RELATIONSHIP BETWEEN BIG FIVE PERSONALITY TRAITS ACADEMIC PERFORMANCE AND ACADEMIC STRESS AMONG POSTGRADUATE STUDENTS IN PAKISTAN

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A thesis submitted in fulfilment of the
requirements for the award of the degree of
Doctor of Philosophy (Management)

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DECEMBER 2019

DEDICATION

To my parents who have supported me all the way since the beginning of my studies. Also, this thesis is dedicated to my wife, my son, my daughter, and my brothers

ACKNOWLEDGEMENT

Alhamdu'Lillah, first of all, praise to Almighty Allah for his blessings and kindness that enabled me to complete this study. During my PhD journey, I was in contact with many people, researchers, academicians, and practitioners. They have contributed much towards my understanding and skills throughout my research. In particular, I would like to express my gratitude to my supervisor, Prof. Dr. Amran Bin Md Rasli for his guidance, support and encouragement throughout my PhD journey. He has been by my side during every step of my PhD studies and assigned priority to my success in the doctoral program. His intellectual capabilities and inspiring experiences uplifted my efforts as a researcher, from the stage of infancy to maturity.

I am also eternally grateful to my family and relatives for their generous prayers and support throughout my PhD journey. Their prayers and excellent advice enabled me to complete this dissertation over the period.

Above all, I will be to my wife and our children for their love and inspiration; it is their support that made it possible for every other resource to work for its intended purpose.

ABSTRACT

Over the years, increased academic stress has been experienced among postgraduate students of Higher Education Institutions (HEIs). It is evident that this academic stress often results in lower academic performance. Despite other factors like academic environment, workload and peer expectations student's personality traits also play an important role in the level of perceived stress among postgraduate students of HEIs. It has been observed that the level of academic stress among postgraduate students varies according to their personality traits. However, there are limited empirical evidences available to confirm this claim. Therefore, the study aimed to firstly investigate the relationship of personality traits with academic stress of postgraduate students in Pakistan HEIs, and the relationship of personality traits with academic performance among them. The current study also investigated the mediating role of academic stress on this relationship among the postgraduate students of HEIs. Quantitative research design was used in the study with data collected from a proportionate random sampling of 384 postgraduate students enrolled in Pakistan's HEIs. Furthermore, the data was analyzed descriptively using SPSS before applying Structural Equation Modeling (SEM) using SMARTPLS 3.0. The results of the study indicate that the personality trait neuroticism is positively and significantly associated with academic stress while personality trait openness is significant but negatively associated with academic stress. At the same time, personality traits extraversion and openness are positively related with academic performance while personality trait neuroticism is negatively associated with academic performance. Similarly, academic stress mediates the relationship of personality traits conscientiousness, neuroticism, agreeableness and extraversion with academic performance. Based on the findings of the study, it is recommended that the HEIs focus on postgraduate students personality development along with academic development in order to improve their performance and skills by using students profiling to help them do better in their academics. However, the study was limited to HEIs students. In order to enrich the result, wider and larger population is recommended.

ABSTRAK

Selama bertahun-tahun, peningkatan tekanan akademik telah dialami oleh penuntut lepasan ijazah di Institusi Pengajian Tinggi (IPT). Adalah jelas bahawa tekanan akademik ini sering mengakibatkan prestasi akademik yang lebih rendah. Di samping faktor lain seperti persekitaran akademik, beban kerja dan jangkaan rakan sebaya, sifat keperibadian pelajar juga memainkan peranan penting dalam tanggapan tahap tekanan akademik di kalangan penuntut lepasan ijazah di IPT. Pemerhatian mendapati bahawa tahap tekanan akademik di kalangan penuntut lepasan ijazah berbeza mengikut sifat keperibadian mereka. Walau bagaimanapun, terdapat bukti-bukti empirikal yang terhad untuk mengesahkan tuntutan ini. Oleh itu, kajian ini bertujuan untuk pertama, menyiasat hubungan antara sifat personaliti dengan tekanan akademik pelajar lepasan ijazah di IPT Pakistan, dan hubungan personaliti dengan pencapaian akademik di kalangan mereka. Kajian ini juga menyelidik peranan pengantara tekanan akademik ke atas hubungan ini di kalangan pelajar pasca siswazah di IPT. Penyelidikan kuantitatif telah digunakan dalam kajian ini dengan data yang dikumpul daripada persampelan rawak berkadar 384 pelajar siswazah berdaftar di IPT Pakistan. Selanjutnya, data telah dianalisis secara deskriptif menggunakan SPSS sebelum Structural Equation Modeling (SEM) diaplikasikan menggunakan SMARTPLS 3.0. Hasil kajian menunjukkan bahawa sifat personaliti neurotisme berkait secara positif dan signifikan dengan tekanan akademik manakala sifat personaliti keterbukaan berkait secara negatif tetapi signifikan dengan tekanan akademik. Pada masa yang sama, sifat personaliti ekstraversi dan keterbukaan berkait secara positif dengan prestasi akademik manakala sifat personaliti neurotisme berkait secara negatif dengan prestasi akademik. Begitu juga, tekanan akademik memainkan peranan pengantara dalam hubungan sifat personaliti kehematan, neurotisme, kebersetujuan dan ekstraversi ke arah pencapaian akademik. Berdasarkan penemuan kajian adalah dicadangkan bahawa IPT memberi tumpuan kepada pembangunan personaliti penuntut lepasan ijazah bersama dengan pembangunan akademik untuk meningkatkan prestasi dan kemahiran mereka agar keputusan akademik mereka lebih baik. Walaubagaimanapun, kajian ini terhad kepada pelajar IPT. Dalam usaha untuk memperkayakan hasilnya, populasi yang lebih luas dan besar turut dicadangkan.

