



# SARHAD JOURNAL OF MANAGEMENT SCIENCES (SJMS)

Dec. 2016, Vol. II, Issue II  
ISSN: 2414-2336



**Sarhad University**  
of Science & Information Technology

Volume II Issue I

ISSN—2414-2336

**SARHAD JOURNAL  
OF  
MANAGEMENT SCIENCES  
(SJMS)**



**Sarhad  
University**  
of Science & Information Technology  
Peshawar - Pakistan

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# **SARHAD JOURNAL OF MANAGEMENT SCIENCES**

## **VOL. 2 ISSUE 2, DECEMBER 2016**

Sarhad Journal of Management Sciences (SJMS) is the 2<sup>nd</sup> academic and research journal of Sarhad University of Science and Information Technology, Peshawar, Pakistan. The journal has an established peer-review process for quality evaluation. The journal is published biannually. It welcomes academic and research contributions from scholars, researchers, and academicians across the world in the discipline of Management Sciences.

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- ▶ To contribute in the promotion of research culture in the country;
- ▶ To explore new vistas in the field of Business and Management;
- ▶ To facilitate scholars and researchers in their research endeavours to contribute quality research and to publish their ideas, results and findings; and
- ▶ To promote quality research culture compatible with international standards.

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## AN ANALYSIS OF JOB RELATED FACTORS AND PERSONALITY TRAITS ON TEACHERS' ILL-HEALTH, PERFORMANCE AND JOB SATISFACTION

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**Abstract.** *Teacher's ill-health & job strains particularly in higher education sector is usually more deceptive as compared to other professions because of its vague nature of roles and is dissimilar to other professions and has substantial connections with numbers of scholars in class, their numerical assessments, workload issues, miserable organizational practices, job insecurity and inadequate recognition. Moreover, the antecedents and consequences of job related strains varies from person to person because of our different personality types and as we are all unique in our perceptions and behaviors. This exploratory research aimed to investigate & explore the factors at the work environment which have a significant impact on faculty well-being, and the possibilities of improvement of the work environment for academic world with particular reference to a public sector university. The results revealed inverse relationship between job strains and performance. The significant job related factors causing stress for male and female faculty members were different. Furthermore female faculty members and faculty members with Type A personality reported higher levels of ill-health. Type A personality also reported higher performance when compared with Type B & Type AB.*

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**Key words:** Teacher, personality, job satisfaction, ill-health

### Introduction

Research on physical & psychological ill-health among academe indicates that it is a common phenomenon among teachers therefore the academic work environment needs to be examined and more specifically organizational specific characteristics, like leadership, HR practices, workload and time pressures, uncertainty, lack of feedback, social support etc. (Kinman & Jones 2004; Winefield et al. 2003; Tytherleigh et al., 2005). Job strains refer to a feeling of psychological and/or physical pressures because of being incapable to manage the environmental demands, challenging events and stressful encounters over period of time (Kahn et al., 1964; Lazarus, 1991). In such situations, people are confronted with opportunities or demands related to what they desire but the outcomes are perceived to be both indeterminate and significant (Decenzo & Robbins, 2004) and it can be labeled as both positively and negatively (Selye, 1956). Some reasons which have been identified by different researchers include role conflict, role overload, role ambiguity, and fear of unknown and perceptions of maltreatment by the organization (Srivastav, 2007). For example, an instructor who attempts to conduct an outstanding lecture every day is likely to be



prone to exhaustion when his employer does not realize that other aspects of his job (e.g. publication) which might be more important for him as compared to teaching. Moreover, students' performance is usually on top priority of good academicians (Shah, Rahman & Abbas, 2015), so dedicated teachers also try their level best to put maximum efforts even for the performance of the low graders (students). Teachers who try to overcome such issues with less organizational support may end up in low motivation, may cause strain on his/her emotions and physical conditions (Abbas, Shahab & Badar, 2016) which in turn leads to absenteeism & high turnover. The observations mentioned above differ from person to person because each one of us brings unique characteristics to our job and these individual differences determine how the individual will react to a particular situation. Some may recognize these issues as a challenge but the others may take it as a risk. For example Type B personality usually show less concern to stress as compared with Type A. Normally the Type A's tend to be over-competitive, outgoing, and also sense impatience most of the time with the speed at which the events take place and dissatisfied with life (Decenzo & Robbins, 2004). Type B's have less desire to compete; they are not impatient, are less status conscious and also less aggressive.

### **Literature Review**

Nowadays, the organizations' job environment considerably differ from the job environment of few decades ago particularly in the academic world e.g. lengthier time at workplace are common nowadays, regular modifications in organizational structure are normal (Locke & Teichler, 2007; Fotinatos-Ventouratos & Cooper, 2005) which in turn lead to countless pressures on employees.

Burnout is one of the most burning issue which leads to ill-health (Lu et al., 2003). It has been considered as a reaction to demanding circumstances at work that leads to physiological reaction manifested by psychometric indications such as coronary artery disease, hypertension, headache and peptic ulcer. According to a survey by Statistics Canada, its not hard work which causes job stress. Rather, it's having no control over how, when, or with whom you do your job. Based on survey from 9000 Canadians, psychological distress was found highest among people in job with the high work demands but little autonomy for decision making. People who had demanding professions but also considerable autonomy to make decision were less stressed. Only 27% of them had high psychological ill-health scores. Consistent with other studies, the worst job strain was reported by those, who were supposed to work directly with the public e.g. police, nurses and teachers. Another deduction from this study was that women reported a higher degree of pressures than men. The researchers recognized this to two factors i.e. men usually have more decision-making power in their jobs and women feel less supported by their co-workers as compared to men.

Most of the research on stress among academic staff has resulted from the work conducted in Europe and USA. Blix, Cruise and Mitchell (1994) in their studies reported that 66% of sample of university's teaching faculty perceived high levels of worries during work at least 50% of the time. They found that most of the issues faced

by the faculty was directly related to time pressures and resource inadequacy. Some researchers is defined stress & strain in terms of reaction to situations that results from negative emotions, and particularly teaching faculty are the ones among all the occupational groups which function under conditions of high stress which is frequently caused by many internal and external factors which may include fewer rewards, inadequate environment, performance pressures in limited time, poor motivation, interpersonal conflicts, resources inadequacy, unequal work distribution, lack of community spirit and dearth of support by bosses (Brown & Ralph, 1998; Gmelch, 1993; Travers & Cooper, 1998).

Faculty stress is usually more deceptive as compared to other professions because of its vague nature of roles and is dissimilar to the business profession; the distressing effects are not often counterbalanced by moments of satisfaction (Claxton, 1989). According to Griffith et al. (1999), if other factors remain constant, stress affects younger and less experienced teachers over seniors and ore experienced teachers; single teachers over the married ones; and female teachers over males.

Lackritz (2004); Gillespie et al. (2001) in their studies on teachers' burnout revealed that burnout had substantial connections with numbers of scholars in class, their numerical assessments, workload issues, miserable organizational practices, job insecurity and inadequate recognition Moreover they concluded that female faculty members were more "burned-out" as compared to males. Kyriacou (1998) also identified few major categories as the sources of faculty stress which primarily include time pressures, low status, students' indiscipline, poor working conditions, poor motivation and conflicts with colleagues .

Stress produces a range of adverse, costly, and devastating consequences e.g. dissatisfaction and anger; depression; inability to relax; feelings of low self-esteem and self-accomplishment, fatigue and emotional exhaustion; irregular sleeping habits due to insomnia, psychosomatic complaints and cardiac problems (Brown & Ralph, 1998; Hinton & Rotheiler, 1998; Travers & Cooper, 1998). Thus in organizational setting, burnout has become a major contributor to ill-health and performance issues of individuals, and costs a lot to the organizations.

On the positive side, research also revealed that a certain level of stress in academe is unavoidable, even beneficial. Hinton and Rotheiler (1998) pointed out that the enthusiasm and challenge of teaching may cause the adrenaline level to rise which are linked with stress, and Dunham (1992) showed that teachers work at highest efficiency level when the jobs allocated to them are in equilibrium with their perceived coping skills. Interestingly, very little challenge and too much can be harmful. Stress can be temporary or long-term, minor or severe and its impact on a teacher depends generally on how long its causes continue and how powerful they are? If stress is short-term and minor, people may handle it or at least recover from its effects quickly. However extreme outcomes of stress include depression, burnout, workplace violence and decreased performance.

## **Individual differences and stress performance relationship**

Individual differences account for a widespread range of responses to stress; a task viewed as a challenge by one person may crop high level of anxiety in another (Newstrom & Davis, 2003). In the mid-1900s, psychosomatic medicine began to position on identifying precise psychological features that might be considered as genuine risk factors in relation to ill-health. With particular reference to the ways in which employees cope with stress, two separate personality categories characterized by opposing sets of behavioral patterns called as Type A and Type B were found (Friedman & Rosenman, 1959). Research shows that based on individual personality differences, some employees are stimulated by stress and perform better, where as other employees report low performance. In other words, a person's readiness to respond to stress with negative or positive feeling may also be a critical cause of performance. The 'Type As' is the people operating at their maximum possible speed, want to achieve competitive goals and are usually with exaggerated sense of time urgency. They usually consider everything to be a challenge and can handle more tasks at the same time while performing well at them all (Robbins & Judge, 2003). However this over achievement does not come for free and are subject to significant amounts of stress. The other personality is the Type B, who is exactly opposite as they are patient, with no sense of time urgency, do not exhibit their achievements, may play for fun and not to show their superiority. Unlike Type A, they can relax without guilt (Robbins & Judge, 2003).

Summing up, Type-As are thus more prone to stress and in-turn have a higher chance of getting psycho-somatic illness because of the over competition and performance pressures round the clock. On the contrary, Type Bs has a greater capacity to handle the stressful situations comfortably and in-turn, are less vulnerable to negative stress related consequences.

One of the most vital challenges faced by education sector is to overcome teacher's stress related issues by developing a conducive climate where they can understand its pros and cons, take it as a challenge, and needs to be on their discussion agenda both formally and informally (Claxton, 1989). This can be incorporated from three areas;

- 1- Teachers must become aware of their stress-full problems they face
- 2- They should be allowed to speak publicly about stress-full issues
- 3- Their captains should take care of such issues and respond accordingly

### **Objectives of Research**

This exploratory research aims to investigate& explore (1) the well-being of teaching faculty at the universities, (2) the factors at the work environment which have a significant impact on faculty well-being, and (3) possibilities of improvement of the work environment for academic world. This exploratory research aimed to address the following research questions:

- Which organizational factors have relatively high tendency towards bringing occupational stress among teaching faculty of a public sector university?

- What is the influence of job related stress on faculty performance of a public sector university?
- How the different personality types (Type A, Type B), stress and performance are related?
- What are the gender specific job stress factors?

### **Research Methodology**

The present study targeted the academic staff of a public sector university of Pakistan. Because of shortage of time and resources, convenience based sampling was used and 221 faculty members from various departments were approached directly to collect the data. Tools used for gathering primary data were questionnaires and semi-structured interviews. The tools of interview and observation were used to gather facts about their job routine and to know how environmental factors influence the work patterns. This helped us to refine our questionnaire, which we have used as a primary data collection tool. Three of the main variables were used. Two of the variables were independent including job related stress factors and personality. The dependent variable was performance. The variables mentioned above were further categorized into many other sub-variables.

### **Job Related Stress Factors**

It was measured by self-designed questionnaire and defined as sources of stress by Hartrick and Hills (1992) and Michie (2002). Keeping in view the organization of the study; we intended to study the following independent variables:

- Heavy workload
- Lack of staff
- Poor working conditions
- Lack of acknowledgment
- Job security
- Nature of job
- Time pressure and deadline
- Lack of training and skills
- Relationships with coworkers & supervisors
- Workplace Privacy
  - Autonomy
  - Harassment

A five point Likert scale, ranging from “never” to “constantly” was used to measure all scales. At some places reverse scale was also used. The scale was grouped into 10 sub scales; These include Work Overload (WO), Job Description & Role Conflict (JDRC), Communication & Comfort With Supervisor & Colleagues (CCS&C) , Office Environment & Resources (OE&R), Feeling Of Inequity (FOIE), Lack Of Skills & Training Opportunities (TSO), Harassment (HAR), Grievance Handling (GH), Lack of Authority (AUTH) and Job Security (JSEC). These variables have been analyzed to identify the factors that have high tendency towards occupational stress. The summated

scores are converted into percentages to get better results as the number of questions varies from indicator to indicator. Percentages are used to make the analysis more meaningful. The summated score ranges from 20% to 100% i.e.

- 21%-48% lower level of stress
- 49%-60% lower moderate level of stress
- 61%-74% upper moderate level of stress
- 75%-100% high level of stress

As all the departments reported their stress with in same range so conclusions were made in relative terms i.e. relative to other departments' stress against performance.

### **Job Performance**

It is the effectiveness of the individual in carrying out his/her roles and responsibilities related to academics. A self explained questionnaire was a used as the research tool. A five point Likert Scale ranging from 1 to 5 is another tool that was used. This scale is grouped into many other subscales:

- Knowledge & Skills
- Job Enthusiasm and
- Job Quality
- Research Productivity
- Job Inputs (Academic)
- Job Inputs (Co-Curricular)
- Self Appraisal
- Appraisal by others
- Absenteeism

To collect information about the performance faculty members, questionnaires, semi-structured interviews from the faculty members and their reporting officers' feedback was used. A traditional rating scale was utilized to determine a summative score for performance. Each Faculty member was rated on the three performance items using a scale ranging from 1 to 5 and these scores were converted into percentages. The summated scores ranged from 20% to 100%.

As all the departments reported their performance within the same range so conclusions were made in relative terms i.e. relative to other departments' performance against stress.

- 20-50% low performance
- 51-70% medium performance
- 71-100% high performance

As all the departments reported their performance with in same range so conclusions were made in relative terms i.e. relative to other departments' performance against stress.

## Personality Characteristics

A revised version of the questionnaire developed by Hartman et al., (2001) comprised of 15 questions was adapted to our sample and was used to conclude the behavior pattern for Type-A, Type-B & Mod A (Type AB).

## Descriptive Statistics and Data Analysis

### Occupational Stress, Personality Type and Job Performance

As mentioned earlier, structured questionnaire were designed to collect data from different departments of a public sector university. Questionnaires from 221 faculty members were collected from the different departments however questionnaires of 200 faculty members were considered for analysis. 21 questionnaires were rejected based on initial screening. The demographic details are presented in the table below:

Table 1: *Demographic Details of the Sample (N=200)*

Demographic Characteristic		Number
GENDER	Female	51
	Male	149
POST	Professor	6
	Associate Professor	14
	Assistant Professor	39
Status	Lectures	141
	Married	109
Qualification	Unmarried	91
	PhD	48
	Non-PhD	152

### Initial Analysis

Our scales defining various job related stressors, personality types and performance were based on the literature review, observations and on the results of our preliminary interviews. However slight changes were made in the questionnaires to make sure that our respondents can understand the questions clearly. Reliability tests were conducted on our sample for each set of questions and few items were also removed to improve the reliability of the instruments we have used. The questionnaire items finally used in analysis were only those with cronbach's alpha values more than 65%. Significance level of 5% and below has been taken as a standard throughout the analysis.

## Overall Stress Factors Impact

The average of all the factors reported that Job Description & Role Conflict, Work Overload, Grievance Handling as the topmost reasons for stress with an average/mean of 56 (approx). Office Environment & Resources was also reported as an important reason of stress with an approximate score of 54. Almost all the departments reported the factors of harassment, lack of training/skills opportunities at the lowest level as a source of stress at an average of 36 and 30 as can be seen in the graph below.

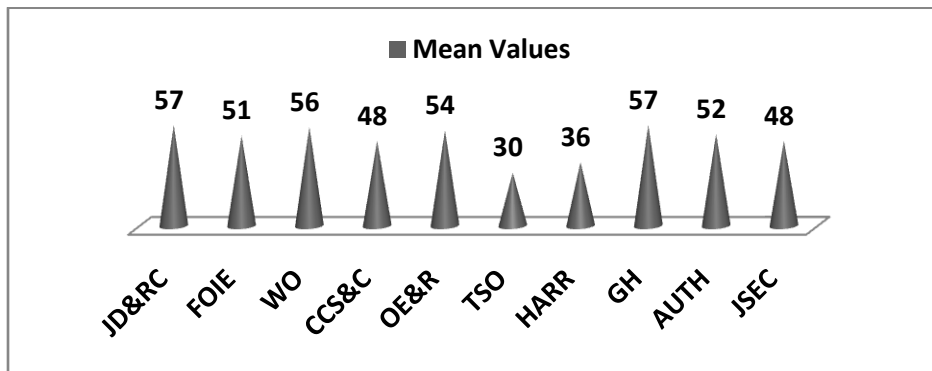


Figure 1 – Overall Occupational Stress Factors

**Regression analysis revealed** Job Description and Role Conflict (JD & RC), Office Environment and Resources (OE & R) and Grievance Handling (GH) most significantly positively related to faculty ill-health.

Table 2: *Regression Analysis (N=200)*

Factors	Beta	t	Sig.
(Constant)		1.758	0.081
JD&RC	0.399	2.119	0.001
FOIE	0.116	1.197	0.234
WO	0.189	2.231	0.027
CCS&C	0.065	0.645	0.52
OE&R	0.223	0.27	0.005
TSO	0.208	2.339	0.081
HARR	0.088	0.994	0.322
GH	0.188	1.784	0.015
AUTH	0.017	0.471	0.344
JSEC	0.114	0.342	0.092

a. Dependent Variable: ill-health

As shown in Table 4, male faculty members reported the following sources of stress more dominant as compared to females. These include Job Description and Role Conflict, Office Environment and Resources, Lack of Authority and Job Security. Female's concern towards the following factors has been reported at high level as compared to male faculty members. These include Grievance Handling, Communication & Comfort with Supervisors and Colleagues, Feeling of In-Equity and Work Overload.

