

## FACTORS AFFECTING POST GRADUATE NURSING STUDENTS SATISFACTION AND ITS RELATION TO THEIR ACADEMIC ACHIEVEMENT

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### Abstract

**Background:** Today, postgraduate students' attraction and loyalty is one of the most important problems that facing higher educational section. Several ways are suggested to increase postgraduate students' satisfaction and their loyalty, among which improving learning environment and increase educational facilities, for that, higher educational institutions making great effort to gain postgraduate nursing students satisfaction and loyalty.

**Aim:** The study aimed to identify factors affecting post graduate nursing students satisfaction and its relation to their academic achievement

**Methods:** Descriptive correlational design was utilized in the present study. The study subjects includes 100 of postgraduate students at Faculty of Nursing, Mansoura University. Two tools were used for data collection, namely; Factors affecting postgraduate students' satisfaction questionnaire and Retrospective Audit to assess student achievement.

**Results and conclusion:** The study findings indicated that there were significant relationship between influencing factors of postgraduate satisfaction and academic achievement. High percent of students were satisfied and influenced by learning environment factors followed by organizing factors. Moreover, administration factors were ranked as a satisfactory factor for postgraduate students followed by library services. More than half of students were excellent and had very good academic achievement.

**Recommendations:** the policy and procedures for registration should be clear and available for all postgraduate students by using different ways such as, design manual or guideline book, regular meetings with postgraduate students and using the web site to informing students, assigned facilitators for helping postgraduate students, regular meeting with postgraduate employees to enhance effective dealing with students, making periodic survey to identify postgraduate students' opinions, needs, discuss their problems and try to solve it.

**Keywords:** Academic achievement, Postgraduate students, Students' satisfaction

### Introduction

In this time of globalization and technological revolution, education is considered as a first important step for human activity. It plays an important role in development of human capital and is linked with an individual's well-being and opportunities for better living (Battle & Lewis, 2002). It gives individuals knowledge and skills that enable them to

increase their productivity and improve their quality of life. This increase in productivity and leads towards new sources of earning that enhances the economic growth of a country (Saxton, 2000).

Higher education is a requirement for social growth and sustainability because it develops the individuals' as

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well as a nation's competencies, and promotes social and economic prosperity (Randall, 2002). Higher education institutions tend to change the individual cognitively, intellectually, attitudinally, psychologically, and morally. (Pascarella and Terenzini, 2005)

Postgraduate students are the builders of the collective future and they should be equipped with the necessary knowledge about civic engagement, leadership skills, and political exposure, which allow them to accomplish their tasks. (Mathews, 2009). Most universities are committed to providing students with services and activities that enhance their experience, attract and retain diverse and capable cohorts, and ensure equity, engagement, and access.

Universities can never remain competitive if they are not aware of the necessity to provide students with "a quality education and a learning process that fosters success" (Mark, 2013). Quality education or academic quality is essential for multi-dimensional benefits of employment, knowledge, competencies of teachers and students (Khan, 2012). University is an educational and service setting, where the service is often produced and consumed. The university should focus on service quality, information, and facilities to increase the satisfaction and loyalty of the students. (Helgesen and Nasset 2007; Childers et al., 2014).

Students' satisfaction is a short-term attitude result from an evaluation of students' educational experience, services and facilities. (Elliott and Healy 2001). Higher educational institutions realize the significance of student satisfaction for functioning and progress (Tessema et al., 2012). Satisfaction is an outcome of academic quality; Students' satisfaction is

a multidimensional process which influence student' academic achievement as well as overall outcome of educational process. (Dhaqane & Afrah, 2016).

Student academic achievement means what student has achieved, their short or long-term educational goals (Ann & Manuel, 2013). Student academic achievement measurement has received considerable attention in previous research; it is a challenging aspect of academic literature, and science.

Postgraduate students' satisfaction and achievement are affected by many factors such as social, psychological, economic, environmental and personal factors, like class room quality, quality of feedback, lecturer-student relationship, cooperation and good relation with fellow students, course content, suitable learning equipment, library facilities and good learning materials.

These factors influence strongly on the student' satisfaction and achievement, but these factors differentiate from person to person and country to country (Mushtaq & Nawaz, 2012). Thus, Interesting in factors affecting student' satisfaction and achievement has increased in both academic and non-academic settings. This is mainly due to the fact that satisfaction affects both students' achievement and organizational performance (Decenzo & Robbins, 2010). So, the intention of this study was identify factors affecting post graduate students' satisfaction and their academic achievement.

#### **Significance of Study**

Satisfaction is a well-researched topic in both academic and non-academic settings. In academic settings, students' satisfaction data help colleges and universities make their curriculum and

environment more responsive to the needs of students.

(Eyck & Ballester, 2009; Witowski, 2008). Dissatisfied students can hardly do well in their studies, and this leads to poor performance, so dealing with students' dissatisfaction is a core taste of any service-based organization (Christine & George, 2010). Moreover Students' academic achievement plays an important role in producing the best quality graduates who will become great leaders and manpower for the country, being responsible for the country's economic and social development (Ali et al., 2009). So, this study aimed to identify factors affecting post graduate students' satisfaction and their academic achievement.

#### **Aim of the Study**

This study aimed to identify factors affecting post graduate students' satisfaction and their academic achievement.

#### **Research Question**

*The research questions were formulated as follows:*

- 1-What is the level of post graduate students' satisfaction?
- 2-What is the level of post graduate students' academic achievement?
- 3-What are the factors affecting post graduate students' satisfaction and their academic achievement?
- 4-To what extent these factors are satisfactory for postgraduate students?

#### **Subjects and Methods**

The subjects and methods for this study were described under four designs, namely technical, operational, administrative and statistical designs.

##### **1- Technical design**

The technical design includes a description of the research design, setting

of the study, study subjects, and tools of data collection.

#### **Research design**

A descriptive correlational design was used in carrying out this study.