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LIST OF ABBREVIATIONS

AGFI	-	Adjusted Goodness of Fit Index
AJK	-	Azad Jammu and Kashmir
AMOS	-	Analysis of Moment Structures
APA	-	American Psychological Association
AVE	-	Average Variance Extracted
CFA	-	Confirmatory Factor Analysis
CFI	-	Comparative Fit Index
CMIN	-	Minimum Chi-square
DAI	-	Degree Awarding Institutes
DF	-	Degrees of Freedom
GDP	-	Gross Domestic Product
GFI	-	Goodness-of-Fit Index
HEC	-	Higher Education Commission
HEI	-	Higher Education Institutes
IV	-	Independent Variables
KPK	-	Khyber Pakhtun Khwa
MCII	-	Mental Contrasting Implementation Intentions
NFI	-	Normed Fit Index
NLTS2	-	National Longitudinal Transition Study 2
RMR	-	Root Mean Square Residual
RMSEA	-	Root Mean Square Error of Approximation
SEM	-	Structural Equation Modelling
TLI	-	Tucker Lewis Index
VIF	-	Variance Inflation Factor

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CHAPTER 1

INTRODUCTION

1.1   Research Background

The area of learning and education can be enhanced from increased knowledge about the factors that contribute to academic achievement (O'Connor and Paunonen, 2007). An individual spends a lot of time as a student, and students play a major role in developing a country's economy, thus it is valuable to understand the academic performance of the students to help them grow stronger and perform better academically. In a broader sense, it is suggested that academic performance plays a necessary role in keeping cultural and scientific innovation up to date (Hirsh and Inzlicht, 2010). However, over the years, students of higher education institutions have experienced lower academic performance due to academic workload, inadequate resources, financial problems, and overcrowded lecture rooms (Joseph, 2009). This has attracted the attention of researchers to explore the factors that result in lower academic performance among the postgraduate students of higher education (Das and Sahoo, 2012; Azila-Gbettor *et al*., 2015).

The study conducted by Azila-Gbettor *et al*. (2015) was mainly focused on the factors that reduce the academic performance and increase academic stress of the students at the university. These stress factors include fear of failing, getting good grades, managing different responsibilities at the same time, and not having enough social support. Moreover the findings of this study reveal that students doing fewer credit hours (workload) are more stressed than those doing higher credit hours. This is contrary to the works of Ahmed and Ramazan (2013), Talib and Zai-ur-Rehman (2012), and Gelch and Burns in 1994. The results of these significant the views held by Euan and Helen (2009) that the relationship between stress and workload is more

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complex. Postgraduate students are facing dynamic challenges of lower academic performance which include studying different courses, research assignments, research projects, and other academic-related activities. The postgraduate students feel more pressure to achieve high academic performance in order to start a successful career afterwards. The struggle for achieving a higher level of academic performance can produce academic stress and lead postgraduate students to low academic performance (Shete and Garkal, 2015).