Table 3: Overall Gender Specific Stressors (N=200)

Factors	Male's Mean	Female's Mean
JD&RC	58	54
FOIE	51	54
WO	57	58
CCS&C	47	52
OE&R	57	49
TSO	30	28
HARR	36	35
GH	56	59
AUTH	55	47
JSEC	52	43

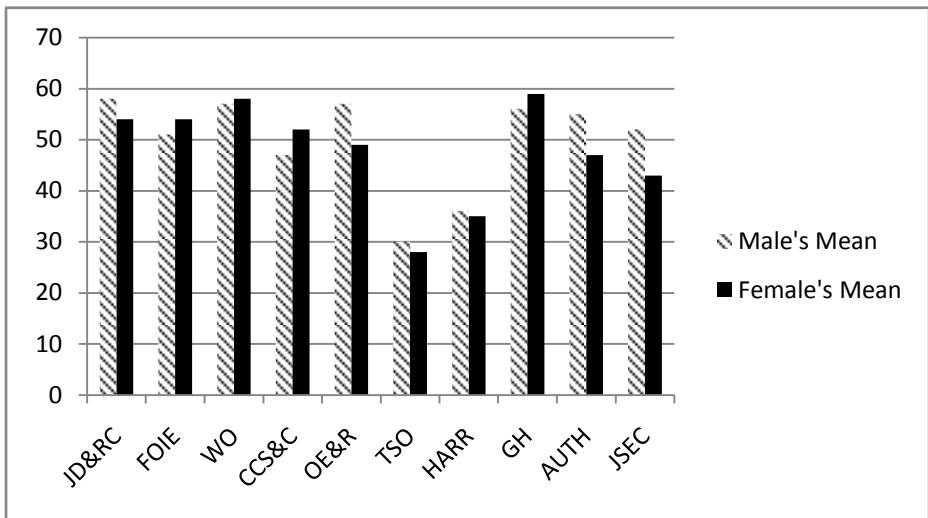


Figure 2: Overall Gender Specific Stressors



## Occupational Stress & Performance Relationship (Gender Specific Distribution)

Table 4 Occupational Stress and Performance Relationship (N=200)

Factors		Min	Maxi	Mean
Stress	Male	23.33	66.67	30.457
Performance		43.7	84.44	70.4622
Stress	Female	26.67	60	48.3333
Performance		51.85	73.33	54.2222

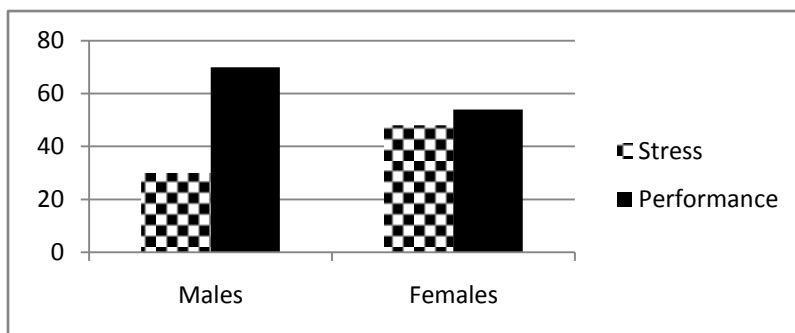


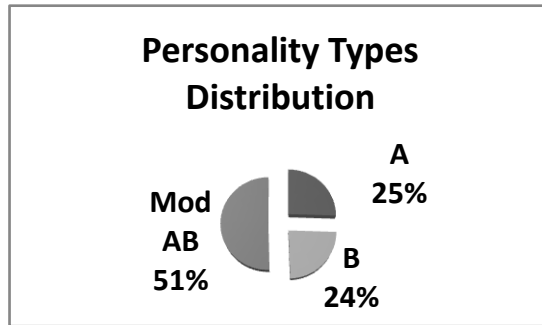
Figure 2 Occupational Stress & Performance Relationship (EE)

## Personality Characteristics of Participants

As discussed in the literature review, every person is unique in its perceptions and responds differently to the same situation. Situations which one person smell as challenging and stimulating might be seen as threat and may cause stress among others. Literature suggests that type A personality being over competitive and impatient are more vulnerable to stress, when compared with type B. Out of total 200 respondents, 51 were TypeA, 48 were TypeB and 101 were Type AB.

Table 5 Personality Distribution of Participants (N=200)

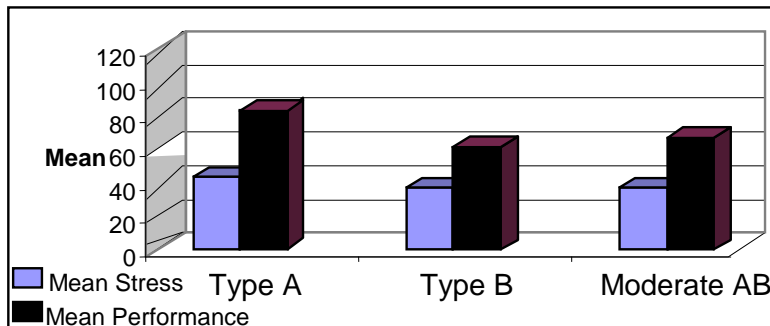
Type	Frequency	Percent
A	51	25,5
B	48	24
Mod AB	101	50,5
Total	200	100.0



*Figure 3* The relationship of stress & performance with personality type has been revealed as

*Table 6 Personality Type, Stress and Performance Relationship (N=200)*

	Mean
Stress Type A	40.2099
Performance Type A	79.83
Stress Type B	31.6667
Performance Type B	60.22
Stress Type AB	34.0796
Performance Type AB	64.89



*Figure 4* Stress-Performance vs Personality Type

### **Findings and Conclusion**

The results of the study indicate that there is an inverse relationship between occupational stress and job performance. The faculty members with relatively high stress level showed relatively good performance when compared with low levels of

stress. Furthermore female faculty members and faculty members with Type A personality reported higher levels of stress. Type A personality also reported higher performance when compared with Type B and Type AB.

The second most important reason reported by almost all the departments as a source of stress was job description and role conflict. In unstructured interviews it was observed that many faculty members were reporting to more than one boss, their job description was not clear to them, and they suffered a lot because of their involvement in other co-curricular activities. Our preliminary interviews also revealed that most of the faculty members with ambiguous and multiple roles felt overloaded most of the time, but were still willing to take other assignments and in parallel they seemed to be more stressed and anxious as compared to others who were only engaged in teaching. These results corroborated with the studies by Caplan et al. (1975) which revealed role ambiguity and workload positively related with depression and anxiety; and it was greatest for Type A people.

Through unstructured interviews and personal observations, it has been observed in almost all the departments that even some senior faculty members faced a lot of problems in getting hold of the resources to complete their tasks. It also has been observed that the faculty members used to pick up and install the Multimedia themselves, thus wasting a lot of time particularly when the devices proved to be out of order. This causes an embarrassment for the teachers in front of the students. Even if the faculty is fully prepared with a power point presentation for some technical lecture, he is not sure whether a multimedia projector will be available or not. This has also contributed a lot towards stress and firefighting on daily basis.

Job security, lack of authority, privacy, time management, office equipment & resources, job description and role conflict have contributed to increase stress in male faculty members more than the females. Females have reported the factors of grievance handling, feeling of inequity, communication and comfort with supervisor & coworkers to be main contributors towards stress, when compared with males. Harassment has been placed at the lower end by both the male and female faculty, as a source of stress.

The results have shown that Type As slightly performed well with slightly highly vulnerability towards stress, but there was no significant difference on stress performance relationship among faculty with different personality attributes. There was no significant difference between the stress level of Type B and Type AB. But stress level of Type A was reported higher from both Type AB and Type B.

### **Recommendations**

With particular reference to stress in academe in higher education, we recommend to formulate a multimodal approach for stress management which will result in a more efficient, broad-based intervention strategy with more chances of success.

In addition, we also recommend organizing such interventions at both individual and organizational level, so as to ensure effective outcomes. Interestingly, some interviewees revealed that if they admit experiencing stress or intend to

participate in stress management related activities, it may involve a risk being labeled as “weak” and unable to cope with the demands of the job. Harkness et al. (2005) suggest that people consider that revealing stress at job is usually perceived by bosses as an expression of weakness or unskillfulness. Such views of the employees should be curtailed and an environment of openness should be encouraged, so employees may talk their hearts out and could benefit from such trainings and sessions.

Based on the major finding and conclusions mentioned in the above paragraphs, few of the recommendations are advised below. Since the major sources of stress identified are job description & role conflict, grievance handling, work overload, office environment & resources the following specific recommendations are made:

**a. Managing Job Description and Role Conflict:** Usually the *conflicts which arise* among people are the role *conflicts* which according to Antonioni (1996) can be a mask that hides the real person. To lessen conflict between students and teachers, precise descriptions of *expectations* of all these must be in written and communicated to all. Accurately defining the various *roles* are very important to reduce conflicts and it must also be kept in mind we all are unique in our interpretations so individual differences must also be considered while incorporating the policies.

As a social being, usually teachers have four *roles* including administrator and/or teacher, father/mother, spouse, & friend and each of these *roles* are coupled with some *expectations* and *responsibilities*. To be a good teacher, they must define their role to teach with zeal and zest rather than just acting the role of a teacher. Once they add the element of commitment in their job, they may not face the negative consequences of stress. However, over commitment is not the solution but a problem in itself. For example burnout has been related with dedicated and committed workers who feel internal pressure to work (Freudenberger, 1974) and accumulated stresses can force the dedicated educators to burn out. Moreover, the job description and the roles must be fixed at the start of the job as a contractual agreement and it must match the educator’s interest, experience and academic background.

Furthermore if a teacher has been assigned different jobs at a time, with different roles to play, it must be formally communicated to him/her with clear guidelines and parameters defined to avoid any role ambiguity. He/she should be appraised against the expectations and good work be acknowledged in public at the end of the day to keep him motivated. If otherwise next time if he has to play the same role, not applauded last time, the supervisor may not find the element of commitment but compliance and ultimately resistance in the subordinate’s attitude. The expected outcomes from clarifying the job description and reducing role conflict in an academic setup will be:

- Negative consequences of stress for the teachers will be reduced.
- Teacher – student conflicts in the classroom and will be reduced.
- Congenial relationships between the teachers, the students and the captains of their institutions will be augmented.

**b. Grievance Handling:** There should be proper grievance handling committee with experienced committee members. The culture of “Who brings a trouble is a trouble maker” should be avoided and the grievances be welcomed to avoid an atmosphere of stress. Few of the recommendations regarding grievance handling are as follows:

- Grievances should be resolved promptly and in accordance with relevant policy of the university.
- Reasonable steps must be followed to make sure the confidentiality of the faculty member forwarding the grievance and s/he should be protected from victimization.
- The resolution process must be fair and impartial and records must be maintained in a proper way.

Additionally the teacher orientation and socialization which starts right after s/he apply for a job (Shahzad, Khan & Shah, 2015) should not be taken for granted and grievance handling procedures should be made clear to all the new entrants.

**c. Office Environment and Resources:** Office environment and resources include the physical office environment, ergonomics, availability of equipment i.e. computers, printers, lab equipment, multimedia /overhead projector etc. It also includes the support staff which reduces your work load particularly in handling the petty issues like photocopying of notes, helping you to install the technical devices etc. It is advised that sufficient number of Multimedia Projectors, Printers etc. be available for the faculty. Each department should have its own technical staff to take care of these machines on regular basis. Backup equipment be available to be utilized in emergency. The departments be provided with equipment and support staff (peons) corresponding to the number of faculty members inducted.

Furthermore the offices should be ergonomically designed, with smart office setup to avoid the problems of backache, headache, eye irritations and other problems of muscles and bones due to improper workstation and lighting/heating/cooling arrangements.

**d. Supportive Relationships:** Supportive relationships, togetherness and lack of conflict with co-workers are considered as a faculty’s best asset to overcome isolation and overload which is usually considered a major cause of faculty stress. Teams/small groups of faculty can provide valuable support to one another, particularly to new team members who seem to be surrendering to stress, and practicing what Claxton (p. 78) calls "creative ranting and raving". Such teams support the team members by offering constructive solutions to stressful situations, distributing their assignments to reduce work overload. However it should be kept in mind that stress is not only experienced in the early career stage teachers, but also at senior levels so such issues should be addressed at all levels.

Some other recommendations based on personal observations and interviews include:

- Recognition and appreciation of even small achievements in public based on equity.

- Unnecessary supervision and control which hurts the ego should be reduced at bare minimum level and less intrusive means should be used wherever required.
- Ensure proper time management at top level and unnecessary marathon meetings be avoided particularly after office hours.
- Unnecessary intrusion into the personal life of employees be reduced unless it is required in special cases where it challenges the organizational culture.
- Faculty from other cities be provided with appropriate accommodation as it has been observed one of the important sources of stress. Though its not occupational stress but its negative effects are trickled down to the performance of the employees.
- Arrangement of transport facilities for pick & drop and official assignments should be streamlined.
- Appropriate orientation be provided to all faculty on regular basis to clarify the procedures regarding dealing with other departments e.g. re-imburement of bills, etc.
- Time pressure be reduced and enough time be given to faculty to carry on with their transactional academic assignments e.g. paper checking, marks uploading etc.
- Appropriate parking and café' arrangements specifically for faculty be arranged.
- Special arrangements for female sports, aerobics etc. as they can't enjoy the same as male faculty members can do in open play grounds
- Finally, small signs such as words of gratitude during formal gatherings, informal tea clubs, excursion trips and back rubs can help to raise a sense of companionship among teachers.

There are many other individual level effective strategies for overcoming the negative impacts of stress. These include

- Physical activities (e.g. swimming, working out, jogging, sports, etc);
- Self-entertainment (reading for pleasure, movies, excursions, concerts); and
- Personal interests (hobbies such as gardening etc.)
- Turning to God i.e. offering regular prayers and visits to holy places.
- Venting of emotions and talking your heart out with friends.

Usually for teachers, drawing a perfect line of separation between work & personal time is difficult as teachers are used to with bringing office work to home e.g. (numerical assessment of students' assignments/quizzes, lecture preparation, deadlines to submit research papers/projects). However effective time management strategies can help them to overcome such issues and the habit of procrastination as well. Unforeseen commitments and disturbances must be avoided during office hours so maximum time can be dedicated to office affairs while their stay at the campus. In this way, they can have sufficient leisure time to enjoy with friends and family after the office hours particularly during the weekends.

## Study Limitations & Suggestions for Future

From the empirical study perspective, this exploratory research study is subject to some limitations which includes a smaller sample size from only one public sector university, convenience based sampling, less number of female faculty members, data collection just at a point of time rather than a longitudinal research design. We focused more on questionnaires (quantitative methods) and less on interviews and cross sectional data from the office bearers such as Registrar and HR offices. Such inputs/data if involved in the study are definitely invaluable but it was not possible to exhaust these sources due to some administrative bottlenecks and dearth of resources. Summing up, these study limitations were because of limited finances and time constraints. Larger number of respondents if selected randomly from various public sector universities would have been considered as more pragmatic research design, which in turn would have led to more generalizable results. For future research in this domain, we suggest to use triangulation strategy, the data should be collected over a period of time, causal relationships should be studied and advanced quantitative & qualitative techniques should be used.

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## RELATIONSHIP BETWEEN EMPLOYEES MOTIVATION AND TURNOVER INTENTION: EMPIRICAL STUDY OF TRAFFIC POLICE OF DISTRICT CHARSADDA

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**Abstract:** *Motivation is the combination of all the factors both external and internal that stimulate desire and energy in people and make them constantly interested and committed to a job, role or subject, and enable them to make efforts for achieving organizational goals. Less motivated people can cause low performance, bad inspiration for co-workers, employees burnout etc. every organization tries to utilize their employees in an optimal way but sometimes motivation does restrict their desired goals. As an employer expects his personnel to perform, employees also expect something in return, which works as stimulus for motivation and when employees expectations are not fulfilled, addressed they simply leave the organization. This study was approached with the purpose of finding the perceived level of motivation (both intrinsic and extrinsic) and its effect upon employee's turnover intention. Data were collected through predesigned, self administered questionnaire. 62 respondents participated actively . For data investigation statistical measures like percentage, frequency, correlation and linear regression were used. For determining the validity Cronbach's alpha was used and it found that all the variables values stood above the minimum level of 0.70. showing the reliability of the data. The end results showed that both intrinsic motivation and over all motivation had effects upon turnover intention and it was concluded that there is significant and empirical correlation between motivation and turnover intention and also between intrinsic motivation and turnover intention.*

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**Key words:** Motivation, intrinsic motivation, extrinsic motivation and turnover intention.

### Introduction

The word motivation is taken from the Latin word “movere”, which means to cause moment. Authors like Bateman et al. (1999) stated that if employees of an organization are motivated, they will perform above their perceived level of intelligence and skills. They have also mentioned that even the talented people will not deliver to their optimum level, if they are less motivated. Stoke (1999) stated that "A mental attribute that leads to a person's degree of allegiance and later this allegiance level provides the base for organizational performance" is called motivation.

Harackiewicz and Sansone (2000) defined motivation as, "any stimulus generated internally which causes generation and directing of behavior". They have given certain examples as hunger and thirst, recognition, rewards etc causes motivation. Motivation has been used to explain types of behavior since long ago i.e. behavior driven by extrinsic rewards or punishment, behavior driven by basic biological needs or drives related to procreation (hunger or thirst) and survival. Their explanations also states that the need or desire to achieve particular outcomes i.e. recognition or avoidance of punishment, promotion also motivates behavior. Germann (2004) also confirmed and restated the findings of Sansone et al. (2000) and has highlighted the importance of individual's motivation for their maximum level output.