#### **Setting**

The study was conducted at Faculty of Nursing, Mansoura University which included 8 departments (administration nursing department, pediatric nursing department, Woman's health nursing and midwifery department, Gerontological nursing department, Medical-Surgical nursing department, community health nursing department, psychiatric and mental health nursing department, Critical care and emergency nursing department)

#### **Subjects**

All postgraduate students in master program at faculty of nursing, Mansoura University during the academic year 2016/2017 were 100.

#### **Data collection tools**

**Tool (1) : Factors affecting Postgraduate students' satisfaction** It is a self-administer questionnaire used to identify factors affecting postgraduate nursing students' satisfaction, levels of postgraduate students' satisfaction and to determine to what extent these factors are satisfactory for students. The questionnaire consisted of four parts as follows

**Part 1:** - Demographic characteristics: such as age, job status, and specialty of the study.

**Part 2:** -This part was designed to identify factors influencing postgraduate students' satisfaction at the study setting. It was developed by researchers based on pertinent literatures (Clayton, 2013; Noel-levitz 2012; Texas Tech University 2010-2011; Paul Bennett & Gosia Turner 2013; Accreditations Manual for Higher

**Educational Institutions, 2008.** It consists of 8 dimensions as follows:-

- 1-Administrative factors (10 items) used to assess issues related to admission and registration program, in addition to institution's commitment to making procedures and policies for registering easy and effective as possible.
- 2-Academic factors (16 items) used to assess the comprehensiveness of academic supervisor as evaluated on the basis of their knowledge, competence and personal attention to student success.
- 3-Library factors (15 items) used to assess the library services and facilities used by students to achieve their academic goals, and cooperation of the library staff with students.
- 4-Psychological factors (6 items) used to assess institution' justice in the treatment with all students and making channel of communication for the students with the faculty and supervisors.
- 5-Safety and security factors (19 items) used to assess the procedures that the university taken to availability student safety and security, and the effectiveness of both security and campus facilities.
- 6-Facility factors (8 items) used to assess issues such as students' activities, study costs of the faculty, location of the faculty, general appearance of the faculty.
- 7-Organizational factors (20 items) used to assess the quality of education provided, clarity of the requirements of the study program, available courses in study program, teaching methods, continuous assessment to students, efficiency of faculty staff and examination system.

8-Learning environment factors (7 items) used to assess issues as tools using in education, lectures hall space, cleanness, lecture hall ventilation level, and lighting.

**Scoring:** - the questionnaire items' responses were on a 5 point Likert scale: strongly non influence, non-influence, neutral, influence, influence strongly. These were scored from 1 to 5, respectively. Scoring of the tool will be averaging of total score of the tool, score (4, 5) indicating high influence, score of (3) indicating neutral and score of (1, 2) indicating low influence.

**Part 3:-** this part consisted of the same eight dimensions as part 2 but the difference in scoring, this part used for measuring to what extent these factors are satisfactory for postgraduate students. It was developed by researchers based on opinions of jury. The questionnaire items' responses were on 3-point student satisfaction scale (dissatisfactory, neutral, and satisfactory). These were scored from 1 to 3 respectively

**Part 4:** - this part used to measure the level of student satisfaction as a whole it developed by (El – Shaer 2008). It consists of only one drawing question express levels satisfaction of students' sample.

**Scoring:** - the picture of scale is in 5 - point Likert scale: strongly dissatisfied, dissatisfied, neutral, satisfied, strongly satisfied. These were scored from 1 to 5 respectively. Score (4, 5) indicating highly satisfaction, score of (3) indicating neutral and score of (1, 2) indicating.

**Tool (2): Retrospective Audit**

It was for identifying students achievement .The student achievement is identified by using average grade point scale that is designed as accumulated form for assessing students' progress grades in the current years. The form contains student name and grade. Students' scores range from excellent to acceptable.

Excellent from 85% -100%.

Very good from 75% - 84%.

Good from 65% - 74%.

Acceptable from 60% - 64%.

Failed from 0% -60%.

**2- Operational design: -**

The operational design includes three phases of the study, namely preparatory phase, pilot study, and implementation phase.

**Preparatory phase: -**

The researchers reviewed the literature using textbook, scientific journal and internet with the aim of developing the data collection tool, and for acquiring in-depth knowledge about the subject. The questionnaire was developed in English language, and then translated into Arabic language as well; this stage was concerned validity and preparing of tools for data collection.

**Validity and Reliability:**

The study tools were tested for face and content validity by jury test of five experts in the field of nursing administration to evaluate the individual items as well as the entire instrument as being relevant and appropriate to test what they wanted to measure. According to their opinion modifications were applied. And as a result of opinions of the experts, omission two items from administration factors, and developed part 3 in tool (1). The face validity of the questionnaire was calculated based on experts' opinion after calculating content validity index of its items and it was 94%. **Pilot study** was

carried out on 10% from postgraduate nursing students at Mansoura University to evaluate the clarity and applicability of the tools and to determine the time needed to fill-in questions and necessary modifications were done based on their responses and they were excluded from the total sample.

- To assess reliability, the study tool was tested by the pilot subjects at first session and retested after 2 weeks as test-retest reliability and it was 0.820 and the calculated Cronbach's Alpha was 0.892. The calculated Cronbach's Alpha for main factors affecting their satisfaction and academic achievement were as the following:

Factors domains	No. of items	Cronbach's Alpha
<b>I-Administration factors</b>	10	0.891
<b>II-Academic factors</b>	16	0.912
<b>III-library services</b>	15	0.871
<b>IV-Psychological factors</b>	6	0.889
<b>V-Safety and security factors</b>	19	0.872
<b>VI-Faculty factors</b>	8	0.904
<b>VII-Organizing factors</b>	20	0.894
<b>VIII-Learning environment factors</b>	7	0.880

**Implementation phase: (field work)**

The researcher introduced herself to the postgraduate students, explained the aim of the study, and how to fill in the questionnaire, approval was taken orally after explaining the purpose of this study and asked them to cooperation with her.