High academic performance at the university level is expressed in a number of ways; including acceptable grades (academic performance), attainment of a degree and/or retention of career and life skills necessary for employability and professional development (Nandamuri and Gowthami, 2011). Postgraduate students' performance at the university demonstrates their ability to acquire the information and skills necessary to increase their likelihood of meeting long-term personal and career goals (Bain, Fedynich and Knight, 2011; Kim *et al*., 2010). Postgraduate students exert maximum effort to overcome these challenges, but the main problem arises when postgraduate students fail to respond to these dynamic challenges of the academic environment. Postgraduate students feel that they don't have control over the consequences and external circumstances. These consequences and external circumstances include the pressure of assignments, quizzes, and examinations that further causes academic stress and affect student's academic performance. If a postgraduate student is not able to reach his goals, it will further produce a negative effect on academic performance. So, it is important to understand the way postgraduate students' deals with their workload in order to avoid higher levels of stress. Mainly, the postgraduate students address the situation according to their personality. The personality of a postgraduate student plays a vital role in achieving excellence in their academic career (Pfeiffer, 2001; Nora, 2004).

Negative personality traits (e.g neuroticism) of postgraduate students lead them to experience a high level of pressure and academic stress resulting in lowered academic performance. Usually, students' reaction to their academic environment is in accordance with the personality traits they possess, and these personality traits are part of their academic life, which cannot be changed easily. The association between

personality and academic performance results from study environments. When achievement criteria and personality characteristics overlap, the personality and academic performance may be directly related (Poropat, 2009). If the personality of a student cannot respond accordingly, it will create a lot of pressure and can further produce academic stress leading to a lower academic performance (Kaplan *et al*., 2005).

Previous studies suggest that the increasing amount of stress poses a serious problem for many postgraduate students at the university level (Rana and Mahmood, 2010). Studies show that postgraduate students most often require counseling as compared to students of the same age with jobs (Stallman, 2010). This suggests that postgraduate students can face more difficulty in handling with academic stress as compared to others in different employment settings. Stress brings changes in the personalities of postgraduate students and can alter their behavior (Wadee *et al*., 2001). Furthermore, if academic stress in the students is not handled properly, it can lead to low academic performance (Chapell, 2005). Akgun and Ciarrochi (2003) commented that academic stress has an adverse effect on the performance of university students in preparing their assignments effectively. As such, the purpose of this study is to identify the personality traits that act as important factors contributing to the academic stress of postgraduate students; and how these factors influence their academic performance in HEIs of Pakistan.

1.2 Development of Higher Education and Postgraduate Students in Pakistan

Higher education is offered to the students with a perspective of preparing them to create a better future through their expertise. In terms of the knowledge economy, it is said that a nation can be transformed into a developed nation if higher education is given its due importance. It brings improvement and betterment not only in an individual's development, but its effects can be seen in the overall advancement and upgrading of employment and earnings, health, longevity, successful parenting,

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civic participation, and general awareness in all spheres of life (Dearden, Reed and Reenen, 2000).

In Pakistan, higher education refers to education above grade 12, which corresponds to the age bracket of 17 to 23 years. The higher education system in Pakistan is made up of two main sectors: the higher education institutions (HEIs) sector and the affiliated Colleges sector. The Higher Education Commission (HEC - a re-embodiment of the former University Grants Commission), is an autonomous apex body responsible for allocating public funds from the federal government to HEIs and accrediting their degree programs. Colleges are funded and regulated by provincial governments, but follow the curriculum of the HEC funded HEIs with which they are affiliated. The higher education system of Pakistan is more public in nature. The number of public universities is more than the private universities. Table 1.1 shows the year-wise increase in the HEIs throughout Pakistan starting from 1947 until 2017 (HEC-2018).

Table 1.1   Development of Universities across Pakistan

Year	Universities		Total
	Public	Private	
1947	1	0	1
1960	5	0	5
1970	8	0	8
1980	19	0	19
1990	20	2	22
2000	32	14	46
2007	50	37	87
2013	73	60	133
2014	92	69	161
2015	99	76	175
2017	106	86	192

Source: Higher Education Commission Pakistan, (2017)

In 1947, Pakistan had only one Public Sector University. In 2017, Pakistan has 192 universities, including 106 public sector and 86 private sector universities. Table 1.2 illustrates the HEIs in Pakistan in 2017 with a detailed breakdown of public and private sectors according to the different provinces of Pakistan.