The purpose of this study was to find the motivation level of employees in relation with employee's turnover intention. The aim is also to find the more prevailing type of motivation i.e. intrinsic or extrinsic in the studied organization. The marginal aim of the study is among traffic police. Motivation plays a vital role in employee's performance. The main problem our understudy organization faces is the negative perception of the local police. People think that they are not socially responsible and are involved in 1) bribes, 2) exploitation, and 3) miss-use of power. We have tried to figure out their motivation level and as motivation can be externally in shape of salary, allowances etc or internally in shape of sense of attachment, value, pride etc, we have assumed that the negative perception of the people may be due to low performance of this institution and again this low performance may be due to their low level of motivation.

The basic concern and motive behind our proposed study can be categorized into three parts, which are different in nature from each other.

1. To find out the relationship of motivation on turnover intention.
2. To investigate the relationship of intrinsic motivation on turnover intention.
3. To investigate the relationship of extrinsic motivation on turnover intention.

### **Research Hypothesis**

H<sub>1</sub>: There is a significant association of employee's motivation with turnover intention.

H<sub>2</sub>: There is significant relationship between intrinsic motivation and turn over intention.

H<sub>3</sub>: There is significant relationship between extrinsic motivation and turnover intention.

### **Significance of the Study**

Traffic police like our other security personnel perform their duty in different conditions. So it is worth to find out as well that whether they are motivated for performing their duties or not as they are playing an important part in our society where taking a u-turn without being of a traffic police man is so difficult. So their duty is important for us and we should give importance to them as well and we have tried to

seek out their motivating and demotivating factors, so that we could gauge their performance and take the essential steps for its betterment. The study target population will be only Charsadda traffic police and will try to find the aforementioned relationship between motivation and turnover intention.

## **Literature Review**

There are different theories regarding motivation which describes how and why human behavior is directed towards a specific direction and also being activated. These theories are broadly categorized into two different groups i.e. 1) Content 2) Process theories.

### **Content theories**

The theories in the first group (content theories group) explain and define motivation in relation to the individual needs. An illustrative example can be stated as these theories state that need of power gain and sense of achievement motivates individuals. It is worth to mention that these theories explain how and why the consideration of individual needs in working environment is needed for their motivation. Following are the content theories presented by different researchers explaining the phenomena of motivation in relation to the human needs.

One of the content theories is presented by Alderfer (1972) called ERG theory, where "E" stands for existence, "R" stands for relatedness and "G" stands for growth. The scholar of the theory stated in his ERG theory that the three mentioned needs (ERG) can represent the motivation characters or factors. Argued in his "ERG Theory", that the need for 'existence' (E) (comparable to Maslow's physiological and security needs), for 'relatedness' (R) (comparable to Maslow's social belongingness and self-esteem needs), and 'growth' (G) (comparable to Maslow's self-actualization needs) can have motivational character simultaneously.

The other theory among the content theories is of McClelland (1961). The scholar here argued that needs are learned by individuals throughout in their individuals learn needs in all of their socialization but their need for power, achievement and affiliation vary from one individual to another. As a consequence, managers should try to identify and focus on the need-dominance of their employees and structure the work environment and recognition strategy accordingly, in order to create a motivating working environment.

The next theory is presented by Herzberg et al. (1959). This theory is called two factors theory. It is named so because the scholar has identified two set of factors which he think could have influence upon the employee's motivation. These two set factors have be stated as 1) Motivation factors i.e. Responsibility, systematic and hierarchal personal growth, recognition and achievement 2) Hygiene factors are: Quality of supervision, working conditions, status and compensation. He concluded on the basis of his research study that high work motivation is the result of the presence of only motivation factors and the presence of hygiene factors would only lead towards employees satisfaction. so if the managers wish to have satisfied workforce, the

managers will have to ensure that the set of hygiene factors for the employees are addressed and met precisely, and if any of the managers wishes his/her personnel to exert more effort additionally, he/she will have to address the motivation factors adequately in shape of recognition of their work, efforts and valued outcomes and in return should offer professional development opportunities, employees autonomy and responsibilities.

### **Process theories**

One of the process theories is called equity theory presented by Adams (1963). He states that an individual will compare his own applied effort and returning rewards with the exerted effort and receiving rewards of the others. If he confines any in-equity, this sense of in-equity will affect the employee's motivation negatively and vice versa. For example if one perceives that he/she is paid less in comparison to others, despite having same nature and amount of work, this will lower the employee motivation and will result either in reduce effort and job dissatisfaction.

It is the Vroom (1964) who presented the next process theory, called Expectancy theory. He stated that positive outcomes are the main reasons behind choosing certain working behaviors by workmen. He explains his theory work and states that if a person perceives that any extra effort application will have positive effects upon performance and that increased performance will earn valued outcomes, this will surely motivate an individual.

The theory of Locke (1988) known as goal setting theory also comes in process theories domain. This theory demonstrates the importance of goals setting and selection and argues that motivation is the resultant of goals. As per this theory challenging (hard enough but realistic) and specific (measurable) goals are more motivational than those which are in contradiction i.e. easy and unclear.

Skinner (1969) presented the theory which also counts in process theories. This theory is called Re-enforcement theory. This work states that the end results of a behavior determine its adoption or not. This theory states that those behaviors which are positively re-enforced by means of rewards , appreciation etc or whose results are positive, will remain in continuation and Those behaviors which results in negative results for that individual or which are negatively re-enforced either by punishment or not being rewarding, will not be repeated. So managers can easily enhance the employees performance by using positive re-enforcement technique for getting his desired level of performance results and also can eliminate the employees non-efficient behaviors simply by using negative re-enforcement.

It can be therefore concluded that motivation is mainly in positive sense. Furthermore by reviewing the added literature it can easily be stated that motivation is mainly of two types: 1) Extrinsic 2) Intrinsic motivation. So the main focus of our study will remain upon finding the overall motivation level, finding on its more dominant type i.e. intrinsic or extrinsic and finding the relation between motivation and of its types i.e. intrinsic and extrinsic with turnover intention.

## Research Methodology

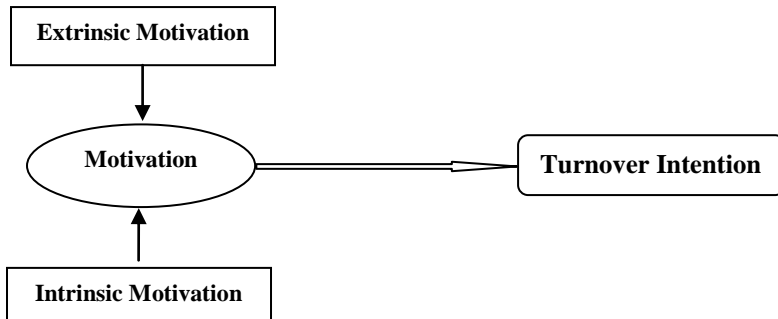
### Sampling design

The target population of this study is traffic policemen serving at District Charsadda. There are 65 policemen working at the mentioned locality. As it is clear that their number was less than 100 which could easily be approached and studied so we selected all the employees working at the locality but in the end got the response of 62 personnel. We have used convenient sampling technique for our study.

### Variables of the study

The principal purpose of our conducted study was to find the relationship of two qualitative variables i.e. "Motivation" and "turnover intention". So motivation worked as independent and turnover intention as dependent variable. Also intrinsic motivation and extrinsic motivated were used as independent variables for turnover intention.

### Theoretical model



### Data collection method

Primary data were collected through pre-designed questionnaires, administered personally. Likert five point scale was adopted for getting the respondents response and all the questionnaire questions were close ended. The questionnaire consisted of ten questions regarding intrinsic motivation, ten questions were about extrinsic motivation and three questions were regarding turnover intention. Best efforts were made to get the true responses by visiting almost every individual personally. For the sake of removing their ambiguities regarding the questions, regular visits were made.

### Data analysis and measurement

SPSS was used for analyzing the collected data. As the study was consisted of qualitative variables, counts and percentages were used for its interpretation. For finding the possible association between variables, Pearson correlation method was used and for finding the causes and effects of variables upon one another, we used Regression Analysis.

## Results and discussion

The succeeding tables show the results obtained by analyzing the collected information from respondents working at the studied population about motivation and job turnover intention. It is consisted of demographic details i.e. frequency and percentage, reliability, Mean Average Score, Correlation and Regression values.

### Demographic Details

Table 1 shows the results regarding Age, Qualification, Job scale, Current job and total job experience.

Table 1 *Frequencies and Percentages of Different Variables i.e. Age, Qualification, Designation, Current Job Exp, Total job Experience.*

Group Years	No (%)	Group Qualification	No (%)	Designation	No (%)	Group Current job Experience	No (%)	Group Total Experience	No (%)
20–25	6 (9.7)	Primary	1 (1.6)	LHC (05)	58 (93.5)	1–5	47 (75.8)	1–5	7 (11.3)
26–30	7 (11.3)	Middle	43 (69.4)	HC (07)	2 (3.2)	6–10	12 (19.4)	6–10	13 (21.0)
31–35	16 (25.8)	Matric	13 (21.0)	IHC (09)	1 (1.6)	11–15	2 (3.2)	11–15	11 (17.7)
36–40	15 (24.2)	F.A	5 (8.1)	SI (14)	1 (1.6)	16–20	1 (1.6)	16-20	10 (16.1)
41–45	9 (14.5)	B.A	0(0)	00	00	00	00	21-25	16 (25.8)
46 – 50	8(12.9)	M.A	0 (0)	00	00	00	00	26-30	3(4.8)
51 – 55	1(1.6)	MS	0 (0)	00	00	00	00	31+	2(3.2)
Total	62 (100)		62 (100)	00	62 (100)	00	62 (100)	00	62 (100)

Source: field data.

It is worth to mention that we have received responses of different job scale employees. The above table shows that out of our 62 respondents 58(93.5%) have a job scale stated as L.H.C i.e. scale 05, 2(3.2) have a job scale called H.C. (07), 1(1.6) employee has a scale of I.H.C (09) and one respondent has S.I (14) job scale.

The same table contains current job and total job experience values as well. The table shows the experience in small intervals and each interval is confronted by its number of respondents and its percentage value. The table explains that there are 47 (75.8%)

employees, who have their traffic police experience lying in the range of 1-5 years of interval. Similarly 12 (19.4%) employees have their traffic experience equal to value in the range of 6-10 years of interval, 2 (3.2%) and 1 (1.6%) employees have experience value in the range of 11-15 years and 16-20 years respectively.

The very same table also consists of "Total job experience" values, their frequencies as per different intervals and percentage as well. The experience of 7 (11.3%) employees is located in the interval 1-5 years, 13 (21.0%) employees have experience values in the interval of 6-10 years. Hence forth employees of frequency number 11 (17.7%) total job experience value lays in the interval of 11-15 years, 10 (16.1%) employees total experience value is somewhere located in the interval of 16-20 years, 16 (25.8%) have total job experience in the interval of 21- 25 years, 3 employees value is located in the range of 26-30 years and 2 (3.2%) are very seasoned and has their total job experience value in the interval of 31-35 years.

### Reliability co-efficient

Table 2 shows the reliability co-efficient of different factors of motivation and turnover intention. Cronbach's Alpha ( $\alpha$ ) has been used for checking the reliability of the data. According to Cronbach's Alpha ( $\alpha$ ), data which result is 60% or more after being checked for the said reliability, the data can be called as reliable and one can surely trust upon this data and its vitalness. The following table shows the percentage values of different variables. All of the variables values are reliable (individually). The overall reliability value for the data is 60% which is a proof of the fact that the scale is reliable (Green *et al.*, 2000). So we can trust upon the results obtained from the data collected.

Table 2 *Reliability Measure of Different Variables.*

Category	Cronbach's Alpha (%)	Remarks
Extrinsic Motivation	71.4	Reliable
Intrinsic Motivation	73.2	Reliable
Motivation	75.00	Reliable
Turnover intention	73.9	Reliable

### Correlation between employees Motivation, turnover intention, Intrinsic and extrinsic Motivation

Table 3 shows the Pearson's co-efficient of correlation of the variables under study. Pearson correlation was considered in order to evaluate the means of employees Motivation, turnover intention, and Intrinsic and Extrinsic motivation. The result showed that the three variables are significantly correlated and also we can find the direction of effects among the variables i.e. how they will effect each other.

It is clear from the table that there is a significant and positive relationship between intrinsic and extrinsic motivation in the selected sample (0.261 (\*),  $p < 0.05$ ). The result indicates that in the studied organization both intrinsic and extrinsic motivations are positively correlated and increase in one will lead to the consecutive increase in the as well. Also the table values indicate that intrinsic motivation (0.778(\*),  $p < 0.01$ ) and extrinsic motivation (0.803(\*),  $p < 0.01$ ) have significant positive correlation with Motivation. We can clearly assume from the above table results that increase or decrease in intrinsic motivation or extrinsic motivation individually, will directly lead towards increase or decrease in employees over all motivation.

The matrix of correlation indicates that intrinsic motivation (-0.276(\*),  $p < 0.05$ ) and overall motivation (-0.260(\*),  $p < 0.05$ ) have significant but negative correlation individually with turnover intention and increase or decrease in both of the variables individually will cause different inverse effect upon turnover intention in the studied organization. I.e. if intrinsic motivation will increase, turnover intention will decrease and same will be the effect if over all motivation on turnover intention. Extrinsic motivation has also negative correlation but insignificant correlation with turnover intention i.e. (-0.120). Though the matrix values indicates insignificant correlation but still it does not neglects its existence and the effect of extrinsic motivation upon turnover intention may be minor but exists.

Table 3. *Pearson's Correlation of Employee's Motivation, Turnover Intention, Intrinsic and Extrinsic Motivation.*

Variables	Intrinsic Motivation	Extrinsic Motivation	Motivation	Turnover Intention
Intrinsic Motivation	1			
Extrinsic Motivation	0.261*	1		
Motivation	0.778*	0.803*	1	
Turnover intention	- 0.276*	- 0.120	-0.260*	1

\*.Correlation is significant at the 0.05 level (2-tailed).

### **Regression analysis between intrinsic motivation and turnover intention**

Table 4 shows regression analysis of intrinsic motivation and turnover intention. Values in the table show that there is a negative and significant relationship between the two terms .i.e. intrinsic motivation and employee's turnover intention of the employees in traffic police of Charsadda, which were selected for the study. The value of t-ratio is 2.22 (which is well above the critical level 1.96 for 5% significance (Joreskog & Sorbom, 1993),  $p < 0.05$ , and the overall significance is 4.93 which is greater than 3. Khan (2013) conducted a qualitative study for finding the relationship of job stress (independent variable) with Employees performance, job satisfaction and workload. The regression values he obtained were  $t > 2$ ,  $p < .05$  and F-value was greater



than 3. Despite this  $R^2$  value was .055 between job stress and employee performance,  $R^2$  value was 0.182 between job stress and Job satisfaction and  $R^2$  value between job stress and workload pressure was 0.041. As seemingly  $R^2$  continues a trend of expressing less value constantly, still, he has declared his results significant and also been recognized and approved. Similarly Stefan Seiler et al. (2011) conducted a study "An integrated model of factors influencing project manager's motivation". They used the same  $t > 2$ ,  $F > 3$  and  $p < 0.01$  approach. In the end after testing their primary variables they went for controlling the age factors in the studied organization and found that despite the main variables, age factor ( $R^2 = .032$ ,  $R = -0.178$ ,  $p < 0.01$ ) has also influence upon motivational factors for personal development. Age was also recognized on the bases of obtained  $R^2 = 0.096$ ,  $R = -0.309$ ,  $p < 0.01$ ) to have an influence on the importance of companies support for balancing workload and private life. They have assumed as well that other personal related variables i.e. Personality, Tenure, Career goals, Job satisfaction etc have an impact on motivational factors.

Based on these results, it can be concluded that employees intrinsic motivation play an important role in their turnover intention. As stated earlier and also is evident in the following table value(Beta) that the relationship between the mentioned variables is inverse in nature and increase in one will indicate decrease in the value of the other variable and vice versa. Though value for R and  $R^2$  are of low dimensions still it has showed the variance in dependent variable due to independent. The low value of  $R^2$  can be justified by keeping above stated literature in mind that there may be other variables involved in affecting the turnover intention in spite of intrinsic motivation.

Table 4 *Model Summary of Intrinsic Motivation and Turnover Intention*

<b>Model Summary</b>				
<b>Model</b>	<b>R</b>	<b>R<sup>2</sup></b>	<b>Adjusted R Square</b>	<b>Std. Error of the Estimate</b>
1	0.276	0.076	0.061	2.31050

a. Predictors: (Constant), intrinsic motivation

<b>ANOVA</b>						
<b>Model</b>		<b>Sum of Squares</b>	<b>Df</b>	<b>Mean Square</b>	<b>F</b>	<b>Sig.</b>
1	Regression	26.346	1	26.346	4.935	.030 <sup>a</sup>
	Residual	320.306	60	5.338		
	Total	346.652	61			

a. Predictors: (Constant), intrinsic motivation

b. Dependent Variable: Turnover intention

Coefficients						
Model		Unstandardized Coefficients		Standardized Coefficients	T	Sig.
		B	Std. Error	Beta		
1	(Constant)	13.106	1.910		6.863	0.000
	Intrinsic motivation	- 0.128	0.058	-0.276	-2.222	0.030

a. Dependent Variable: Turnover intention

### Regression Analysis between Extrinsic Motivation and Turnover Intention

It is clear from the values obtained in the table 5 that there is a negative but non-significant relation between extrinsic motivation and Turnover intention. As it is clear that in the following table i.e.4.7.2 the value of t-ratio is less than 2 ( $t > 2$ ),  $P < 0.05$ , and the overall significance value i.e. F value, is less than 3. The aforementioned values indicate that the relationship between extrinsic motivation and turnover intention is not a significant one.