Master student's data was collected before and after lectures from the middle of November 2017 to the middle of December 2017. It was collected 2 days weekly, from 10 to 20 sheets per day. The questionnaire sheets were distributed to the master students in their study setting. The researcher was present all the time for any clarifications. The time that postgraduate student taken to complete the questionnaire was 20 minutes.

**3- Administrative design:**

An official permission to conduct the study obtained from the Din of the faculty. Formal approval obtained from the research ethics committee of the faculty of nursing, Mansoura University.

Oral informed consents were obtained from the participants. Privacy and confidentiality of the collected data will be assured and participants were able to withdraw from the study at any stage without responsibility.

**4- Statistical design**

The collected data were organized, tabulated and statistically analyzed using SPSS software (Statistical Package for the Social Sciences, version 19, SPSS Inc. Chicago, IL, USA). For quantitative data, the range, mean and standard deviation were calculated. For qualitative data, which describe a categorical set of data by frequency, percentage or proportion of each category. Correlation between variables was evaluated using Pearson's correlation coefficient (r). Significance was adopted at  $p < 0.05$  for interpretation of results of tests of significance.

**Results**

**Table (1):** Demographic data of the postgraduate students at faculty of nursing Mansoura University (n=100).

Variables	The studied postgraduate students (n=100)	
	N	%
<b>Age years:</b>		
23- 30<	70	70.0
30-35<	26	26.0
35	4	4.0
Range	23-35	
Mean±SD	25.58±6.45	
<b>Work status:</b>		
Working	87	87.0
Don't work	13	13.0
<b>Specialty:</b>		
Obstetrics	18	18.0
Psychological nursing	4	4.0
Medical& Surgical	10	10.0
Geriatric	5	5.0
Pediatrics	5	5.0
Administration	8	8.0
Community	3	3.0
Critical (Emergency)	17	17.0
Infection control	15	15.0
Preparatory	15	15.0

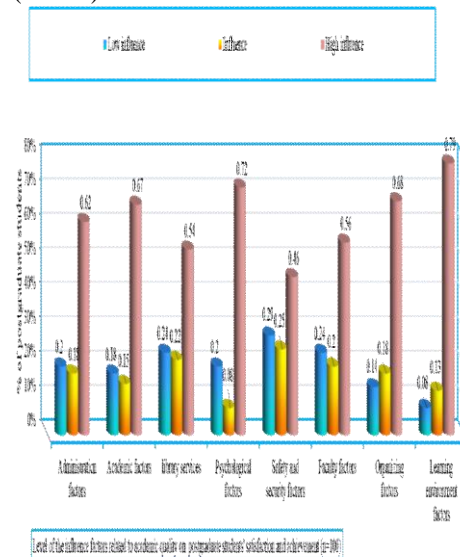
**Table (1)** Reveal demographic data of the postgraduate students at faculty of nursing Mansoura University. Approximately three fourth of them (70%) were in the age group 23 to 30< years, with the majority of them (91%) were females. The highest percentage of them were employed (87%), more than three quarters of them were married (85%), and the biggest specialists' number were obstetrics (18%)

**Table (2):** Postgraduate students’ opinion about the influence factors on their satisfaction and achievement at faculty of nursing Mansoura University (n=100).

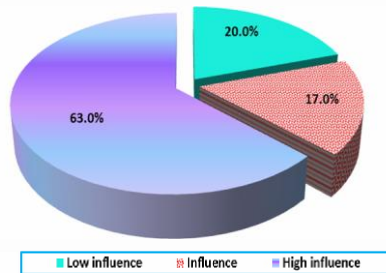
Factors influence	Opinion about factors influence on postgraduate students' satisfaction and achievement (n=100)									
	Doesn't influence strongly		Doesn't influence		Neutral		Influence		Strongly Influence	
	N	%	N	%	N	%	N	%	N	%
I-Administration factors	14	14.0	6	6.0	18	18.0	43	43.0	19	19.0
II-Academic factors	11	11.0	6	6.0	16	16.0	43	43.0	24	24.0
III-library services	13	13.0	10	10.0	22	22.0	35	35.0	20	20.0
IV-Psychological factors	15	15.0	5	5.0	8	8.0	44	44.0	28	28.0
V-Safety and security factors	19	19.0	10	10.0	25	25.0	38	38.0	8	8.0
VI-Faculty factors	15	15.0	9	9.0	20	20.0	41	41.0	15	15.0
VII-Organizing factors	10	10.0	4	4.0	18	18.0	37	37.0	31	31.0
VIII-Learning environment factors	6	6.0	2	2.0	13	13.0	54	54.0	25	25.0

**Figure (1):** Levels of the influencing factors on postgraduate students' satisfaction and achievement at faculty of nursing Mansoura University (n=100)

**Table (2) :** table 2 illustrates that organizing factors, psychological factors, and learning environment factors were strongly influence students’ satisfaction and achievement at percentage of (31%, 28%,and 25%) respectively. Also, more than (40%) of students were influenced through factors of administration, academic, psychological factors and learning environment factors, while the lowest percentage of factors strongly un influence with students’ satisfaction and achievement (19%, 15%) were safety and security and faculty factors respectively.

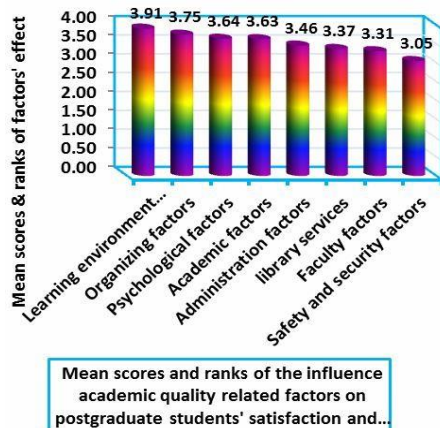


**Figure (2):** Level of total influence factors on the studied postgraduate students' satisfaction and achievement at Mansoura University (n=100).