Table 1.2   HEC Chartered Universities List

Region	Universities	Public	Private
Federal	37	27	10
Punjab	53	26	27
Sindh	52	20	32
Khyber Pakhtunkhwa	33	21	12
Gilgit -Baltistan + Baluchistan + AJK	17	12	5
Total	192	106	86

Source: Higher Education Commission Pakistan, (2017)

Table 1.2 indicates the number of HEIs in Pakistan in the year 2017. This shows a major change in the overall number of universities in Pakistan. Table 1.2 shows that at present there are 192 universities in Pakistan as compared to 161 universities in 2014 and 175 universities in the year 2015 (Pakistan Economic Survey, 2016-2017).

Worldwide recent trends in the universities are to focus on the research activities and increase awareness in students to adopt this change in the future. Higher education in Pakistan is also taking positive steps to adopt the changes that are now emerging at a very fast pace. The trends of enrolment in higher education in Pakistan are strengthening day by day and according to HEC Pakistan, for the year 2017 the enrolments figures of higher education have increased and there is a trend of increase in the enrolment figures of postgraduate students in coming years. In Pakistan like any other country, the postgraduate studies are referred to as the education that starts after 16 years of education and all postgraduate studies in Pakistan have comprehensive two years of study time along with research related activities. In Pakistan, postgraduate study is a blend of both compulsory taught

courses and research. Now, there are 120,230 postgraduate enrolled students, who constitute 10 percent of the overall enrolment in higher education in Pakistan (HEC-2017). Table 1.3 shows the enrolment of higher education in Pakistan.

Table 1.3   Province wise Distributions of Enrolments

Region	Enrolled Students
Federal	178933
AJK	17083
Balochistan	31726
Gilgit Baltistan	7101
NWFP (Now KPK)	149428
Punjab	574699
Sindh	263440
Total	1220230

Source: Higher Education Commission Pakistan, 2017

Table 1.3 presents the provincial annual data of enrolment up to the year 2017. According to Table 1.3, the highest enrolled postgraduate students both in public and private sector HEIs is in the Punjab region. Second highest is in Sindh region, and it is noteworthy that for the past few years, the private sector universities in Sindh region are increasing as compared to the public sector (HEC, 2017). The enrolment of students is increasing in Khyber Pakhtunkhwa (KPK) regions as well. Furthermore, the Government of Khyber Pakhtunkhwa in the past few years has taken very impressive steps to establish universities in regions like Abbottabad, Swabi, Mardan, and Malakand. The result of this step is that the enrolment of postgraduate students has increased.

Post Graduate students consider themselves to have low performance than others and because of which they have high level of academic stress (Andrews & Wilding, 2014). In some cases, it has been found that university students have dropped out from their studies due to improper handling of both the academic curriculum and research related assignments and academic writing, especially at

postgraduate levels. Furthermore, in the context of Pakistan, some universities investigated the reasons for students dropping out in the middle of their studies, and found that more than 50 percent of the students leave their postgraduate studies in the middle because of the workload, demanding research-related activities and poor coordination among course instructors and supervisors (Daily Times, 2014). Rana and Mahmood (2010) further examined the relationship between anxiety and academic achievement, and found that test anxiety ultimately becomes one of the hurdles in academic performance. All these problems cause stress among postgraduate students and adversely affect their academic performance.

1.3   Problem Statement

Postgraduate students face adjustment difficulties to the new academic environment because of which they experience lower academic performance (Schevvens, Wild & Overton 2003)

Academic performance of postgraduate students has attracted considerable attention from researchers (Wu and Wu, 2008; Kausar, 2010; Abbasi *et al*., 2011) as studies at postgraduate level are more challenging as compared to the undergraduate studies because the postgraduate students are involved in the taught courses and research activities in order to complete their degree (Smits, Verbeek and De Buisonje, 2002).

The concept of research has gained tremendous attention in today's academic environment and setting. Pakistan is also heading towards that trend and specifically, postgraduate students are more connected to research activities as per the requirement of their academic settings (Rana and Mahmood, 2010). Postgraduate students are required to be guided in the field of research because research includes more hard work, concentration, and devotion. Moreover, it is a very prominent and important aspect of current academic settings. Furthermore, Ahmed *et al*. (2009),

