competitive in the business field.
- To change occupation area or current career path to a new one.
- All of the above.
- None of the above.

5- Familial and Societal Variables:

- To fulfill family's expectations.
- To comply with peer pressure.
- To obtain qualifications as regulated by law.
- To act in accordance to social values.
- All of the above.
- None of the above.

6- While pursuing your higher studies, you are pressurized mostly by one of the following challenges:

- Time constraints.
- Family and societal duties.
- Financial difficulties.
- Discouraging universities' learning environments.
- Current job duties and responsibilities.
- All of the above.
- None of the above.

7- You receive support mostly from:

- Family members.
- Friends.
- Supervisors and colleagues.
- Community organizations.
- All of the above.
- None of the above.

8-To increase the number of Saudi postgraduate females, Saudi organizations should:

- Initiate academic majors demanded by the global work market.
- Provide more financial and career privileges for employees who received new degree.
- Facilitate opportunities for employees from all sectors.
- Eliminate financial and career restrictions for employees who want pursuing.
- All of the above.
- None of the above.

9- The Ministry of Higher Education provides opportunities for postgraduate programs to empower Saudi females with the required skills and knowledge to be competitive in the global market:

- Agree strongly.
- Agree.
- Neutral.
- Disagree strongly.
- Disagree.

10 – In your opinion, the extrinsic factors (external uncontrollable events) hinder Saudi female students from continuing their higher studies more than intrinsic factors (internal satisfaction):

- Agree strongly.
- Agree.
- Neutral.
- Disagree strongly.
- Disagree.

Appendix II

Interview Questions

1. What is your Postgraduate major?
2. Do you have positive feelings towards postgraduate courses?
3. Do admission requirements of master or PHD programs hinder Saudi females from continuing their postgraduate study?
4. Do master or PHD programs enrich your future carrier?
5. Do job opportunities in Saudi organization force Saudi females to continue their postgraduate?