**Figure (1&2)** shows Level of the influence factors on postgraduate students' satisfaction and academic achievement at faculty of nursing Mansoura University. The figures display the highest level of influence of factors (79%) was learning environment factors followed by psychological factors with the percentage (72%), and the lowest ratio of influence (29%) to safety & security factors, and library services factor (24%). Regarding the level of total influence factors; the majority of postgraduate students had high influence level with the factors of their satisfaction and achievement.

**Figure (3):** Effect mean scores and ranks of factors influence postgraduate students' satisfaction and academic achievement at faculty of nursing Mansoura University (n=100).



**Figure (3)** show Effect mean scores and ranks of factors on postgraduate students' satisfaction and achievement at faculty of nursing Mansoura University. The figure points to that the learning environment factors the most influence factors on postgraduate students' satisfaction and achievement, followed by organizing factors with mean scores (3.91±0.82, & 3.75±0.76) and the less influence factors on postgraduate students' satisfaction and achievement was safety & security factors with mean score (3.05±0.79).

**Table(3):** Postgraduate students satisfaction at faculty of nursing Mansoura University (n=100).

Level of satisfaction	Postgraduate students' satisfaction (n=100)	
	N	%
Strongly dissatisfied	19	19.0
Dissatisfied	20	20.0
Neutral	14	14.0
Satisfied	20	20.0
Strongly satisfied	27	27.0

**Table (3)** illustrates postgraduate students' satisfaction at faculty of nursing Mansoura University. The table show that (27%) from the postgraduate students were strongly satisfied and (20%) from them satisfied. While considerable percentages from them were strongly dissatisfied and dissatisfied (19% & 20%).

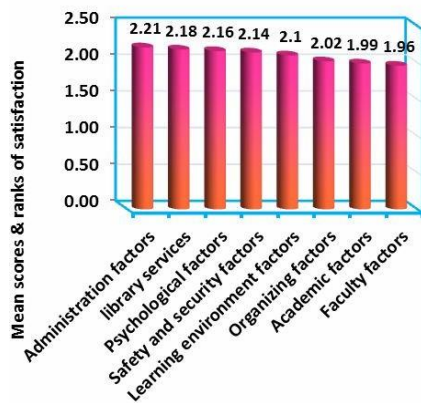


**Table (4):** Satisfactory level of postgraduate students about influence factors at faculty of nursing Mansoura University (n=100).

Factors influence	Satisfactory level of postgraduate students (n=100)					
	Dissatisfactory		Neutral		Satisfactory	
	n	%	N	%	n	%
I-Administration factors	34	34.0	11	11.0	55	55.0
II-Academic factors	43	43.0	15	15.0	42	42.0
III-library services	35	35.0	13	13.0	52	52.0
IV-Psychological factors	34	34.0	15	15.0	51	51.0
V-Safety and security factors	34	34.0	15	15.0	51	51.0
VI-Faculty factors	44	44.0	14	14.0	42	42.0
VII-Organizing factors	41	41.0	17	17.0	42	42.0
VIII-Learning environment factors	44	44.0	14	14.0	42	42.0

**Table (4)** shows satisfactory level of postgraduate students about influence factors at faculty of nursing Mansoura University. The table result demonstrates that the most satisfactory factors to the postgraduate students were administration factors with score (55%), followed by library services with score (52%). On the contrary, the lowest satisfactory factors were faculty factors and learning environment factors with score (44%), followed by academic factors with score (43%).

**Figure (4):** satisfactory mean scores and ranks of postgraduate students about influence factors at faculty of nursing Mansoura University (n=100).



Mean scores and ranks of satisfaction of postgraduate students about influence academic quality related factors (n=100)

**Figure (4)** shows satisfactory mean scores and ranks of postgraduate students about the influence factors at faculty of nursing Mansoura University. The figure illustrate that administration factors was the highest satisfactory for students with mean score (2.21) followed by library services with mean score (2.18). While the lowest satisfactory factor for students was faculty factors with mean score (1.96) followed by Academic factors with mean score (1.99).

**Table (5):** Academic Achievement level of postgraduate students at faculty of nursing Mansoura University (n=100).

Level of achievement	The studied postgraduate students (n=100)	
	N	%
Achievement level:		
Failed	20	20.0
Accepted	8	8.0
Good	17	17.0
Very good	28	28.0
Excellent	27	27.0

**Table (5)** show academic achievement level of postgraduate students at faculty of nursing Mansoura University. The table points to excellent achievement level was (27%), very good level was (28%) and, the failed level was (20%).

**Table (6):** Relationship between level of the factors influence with level of satisfaction and academic achievement among postgraduate students at faculty of nursing Mansoura University (n=100)

Variables	Level of the influence factors on postgraduate students' satisfaction and academic achievement (n=100)								$\chi^2$ P
	Low influence (n=20)		Influence (n=17)		High influence (n=63)		Total (n=100)		
	N	%	n	%	N	%	n	%	
<u>Level of satisfaction:</u>									
Dissatisfied	20	100	9	52.9	10	15.9	39	39.0	50.077 0.0001*
Neutral	0	0	4	23.5	10	15.9	14	14.0	
Satisfied	0	0	4	23.5	43	68.3	47	47.0	
<u>Level of achievement:</u>									
Failed	10	50.0	3	17.6	7	11.1	20	20.0	35.460 0.0001*
Accepted	3	15.0	2	11.8	3	4.8	8	8.0	
Good	4	20.0	7	41.2	6	9.5	17	17.0	
Very good	3	15.0	3	17.6	22	34.9	28	28.0	
Excellent	0	0	2	11.8	25	39.7	27	27.0	

\*Significant (P<0.05)

**Table (6)** show relationship between level of the factors influence with level of satisfaction and academic achievement among postgraduate students at faculty of nursing Mansoura University. The table points to highly statistically significant relation between effect level of factors and level of satisfaction (p=.0001) that about (68%) from the satisfied postgraduate students were high influence

of factors and (100%) from the dissatisfied postgraduate students were low influence. Also, there is highly statistically significant relation between effect level of factors and level of achievement (p=.0001), so that about (50%) of failed postgraduate students were low influence from the factors and (39.7%) from excellent postgraduate students were high influence.