Table 5 *Regression Model Tables for Extrinsic Motivation and Turnover Intention.*

Model Summary				
Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	0.120 <sup>a</sup>	0.015	-0.002	2.38615

a. Predictors: (Constant), Extrinsic motivation

ANOVA						
Model		Sum of Squares	Df	Mean Square	F	Sig.
1	Regression	5.029	1	5.029	0.883	0.351
	Residual	341.624	60	5.694		
	Total	346.652	61			

a. Predictors: (Constant), Extrinsic motivation

b. Dependent Variable: Turnover intention

### Coefficients

Model		Unstandardized Coefficients		Standardized Coefficients	T	Sig.
		B	Std. Error	Beta		
1	(Constant)	10.395	1.605		6.477	.000
	Extrinsic motivation	-0.047	0.050	-0.120	-0.940	0.351

a. Dependent Variable: Turnover intention

Akintoye (2000) stated that extrinsic motivation really helps in maintaining the working enthusiasm of workers and in its retention. He stated that among extrinsic motivators money is the most significant motivator for employees. He also argued that the presence of extra allowances, benefits and also salary increments along with the principle salary amount, greatly contribute in workers motivation.

### Regression Analysis between Motivation and Turnover Intention

Table 6 shows regression analysis of motivation and turnover intention. It is clear from the values obtained in the table that there is a negative(-beta) and also significant relationship between motivation and turnover intention as the value of t is greater than 2 ( $t > 2$ ),  $P < 0.05$ , and the overall significance i.e. F is 4.51 which is greater than 3.

Table 6 *Regression Model Tables for Motivation and Turnover-Intention.*

#### Model Summary

Model	R	R <sup>2</sup>	Adjusted R Square	Std. Error of the Estimate
1	.260	0.068	0.052	2.32103

a. Predictors: (Constant), motivation

#### ANOVA

Model		Sum of Squares	Df	Mean Square	F	Sig.
1	Regression	23.422	1	23.422	4.348	0.041
	Residual	323.231	60	5.387		
	Total	346.652	61			

a. Predictors: (Constant), motivation, b. Dependent Variable: Turnover intention

### Coefficients

Model	Unstandardized Coefficients		Standardized Coefficients	t	Sig.
	B	Std. Error	Beta		
1 (Constant)	13.290	2.119		6.271	0.000
Motivation	-0.066	0.032	-0.260	-2.15	0.041

a. Dependent Variable: Turnover intention

Henderson et al. (2008) have acknowledged two main categories of incentives for health worker motivation and retention. These are financial incentives (salary supplements, benefits and allowances) and non-financial incentives (improved working and living conditions, continuing education and professional development, supervision and managements etc). Rose and Miller (1984), Iverson and Roy (1994) and Van Brenkelen (1999) suggested that pertaining to job related factors, particular conditions of employment (e.g., salary, career opportunity etc) are important causes of turnover intention. So it indicates that motivation can be prevailed through different sources and each one has its own importance but if someone wishes to retain his/her employees and reduce their intention to quit, he/she has to keep their employees motivated. It is concluded that motivation plays a key role in retention of employees and has an inverse relationship with turnover intention and our study also affirms the related literature.

### Discussion

This study was undertaken to find the relationship between motivation and turnover intention. The obtained results state that motivation has a significant and negative relationship with that of turnover intention. Similarly the relationship of other subparts of motivation i.e. intrinsic and extrinsic motivation was also found out, which revealed that intrinsic motivation individually shows significantly negative relationship with turnover intention but extrinsic motivation despite continuing negative trend in relationship does give significant results.

Researchers like Adams and Hicks (2000) and Stoke (1999) have highlighted the importance of motivation for getting employees commitment. By reviewing the results it could be found that the study results are also in line with that of the mentioned researchers work, and emphasizing upon the motivation of employees for reducing turnover intention.

### Summary and Recommendations

This study was carried out with the purpose of finding the relationship of motivation, intrinsic motivation and extrinsic motivation with that of turnover intention, specifically in personnel of the studied organization at Charsadda locality.

To achieve the desired objectives, primary data was collected at first instance through pre-designed questionnaires. All the questions in there were close ended. In fact each questionnaire was a combination of three questionnaires' .i.e. intrinsic motivation, extrinsic motivation and turnover intention questionnaires. Questionnaire for intrinsic motivation was designed by Williams and Anderson (1991), extrinsic motivation questionnaire was again designed by Williams and Anderson (1991), and questioner for finding turnover intention was developed by Camman et al (1979). As the questions were close- ended, five point Likert scale was used to measure various views and responses.

After collecting the data its reliability was measured by using Cronbach's Alpha. Correlation among the variables was tested by the use of Pearson correlation. Due to qualitative nature of the data firstly variables are presented in the form of counts and percentages. For investigating the perception of respondents regarding each variable, Mean average score (MAS) were calculated and for further justification of the results, regression analysis was calculated at 5% level of significance.

However after measuring the Cronbach's Alpha for all the variables it can be stated that as for every individual variable the value was greater than .65 and even greater than 0.70, the data is reliable. Similarly correlation technique was used in order to examine the possible association and its nature among the variables. Keeping in view the correlation table values, it can be found that there is significant and inverse relationship between Motivation and turnover intention. Also the relationship between intrinsic motivation and turnover intention is significant and inverse. However the relationship between extrinsic motivation and turnover intention was not significant as per obtained data results but is inverse.

### **Recommendations**

- 1) The good working relationships should be preserved.
- 2) The government should impose such developmental policies, which could promote desire and opportunities for higher education among the employees.
- 3) Government should introduce a systematic development plan based on the education level of the employees.
- 4) Government and upper level personnel among the organization hierarchy should promote proper need base training, not only for employees professional development but also for creating awareness regarding social responsibilities.

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# DOES ORGANIZATIONAL LEARNING ORIENTATION MATTER? INVESTIGATING THE IMPACT OF LEARNING ORIENTATION ON SMES PERFORMANCE

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***Abstract.** The purpose of this study was to conduct an investigation into the link between organizational learning orientation and business performance in small and medium sized enterprises (SMEs). Data were analysed using sample of 213 SMEs belonging to the manufacturing sector in Sialkot, Pakistan. The findings indicated that learning orientation is positively and significantly associated with the organizational performance of SMEs. The implications and limitations of the study are discussed and possible future research directions are provided.*

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**Key words:** Learning orientation, Performance, SMEs, Sialkot, Pakistan

## Introduction

Business organizations are in continuous search to embrace and practice those strategies that could enable them to obtain greater performance and sustainable competitive advantage. Learning orientation is one of the key strategies that affects the creation of knowledge and results in shaping the behaviour of employees and improved performance (Dada & Fogg, 2014; Spicer & Sadler-Smith, 2006). According to Argyris and Schön (1978) organizational members are the main learning agents who disseminate the accumulated knowledge in the organization. This shared knowledge makes the organization effective in responding to the external and internal environmental changes. Learning orientation refers to the willingness and acceptance of learning by the members of an organisation (Rhee, Park, & Lee, 2010). In order to rapidly respond to the challenges posed by external environment, organisations are required to continuously learn new ideas, skills and processes (Kim & Atuahene-Gima, 2010). Embracing learning capabilities are crucial for ensuring long term survival and growth of the organisation (Bharadwaj, Varadarajan, & Fahy, 1993). Understanding these learning capabilities helps organisations in interpreting the effects of environmental changes and providing an insight to organisations to better deal with these changes (Daft & Weick, 1984). Learning has been highlighted in the strategic management literature as a fundamental strategic factor that improves the company performance and results in competitive advantage (Real, Roldán, & Leal, 2014).

Nevertheless, majority of the empirical studies on learning orientation-performance relationship have focused on the large-scale organizations in developed countries (Fang, Chang, Ou, & Chou, 2014; Wang, 2008). The SME sector has been paid less attention by the scholars in terms of learning orientation (Dada & Fogg, 2014; Sanzo,



Santos, García, & Trespalcacios, 2012). Moreover, research focusing on the learning oriented behaviour of SMEs in developing countries is scant. Thus, the present study fills the gap in the literature by examining the relationship between learning orientation and organizational performance in the context of SMEs in Pakistan being a developing country.

## **Literature Review**

### **Learning orientation**

Organizational learning has been considered vital for attaining greater organizational performance and sustainable competitive advantage for large organizations (Choi, 2012; Lukas & Maignan, 1996) and SMEs in particular (Dada & Fogg, 2014). Organizational learning is clearly linked to learning orientation in order to indirectly measure organizational learning. An organization is said to have learning orientation if it has a set of values that encourages its employees to create and use new knowledge and also promote a culture wherein proactive learning occurs (Sinkula, Baker, & Noordewier, 1997). Organisations undertake learning activities to increase their ability to effectively compete in the changing market through creation of knowledge. Learning orientation has been highlighted in the research as a mean for collection, interpretation, evaluation and dissemination of information for organizations (Moorman & Miner, 1998). Prior research has highlighted that an organisation's quest to obtain new knowledge reflects the presence of learning orientation (Sinkula *et al.*, 1997).

Notably, learning orientation is the basic mechanism to share the knowledge about the past experiences among the organisational members (Lipshitz, Popper, & Oz, 1996). The attitude and inclination of the individuals toward the process of learning play an important role in its effectiveness. According to Slater and Narver (2000), the organisation may change the attitude of the employees by taking steps like directing employees towards learning through introducing new mental models, ingenuousness, knowledge sharing, supporting the workers to try innovative methods to get their work done and discarding the obsolete methods.

A culture which is conducive to generative learning is developed when a particular organisation motivates and creates such an atmosphere wherein employees learn and enable them to think creatively or out of box (Baker & Sinkula, 1999; Fang *et al.*, 2014; Sinkula *et al.*, 1997). Here organisation is required to raise the learning level of internal employees either through counselling by senior employees or hiring experts with updated knowledge (Simon, 1991). According to Celuch *et al.* (2002), learning at individual level is required to make the firm market oriented. Learning orientation and market orientation jointly improve the capabilities of a firm and create superior performance (Eris & Ozmen, 2012). It is the learning orientation aspect of an organization that causes the creation of new knowledge and insights enabling the organisation to behave as the market demands and ensures its due share in the available market opportunities (Fang *et al.*, 2014).

Learning orientation consists of commitment to learning, open-mindedness and shared vision (Baker and Sinkula, 1999). “Commitment to learning is the readiness of the organization to change the way it does things by combining existing knowledge or incorporating new knowledge. It includes the acquisition, communication, acceptance and assimilation of the knowledge in the organization” (Jolly & Thérin, 2007, p. 237). Committed organizations consider learning as an important factor for the survival and growth of the organization. Open mindedness refers to questioning the traditional ways of viewing market information and seeking the new ways of looking at market phenomena (Troy, Szymanski, & Varadarajan, 2001). Open-mindedness injects new ideas into the firms, strengthens creativity and ability to yield new opportunities that favor product innovation (Calisir, Gumussoy, & Guzelsoy, 2013). Open-mindedness promotes firms to achieve competitive advantage and gain great organizational performance (Usaahawanitchakit, 2011).

Shared vision refers to an organisation-wide focus on learning (Sinkula *et al.*, 1997). Shared vision provides direction to organisational learning. It encourages the organisational members to use their potential and exhibit commitment to make the learning process successful (Day, 1994). Shared vision brings employees at a similar level of understanding. This commonness in understanding creates commitment and alignment with the learning direction taken by the organisation. This alignment is necessary for creating motivation and a sense of responsibility to learn among the employees (McKee, 1992).

### **Organisational performance**

Performance is the difference between the actual and the expected outcomes. Researchers generally use two methods to measure the organisational performance. One is subjective method and the other is objective methods. Generally, objective method measures the performance by three main indicators, i.e. growth, profitability and market share. These indicators can also be measured as non financial indicators. It is more appropriate to use non-financial indicators to bridge the gap created by the insufficiency of information (Dess & Robinson, 1984). Jantunen *et al.* (2008) recommend using subjective measures of performance because the collection of data becomes easier using subjective approach. Generally the managers/ owners of the firms hide the financial data and are reluctant to disclose the information to outsiders. Apart from this, subjective measures provide reliable, correct, and accurate measure while measuring the organizational performance from the perspective of SMEs (Escribá-Esteve, Sánchez-Peinado, & Sánchez-Peinado, 2008; Khan & Khaliq, 2014). Moreover, a positive correlation exists between the outcomes obtained from objective and subjective measures in the previous studies (Love, Priem, & Lumpkin, 2002). The study of Kirca *et al.* (2005) have identified four types of performance outcomes that are “organisational (financial) performance, customer related outcomes (customer satisfaction), innovative outcomes (innovation) and employee related outcomes (employee satisfaction). The current study is confined to only non-financial performance of the organisations, that are customer satisfaction, employees’ satisfaction, service quality, growth and innovation respectively” (p. 27) .

## Learning Orientation and Organisational Performance

Learning orientation facilitates the organizations to acquire knowledge to enhance organizational performance and gain sustainable competitive advantage (Baker & Sinkula, 1999; Bing & Zhengping, 2011; Celuch et al., 2002; Kaya & Patton, 2011; Slater & Narver, 1995; Suliyanto & Rahab, 2012). Organizations that are prone to accepting new ideas, skills and process are better able to efficiently respond to market environment changes (Baker & Sinkula, 1999; Calantone, Cavusgil, & Zhao, 2002; Fang et al., 2014) and results in maintaining greater firm performance and sustained competitive advantage in the long run (Alegre & Chiva, 2013; Hussain, Ismail, & Akhtar, 2015; Jiménez-Jiménez & Sanz-Valle, 2011). Organization that adopt and practice learning orientation are better able to adapt to the evolving business environment by developing new products that meet the emerging consumer needs (Lonial & Carter, 2015; Wang, 2008).

Some studies provide evidence on a positive relationship exists between learning and firm's performance. For example, Spicer and Sadler-Smith, (2006) reported that the relationship of the learning orientation on firm performance is positive. Keskin (2006) found a positive impact of learning orientation on innovation and firm performance in developing countries. Baker and Sinkula (1999) indicated that learning orientation has a direct effect on organizational performance. However, few studies reported the indirect relationship between learning orientation and performance. Frank *et al.* (2012) found that high level of learning orientation results in higher organizational performance. However, both highly dynamic environments as well as hostile environments absorb possible performance effects of a high learning orientation in SMEs. Rhee *et al.* (2010) indicated indirect relationship between learning orientation and performance. They found that learning orientation influences innovation performance, which in turn improves organizational performance. Lee and Tsai (2005) found that learning orientation effect market orientation positively that in turn has significant impact on innovativeness and performance. Lonial and Carter (2015) found learning orientation of SMEs as indicator of positional advantage which in turn is linked to firm performance. The literature presented above leads to the development of the following hypothesis:

*H1:* Organization's learning orientation is positively and directly related to organizational performance of SMEs

## Methodology

This study is a survey type study wherein the researchers have used a questionnaire for data collection from the target population. The questionnaire developed for this study has been administered personally to the 367 respondents through mail and self-visitations. The respondents of the study were the top management such as CEO, Director, and Managing Directors of the SMEs belonging to manufacturing sector of the Sialkot region, Province of Punjab, Pakistan.

This study used already tested, reliable and validated self administered questionnaires for data collection. For learning orientation 15 item scale developed by Sinkula *et al.* (1997) was adapted to measure the construct. The scale had been previously validated by several studies (Hakala, 2013; Nasution, Mavondo, Matanda, & Ndubisi, 2011; Real, Roldán, & Leal, 2012; Wang, 2008). Non-financial measures like employee satisfaction, innovation, customer satisfaction, service quality, and growth were used for measuring organizational performance and were adapted from Kirca *et al.* (2005). Non-financial measures were used for organizational performance because often managers or owners of the SMEs are reluctant to provide the financial data. Moreover, subjective measures provide correct, reliable and accurate information than objective measures (Escribá-Esteve *et al.*, 2008; Khan & Khalique, 2014). The survey instrument was based on 5-point Likert scale for the data collection. Recent studies on the Likert scale have shown that the optimal option for Likert scale is 5-points. The survey also consisted of demographic profiles of the respondents including gender, age of the firm, number of employees and sector of the organization (leather, surgical goods, sports etc). A total of 239 questionnaires were returned. Out of them, 26 questionnaires were discarded because those were found to be incorrectly filled. Thus, analysis has been conducted on the remaining 213 questionnaires. This constituted 58% response rate which is generally considered good for analysis.

Cronbach alpha reliability test was performed to check the reliability and internal consistency of the instrument. Researchers highlight that if the value of Cronbach alpha is more than 0.6 then it is considered good and all items of a construct can be analyzed by summing them up as one measurement. It was necessary to check for the reliability and internal consistency because though validated questionnaires were used, adaptation was made according to the cultural context. The reliability results indicate that the composite constructs (learning orientation, 0.768 and organizational performance, 0.926) are reliable and there is internal consistency in the items. Thus, the survey instrument was reliable and could be used in Pakistani context. The Cronbach alpha values were generated after the principal component analysis was performed.

## Analysis and Results

### Sample profile

The profile of respondent SMEs is provided in Table 1. The gender distribution indicates that 88 percent of respondents were male and only 12 percent were female.

Table 1 *Demographic of the Firms (N=213)*

Gender of Respondents		
	Frequency	Percent
Male	188	88.3
Female	25	11.7
Total	213	100

<b>Line of Business</b>		
Surgical Goods	12	5.6
Leather Goods	43	20.2
Electrical Appliances	50	23.5
Earthenware	26	12.2
Silver Ware	17	8.0
Garments and Apparels	47	22.1
Sports	18	8.5
Total	213	100.0
<b>Number of employees</b>		
Less than 25	30	14.1
25-50	63	29.6
51-75	65	30.5
76-100	37	17.4
More than 100	18	8.5
Total	213	100.0
<b>Firm Age</b>		
Less than 3 years	32	15.0
3 to 5 years	51	23.9
5 to 7 years	48	22.5
7 to 10 years	56	26.3
More than 10 years	26	12.2
Total	213	100.0

Majority of the respondent firms were from the Electrical Appliances manufacturers having frequency of 50 (23.5%). Garments and Apparels manufacturer firms are at second highest frequency with 22.1 percent of the respondents. Leather products manufacturer SMEs are at third highest participators with the frequency of the 43 (20.2%). In the firm age category, it was found that most of the firms were 7 to 10 years old (26.3%). The respondent SMEs were asked to indicate the number of full time employees working in their businesses. The results indicate that 93 enterprises (43.7%) employee up to 50 employees; while 65 enterprises (30.5 %) employ between 50 to 75 employees. The results further indicate that 37 enterprises (17.4%) have an

employee strength of more than 75 but less than 100 employees; whereas, only 18 enterprises (8.5%) has more than 100 full time employees. The employment trend indicates that majority of the enterprises can be categorized as small enterprises.