Kausar (2010), Hudd *et al.* (2000) and Crockett *et al.* (2007) have also identified other factors, i.e. workload and social support that can affect the academic performance of postgraduate students. In similar respect, Pakistani postgraduate students are facing numerous issues during their studies. Statistics indicate that most postgraduate students in Pakistan are unable to complete their studies within normal duration (Lashari, Bhutto and Abro, 2013). Lack of systematic approach, unclear policies, and inexperienced supervisors cause a delay in the accomplishment of the postgraduate degree in Pakistan. For this reason, the postgraduate students either choose to quit their studies or prefer to go abroad for the completion of their higher studies (Daily Baluchistan Express, 2017). Therefore, a considerable number of Pakistani students is studying abroad. For example, in the USA there are approximately 5,364 students in the years 2014-2015 (Express Tribune, Pakistan, 2016), China has approximately 19,000 Pakistani students in higher education ("Pakistani Students Abroad," n.d.), Malaysia has approximately 6,000 Pakistani students in higher education (Express Tribune, Pakistan, 2015), and the United Kingdom is accommodating approximately 10,000 students in 2016 (Pakistani Students abroad)

However, poor academic performance among Pakistani students is not limited to these factors only. There are many other factors that can influence the academic performance of university students. Along with the environmental factors, the researchers have also exposed personality related factors that affect academic performance (O'Connor and Paunonen, 2007; Komarraju Karau and Schmeck, 2009). Personality traits are a significant variable that can influence the productivity of the students and the level of academic performance at the university level.

Personality traits have a significant role in student's life to handle academic related issues which may lead to a decline in academic performance. A unique pattern of feeling, thinking and behaving shapes the personality of an individual (Schmitt *et al.*, 2007). Personality traits are part of every human being, so they can influence the performance of university students as well. Students at university level respond to the academic environment subject to the personality traits that they possess. Some students have the personality to handle tasks very confidently and

tactfully, but there are some students who cannot handle tasks confidently, feel nervous, and hesitate to interact with their classmates and especially with their course instructors and supervisors (Crockett *et al.*, 2007).

Several other studies have investigated the impact of personality traits on academic stress (Chai and Low, 2015; Allred, Granger and Hogstorm 2013; Besser and Shackelford, 2007). However, limited literature is focused on the relationship of the Big Five personality traits and academic stress among the students of higher education. Furthermore, some studies have investigated organization settings and employee job performance (Bashir *et al.*, 2013; Shahzad, Sarmad, Abbas and Khan, 2011; Abdullah, Rashid and Omar, 2013). In explaining the academic performance of postgraduate students' previous studies reveal limited research for relationship between the Big Five personality traits with academic stress. Numerous previous studies have examined stress and its relationship with the postgraduate students (Keady, 1999; Nzewi, Chiekezie and Ikon, 2016; Nelson *et al.*, 2001; MAH, 2011; Das and Sahoo, 2012; Byars, 2005; Bukhsh *et al.*, 2011; Nandamuri and Gowthami, 2011; Cretsinger, 2003; Sharma *et al.*, 2013). The review of the literature reveals that few studies have been conducted on the relationship between stress and academic performance of postgraduate students, whereas limited research studies could be found between the relationship of Big five with academic stress and performance of postgraduate students especially in the context of Pakistan. Therefore, the current study bridges this gap to investigate the relationship between the big five personality traits, academic stress and academic performance among the postgraduate students of the higher education in Pakistan.

Most literature exposes the inverse relationship between education stress and education performance (Saklofske *et al.*, 2012; Shokri *et al.*, 2007; Tyssen *et al.*, 2007; Hakimi, Hejazi and Lavasani, 2011). These studies failed to explain the existing interrelationship of student's performance, Academic performance and academic stress. Secondly, the aforementioned studies considered academic performance based on students' performance in the exams. Recent literature acknowledged the academic performance as not only a function of results (York *et al.*, 2015). There are many other factors needed to be considered to evaluate

students' academic performance (York *et al*., 2015). Thirdly, the academic stress is more attributed to the postgraduate students as compared to the college students (World Economic Forum 2018). To address these gaps, the current study considers the interrelationships between personality, academic stress and academic performance which measured through multi-item scale to evaluate the subjective performance of the postgraduate students

Researchers have acknowledged the impact of personality trait on the level of academic stress a student feels during his studies (Chai and Low, 2015; Allred *et al*., 2013; Besser and Shackelford, 2007). Furthermore, researchers also agree on the relationship between academic stress and student's academic performance (Yusoff *et al*., 2013; Malik and Balda, 2006; Struthers, Perry and Mence, 2000). Existing literature has limitations. Most of the studies were conducted on Medical students (Saklofske *et al*. 2012; Tyssen *et al*. 2007; Shokri *et al*. 2007; Chai and Low, 2015; Kausar, 2010) and studies find academic stress as independent or dependent variable. However, few studies were focused on issue of academic stress and its mediating role was less exposed. (Kim *et al*., 2016; Chu *et al*, 2015; Chu *et al*, 2015a). None of the studies found academic stress as mediator for postgraduate students.