**Table (7):** Correlation between total factors influence scores and total scores of satisfaction and academic achievement among postgraduate students at faculty of nursing Mansoura University (n=100).

Variables	Total satisfaction and achievement scores among the studied postgraduate students (n=100)			
	Total satisfaction scores		Total achievement scores	
	R	P	r	P
Total effect scores	0.357	0.0001*	0.325	0.001*
Total achievement scores	0.650	0.0001*		

r=Correlation Coefficient

\*Significant (P<0.05)

**Table (7)** show correlation between total factors influence scores and total scores of satisfaction and academic achievement among postgraduate students at faculty of nursing Mansoura University. The table demonstrate that statistically significant correlation was found between total factors influence scores with students' total satisfaction and total student' achievement. Also, correlation was found between students' total achievement and students' total satisfaction.

#### **Discussion**

With the growing competitiveness in student attractiveness among higher educational institutions, student satisfaction has giving more attention in recent years (**Petruzzellis et al., 2006**). Student satisfaction is the most important factor to attract and retain high performers who improve the reputation and ranking of the university (**Sangwan and Dalal, 2012**).

The present study sought postgraduate students' opinion about the factors that influencing on students' satisfaction and their academic achievement in the connection with learning environment factors ranked at the first factors influencing postgraduate students' satisfaction and achievement the present study showed that the most important learning environment factors having great influence on students' satisfaction and achievement were availability of comfortable seat, use of illustration mean, fit the lecture hall with students' number, caring staff, supportive teaching staff, clean and secure environment, adequate infrastructure, adequate class size, diversity policies, facilities, and effective courses. This result may be due to the important of these environmental factors and it is essential for

students to become comfortable and satisfied then they become able to learn. Thus, the faculty should pay more attention to environmental factors to increase retention of students and loyalty.

On the same line of this result (**Arambewela, and Hall, 2009**) claimed that the importance of suitable learning environment are perceived to be the most important variable influencing and generating student satisfaction. Also, a study conducted by (**Garcl, 2009**) The study further realized that learning equipment, teaching quality and teaching/learning materials have significant influence on the students' satisfaction. And, National Survey of Student Engagement (**NSSE, 2012**) shows that creating a supportive campus learning environment is among five main factors affecting student achievement in higher education.

On the same line ( **Kärnä and Julin 2015**) conducted a study on Postgraduate students' satisfaction about university facilities. study indicated that Postgraduate students satisfied with factors related to comfortable learning environment, public spaces, campus accessibility. And **Zineldin et al. (2011)** identified the quality of university infrastructure as an important determinant of Postgraduate student satisfaction in Turkey. Specifically, this related to factors such as physical appearance and cleanliness of classrooms.

Regarding Organizing factors influencing postgraduate students' satisfaction and achievement the present study ranked it as a second factor influences on students. The most important organizing factors having great influence on students' satisfaction and achievement were efficiency of faculty staff, the study days in the faculty, organizing courses during the study day, and strengthening

the theoretical aspects with practical. This finding may be due to the important of being efficiency when dealing with adult learner and postgraduate students most of them having children and they work, thus they prefer to organize courses and decrease the time they spent in faculty.

On the same line **(Ziaee et al. 2004)** showed that students who received meaningful academic coaching felt more satisfied. In the skills laboratory the students were happy and satisfied that the learning objectives were available and the students knew what their research carried out by **(Loveland and Bland 2013)** found that class scheduling has a significant impact on student satisfaction and achievement. The general quality of educational institution is important in the overall students' satisfaction and achievement.

On the other hand, the results showed that administrative factors were ranked at the most satisfactory factors for students. From these factors were the method of dealing with postgraduate students, the clarity of procedures and policies for registering department, and the opportunity to register for the desired specialization.

This result may be due to students' awareness about the effect of style of dealing on student psychological state and their own retention. Also, the ambiguity of the procedures of registration and the errors that may occur and the interesting when choosing if there is availability of opportunities. In line with the foregoing **(Berkeley, 2015)** demonstrate that the faculty should give the opportunity to choose the desired specialty to make them more interested, satisfied and help them develop their skills.

Also, Kandiko and Mawer (2013) showed that postgraduate students should be given the opportunity to assess,

participate, and choose the courses that are well designed, allocated, and delivered, as well as, respond to postgraduate student's needs, administrators need to be supporting by interacting, helping, and guiding the postgraduate students. Moreover Lenton (2015) found that postgraduate student satisfaction differed by the field of study. It means that giving the opportunity to register for the desired specialization having great effect on Postgraduate students' satisfaction.

The library factors were ranked as the second satisfactory factors for students. The current study revealed that the highest percentage of postgraduate students' agreement upon the efficiency of the devices and physical services, library physical facilities and using services of the library easily were the most important factors that influence on them. This may be due to the importance of these factors because it's the main source of literature search.

**Wilkins and Stephens (2013)** demonstrated that physical facilities and effective use of technology as key determinant factors of student satisfaction. Such as available learning equipment, library facilities and learning materials. And, **Lo (2010)** and **Papastavrou et al. (2016)** stressed that the students' satisfaction was found to be positively related to all items comprising the learning environment such as, computer laboratory, library facilities, availability of teaching/learning resources.

This result in agreement with present study results (Bayrak 2007) have extrapolated that library and internet facilities are the factors that first come to Turkish Postgraduate students' minds in terms of higher education service quality.

Regarding psychological factors were ranked the third satisfactory factors for students the present study showed that

faculty staff and administration dealing with students and feeling belonging to the faculty the most important factors. A good relation with the academic and administrative staff gives the postgraduate students a better feeling of inclusion and consequently enhances their sense of belonging.