### Correlation

Pearson correlation was calculated to ascertain the relationship between the variables. The results are provided in Table 2. The results indicate that there exists a strong and statistically significant relationship between the variables of the study.

Table 2: *Correlation Matrix (N=213)*

No.	Variables	Learning orientation	Organizational Performance
1	Learning Orientation	1	
2	Organizational Performance	.875**	1

Note: P < 0.01 level (2 tailed)

### Hypothesis Testing

To test the hypothesis of the study, regression analysis was performed to find the direct effect of predicting variable (IV) learning orientation on the criterion variable (DV) of organizational performance. Table 3 provides the results of the subject analysis. These results demonstrate that learning orientation ( $\beta = 0.608$ ,  $t = 12.431$ ,  $p < 0.001$ ) has positive and significant relationship with the performance of the organization. Hence, these results support the current study hypothesis. It means these results validate such results in the previous studies (Sinkula *et al.*, 1997; Keskin, 2006; Spicer and Sadler-Smith, 2006; Michna, 2009; Rhee *et al.*, 2010; Frank *et al.*, 2012; Hakala, 2013).

Table 3 *Regression of Learning Orientation-Performance (N=213)*

Variables	Adjusted R-square	Beta	t-statistic	Sig.
Learning Orientation	0.420	0.608	12.431	0.000

Sig p < 0.001

### Discussion and Conclusion

This study examines how learning orientation can affect the organizational performance of SMEs in Pakistan. Significant conclusion from this study is that learning orientation has a significant positive effect on business performance. The results of the study conclude that with increase in the level of learning orientation, the degree of organizational performance also increases. The results of the study posit that strong learning orientation facilitates the achievement of sustainable competitive

advantage and yields greater organizational performance. The study also highlights that when organization stops learning; it may not be able to absorb the external pressure and would be badly affected. This study guides the owners/ managers of SMEs to promote and encourage learning in organization in order to ensure improved performance. The findings would also help them to better understand the effects of organizational learning through commitment to learning, open mindedness and shared vision of the employees on business performance. The study has limited sample size belonging to only Sialkot District of Punjab Pakistan. It is strongly advised that a larger sample size from SMEs operating in various districts of Pakistan should be taken in order to generalize the results of the study. Moreover, the longitudinal study is suggested to be undertaken in future for the findings of the study to be validated.

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# THE IMPACT OF MERGER AND ACQUISITION ON KARACHI STOCK EXCHANGE—TESTING SEMI-STRONG EFFICIENT MARKET HYPOTHESIS

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**Abstract:** *This paper particularly addresses the impact of mergers and acquisition (M&A) announcements on share prices in Pakistani stock market from 2006 to 2014. It uses event study method for a sample of 32 M&A announcements from both financial and non-financial sectors. The result shows that M&A declarations do not signal any significant information to Pakistani market. Therefore, the findings show statistically insignificant abnormal returns on announcements of M&A, however a significant positive abnormal return just before proclamation of merger and acquisitions is noted. Similarly, the bidder firms show significant share price reaction and also some gains before the announcement which may be because of leakage of information (Khan, 2011). While after the declaration both target and bidder firms experience losses but overall conclusion detects that the target companies get fewer abnormal earnings as compared to acquirer firms in case of acquisitions. The insignificant unexpected returns on announcement date of M&A do not support semi-strong form of EMH. The findings of this study help investors in devising their investment strategies based on the timing of important announcements by companies such as M&A.*

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Key words: Merger, Acquisition, Event Study, Semi-Strong, Efficient Market Hypothesis, Pakistan.

## Introduction

Merger and acquisitions (M&A) always play an essential part in external expansion of businesses. During the 5<sup>th</sup> M&A wave, amalgamation and possession extended all over the world, especially in Asia. Due to this technological growth and globalization in the world all corporations are trying to maintain their competitive position. That's why all firms need to build an appropriate M&A strategy in order to improve its performance and also maintain its existence for surviving in this competitive market. Several researches acknowledged that due to globalization advancement, a number of companies prefer the M&A as a means to broaden the company, advance existing production and increase their market share. The same fashion has been observed in Pakistan where large number of merger took place in many sectors especially in banking industry.

As an emerging market, according to analysis by Bloomberg, Pakistan ranked third in 2014 amongst the top ten best performing markets in the world and second the most mature stock exchange in south Asia. Besides this Karachi Stock Exchange (KSE, now Pakistan Stock Exchange, PSX; hereinafter PSX and KSE will be used interchangeably)<sup>1</sup> is one of the major stock exchanges in Pakistan. It revealed significant growth in few precedent periods.

This study analyzes the impact of M&A announcements on share prices on the KSE. The reason behind conducting study on the KSE is that a lot of work has been done on this topic in developed countries but very little is known about its influences in case of Pakistan. This study analyses cases of M&A from both financial and non-financial sectors. In addition, the main reason of choosing banking sector (financial sector) of Pakistan is recently experiencing regulatory changes in the industry. The State Bank of Pakistan has increased paid-up-capital for all banks operating in Pakistan from Rs.1 billion in 2001 to Rs. 10 billion in 2013 (Tauseef & Nishat, 2013). The increment in paid-up capital compels many banks to either merge with other small banks or being acquired by other banks. The last decade is considered as “merger and acquisition decade” in banking sector of Pakistan. Now, it is a suitable time to analyze the effect of M&A on share prices.

### **Problem Statement**

M&As have become increasingly widespread in the 1990's. According to the UN's World Investment Report (UN, 2000), worldwide M&A grew at an annual rate about 42% over the period 1980-1999 to reach \$2.3 trillion in 1999 where more than 24,000 M&A took place during that period (Liang, 2013). M&A activities have been a common form for more than four decades in North American and European markets. In Asia, most of the M&A activities have taken place after the Asian financial crisis in 1997 (cited in Liang, 2013, p. 3).

The stock markets of firms are affected due to different events including the announcements of M&A. This research analyzes the impact of M&A in banking sector of Pakistan over the period from 2006-2014.

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<sup>1</sup> Pakistan Stock Exchange (PSX) is the result of demutualization of three stock exchanges of Pakistan (i.e., Karachi Stock Exchange, Lahore Stock Exchange and Islamabad Stock Exchange) in January 2016. The old performance indicator KSE-100 index is still used for measuring the performance of PSX.

## **Objectives of the Research**

The main objective of this research is to analyze the effect of M&A on stock returns of listed firms of the KSE. The banking sector of Pakistan is of prime interest as many M&A took place in this industry due to increase in Minimum Capital Requirements which compel the banks to either merge or be acquired by other banks. The study can help in providing additional guidelines to decision makers by simultaneously planning at the time of merger and acquisition. The results can help shareholders in making investments decisions around M&A.

## **Theoretical Framework**

This study is used to judge semi-strong form of Efficient Market Hypothesis (EMH). This theory assumes that share prices are the true reflection of all available information in the market (Fama, 1970). EMH has three types: weak form, semi-strong form and strong form. Weak form of efficiency assumes that past share prices are embodied in today's share prices. Semi-strong EMH states that any public information should be quickly reflected in share prices in either positive or negative manner. While strong EMH assumes that all information, including past share prices, public information and private news, are available to all investors and no investor can beat the market (Fama, 1970). This research uses M&A events as public information to test semi-strong form of EMH. In case, there are unexpected returns on the day of M&A, it testifies semi-strong form of efficiency that public information (M&A announcements) reflects quickly in share prices.

## **Literature Review**

A significant amount of literature gives facilitation to know about the effect of M&A on stock returns (Gopaldaswamy, Acharya & Malik, 2008; Simões, Macedo-Soares, Klotzle & Pinto, 2012). It also gives assistance in order to know that how target and bidder firms are affected by it.

Liang (2013) examined the effect of M&A declarations of firms listed on the Hong Kong Stock Exchange from 2007-2012. For analysis, the researcher selected a sample of 44 firms. During this study, event study was applied for measuring abnormal returns. The study found that the acquiring firms achieved a constructive and momentous unexpected returns just 2 days pre & post of declaration dates. Correspondingly Dianita, Tarmidi, and Hadian (2013) also analyzed the impact of M&A proclamations in Indonesia from year 2005-2011 for 20 firms. Using the event study, the results showed significant abnormal proceeds on the declaration date and there was a significant Accumulated Abnormal Returns (AAR) prior to declaration of M&A events. Similarly, Padmavathy and Ashok (2012) analyzed the impact of merger announcements on stock price behavior in 2010 for a sample of 97 companies listed on the Bombay Stock Exchange. Again, as a method to analyze the results, event method was demeanor to discover AR. The event study method shows that M&A events failed to produce any unexpected returns for bidders.

In the same way, Mahmood, Aamir, Hussain and Sohail (2012) also observed the impact of merger and acquisition on post-merger life of 8 Pakistani companies for a sample of three years (2000-2002) using event study method. Here results indicated that in five companies the stock prices were affected positively while in two companies, one month after the merger, the results were negative. Moreover, no change in the price of one company has been found. Overall, the result specifies that M&A positively affects the stock values of corporations.

Likewise Gopaldaswamy et al. (2008) also carried out research in India to check stock value response of companies due to M&A declarations from 2000-2007. For analysis, 25 firms were chosen. On the basis of standard event study model the author found growing tendency in CARs for corporations and AR for firms before the time of announcements which again confirmed the insider keenness.

Ma, Pagan and Chu (2009) also examined the abnormal returns by selecting a total sample of 1477 firms from ten Asian stock markets.<sup>2</sup> The author exploits event procedure for measuring AR before and after the transactions in three event windows. The findings suggest that the financial benefits related with M&A were beneficial and it would be helpful in external growth of firms so it was highly recommended to managers.

Similarly, studies are also conducted in order to outlook the impact of M&A on target and bidder firms which illustrate sometimes gains for both firms (Sana & Nishat, 2013) but most studies demonstrate gains for target firms (Karnik, 2005; Manasakis, 2009; Shaheen, 2006).

Like Sana and Nishat (2013) examined the wealth effect of merger and acquisition of seven M&A events in banking sector in Pakistan over the period from 2003 to 2008. The authors divided the sample merger and acquisition transactions into three categories<sup>3</sup>. The investigation was carried out on the basis of standard event study model in order to measure the impact of M&A on the return of both bidder and target banks around 30 days event window of announcement dates. It pointed out statistically significant reactions and also the combined mean CARs for the target banks and bidder companies are both positive and statistically significant.

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<sup>2</sup> China, India, Hong Kong, Indonesia, Malaysia, the Philippines, Singapore, South Korea, Taiwan, and Thailand.

<sup>3</sup> The sample of M&A were categorized as, (1) Merger of Pakistani banks with the other domestic banks, (2) Acquisition of Pakistani banks by the foreign investors; and (3) Merger of Pakistani banks with the foreign banks operating in Pakistan.

Likewise Karnik (2005) also assessed value creation for target companies' shareholders in the Indian context. The author, using a sample of M&A spread across industries, compared the share prices of target firms before and after public announcements for open offer in relation to stock market index. The study found that the effect of public announcements is sometimes very short-lived. This study used differing time windows to test the hypotheses. It was found that there was a significant value creation for target companies' shareholders due to public announcements as well as relative to benchmark index, irrespective of the time window used for the study.

Manasakis (2009) also examined the shareholder wealth effects of M&A in Greek over the period (1995-2001) through means of typical event method. The study gave evidence of considerable abnormal returns by target investors due to declarations. While on other side, the bidders' companies had major losses in these transactions. The M&A in Greek market failed to initiate worth.

Shaheen (2006) explained acquisitions proclamation influence on share prices with the help of market model of event study. For sample the researcher only considered merger announcements after 1997 between two publicly traded companies. Out of 467, only 40 announcements were randomly chosen which shows that sample consists of 80 securities, which were large enough for assessing firms. Beta's parameter estimation period and post event phase were constant for all securities in this sample. The results indicated meaningful positive abnormal proceeds for target businesses on pronouncements date. Similarly Wong et al. (2009) also observed the effect of M&A announcements on pricing activities of bidding investors in six Asian countries over the period (2000-2007) for a sample of 95 mergers and 563 acquisitions. The authors used market model and regression model in order to find abnormal value for bidder and target firms. The study found drastically negative results for target companies while good for bidders.

Bashir, Sajid and Sheikh (2011) analyzed M&A influence on shareholder's wealth in 44 mergers companies of Pakistan from 2004-2010. Among these 44 mergers, 27 were in financial sectors and the rest occurred in non-financial industries. The findings of event study showed that target firms experience insignificant losses while the acquirer firms enjoy statistically insignificant gains.

In aforesaid literature it has been found that a lot of work has been done on the issue of merger and acquisition and its consequences in emerging and developed countries. All of which shows a mix pattern of results, some show positive impact (Ma et al., 2009; Sana & Nishat, 2013) and some show negative results on stocks (Manasakis, 2009; Wong, Cheung & Mun, 2009). As due to technological development and globalization all firms in the world are trying to sustain their competitive situation. The same pattern has been observed in various sectors of Pakistan with limited research. Although researchers have tried to determine the impact of M&A on stock returns (Bashir et al., 2011; Mahmood et al., 2012; Sana & Nishat, 2013) but that shows mix results which may be due to small sample used in the analysis. So this current study tries to take a

bigger sample of M&A cases in Pakistan. Hence, this paper examines the impact of M&A on stock return in Pakistani market from 2006 to 2014.

Based on the above literature, the following hypothesis can be derived for testing in the paper. The following hypothesis is meant to be proved by this study:

H<sub>0</sub>: AR=0: M&A has no significant impact on share prices around the announcement date.

H<sub>1</sub>: AR≠0: M&A has a significant impact on share prices around the announcement date.

### **Methodology**

A secondary data of M&A in Pakistan is taken from competition commission of Pakistan (CCP's website, 2014). There are total 70 mergers and 372 acquisitions in Pakistan over a period of 2006-14 (CCP's website, 2014). Due to non-availability of data, about 38 firms are not included in this study in case of mergers. So to carry out this particular research, a total of 32 firms both from financial and non-financial sectors<sup>4</sup> (see Appendix for more detail) are taken as a sample size which announced mergers and acquisitions from 2006-2014<sup>5</sup>. In these 32 firms, 22 firms are those companies which have been merged, five are the target and five are the bidder firms. The secondary data is collected from the KSE website, Competition Commission of Pakistan (CCP's website, 2014) and other related websites like Bloomberg, Business recorder and yahoo finance etc.

In order to test whether this M&A has any positive and negative impact on the KSE, an event study is employed to calculate any unexpected returns around these announcement dates (Brown & Warner, 1985; Dianita et al., 2013; Fuller et al., 2001; Sana & Nishat, 2013; Shaheen, 2006; Travlos, 1987).

An econometric way to determine the effect of certain events is termed as event study which is the most used empirical methods in finance and accounting for this purpose (cited in Eleclasson, 2010, p. 7). It observes response of market to an incident, where facts regarding incident are available as a pronouncement (Jogiyanto, 2007). Event study can disclose significant information regarding how stocks respond to an occasion and also facilitate in estimating other stock performance (Brown & Warner, 1985). Similarly, it also examines the information content of public news. Event study research is usually associated with rapidness of facts approaching market and how

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<sup>4</sup> There are 14 banks from financial sector while 18 companies from non-financial sector.

<sup>5</sup> Due to non-accessibility of data before 2006, only this period is selected.



quickly that information is reflected in share prices (cited in Dianita et al., 2013, p. 3). Hence, event study is used to measure the semi-strong form of efficiency.

It determines average unexpected returns pre & posts to the M&A announcements. Unexpected return is the difference between actual returns and expected returns. Two procedures of projected returns are considered in this study. First one is Market Adjusted Returns which is used for scheming excess returns and the second one is Market Model Returns which is used to measure abnormal returns (AR). The present study centers on market model in analyzing unexpected earnings in the region of broadcast date of mergers and acquisitions (Bashir et al., 2011; Dianita et al., 2013; Shaheen, 2006; Wong et al., 2009); as according to Strong (1992), market model is “the mainly well-liked” technique in scheming unexpected proceeds.

According to Dianita et al. (2013) the following steps are carried out for the measurement of unexpected returns. Firstly, to calculate the actual returns which are the gains from investment during period of observation. The share returns by logarithmic method are computed by:

$$R_{it} = \ln(P_{it}/P_{it-1}) \quad [1]$$

Whereas  $R_{it}$  is the daily return of firm  $i$  on day  $t$ ;  $\ln$  is the natural log;  $P_{it}$  is the share price of firm  $i$  on day  $t$ ;  $P_{t-1}$  is the share price of firm  $i$  on the previous day.

To inspect the impact of M&A on share prices daily data is used rather than their weekly and monthly complement. While using the daily share prices, however, various issues occur (such as thin trading etc.). In order to reduce these difficulties, this study obtains  $\ln$  of share prices to bring the data into normality (Strong, 1992). Furthermore, to address the econometric issue of normality, non-parametric tests (such Wilcoxon Signed Rank Test) are also used along with parametric tests.

Secondly, the market returns are calculated with the help of following equation.

$$R_m = \ln(KSE-100_t/KSE100_{t-1}) \quad [2]$$

Where, KSE-100 index is used as a proxy for market returns.