Research work needs hard work, commitment, time and efforts to complete. If the postgraduate students feel that they cannot cope with these requirements, they feel stressed. Academic stress can further influence the academic performance of university students. A student's life in Pakistan is subjected to different kinds of stresses, such as the pressure of academics with an obligation of success, uncertain future and difficulties envisaged for integration into the system. The postgraduate students in HEIs of Pakistan perceive a high level of academic stress that has affected their academic performance (Kausar, 2010). However, some researchers investigated the role of academic stress (Kausar, 2010; Mushtaq and Khan, 2012) among the students of HEIs in Pakistan. Chambel and Curral (2005) suggested that work-related attitudes like academic stress can be used as the mediator. Kim *et al.,* 2016 also used stress as a mediator and the study suggested that stress may be a factor that can effect personality traits and produce changes in the individual. Apart from these studies, the research on the mediating role of the academic stress is

limited. Especially, in the context of students' personality traits and academic performance, the literature is inadequate to build the theory on the mediating role of academic stress among postgraduate students of HEIs in Pakistan. Thus, to fill this gap the current study also investigated the mediating role of academic stress among the personality traits and academic performance. The inconsistent findings of the direct relationship of the big 5 personality traits to performance call for the inclusion of the mediator.

1.4 Research Questions

The study aims to address the following research questions:

i. Do postgraduate students' personality traits have any relationship with the academic stress?

ii. Do postgraduate students' personality traits have any relationship with his/her academic performance?

iii. Does academic stress influence the academic performance of a postgraduate student?

iv. Does academic stress mediate the relationship among postgraduate students' personality traits and his/her academic performance?

1.5 Research Objectives

In general, the objectives are more specific and make the research process and study easier to measure. Objectives are the basic tools that underline all planning, strategic activities, layout and the desired direction for the study that has been conducted. They serve as the basis for creating policy and evaluating performance. The research objectives are as follows:

i. To investigate the relationship of postgraduate student's personality traits with the academic stress.

ii. To investigate the relationship of postgraduate students' personality traits with their academic performance.

iii. To investigate the relationship between the academic stress and academic performance of the postgraduate students.

iv. To investigate the mediating role of academic stress among postgraduate students' personality traits and their academic performances.

1.6   Significance of the Study

A review of the literature has revealed that researchers in the area of organizational behavior have focused on studying the causes and consequences of academic stress among the postgraduate students of HEIs (Pistorello *et al*., 2012). A higher level of academic stress is related to many negative consequences among postgraduate students of HEIs (Khan *et al*., 2013; Kausar, 2010). Past studies have mostly focused on the factors that produce a higher level of academic stress among postgraduate students (Shaheen and Shaheen 2013; Kausar, 2010). A substantial quantity of literature has investigated the problem related to personality, academic stress and performance, but these studies have some restraint that is necessary to be considered. For example, some studies (Ahadi and Narimani, 2010; Shokeri *et al*., 2007; Hakimi *et al*., 2011; Tyssen *et al*., 2007; Saklofske *et al*., 2012) focused on the relationship between personality traits, stress and performance among students in different countries like Iran, Norway, and United Kingdom, but these studies focused on College students and undergrad students. Furthermore, these studies used GPA as a measuring tool, as for the postgraduate level where research is involved, measurement by GPA is not enough to examine the academic performance of the students; there are more perspectives and measure that can calculate the performance of the research students like York *et al*. (2015) identified different measures for academic performance. To address these gaps, the current study considered more dimensions for measuring the performance of postgraduate research students, i.e.

skills acquisition and persistence. So, the academic performance is also measured through multi-item scale to evaluate the subjective performance of the postgraduate students. Furthermore, existing literature on the relationship between personality traits and academic stress is also limited. Thus, the current study contributes to extend the existing literature in this area. Another significance of the current study is the mediating role of academic stress on the relationship between personality traits and academic performance. Furthermore, the current study also develops a framework that explains the interplay among the three variables, i.e. personality traits, academic performance, and academic stress.