Dealing with cooperation, kindness of administrative staff and faculty staff, and responsiveness of the educational system plays a vital role in determining students' satisfaction (**Malik et al. 2010**). Also, **O'Keeffe (2013)** found that lack of a sense of belonging within a higher education institution is a key cause of dissatisfaction between students.

However, justice in the treatment of all Postgraduate students has the lowest influence on Postgraduate student' satisfaction and achievement this finding may be due to that the faculty staff were grown enough when dealing with Postgraduate students and use the same manner when working with Postgraduate students and Postgraduate students have not feel any change in dealing.

As for the safety and security factors influencing postgraduate students' satisfaction and achievement the present study showed that the most influence factors were availability of more than one entrance and exit, availability of telephone in the lift and availability of first aid. This result may be due to students' awareness about the elements of safety and disaster management. This high awareness probably due to what they have learned in related courses.

In agreement with this result, the importance of students' safety and security in Campus that argued in the (**Alamance community College, 2015**). Where colleges and universities responsibility of providing a safe learning, working, and living environment for students, faculty,

staff, and visitors, through campus policies and continues training security staff.

Concerning with faculty factors influencing postgraduate students' satisfaction and achievement the present study showed that the costs in the faculty, location of the faculty and college facilities were the most influence factors, this may be due to the important of financial factor in students' satisfaction and in complete their studies

In agreement with **Choudaha (2014)** emphasize that finances are the primary reason for dissatisfaction with the college experience in the U.S. a finding reinforced by **Leveson et al. (2013)** that location of the faculty also, one of the most important faculty factors influencing postgraduate student' satisfaction.

In a line with **Insch and Sun (2013)** found that accommodation, socializing, sense of community, safety and cultural scene as most important attributes of university location. However **Kandiko and Mawer (2013)** demonstrate that the location of the university one of the reasons that make Postgraduate students feeling satisfied and feeling belong to university. Also, **Archuleta et al. (2013)** showed that adverse financial situations and financial anxiety can contribute the postgraduate students' dissatisfaction.

In connection with the academic factors influencing postgraduate students' satisfaction the current study finds the most influential academic factors were academic supervisor cooperation, level of confidence and communication skills of them. This is a reflection of the actual situation because if the supervisor loose the communication skills and didn't cooperation with students, they would be dissatisfaction and have not loyalty to the faculty and turned over.

This issue has been addressed by **Yusoff et al. (2015)** who mentioned that

there were variables that significantly influence students' satisfaction relationship with the teaching staff, knowledgeable and responsive faculty and staff helpfulness.

Teaching staff are responsible to achieve Postgraduate students' satisfaction by being committed, responsive, intellectual, determining postgraduate students' needs, and collaborate Khan (2012). Also, Sojkin et al. (2012) discuss the important of academic factors such as communication with the instructor in and outside the classroom, the quality of education professors provide, and chosen textbooks relate to Postgraduate student satisfaction.

Concerning the relationship between students' satisfaction and achievement the finding found significant relation which satisfaction promotes both academic achievement and retention of the student. Getting academic degree is not all of the success, but attaining satisfaction is the actual meaning of success (Khalif M. 2016).

Many students achieved the highest levels of academic degrees but didn't enjoy their life spent for study. For this, education and training based on students' satisfaction is one of the main duties of researchers and planners of educational system (Khalif, 2016). Student satisfaction can be determined from his level of pleasure as well as the effectiveness of the education that the student experiences. In this regard, satisfaction can be considered as the act of satisfying a need or desire in achieving a planned goal.

(Gaspar, 2013) demonstrated that higher level of relative student achievement was associated with student satisfaction. The satisfaction and the achievement scores are positively correlated. Smayling and Miller (2012)

study examined the relationship between satisfaction and achievement of students and found a positive relationship existed.

Additionally, this study also examined the relationship between overall student satisfaction and student academic achievement among students in higher education. Results indicated a significant relationship between student satisfaction and academic performance as measured by GPA. Students who were less satisfied with their college experience, had the lowest mean GPA score. This outcome was consistent with previous research, which also reported a significant relationship between student satisfaction and academic performance in the study carried by (Saenz et al., 1999; Valentine, 2003).

(Kara and DeShields; 2004) also report a positive relationship between student' satisfaction and achievement. And (Chambel and Curral ;2005) found levels of satisfaction have a direct impact on student performance. Also, (Zeitun et al; 2013) found a statistically significant positive relationship exists between satisfaction and achievement. Moreover (Martirosyan et al; 2014) reported a significant relationship between student satisfaction and student academic achievement. In a line with (Guan, Shiye, Liu, & Yum, 2006) their study found a positive relationship between major satisfaction and grade point average of college students.

### **Conclusion**

**In the light of present study, it was concluded that:**

Nearly half of postgraduate students were satisfied and had excellent and very good grades academic achievement. Post graduate students were more satisfied with administration factors followed by library service and psychological factors. Learning environment factors were ranked

as the most influence factors on students' satisfaction and achievement followed by organizing factors and psychological factors. Statistically significant relation was found between level of satisfaction and achievement, while postgraduate students who were satisfied were excellent and very good in their achievement. Moreover, statistically significant relation was found between influence factors on students with total scores of satisfactions and total scores of achievements as an indicator of academic quality

#### **Recommendations**

In the light of the study finding, and in view of the increasing competitiveness among higher education institutions, the following recommendations are proposed for attracting and satisfying postgraduate students

#### **1- Administration factors**

- The policy and procedures for registration should be clear and known for all students by using different ways such as, design manual or guideline book, regular meeting and using the web site to informing students.
- Facilitate registration process and assigned facilitators for helping postgraduate students.
- Regular meeting with postgraduate employees to enhance communication and effective dealing with students.