Thirdly, Excess Returns are calculated while comparing actual returns with market returns where KSE-100 index is used as a proxy of market returns. A 21-day event window is used for this purpose i.e.,  $t-10$  up to  $t+10$  days. The ExR is deliberated by the formula:

$$ExR_{it} = R_{it} - RM_t \quad [3]$$

Whereas  $ExR_{it}$  is the excess return of security  $i$  at time  $t$ ;  $R_{it}$  is the actual return on security  $i$  at time  $t$ ;  $R_{mt}$  is the return on the market index at time  $t$ .

Fourthly, another alternative method of calculating unexpected returns is abnormal returns where the expected returns are measured with the help of market model. Consequently, it is premeditated by:

$$E(R_{it}) = \alpha_i + \beta_i \cdot RM_t + \varepsilon_{i,t} \quad [4]$$

Where  $E(R_{it})$  indicates expected return on stock  $i$ ;  $\alpha_i$  is intercept of regression equation;  $\beta_i$  shows beta is assessment of systematic risk;  $RM_t$  is market index (here KSE-100 show market returns);  $\varepsilon_{i,t}$  is the residual error of the stock  $i$  and the unsystematic risk.

Under the method, the expected returns is calculated from estimated window which is prior to the the event window. For this purpose, time  $t = 0$  demonstrates event date; Event window =  $[-10, +10]$ ; Estimation window =  $[-110, -11]$  days.

For projecting the market model parameters ( $\alpha$  and  $\beta$ ), various estimation periods are considered in the literature. For example, Sulong et al. (2008) used 61 trading days; Travlos (1987) used 136 days; Liang (2013) included 120 days and Bacon et al. (2009) included 180 days in his estimation procedure. A parameter estimation period of 100 trading days is considered for this paper before the event window for estimation of  $\alpha$  and  $\beta$ . So when  $E(R_{it})$  is once measured then unexpected returns is considered by deducting the actual share returns from its expected returns.

$$AR_{i,t} = R_{i,t} - E(R_{i,t}) \quad \text{OR} \quad AR_{i,t} = R_{i,t} - (\alpha_i + \beta_i R_{m,t}) \quad [5]$$

While  $AR_{i,t}$  shows abnormal return of the stock  $i$  of the event period  $t$ ;  $R_{i,t}$  shows actual return of the stock  $i$  of the event period  $t$  and  $E(R_{i,t})$  indicates expected return of the stock  $i$  of the event period  $t$  calculated using market model.

Lastly, Cumulative Abnormal Returns is calculated with the following formula:

$$CAR_{it} = \sum_{t=-10}^{t+10} AR_{it} \quad [6]$$

Whereas  $CAR_{it}$  is cumulative abnormal return;  $AR_{it}$  shows unusual return of the stock and  $t$  is event period (i.e.,  $t+10$  to  $t-10$ ).

### Empirical Analysis

This section shows the findings of event study for a sample of 32 events of M&A. The findings are categorized into three sub-sections: (I) Behavior of stock prices of merged firms; (II) Behavior of stock prices of bidder firms; (III) Behavior of stock prices of target firms

#### Behavior of Stock Prices of Merged Firms

Table 1 shows the detail of both abnormal and excess returns of merged firms over 21-days event window.

Table 1 *Behavior of Stock Returns around Merger Events*

ABNORMAL RETURNS				EXCESS RETURNS		
DAY	Mean	Median	SD	Mean	Median	SD
t-10	0.0159 (0.379)	0.0013 (0.862)	0.0809	-0.0104 (0.573)	-0.0037 (0.651)	0.0832
t-9	0.0088 (0.624)	0.0060 (0.578)	0.0813	-0.0159 (0.577)	-0.0061 (0.702)	0.1284

t-8	0.0269 (0.026)*	0.0160 (0.040)*	0.0512	0.0184 (0.140)	0.0111 (0.187)	0.0549
t-7	-0.006 (0.648)	0.0018 (0.835)	0.0632	-0.0082 (0.643)	-0.0097 (0.198)	0.0799
t-6	-0.039 (0.292)	-0.0073 (0.251)	0.1680	-0.0181 (0.656)	-0.0019 (0.754)	0.1832
t-5	0.0482 (0.243)	0.015 (0.164)	0.1836	0.0213 (0.623)	-0.0023 (0.896)	0.1957
t-4	0.0183 (0.052)*	0.0105 (0.040)*	0.0420	0.0265 (0.128)	0.0109 (0.059)*	0.0764
t-3	-0.0131 (0.132)	-0.0084 (0.224)	0.0383	-0.0057 (0.734)	-0.0068 (0.424)	0.0751
t-2	0.0090 (0.437)	0.0121 (0.118)	0.0522	0.0144 (0.321)	0.0106 (0.118)	0.0650
t-1	-0.0146 (0.145)	-0.0108 (0.266)	0.0441	0.0118 (0.265)	0.0044 (0.385)	0.0470
t0	0.0214 (0.242)	0.0060 (0.465)	0.0813	0.0192 (0.274)	0.0020 (0.781)	0.0780
t+1	-0.0311 (0.407)	-0.0018 (0.889)	0.1684	-0.0254 (0.323)	-0.0081 (0.313)	0.1149
t+2	-0.0103 (0.255)	-0.0089 (0.251)	0.0403	-0.01110 (0.270)	-0.0070 (0.297)	0.0449
t+3	0.0226 (0.258)	0.0029 (0.578)	0.0891	0.0093 (0.674)	-0.0079 (0.538)	0.0996
t+4	-0.0102 (0.280)	-0.0156 (0.020)*	0.0422	-0.0200 (0.087)	-0.0220 (0.014)*	0.0509
t+5	-0.0083 (0.389)	-0.0076 (0.348)	0.0431	-0.0218 (0.104)	-0.0131 (0.251)	0.0588
t+6	-0.0047 (0.606)	-0.0011 (0.889)	0.0411	0.0002 (0.991)	-0.0081 (0.297)	0.0620
t+7	-0.0111 (0.157)	-0.0101 (0.211)	0.0346	-0.00246 (0.752)	-0.0056 (0.487)	0.0352
t+8	-0.009 (0.530)	-0.0020 (0.781)	0.061	0.0011 (0.936)	0.0044 (0.578)	0.0625
t+9	0.0104 (0.185)	0.0037 (0.385)	0.0347	0.0079 (0.606)	0.0007 (0.917)	0.0693
t+10	-0.0133 (0.260)	-0.0057 (0.487)	0.053	-0.0136 (0.384)	-0.009 (0.287)	0.0698

**Note:** In the above table the P-values are indicated through the brackets while point out the significance of the value at 5% critical value. Here for mean averages one-sample T-test while for median Wilcoxon Signed Rank Test is exploited in case of P-values.

The following findings can be extracted from Table 1. Firstly, it is observed that on merger declaration date, response of stock value to this news is not noteworthy

(Gopaldaswamy et al., 2008; Padmavathy & Ashok, 2012). The mean (median) abnormal return is 2.1 % (0.5952%) respectively but the p-value of abnormal return is higher than the 5.0% critical value i.e., 0.24 (mean) and 0.46 (median). Similarly, on day t0, the mean (median) excess return is at 1.92% (0.197%) but the p-value of excess return is insignificant which is 0.27 (mean) and 0.78 (median). So, the declaration date shows an affirmative mean (median) for AR & ExR but not significant at the 5.0% level. Due to which the null hypothesis cannot be rejected which means unexpected returns of share value on declaration date of merger are not significant. It shows that merger announcement fails to incorporate any information to interested parties on announcement date. This result also proves that the KSE is not efficient in semi-strong form as it is unable to incorporate new information quickly. One reason for this insignificant irregular gain to the market, on day of declaration, may be the leakage of information before formal declaration (Gopaldaswamy et al., 2008)

Secondly, Table 1 reports some significant values before announcement dates, for example, day t-4 and day t-8 shows that mean value of abnormal return is 1.825% and 2.69% respectively which is statistically significant because its p-value is 0.052 and 0.040 respectively at 5% critical values. Similarly, the median of both abnormal return and excess are significant on day t-4 (i.e., 1.048% with p-value of 0.04) and 1.089% (p-value 0.05) respectively. The table also shows that median of day t-8 is 1.60% and its p-value (0.04) is significant. So statistically considerable positive excess returns and abnormal returns are found immediately before the announcement day (i.e., day t-4 and day t-8). While for other rest of the days before declaration, the table indicates an insignificant mix of negative and positive results for abnormal returns and excess returns. So overall, the results propose a clue of information leakage to market prior to the information of declaration which may cause insignificant unexpected gains on day of declaration. This outcome is consistent with Gopaldaswamy et al. (2008, p. 99) findings who had done research in India and found a significant AR for businesses before the time of announcement which again confirmed the insider keenness.

Thirdly, Table 1 shows a large divergence from mean for both AR & ExR in form of standard deviation. In the vein of AR, it fluctuates as 3.4% on day t+7 to 18.3% on (t-5) day. Similarly in ExR, it differs from 3.5% to 19.5% on same days. This huge variability in returns may lead to insignificant unexpected returns on day t0.

Lastly, Table 1 also depicts that the mean (median) of abnormal returns and excess returns of post-announcement dates are statistically insignificant at 5% level except on day t+4 where the median of both abnormal return and excess return is statistically significant and have p-values of 0.02 (abnormal return) and 0.01 (excess return) at 5% significant level. On average, the findings indicate an insignificant negative mean (median) of both abnormal returns and excess returns during post-announcement period. The significant values after announcements further strengthen the argument of non-existence of semi-strong form of efficiency, as the market takes some times to incorporate new information.

## Share Prices Behavior of Bidder Firms

Table 2 shows the results of event study around 21-day event window of bidder firms.

Table 2: *Share Price Behavior of Bidder Firms (Acquisition)*

DAY	ABNORMAL RETURNS			EXCESS RETURNS		
	Mean	Median	SD	Mean	Median	SD
t-10	0.00162 (0.855)	0.002835 (0.862)	0.0186	0.00578 (0.426)	0.005717 (0.651)	0.01459
t-9	0.01301 (0.059)*	0.01300 (0.578)	0.0111	0.0219 (0.106)	0.01924 (0.702)	0.0236
t-8	-0.0803 (0.213)	-0.038 (0.040)*	0.1212	-0.0697 (0.223)	-0.03270 (0.187)	0.1080
t-7	0.0073 (0.516)	0.0069 (0.835)	0.0231	0.0124 (0.543)	0.01811 (0.198)	0.0416
t-6	-0.0027 (0.519)	-0.0025 (0.251)	0.0085	0.01339 (0.022)*	0.01174 (0.754)	0.00825
t-5	0.0125 (0.307)	0.0115 (0.164)	0.024	0.01151 (0.023)*	0.01230 (0.896)	0.00722
t-4	-0.0089 (0.143)	-0.010 (0.040)*	0.0120	0.0014 (0.933)	0.00738 (0.110)	0.0350
t-3	0.03006 (0.024)*	0.0303 (0.224)	0.0191	0.03508 (0.017)*	0.03323 (0.424)	0.01998
t-2	0.01723 (0.496)	0.0077 (0.118)	0.0172	0.0084 (0.554)	0.00996 (0.118)	0.0290
t-1	-0.0073 (0.707)	-0.0060 (0.266)	0.0407	-0.0070 (0.730)	-0.0036 (0.385)	0.0424
t0	-0.0072 (0.691)	-0.0069 (0.465)	0.0377	-0.0096 (0.473)	-0.0111 (0.781)	0.0271
t+1	0.0155 (0.233)	0.0156 (0.889)	0.0247	0.0087 (0.456)	0.00376 (0.313)	0.0235
t+2	-0.0083 (0.617)	-0.0087 (0.251)	0.0342	-0.0133 (0.453)	-0.0134 (0.297)	0.0357
t+3	-0.0228 (0.050)*	-0.0226 (0.578)	0.0183	-0.0206 (0.088)	-0.01713 (0.538)	0.02047
t+4	0.00750 (0.249)	0.0093 (0.020)*	0.0124	0.00314 (0.590)	0.00386 (0.014)*	0.01203
t+5	-0.0075 (0.579)	-0.0078 (0.348)	0.0277	-0.0133 (0.420)	-0.01397 (0.251)	0.0332
t+6	0.01080 (0.327)	0.0119 (0.889)	0.0217	0.00049 (0.963)	0.00071 (0.297)	0.02224
t+7	0.0143 (0.350)	0.0137 (0.211)	0.0302	0.01723 (0.153)	0.01446 (0.487)	0.02187

t+8	-0.0116 (0.436)	-0.0082 (0.781)	0.0299	-0.0096 (0.623)	-0.0076 (0.578)	0.0406
t+9	-0.0101 (0.288)	-0.0074 (0.385)	0.0184	-0.0105 (0.453)	-0.0013 (0.917)	0.0283
t+10	-0.0014 (0.902)	-0.0044 (0.487)	0.0237	0.0001 (0.992)	0.0020 (0.287)	0.0268

**Note:** In the above table the P-values are indicated through the brackets while \* point out the significance of the value at 5% critical value. Here for mean averages one-sample T-test while for median Wilcoxon Signed Rank Test is exploited in case of P-values.

Many findings come forward after a detailed assessment of Table 2. It also shows a mix pattern of results.

Firstly, the results of Table 2 are consistent with the results of preceding Table 1 which show inconsequential abnormal return (AR) and Excess returns (ExR) on announcement date (Shaheen, 2006). AR of both mean (median) is -0.72% (-0.68%) with its p-values of 0.69 and 0.46 which are higher than 5% critical level. Similarly, the mean (median) of excess return is -0.96% (-1.11%) while its p-value is not statistically significant at 5% critical level. So it means the null hypothesis cannot be rejected and there are insignificant negative returns on announcement date. It refers that the KSE is not efficient in its semi-strong form.

Secondly, table 2 shows some significant positive mean AR (1.3%) on t-9 at 5% critical level (Liang, 2013). Likewise there is significant AR and ExR on day t-3 as its p-value are 0.02 and 0.01 respectively. Similarly there is significant positive mean ExR on t-5(1.15%) and t-6(1.33%) with significant p-values. Only day t-4 and t-8 show significant negative median abnormal returns (i.e., -1.0% and -3.7%) at 5% significant level. Hence, on average, considerable positive response of share values being viewed before formal announcements which may be because of the insider trading (Gopaldaswamy et al., 2008). These results are similar to the findings of Liang (2013, p.18) “who examined M&A in Hong Kong Stock Exchange and found that 2 days prior and later than declaration date a positive and considerable AR by acquiring companies had been observed”.

Thirdly, table 2 illustrates the amount of standard deviation which shows variation from mean values from very low to very high for both abnormal and ExR values for example, it varies from 0.84% (day t-6) to 12.1% (day t-8). Equally ExR, it varies from 0.72% (day t-5) to 10.8% (day t-8). So it shows a lot of variability in returns.

Lastly, most of the mean (median) of abnormal and excess returns are insignificant in post-acquisition period (Padmavathy & Ashok, 2012). Some values are still significant after Day t0, for example, day t+3 which shows significant mean abnormal return and also day t+4 where the median of both abnormal (0.93%) and excess returns (0.38%) are statistically significant at 5% level (Liang, 2013).

Therefore, it has been noticed that mostly there is no positive significant share prices reaction as well as no such considerable gain for the bidders after the announcement of acquisition. While on other hand may be due to information leakage, a positive significant reaction before the announcement has been noticed (Gopaldaswamy et al., 2008).

### Share Prices Behavior around 21-day Event window of Target Firms

Here the Table 3 shows a comprehensive picture of the target firms results around 21-day of event window.

Table 3 *Share Price Behavior of Target Firms (Acquisition)*

DAY	ABNORMAL RETURNS			EXCESS RETURNS		
	Mean	Median	SD	Mean	Median	SD
t-10	0.0187 (0.425)	0.0153 (0.787)	0.0470	0.0214 (0.395)	0.01413 (0.590)	0.0503
t-9	-0.0186 (0.401)	-0.0161 (0.418)	0.0444	-0.0219 (0.383)	-0.02358 (0.418)	0.0501
t-8	0.0057 (0.770)	0.0034 (1.000)	0.0409	0.0046 (0.833)	0.01343 (1.000)	0.0459
t-7	0.0128 (0.476)	0.0127 (0.418)	0.0363	0.0174 (0.360)	0.01668 (0.418)	0.0377
t-6	-0.0276 (0.060)	-0.0289 (0.059)	0.0237	-0.0070 (0.603)	-0.004833 (0.787)	0.0277
t-5	-0.0112 (0.597)	-0.0077 (0.787)	0.0438	0.0051 (0.858)	0.0012 (1.000)	0.0599
t-4	-0.0012 (0.949)	0.00297 (1.000)	0.0380	0.0050 (0.698)	0.0071 (0.787)	0.0269
t-3	-0.0040 (0.830)	-0.0065 (1.000)	0.0387	0.0060 (0.835)	0.0031 (1.000)	0.0603
t-2	-0.0116 (0.503)	-0.0150 (0.590)	0.0351	-0.0013 (0.948)	-0.0026 (0.787)	0.0418
t-1	-0.0025 (0.963)	-0.0319 (0.590)	0.1132	0.0097 (0.858)	-0.0068 (0.787)	0.1130
t0	-0.0420 (0.307)	-0.0164 (0.590)	0.0803	-0.0342 (0.439)	-0.012 (0.590)	0.0891
t+1	0.0132 (0.388)	0.0192 (0.590)	0.0305	0.0167 (0.444)	0.0267 (0.590)	0.0439
t+2	-0.0056 (0.724)	-0.0056 (0.590)	0.0329	0.0017 (0.927)	0.0012 (0.787)	0.0385
t+3	-0.0008 (0.900)	-0.0017 (1.000)	0.0133	-0.0017 (0.902)	-0.0020 (0.418)	0.0287
t+4	-0.0133 (0.641)	-0.0064 (1.000)	0.0591	-0.0068 (0.823)	-0.001770 (1.000)	0.0640

t+5	-0.0092 (0.346)	-0.0033 (0.418)	0.01922	-0.0093 (0.505)	-0.002807 (1.000)	0.0284
t+6	-0.0051 (0.679)	-0.0099 (0.590)	0.0254	-0.0090 (0.392)	-0.01068 (0.418)	0.0211
t+7	0.0154 (0.283)	0.0132 (0.418)	0.0278	0.0064 (0.472)	0.006901 (0.281)	0.0180
t+8	-0.0051 (0.459)	-0.0067 (0.787)	0.01400	-0.00955 (0.280)	-0.009010 (0.281)	0.01710
t+9	0.0407 0.031)*	0.0415 (0.059)*	0.0278	0.04460 (0.010)*	0.04691 (0.059)*	0.02146
t+10	-0.0151 (0.139)	-0.016 (0.178)	0.01831	-0.0128 (0.335)	-0.01142 (0.281)	0.0262

**Note:** In the above table the P-values are indicated through the brackets while\* point out the significance of the value at 5% critical value. Here for mean averages one-sample T-test while for median Wilcoxon Signed Rank Test is exploited in case of P-value.