The current study measured academic performance through skills acquisitions and persistance rather than just focusing on GPA. That is the knowledge contribution as it provide the basis for future research as it measure the subjective behavior towards academic performance by focusing on personality traits, such as Big 5 model's different dimensions. Past literature focused on the relationship of personality trait and acadamic performance. Some studies focused on acadamic stress and acadamic performance. However, the studies on mediating effect of acadamic stress between personality and acadamic performance is limited. The current study is focusing the mediating effect of acadamic stress, this mediation affect is the another knowledge contribution in the context of postgraduate students as there is very limited studies on the mediation role of academic stress in the existing literature.

For the practical perspective, results of the current study are useful for the HEIs management to lower the level of academic stress among their postgraduate students. Also, it is important to understand the link between personality traits, academic stress, and academic performance and the mediating role of academic stress between the relationship of personality traits and academic performance.

1.7   Scope

The scope of current study comprises the academic stress from academic activities and academic performance. Student's personality is important in order to deal with academic stress. The current study focused on the postgraduate student's personality traits using "big five model" of personality traits. The current study also investigated the mediating role of academic stress in the relationship between personality traits and academic performance. The scope of the study comprises of the Big Five personality traits, academic stress, and academic performance.

The study targeted the postgraduate students (Masters and Ph.D.) enrolled in higher education institutions of Pakistan both in course work and research work, this is because the postgraduate studies in Pakistan is the blend of both the research work and course work. Therefore, HEIs were considered the main source of data collection. At the end of 2015, there were 99 public HEIs and 76 private HEIs in Pakistan. This makes a grand total of 175 HEIs. Furthermore, the total higher education enrollment is 914264 in 2014-2015. According to the Higher Education Commission (HEC), approximately 10% of the total students are postgraduate students and this makes the sum of 91374 postgraduate students enrolled in the year 2014-2015. Thus, the scope of the current study consists of the postgraduate students from the HEIs all over Pakistan.

1.8   Limitations

The current study was focused on postgraduate students enrolled in higher education institutions in Pakistan. Thus, the sample was derived from the database of the postgraduate students of HEIs of Pakistan. Time and financial constraints limit the scope of the study to these respondents only, so this affects the sample size, as the period undertaken for research is not enough and sometimes it become costly to visit the different locations. A limited sample size has been taken from the

population to test the effects. The results may vary from the studies with larger samples. Furthermore, the study employed the questionnaire as a tool for data collection. This may cause a bias in the findings of the study. Factors like the inaccuracy of postgraduate students assessing their own awareness, varying level of commitment and the personalities of their supervisor/faculty members might affect the results of the study.

According to the culture of Pakistani HEIs, the target audience might not want to participate in the research due to psychological and cultural factors. Some of the areas were hard to reach especially low participations from female participants were notices in these regions. A bias in society towards the female gender might have affected the ratio of male to female respondents. This could have resulted in a variety of results and response rate. As Pakistan is a combination of different areas and in some areas, people usually perform according to their culture and that can affect their personality and they hesitate to involve into such questionnaires or survey.

1.9   Operational Definitions

1.9.1   Academic Stress

Stress can be defined as negative emotional, cognitive, behavioral and psychological process that occurs when a person tries to deal with the stressors (Bernstein *et al*., 2005). Academic stress can be defined as the perception of discrepancy between the demand from the environment and the capacity of an individual to meet the demands (Vermunt and Steensman, 2005; Topper, 2007; Nathawat and Dadarwal, 2014).

In this study, academic stress is operationally defined as a mental distress with respect to some anticipated frustration associated with academic failure or

perceieved possibility of such a failure. The academic stress in this research refers to the feeling of nervousness, anxiety or mental distress due to factors related to postgraduate students course or research work.

1.9.2 Academic Performance

Academic performance refers to how students deal with their studies and how they cope with or accomplish different tasks given to them by their instructors (Ahern and Norris, 2011). Another researcher has defined the concept of academic performance as the ability of the student to extraordinarily embrace and apply what has been taught in the classroom (Junco, 2015).

This study considers the concept of academic performance as the skill of the student to perform well and utilize these skills in the appropriate manner. The current study operationalized the concept of academic performance as postgraduate student's academic achievement consistency and skills acquisitions during their study period. The current study measured the academic performance on the basis of skills acquisitions and persistance.

1.9.3 Five Personality Traits

According to personality psychologists, the big five traits refer to five broad personality traits that give a complete portrayal of an individual's personality (John and Srivastava, 1999; Chamorro-Premuzic and Furnham, 2003). The big five personality scale is a multidimensional scale based on the five dimensions of the personality (Vedel, (2015). These dimensions are neuroticism, extraversion, agreeableness, openness to experience and conscientiousness. This study perceived big five as the scale of personality that reveals the actual trait of the person based

upon the category. These dimensions are neuroticism, extraversion, agreeableness, openness to experience and conscientiousness.