#### **2- Academic factors**

- Availability of feedback by the academic staff and a system of bilateral feedback from teachers to students and adverse should be set for good evaluation of students.
- Making periodic survey and regular meeting to identify students' opinions, needs, discuss their problems and try to solve it.

#### **3- library service**

- Increase numbers of staff working in library to help students, enhance their cooperation with students and increasing opening hours of library.

#### **4- Psychological factors**

- Enhance the faculty members' justice in dealing with students through stick by the policy, course specification and professional ethics.

#### **5- Safety and security factors**

- Increasing the numbers of faculty security members, first aid training and maintenance of equipment in the event of potential emergencies and any events.
- Availability of telephone in the lift access blogger a number to call during emergency.

#### **6- Organizing factors**

- Clarity of the requirement of study program, organizing lectures during the study day, and use a variety of teaching methods.

#### **7- Learning environment factors**

- Increase space of lecture hall, availability of comfortable seats in lecture hall and increase using of illustration methods like projector, microphone and data show to facilitate learning process.

#### **Reference**

1. Ali, N., Jusoff, K., Ali, S., Mokhtar, N., Salamt, A. and Syafena A. (2009). The Factors Influencing Students' Performance at University Teknologi MARA Kedah, Malaysia. Canadian Research & Development Center of 4 Sciences and Cultures: Vol.3. No.
2. Ann, R., & Manuel, R. (2013) Factors affecting Academic performance of BS Astronomy technology students international journal of Engineering Research &

- technology(IJERT)ISSN:2278-0181Vol.2.issue12,December-2013
3. Accreditations Manual for Higher Educational Institutions 2008.
  4. Alamance Community College; (2015): safety and security Retrieved from: [https://www, Alamance. Edu/service-for- students-site safety-and-security](https://www.Alamance.Edu/service-for-students-site-safety-and-security)
  5. Arambewela J.( 2009). “An empirical model of international student satisfaction,” Asia Pacific Journal of Marketing and Logistics, vol. 21, no. 4, pp. 555-569, 2009
  6. Archuleta, K., Dale, A. & Spann, S. (2013). College Postgraduate students and Financial Distress: Exploring Debt, Financial Satisfaction, and Financial Anxiety. Journal of Financial Counseling and Planning, 24: (2), 50-62.
  7. Battle, J., & Lewis, M. (2002). The increasing significance of class: The relative effects of race and socioeconomic status on academic achievement. Journal of Poverty, 6(2), 21-35.
  8. Bayrak, B. (2007). Yükseköğretim kurumlarından beklenen hizmet kalitesi ve hizmet kalitesinin algılanmasına yönelik bir araştırma. Unpublished doctoral dissertation). Marmara University, İstanbul.
  9. Berkeley, C. (2015): University of California, school of public health 50 University Hall#7360 Berkeley, CA94720-7360.
  10. Childers, C., Williams, K., & Kemp, E. (2014). Emotions in the classroom: examining environmental factors and student satisfaction. *Journal of Education for Business* 89(1), 7-12.
  11. Christine E. & George D. (2010) Impact of learner engagement on attrition rates and student Success in online learning retrieved from <http://www.itdl.org/Journal/May10/article01.Htm>
  12. Chambel, M. & Cural, L. (2005). Stress in Academic Life: Work Characteristics as Predictors of Student Well-being and Performance. *Applied Psychology*, 54: (1), 135-147.
  13. Clayton, K. (2013). <http://www.claytone.edu/portals/26/survey-students-satisfaction>.
  14. Choudaha, R. (2014). Bridging the gap: Recruitment and retention to improve international student experiences, NAFSA.
  15. Decenzo, O. & Robbins, S. (2010). Fundamentals of human resource management (10th ed.). Hoboken, NJ: John Wiley & Sons, Inc. Madison N. (2014): what is a postgraduate student?
  16. Dhaqane, M. & Afrah, N. (2016). Satisfaction of Students and Academic Performance in Benadir University. *Journal of Education and Practice*, 7: (24), 59-63.
  17. El-Shaer A. (2008) Organizational structure features influence on occupational stress for intensive care nurses and strategies for dealing with stress. Doctoral degree, faculty of nursing, Tanta University.
  18. El-Said, E. (2013). Effect of faculty support and nursing students’ self-efficacy and affective commitment on their academic achievements. Doctoral degree, faculty of nursing, Mansoura University.
  19. Elliott, K. & Healy, M., (2001). Key factors influencing student satisfaction related to recruitment and retention. *Journal of Marketing for Higher Education*, pp. 1-11.
  20. Eyck, R., Tews, M., & Ballester, J. (2009). Improved Medical Student
-