A number of findings can be extracted from table 3. First, there is a negative insignificant mean (median), abnormal returns and excess returns on the announcement dates for the target firms. This result is similar with finding of Bashir et al. (2011, p.263) “who had analyzed the impact of merger and acquisition in Pakistan and found that the target firms experience insignificant loss while the acquirer firms enjoy statistically insignificant increase in value.” It refers that market is inefficient in semi-strong form where new information (here M&A) is not quickly incorporated in share prices.

Secondly, Table 3 shows a very different picture of target firms from that of bidders. The table shows that there are insignificant negative mean (median) abnormal returns and excess returns on most of the days prior to the acquisition’s proclamation dates. Therefore, no major stock value reactions are noted before the pronouncement dates and no significant gains for target firms (Bashir et al., 2011).

Thirdly, Table 3 indicates that only on day t+9, there is significant positive mean(median) abnormal and excess returns after the announcements, i.e., with a mean(median) of abnormal returns are 4.0% (4.1%) and excess returns are 4.4% (4.6%) with significant p-values at 5% level. For rest of the days after announcements, the table presents insignificant negative abnormal and excess returns for most the days except a significant gain on day t+9 for both abnormal and excess returns. It may imply that acquisition announcements take some times to incorporate such information and supports inefficiency in semi-strong form.

Lastly, Table 3 demonstrates standard deviation values which show a greater departure from the mean values for both abnormal and excess returns. Such as for unexpected values, it varies from 1.3% on day t+3 to 11.3% on day t-1. Likewise in excess values, it varies from low 1.7% to a high of 11.3% on same days. This shows variability in returns due to which the abnormal returns may not become significant on day t0.



## Conclusion

This paper particularly addresses the impact of mergers and acquisition announcements on share prices in Pakistani market from 2006 to 2014. The current study uses an event study method in order to analyze the M&A announcements on stock returns of 32 companies listed on the KSE (or PSX). Out of these 32 announcements, 22 firms are those companies which have been merged, five companies are the target and five are the bidder firms. A number of findings can be extracted from the results of event study. Firstly, the results show statistically insignificant abnormal returns on the day of M&A announcements (Gopaldaswamy et al. 2008; Padmavathy & Ashok, 2012) for merger firms. One reason for these insignificant unexpected gains may be due to news leakage prior to the formal announcements because the firms show significant share price reactions just before the announcements (Liang, 2013; Khan, 2011). So the current outcome also proposes leakage of news to market immediately before the declaration of amalgamation (Gopaldaswamy et al., 2008). Alternatively, the findings indicate negative insignificant abnormal returns after the announcements of merger.

Secondly, the results of bidder firms in acquisition announcements are also consistent with the merger declarations, which indicate that on proclamation day there is no significant share price reaction and also the bidders do not gain any proceeds on announcement dates. On the other hand, there is considerable positive stock values reaction prior to announcements of acquisition for bidder firms which may be because of the leakage of information prior to formal announcements (Liang, 2013). Instead, on average, the findings indicate insignificant negative abnormal returns after announcements (Padmavathy & Ashok, 2012). Thirdly, the results depict a very different picture of target firms from that of bidders before and after the announcements of acquisition. So, on average, no major stock value reaction is documented before the pronouncement date and no significant gains for target firms (Bashir et al., 2011). On average, the conclusion detects that the target companies get less profit as compared to acquirer firms in case of acquisition of Pakistani firms.

Based on the findings, this paper does not support semi-strong form of EMH because there is insignificant unexpected return on the day of announcements of both merger and acquisition. However, there are significant abnormal returns before and after announcement date of M&A. The significant returns before the formal declaration may refer to leakage of information. Similarly, the significant values after announcements imply that the market takes time to incorporate any public news such as M&A. Further research can be found to apply dedicated statistically tests to check the insider trading, if any. In addition, the results have importance for investors to device the timing of their investment decision around announcements of important events such as M&A. This study suggests that investors can not earn abnormal profit on announcement date of M&A.

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## Appendix

### Panel 1: List of Mergers Carried out In Pakistan from 2006 to 2013

Name of Company of Merger	New name of the company / merged with	Date of merger
Mustehkam Cement Limit	Bestway Cement Company Limit	26/12/2013
Azam Textile Mills Limit	Saritow Spinning Mills Limited	21/2/2012
The Royal Bank of Scotland Ltd	Faysal Bank Limited	3/01/2011
Atlas Bank Limited	Summit Bank Limited	11/01/2011
MyBank Limited	Summit Bank Limited	6/07/2011
Stiefel Laboratories Pak (Pvt) Ltd	GlaxoSmithKline Pakistan Limit	14/01/2011
Askari Leasing Limited	Askari Bank Limited	10/03/2010
Al-Zamin Leasing Corp. Ltd	Invest Capital Invest. Bank Ltd	11/01/2010
Orix Investment Bank Limited	Orix Leasing Pakistan Limited	28/10/2009
AutomotiveBatteryCompany Ltd	Exide Pakistan Limited	4/05/2009
Network Leasing Corporation Ltd	KASB Bank Limited	17/02/2009
Shaheen Cotton Mills Limit	Shehzad Textile Mills Limit	21/12/2009
PICIC Commercial Bank Ltd	NIB Bank Limited	1/01/2008
Pirkoh Gas Company (Pvt) Ltd	Oil & Gas Develop.Company Ltd	4/09/2008
Nishat Apparel Ltd	Nishat Mills Limited.	11/11/2008
Suzuki Motorcycles Pakistan Ltd.	Pak Suzuki Motor Company Ltd	29/10/2007
International Housing Finance Ltd	KASB Bank Limited	22/11/2007
Dewan Hattar Cement Ltd	Dewan Cement Limited	22/10/2007
First Allied Bank Modaraba	Allied Bank Limited	25/08/2006
WORLD CALL Comm. Ltd	WORLD CALL Telecom Ltd	9/06/2006
Modaraba Al-Tijarah	Modaraba Al-Mali	11/07/2006
Pakistan Papersack Corp. Ltd	Thal Limited	4/08/2006

### Panel 2: List of Acquisitions Carried out In Pakistan from 2006 to 2013

Target company	Bidder company	Date of Acquisition
Habib Sugar Mills Limited	Bank Al Haibib Limited.	27-03-2009
MCB Bank Limited	Nishat Mills Limited.	16-06-2009
Royal Bank of Scotland	MCB Bank Limited	31-08-2009
Fauji Fertilizer Company Limited	PICIC Investment Fund.	04-01-2010
Royal Bank of Scotland Limited	Faysal Bank Limited.	10-08-2010

## **EFFECT OF ISLAMIC WORK ETHICS ON EMPLOYEE WELL-BEING, JOB STRESS AND TURNOVER INTENTION**

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***Abstract.** This study is focused on to investigate the effects of Islamic work ethics on employee well-being, job stress and turnover intention. Adopted questionnaire was used to collect data, from 201 Government School teachers of Peshawar District, Pakistan. Simple linear regression model was used to identify the effects of Islamic work ethic on employee well-being, job stress and turnover intention. Results show that Islamic work ethics has significant effect on employee well-being whereas insignificant effect on turnover intention and job stress. This paper also provides basic information regarding the amount of work carried on Islamic work ethics in business organizations of Pakistan mainly in education sector of Peshawar District, Pakistan.*

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**Key words:** Turnover intention, Islamic work ethics, employee well-being, Job stress.

### **Introduction**

The term ethics was defined Johnson (1984) as the science of conduct and behavior. In the field of ethics there are different schools of thoughts. One important school of thoughts is Islamic work ethics while second important is that of protestant work ethics. According to Weber (1958) in the majority of European countries economy protestant work ethics has been gained high importance in the expansion of capitalism. Evidently Weber has connected the success that accomplished by most European states to religious aspects (Yousef, 2000). He also suggests that Protestant work ethics mostly hold to promote the potency of free enterprise which is totally grounded over the values that economic gains and effort are focus to realize personal and spiritual achievement (Kidron, 1978; Mirels & Garrett, 1971).

Islamic work ethics represents the mixture of principles or beliefs which are based on the injunctions of the Quran Majeed, the recorded sayings of the Prophet Muhammad (S.A.A.W) and hard work of the people involved (Ali & Al-Owaihian 2008; Rice, 1999). Shakil, (2011) contends that Islamic work ethics encompasses economic, social and ethical scope. In every part of an individual's life, that includes her/his economic, business and daily life, one must replicate the Islamic work ethics. Islamic work ethics is the way that shape and also affects the contribution and participation of workers in their working place (Ali, 2008). Employees' behavior toward their work and also organization they work for can affect work ethics (Glazer, et al., 2004). The secular ethical or Western standards, Islamic moral and moral system principles are completely unrelated from one another. The Western secular system understand system of ethics that were brief also narrow minded usually these models projected a structure of ethics

divided from religion the total structure were founded on the values of their creators . Beekun (2005) explain IWE completely center of attention on the association of human to his Lord. Yousef (2001) says the similarity between in both the systems are moral which is focus on avoid unprincipled ways of wealth collection ,creativity and assurance, loyalty to work, collaboration and competitiveness at the place of work and keep away from un-ethical source of wealth collection.

### Research Question

What is the effect of Islamic work ethics on employee well-being, job stress and turnover intention?

### Theoretical Model

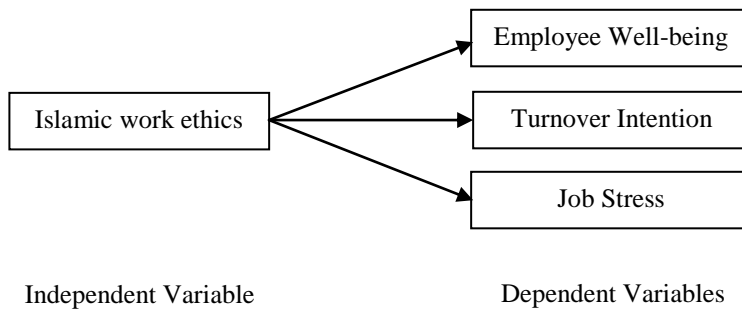


Figure 1: Theoretical Framework of the Research

### Hypotheses

H1: There is a significant effect of Islamic work ethics on employee well-being

H2: There is a significant effect of Islamic work ethics on turnover intention.

H3: There is a significant effect of Islamic work Ethics on Job Stress.

### Literature Review: Islamic Work Ethic

Quran Pak supports obtaining of technology and skills and discourages idleness. IWE highlight consultation and collaboration at place of work and devotion to work as a good quality. Islamic work ethics is totally based on intentions not just on results (Ali, 1988). Islamic work ethics is the way of gaudiness which inspiration employees how to get involved and manage in their place of work.

## **Islamic Work Ethics and Job Stress**

Long (1995) says that within the working surroundings stress is race between the source of demand and individual. Yousaf, (2000 & 2001) has two research studies on Islamic work ethics simultaneously. Ali, (1992, 1988) and (Rehman et al., 2006) research also vital on stress level and improving job satisfaction in place of work. Yousaf (2001) and Rehman et al., (2006) in conformity with Furnham (1984, 1991) have claimed so as to there is a job happiness and superior job declaration which results in a most happy worker in his research on Islamic work ethics. Stress and depression are insignificant associated with religion, (Fehring et al., 1987). Koenig et al., (2004) suggested that energetic workers always tend to work high with less antagonism and great expectations. Management should realize the concept of work ethics and speed up the development growth and try to attract the employees together physically and spiritually (Whittington & Diddams, 2003).

## **Islamic Work Ethics and Turnover intention**

Turnover intention of worker has great impact on organization working. Islamic work ethics research suggests, that workers accepting Islamic work ethics have lesser turnover rate (Shakil, 2011). Hence, it is easy to conclude that such workers have been found more happy, highly involved in job. Rokhman (2010) says IWE presented insignificant association with intention to leave.

Rokhman (2010) suggested that those workers who chase Islamic work ethics and contain powerful belief on Islam and all at once they express job satisfaction, low turnover intention, more managerial obligation are found. The most important parts of ethical values and Muslims attitude are Islamic work ethics; therefore staffs that are more level in IWE are higher job participation, job happiness and intention to leave.

## **Islamic Work Ethics and Employee Well-being**

About justifiable wages to help the workforces the Holy Prophet has said a lot about work ethics. He says: before their sweat dries pay wages to your workers. Ali, (1988) claimed that rise your employee's moral and due to this, it will offer them authority to right their outcome, and will not made them unneeded and not to be unfaithful to the assets at hands and it is a guarantee to reject your power, or deceive the expectation. He also mentions extension of aliments which supports them to keep away from poverty to the fact of education. According to Ahmad, (1971) the aim of the Islamic structure of business are not mainly capital oriented, consequently are founded on the ideas of achieving a good life and human gladness.

## **Methodology: Population and Sampling technique:**

In District Peshawar, 9960 Government school teachers are working, therefore the population of our study is 9960. Through adopted structure questionnaires the data were collected from 201 Teachers of the subject schools in District Peshawar, Pakistan. According to Sekran (2003) for the population of this magnitude there should be 370 respondents. Therefore, we distribute 400 questionnaires in the target population. The return rate of questionnaires was 50.25%.

## Analysis and Results

In the current study 201 respondents were selected for data collection, for this purpose we divided all respondents in classification as gender, age, education and experiences, among these respondents 61 were female respondents (30.34%), and 140 respondents were male(70%). Mostly 30-40 years respondents group were in majority. Only 1% respondents having intermediate, respondents having Bachelor degrees were about 35.8%, likewise respondents having Master and M.Phil were (56.5%) and (4%) respectively. Similarly there were high experienced teachers among all the staffs/ teachers so respondents having 1-10 years experienced are (56.5%) 21-30 years experienced were held only (15%) and 11-20 teachers were about (28.3%) among all these teachers only one respondent got experienced more than 30 years. The demographics characteristics are as follow in table no table (i).

Table 1 *Demographic of Respondents*

	Description	Frequency	Percentage %
<b>Gender</b>	Male	140	70
	Female	61	30.34
<b>Total</b>		201	100%
<b>Age</b>			
	20-30	65	32.3
	31-40	74	32.3
	41-50	53	26.5
	51-60	9	4.5
<b>Total</b>		<b>201</b>	<b>100</b>
<b>Qualification</b>			
	Intermediate	2	1.0
	Bachelor	72	35.8
	Master	119	59.5
	M.Phil	8	4.0
<b>Total</b>		<b>201</b>	<b>100</b>
<b>Experience</b>			
	1-10	113	56.5
	11-20	57	28.3
	21-30	30	15.0
	31-40	1	0.5
<b>Total</b>		<b>201</b>	<b>100</b>

Table 2 *Reliability Statistics*

No of Variables	Items	Alpha Score	Reliability
Islamic work ethics	17	0.65	Reliable
Job stress	13	0.81	Reliable
Turnover intention	3	0.71	Reliable
Employee well-being	18	0.60	Reliable

Standard: Hair et al (2003).



## Measurements

17 Items scale of Islamic work ethics was used and this scale was developed by Ali (1988). Five Likert scale was intended for responses; which range from strongly disagree to strongly agree. Similarly for job stress (13) items scale was used which was developed by Parker and Decottis, (1983). Horner and Hollingsworth (1978) uses (3) items scale for turnover intention, like wise Ryffs (1995) developed (18) Employee well-being items scale.

Table 2 shows means of all variables i.e., Islamic Work Ethics means (3.75), job Stress means (3.28) Employee Wellbeing means (3.57) and turnover intention means were (2.56). IWE means and EWB were high which described that employees are highly motivated and happy. Similarly Job stress and Turnover intention means were low, which describe that staffs have no stress and are not willing to leave their current organization.

Table 3 *Means of all variables*

No of variables	No of items	Means
Islamic work ethics	17	3.75
Employee well-being	18	3.57
Turnover intention	3	2.56
Job stress	13	3.28

## Regression Analysis

Table 3 explains that (1.4%) variations occur in the dependent variable. Y = Job Stress was described by independent variable. X = Islamic Work Ethics. The overall model was insignificant as P-value is greater than 0.001, which is (.097). Similarly explains that (1.7%) variations occur in the dependent variable. Y = Turnover Intention was described by independent variable. X = Islamic Work Ethics. The overall model was Insignificant as P-value is greater than 0.001, which is (.064). Also table 3 shows that (18%) variations occur in the dependent Variable. Y = Employee wellbeing was described by Independent Variable, X = Islamic Work Ethics. The model was significant as P-value was less than 0.001, which is .000.