1.9.4 Neuroticism

Awadh and Ismail, (2012) explained neuroticism as variances of an individual's tendency to experience suffering, and defined as emotionally insecure and uneven. According to Robinson *et al*. (2015), neuroticism is the trait of human that is categorized by the moodiness, gloominess, or the instability in emotions. In the course of this study, the concept of neuroticism is constructed as the trait of a person who suffers experiences of mood swings, nervousness, bad temper, and depression.

1.9.5 Extraversion

Extraversion includes characteristics such as expressivity, sociability, confidence, communication, energy, enthusiasm (Barrick and Mount, 1991), having a strong desire for social acknowledgment, admiration, promptness', talkativeness, activity, positivity, and eagerness. Extraverts are emotionally stable and have a satisfied and delightful personality (Costa and McCrae, 1997). In this research, the definition of extraversion trait is built as the excited, social, talkative, assertive person who holds a high level of emotional expressiveness.

1.9.6 Agreeableness

Agreeable personality consists of characteristics such as courtesy, flexibility, simplicity (Barrick and Mount, 1991), cooperativity, helpfulness, compassion, care, sympathy, and non-prejudiced disposition (McCrae and Costa, 1997). The concept of agreeableness in this study is that of a personality dimension which consists of trust, altruism, and mostly all pro-social traits.

1.9.7 Openness to Experience

Openness to experience is related to the characteristics such as creativity and innovation (Barrick and Mount, 1991), kindness, gentleness, perceptiveness, understanding, optimism, positive attitude and the capability of being better adjusted in other dimensions of the Big Five personality traits (Costa and McCrae, 1997). Under the light of the concept of openness, this study perceives the openness as creative, and eagerness to learn things attitude.

1.9.8 Conscientiousness

Conscientiousness constitutes characteristics such as hard-work, focus, alertness (Barrick and Mount, 1991), cautiousness, inclusiveness, responsibility (Moon, 2001), organization and firmness, rationale, logic, dependability, and consistency and risk aversiveness (Goldberg, 1990). In this study, conscientiousness is taken as the trait of the person which includes thoughtfulness, organized conducts, planning, and traits that are directed towards certain goals.

1.10 Organization of the Thesis

Chapter one starts with the introduction of the thesis along with the complete introduction of the target area. Furthermore, the explanation or the development of the research questions is followed by research objectives and significance of the current study by discussing the current situations, describing the research gap. The scope of the study is highlighted with a brief discussion about the targeted sample. In the end, the delimitations are also pointed out.

Chapter two provides a literature review of the different research streams that are pertinent to the formulations of the research model. The bulk of this chapter consists of an extensive review of personality traits, academic stress, academic performance among postgraduate students' literature. Specifically, the literature focuses on the below mention issues and discusses them.

Personality behavior in the context of university postgraduate students' causes academic stress among postgraduate students and impacts academic performance. Furthermore, chapter two provides the theoretical arguments for the conceptualization of the research model. It contains the research model, which illustrates the relationship between the personality and academic stress and its relation to performance, achievement, burnout and the health of the students. Lastly, a rationale for each hypothesis in this research model is provided.

Chapter three includes the research design, with details of the qualitative and quantitative procedures and methods used to test the research model. More specifically, it contains information on the unit of analysis, key informant, target sample frame, sample size, and the method for survey administration. In addition, this chapter also contains the description of measures for constructs used in the research model.

Chapter four aims to examine the research hypotheses. The collected data was processed with statistical package for the Social Sciences (SPSS) and SMARTPLS 3.0 for Windows. At the first stage, the initial data screening was done through analyzing missing data. After the initial data screening common method bias and non-response bias was tested. The third stage was to use PLS for the measurement model and structural model validation. During the measurement model, the convergent and discriminant validity was tested. The structural model was used to test the hypothesized relationships of the current study.

Chapter five provides the discussion on the findings of the study. The chapter starts with the highlights of the research process adopted for the current study. Next section focuses on the discussion of each objective of the study and provides thorough discussion on the findings of the study. Furthermore, theoretical, managerial and empirical implications of the study are provided in the next section, followed by the limitations and future recommendations. The last section of the current study concludes the results and provides the revised framework of the study.

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