- Satisfaction and Test Performance with a Simulation-Based Emergency Medicine Curriculum: A Randomized Controlled Trial. Paper presented at the ACEP (2008) Rasaarch Forum, October 2008.
21. Garcl a-Aracil, A., (2009). European graduates' level of satisfaction with higher education. *Journal of Higher Education*, 57(1), pp. 1-21.
  22. Guan, G., Shiye, M., Liu, J. & Yum, G. (2006). Relationship between satisfaction with major, academic performance, and congruence. Retrieved August, 16: 2006.
  23. Gaspar, D. (2013). Relationship between classroom climate and academic achievement of higher secondary students in Salem District. *International Journal of Applied Research and Studies (IJARS)*, 2: 1-12.
  24. Helgesen, O., and Nasset, E., (2007) "What accounts for students' loyalty? Some field study evidence", *International Journal of Educational Management*, 21 (2), pp 126-143 [http://www.wisegeek.com/ what is a postgraduate-student.htm](http://www.wisegeek.com/what-is-a-postgraduate-student.htm) on 7/4/2014
  25. Insch, A. & Sun, B. (2013). University Postgraduate students' needs and satisfaction with their host city. *Journal of Place Management and Development*, 6: (3), 178-191.
  26. Karna, S. & Julin, P., (2015). A framework for measuring student and staff satisfaction with university campus facilities. *Quality Assurance in Education*, pp. 47-61.
  27. Kara, A. & DeShields, O. (2004). Business student satisfaction, intentions and retention in higher education: An empirical investigation. *Marketing Educator Quarterly*, 3: (1), 1-25.
  28. Kandiko, C. & Mawer, M. (2013). Postgraduate student expectations and perceptions of higher education. London: King's Learning Institute.
  29. Khalif, M. (2016). Satisfaction of Students and Academic Performance. *Journal of Education and Practice* ISSN 2222-1735 (Paper) ISSN 2222-288X (Online) Vol.7, No.24, 2016 [www.iiste.org](http://www.iiste.org)
  30. Khan, M. (2012). An empirical study of students' satisfaction with education service quality in institutions of higher education in Pakistan. *SZABIST, Pakistan*, 5(15), 137-154
  31. Lenton, P. (2015). Determining Postgraduate student satisfaction: An economic analysis of the National Postgraduate student Survey. *Economics of Education Review*, 47: 118-127.
  32. Lo, C. (2010). How student satisfaction factors affect perceived learning. *Journal of the Scholarship of Teaching and Learning*, 47-54.
  33. Loveland, K. & Bland, E. (2013). Impact of course scheduling formats on student learning and satisfaction. *Atlantic Economic Journal*, 41: (2), 191-192.
  34. Leveson, L., McNeil, N. & Joiner, T. (2013). Persist or withdraw: the importance of external factors in students' departure intentions. *Higher Education Research & Development*, 32: (6), 932-945.
  35. Mark, E. (2013). Student satisfaction and the customer focus in higher education. *Journal of Higher Education Policy and Management*, 35(1), 2- 10.
  36. Malik, M., Danish, R. & Usman, A. (2010). The impact of service quality on students' satisfaction in higher education Institutes of Punjab.

- Journal of Management Research, 2: (2), 1.
37. Mathews, D. (2009). Ships passing in the night? *Journal of Higher Outreach and Engagement*, 13(3), 1-5.
38. Martirosyan, N., Saxon, D. & Wanjohi, R. (2014). Student satisfaction and academic performance in Armenian higher education. *American International Journal of Contemporary Research*, 4: (2), 1-5.
39. Mushtaq, I., & Nawaz, S. (2012). Factors Affecting Students' Academic Performance. *Global Journal of Management and Business Research*.
40. National Survey of Student Engagement. NSSE (2012). Benchmarks of effective educational practice, retrieved from [http://nsse.iub.edu/pdf/nsse\\_benchmarks.pdf](http://nsse.iub.edu/pdf/nsse_benchmarks.pdf) obtained on the 8th of January, 2015.
41. Noel-Levitz (2012). Students Satisfaction Inventory Scale Spring: Community, technical college version.
42. O'Keeffe, P. (2013). A sense of belonging: Improving student retention. *College Student Journal*, 47: (4), 605-613.
43. Paul, B. and Gosia, T. (2013): postgraduates' research experience survey 2013 questionnaire. The Higher Education Academy.
44. Papastavrou, E., Dimitriadou, M., Tsangari, H. & Andreou, C. (2016). Nursing students' satisfaction of the clinical learning environment: a research study. *BMC Nursing*, 15: (1).
45. Pascarella, E. & Terenzini, P. (2005). How college affects students (Vol. 2): A third decade of research. San Francisco: Jossey-Bass
46. Petruzzellis, L., D'Uggento, A. & Romanazzi, S. (2006). Student satisfaction and quality of service in Italian universities. *Managing Service Quality: An International Journal*, 16: (4), 349-364.
47. Randall, J. (2002). Quality assurance: Meeting the needs of the user. *High Education Quarterly*, 56(2), 188-203.
48. Saxton, J. (2000). Investment in education: Private and public returns. Retrieved from <http://www.house.gov/jec/educ.pdf>
49. Sangwan, S. & Dalal, S. (2012). Student Satisfaction: A Comparative Study between Select Private and Government University in Haryana-NCR Region. *Global Education Journal*, 2012: (2).
50. Smayling, M. & Miller, H. (2012). Job satisfaction and job performance at the internship level. *Journal of Leadership, Accountability and Ethics*, 9: (1), 27.
51. Sojkin, B., Bartkowiak, P. & Skuza, A. (2012). Determinants of higher education choices and Postgraduate student satisfaction: the case of Poland. *Higher Education*, 63: (5), 565-581.
52. Tessema, M., Ready, K. & Yu, W. (2012). Factors affecting college students' satisfaction with major curriculum: evidence from nine years of data. *International Journal of Humanities & Social Science*, 2(2), January, 34-44.
53. Witowski, L. (2008). The relationship between instructional delivery methods. and students learning preferences: What contributes to students' satisfaction in an online learning environment?

- Ph.D. Dissertation. Retrieved on December 11, 2010 from <http://gradworks.umi.com/3310726>.
54. Wilkins, S. & Stephens, M. (2013). Assessing student satisfaction in transnational higher education. *International Journal of Educational Management*, 27: (2), 143-156.
55. Yusoff, M., McLeay, F. & Woodruffe-Burton, H. (2015). Dimensions driving business student satisfaction in higher education. *Quality Assurance in Education*, 23: (1), 86-104
56. Ziaee, V., Ahmadinejad, Z. & Morravedji, A. (2004). An Evaluation on Medical Students' Satisfaction with Clinical Education and its Effective Factors. *Medical Education Online*, 9: (1), 4365.
57. Zeitun, R., Abdulqader, K. & Alshare, K. (2013). Team Satisfaction and Student Group Performance: A Cross-Cultural Study. *Journal of Education for Business*, 88: (5), 286-293. 41: (2), 191-192.
58. Zineldin, M., Akdag, H. & Vasicheva, V. (2011). Assessing quality in higher education: new criteria for evaluating Postgraduate students' satisfaction. *Quality in Higher Education*, 17: (2), 231-243.