Table 4 *Regression Analysis*

Model	R	R square	Adjusted R square	F	Standard error	B	Sig
1	.118a	.014	.009	2.775	.701	.118	.097**
2	.131a	.017	.012	3.476	1.06	.131	.064**
3	.427a	.183	.178	44.213	.374	.427	.000***

P<0.10; \*\*P<0.001\*\*\*

- a. Dependent Variable: Job stress
- b. Dependent Variable: Turnover Intention
- c. Dependent Variable : Employee well-being

### Discussion

The main idea of this research is to examine the effects of Islamic work ethics on employee well-being, turnover intention and job Stress. 401 questionnaires were divided amongst different government schools Teachers of District Peshawar; which results shows that employees are satisfied due to high level of Islamic work ethics also shows by their means. Likewise employee well-being score were also high, as shown by teachers highly satisfied and happy from their from current job, similarly job stress and turn over intention aggregate means were low, which shows that teachers have no turnover intention and no stress at workplace due to Islamic work ethics. All the hypotheses were supported by prior researches of Rokhman (2010); Shakil (2011) and Ajmal (2014).

### Conclusion

This study investigated the effect of Islamic work ethics on employee well-being, job stress and turnover intention. Finding of the study suggested that Islamic work ethics is very necessary for organization. When an organization follows Islamic work ethics, their employees will highly be motivated and loyal towards organization. Similarly Islamic work ethics also leads towards less stress and low turnover intention.

This study provides some important recommendations for managers and academicians. For managers it is recommended that they should develop such an environment where employees can follow Islamic work ethics, which ultimately will result motivation and loyalty towards organization. While for academicians it is recommended to study other HR practices with Islamic work ethics in order to get insight and credible results.

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## THE MEDIATING ROLE OF CAREER DEVELOPMENT IN ITS ANTECEDENTS AND OUTCOMES: EMPIRICAL EVIDENCE FROM PAKISTAN

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**Abstract:** *The impression of strengthening human capital to promote innovation and creation by planning the careers of organizational members in light of HRM practices and policies and to develop distinct mentalities, competencies and skills with the sole objective of providing a series of novel services and products has been getting importance. The current paper dig into the importance of career planning along with the career management as input for the career development and career commitment, and career satisfaction as the output of this relationship. A sample of 395 teaching staff of the colleges of Malakand Division of Khyber Pakhtunkhwa, Pakistan was randomly selected for the current research. To test the hypotheses of the study, structural equation modeling as a statistical technique for analysis of the empirical data was employed. Empirical results supported all the hypotheses of the study. These results illustrated that career planning along with the career management are very important roots of the career development which further engenders career commitment and career satisfaction. These results also validated the mediating role of career development in the relationship of career management and career planning on the one hand as antecedents and career commitment and career satisfaction as outcomes on the other hand. The study has uniqueness in the sense that the study is the first one that tests these hypotheses in colleges in Khyber Pakhtunkhwa. And that is why the study has both academic and practical implications. At the end a few recommendations has been put forwarded for future research.*

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**Key words:** *Structure equation modeling; career development; career planning; career commitment, career management, and career satisfaction.*

### Introduction

Our current globalized world of business is characterized by continuous and unavoidable changes that are taking place on daily basis leading to downsizing/rightsizing processes and restructuring, acquisitions and mergers, and technological

progressions to deal with the active pressures of globalization (Baruch, 2004; Greenhaus, Callanan, & Godshalk, 2009). Such constant shifts in the organisations have increased the level of importance for managing people at work, and specially, the managing and planning of their employment careers (Baruch, 2004). Career related issues are critical because they are matters of concerns for both the employee and employer. It is a composite process and the related theories of this composite process came into being in 1950s in the work of Anne Roe, John Holland, Eli Ginzberg, Donald Super and David Tiedeman (Herr & Shahnasarian, 2001). Career development involves a planned, formalized, and organized effort to create equilibrium between the organization's work force requirements and individual's career needs. Literature on careers in the 1990s remained focused on the practices of career development covering a widespread range of career related issues, organizations and populations (Adekola, 2011).

Career is a lifelong process composed of some patterned work related experiences. These experience inter alia, job positions, work related decisions, works related activities or duties; and subjective interpretations of job and associated events, such as work aspirations, values, expectations, needs, wants and feelings about any specific work, related to a class of individual is called as career (Greenhaus et al., 2009). Evidently, only a job is not a career, it is the collective name of a process, attitude and behaviour, and a situation in an individual's work life with the aim to accomplish some work related goals. According to Baruch (2004), although career is the attribute of an individual, it is the responsibility of the organisation to plan and manage the career of their employees and therefore, is a joint responsibility of taking care of the career management for maximum benefit for both. Proper investment in the career planning and career management of individuals enables them to harvest the fruits of such investment by achieving in the form of career development. According to Greenhaus et al. (2009) the development of career is a continuous process by which individuals move on with a chain of steps, every step is characterized by a comparatively distinct themes, issues, and unique set of tasks.

Organizations take initiatives for career planning and career development with the purpose to enhance the experiences of their employees with the ultimate aim to enable them to have proactive style of responsibility for their own promotion and progression in their career (Ababneh, 2013; Martin, Romero, Valle, & Dolan, 2001). It has been acknowledged that a properly structured career development system helps organizations to retain their valuable personnel with more developed skills, knowledge, and enhanced competencies. This further enables these organizations to equip themselves with motivated and retrained employees, find themselves in a better position to take informed decisions on compensation and succession planning ensuring in a well engaged and productive manpower (Kapel & Shepherd, 2004; Kaye, 2005). Keeping in view these theoretical perspectives this paper attempts to empirically test career planning and career management as antecedents and career commitment and career satisfaction as outcomes with the mediating role of career development in public and private colleges' context.

## Model of Career Development

Figure 1 represents the conceptual model for the current study. The variables are interlinked and present a mediation role for career development. Each arrow in the path diagram represents a distinct hypothesis. The subsequent discussion carries discussion on the hypotheses.

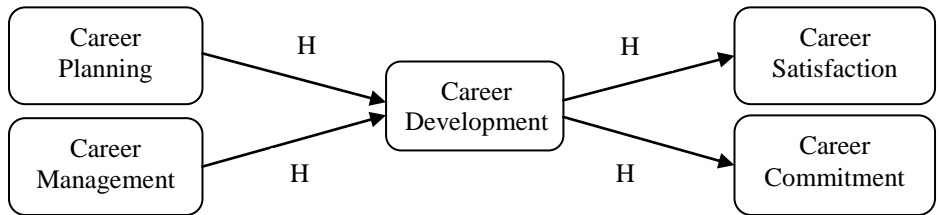


Fig. 1 Conceptual Model of Career Development

### Career Development and Career Planning

Career development has critical importance in the relationship between the employees and their employer. No doubt, career development is an individual initiative, organisations set up mechanisms, systems and structures, as well as processes to nurture career development initiatives among personnel (Adekola, 2011); the impression of individuals pursuing their careers and molding, developing and shaping them with the objective to get maximum benefits, has received great attention in the present age. It is imperative for them to make career planning as an intentional activity for equipping themselves with personal knowledge, skills, strengths, create opportunities, overcome constraints, consequences and choices, and planning for education and work, and associated developmental experiences to devise planning to achieve career goals (Ababneh, 2013). In the light of this discussion first hypothesis is presented:

*H1: Career planning of employees' leads to their career development.*

### Career Management and Career Development

The second mostly quoted antecedent of career development is the career management. When individuals plan their career aims and goals, they need knowledge, skills, and competencies to execute them with appropriate career management practices. Otherwise stated, forthcoming stage after career planning will be its execution via suitable career management drills. It is clear that career management is a continuous exercise of creating, developing, organizing, implementing and monitoring career plans and strategizing them by the employee itself, or together with the employer (Greenhaus et al., 2009). Surely, for any living organization career management is an ongoing activity of work life. A well-managed career management can have positive effects on employees like promoting and encouraging spirits of fulfillment while ill-managed career management and poor career decisions can have negative effects on individual's

sense of wellbeing. Similarly, continuous flux of change in business direction and strategies, mergers and acquisitions, organizations' downsizing, and technological innovations, needs continuous career management (Greenhaus et al., 2009). It is claimed that most of the employees can arrive at informed decisions if they have effective career management system. Any initiative of career management provides a link between institutions and its employees and strengthens the bond, as institutions strive to couple an employee's interests and capabilities with institutional opportunities through some well-planned program including activities such as job enrichment, job enlargement, job rotation, career counseling, etc. (Martin, et al., 2001). Effective career management practices will help in gathering proper feedback and this feedback further help the individuals in developing their knowledge and skills, promote employee insight, goal and strategy development (Greenhaus et al., 2009; Martin et al., 2001). In the light of this discussion second hypothesis is presented:

*H2: Career management employees' leads to their career development.*

### **Career Development and Career Satisfaction**

Career satisfaction has great importance in an employee physical, psychological, and social well-being. It has significant and a positive impact on the output of an employee (Afonso, Ramos, Saraiva, Moreira, & Figueira, 2014). This critical variable in organizational behaviour represents an overall summary of how a person feels about a lifetime of work. Organizations are serious about employees' career development as it is considered one of the effective ways of developing and retaining employees (Kong, Cheung, & Song, 2012). According to Greenhaus et al. (2009) it is the collectivity of satisfaction that individuals get from the extrinsic and intrinsic facets of their careers, promotion and increase in pay, and developmental opportunities. According to Kong, et al. (2012) it is an important predictor of career success both subjective and objective. External or objective career success relates more or less to some tangible indicators like salary, promotion, etc. (Arthur, Khapova, & Wilderom, 2005). Researchers (e.g. Arthur et al., 2005) consider subjective career success an increasingly important and is one of the factors that contribute significantly to career success. In the light of this discussion third hypothesis is presented:

*H3: Career development of employees' will have positive effects on their career satisfaction.*

### **Career Development and Career Commitment**

Career development has many outcomes. Career commitment is one of them. Career development opportunities affect an employee's personal career objectives, identification with, involvement in and attachment to those objectives. Career commitment is the intensity of an employee's motivation towards his or her work in their career (Noordin, Williams, & Zimmer, 2002). Institutions that help and assist their employees by providing them career related information well in time, it basically narrow down the focus of their employees and bond them more tight to their institutions, hence becoming committed towards their career. As institutions are subject



to more flux and become less capable of guaranteeing employment security hence commitment to an internally defined career may become a significant source of occupational meaning and continuity (Colarelli & Bishop, 1990). Therefore, career development would be fundamental for career commitment and career progression (Noordin et al., 2002). Career development opportunities and initiatives provided by the organization strengthen employees' commitment. According to King (1999) some psychological forces like self-insight, resilience and self-identity in pursuing career aims and objectives constitute prime components for career commitment, motivation, cohesiveness, consensus, and for strengthening cooperation in institutions. In the light of this discussion our fourth hypothesis is:

*H4: Career development of employees' will have positive effects on their career commitment.*

### **Rationale of the Study**

Career issues have got centrality in the relationship between employees and employers. Any HR intervention that affects this relationship is very pivotal. Though variables in this relationship may have common names, social and cultural development of these variables differs from culture to culture and from organization to organization. Studying these constructs in different organizational setups and validating hypotheses therein is very essential. These hypotheses have been tested in developed countries and in bits and pieces. This study is the first attempt to test these hypotheses through empirical data from the colleges in Khyber Pakhtunkhwa which is a developing part of a developing country. The results may have great academic and practical implications.

### **Method**

#### **Population and samples for the study**

Population for the current study is all the teaching staff of colleges of the Malakand division of Khyber Pakhtunkhwa, Pakistan. Simple random sampling technique has been employed to cover the approximately 2200 population. A total of 750 employees, lecturers, assistant professors, associate professor, and full professors within these colleges were sent the survey questionnaire. The questionnaire has a covering letter wherein the purpose and objectives of the research have been explained. A total of 415 employees returned the filled in questionnaires which made 55% response rate. Out of these 20 questionnaires were discarded due to missing data, hence the analyses were run on the remaining 395 which represented a participation rate of 53%.

#### **Measures**

Two main measures have been used: first consists of demographic information on gender and rank of the employees; the second one is aimed at measuring the five career constructs i.e. career management, career planning, career development, career commitment, and career satisfaction. For the five career constructs, five point Likert scale ranging from 1 (strongly disagreed) to 5 (strongly agreed) has been employed.

## Demographic profile of the respondents

The frequency of respondents by gender is enlisted by Table 1. It is clear from table 1 that male participants dominate with 82% (n=324), while female participants are 18% (n=71). Similarly, table 2 presents the frequency of respondents by age. The statistics in table 2, it is clear that age group 25-35, having 52.2% (n=206) is the dominant group. This is followed by the age group 36-45, having 25.8% (n=102). The age group 46 and above has 20% (n=79) share in the collected data. There are 8 respondents who left the age column in the questionnaire blank.

Table 1 *Gender of the Respondents (N=395)*

		Frequency	Percent	Valid %	Cumulative %
Valid	Male	324	82.0	82.0	82.0
	Female	71	18.0	18.0	100
	<b>Total</b>	<b>395</b>	<b>100.0</b>	<b>100</b>	

Table 2 *Age of the Respondents (N=395)*

		Frequency	Percent	Valid %	Cumulative %
Valid	25-35	206	52.2	53.2	53.2
	36-45	102	25.8	26.4	78.0
	46 and above	79	20.0	20.4	100.0
Missing System		8	2.0		
	<b>Total</b>	<b>395</b>	<b>100</b>		

Table 3 presents the information regarding designation of the respondents. It is clear that lecturer is the dominant group, having 59.9% (n=233), followed by the group of Assistant Professor (n=87) with 22.4%. Associate Professors share 15.2% (n=59), and Professors with 1.5% (n=6), followed by Other (n=4) with a percentage of 1. Six respondents (1.5%) did not reveal their designation.

Table 3 *Designation of the Respondents (N=395)*

		Frequency	Percent	Valid %	Cumulative %
Valid	Lecturer	233	59.0	59.9	59.9
	Assistant Professor	87	22.0	22.4	82.3
	Associate Professor	59	14.9	15.2	97.4
	Professor	6	1.5	1.5	99.0
	Others	4	1.0	1.0	100.0
	<b>Total</b>		<b>389</b>	<b>98.5</b>	<b>100.0</b>
Missing System		6	1.5		
	<b>Total</b>	<b>395</b>	<b>100</b>		

## **Confirmatory Factor Analysis**

Since the model for the study has interdependence, and to measure and assess the constructs and the hypothesized relationships in such cases, the best statistical technique recommended by the researchers is Structural Equation Modeling (SEM). In addition, the hypotheses of the model are very common, here they are tested in a new setting, hence confirmatory factor analysis is needed. Keeping these aspects in mind, the researchers employed the same. The application of this technique is due to two reasons “1) it provides a straight forward method of dealing with multiple relationships simultaneously while providing statistical efficiency; and 2) its ability to assess the relationships comprehensively and provide a transition from exploratory to confirmatory analysis” (Hair, et al., 2006, p. 578). Through this model testing procedure, the goodness-of-fit between the hypothesized model and the sample data is searched out. The researchers have applied the hypothesized structure model to the empirical data to test as to what extent the observed data fit to the restricted structure. For the validity of the model the researchers have employed five commonly used fit indices i.e. CFI, GFI, RMSEA, RMR and CMIN/DF.

## **Career planning**

In data collected, respondents have recorded their perceptions regarding the current status of career planning in the career development process. The items for the measurement of this construct were taken from Gould (1979), King (1999). Five point Likert scale ranging from (1) for Strongly Disagree to (5) for Strongly Agree has been employed. The construct has been measured with 11 items. The scale has been checked for its reliability with the help of Cronbach Alpha which is 0.85.

While conducting CFA for this construct, the results of the initial model with eleven indicators were not found with some low values for the fit statistics. Therefore, the model was looked into in the light of recommendation of the modification indices. By detailed assessment of the values it was found there that CrPIng-3, CrPIng-5, and CrPIng-11 indicators are creating problems as they were highly correlated with other indicators. They were, therefore, dropped and the model was run again. The results of the CFA after deleting these indicator are reported in Table 4.

## **Career management**

The participants provided data about the presence of career management and importance of career management in these colleges based on their perception. Career management practices were measured by adapting scales from Lee and Bruvold (2003), and Chen, Chang and Yeh (2004). Five point Likert scale was used. The reliability estimates of the six items had Cronbach alpha value of 0.87.

CFA was conducted for this construct with six indicators. The results of the initial model did not demonstrate good fit in the light of the fit indices. The model was, thus, looked into in the light of recommendation of the modification index. By detailed assessment of the values it was found there that CrMgnt-2 indicator was creating problems as it was highly correlated with other indicators. This indicator was,

therefore, dropped and the model was run again. The results of the CFA after deleting this indicator are reported in Table 4.

### **Career development**

The mediating construct was supposed to measure whether career development has any role between the antecedents and resultant variables. The items (five in total) for the construct has been developed by adapting from Coachline's survey (available: <http://www.orghealth.com/cdn/>). The five items had a Cronbach alpha value of 0.87.

CFA was conducted for the construct of career development having five indicators. The results of the initial model were not found satisfactory in the light of the fit indices. By detailed assessment of the values it was found there that the error terms e1 and e2 were creating problems as they were highly correlated with one another. They were, therefore, connected through correlation arrow. The results of the CFA after this are reported in Table 4.

### **Career satisfaction**

Career satisfaction was measured through an eight-items scale on a five point Likert scale. Participants provided information on the items of this construct which were adapted from the Survey of Hackman and Oldham (1976). Cronbach alpha value for the scale was found 0.84.

After the reliability estimates, CFA was conducted to see the fitness of the model. The results of the initial model were not found satisfactory as the values did not fall within the acceptable range. By detailed assessment of the values it was found there that indicators CrSatfcn-7 and CrSatfcn-8 were creating problems as they were highly correlated with other indicators. These indicators were, therefore, dropped and the model was run again. The results of the CFA after deleting these indicators, the results are reported in Table 4.

### **Career commitment**

The responded provided perceptual information about their experience and existence of career commitment with these colleges. The items for this construct were adapted from the work of Colarelli and Bishop (1990), and Lee and Bruvold (2003) evaluated career commitment with a five point Likert scale was used. Cronbach alpha value for the scale was found 0.85.

CFA was also conducted for this construct having seven indicators. Again the results of the initial model were not found within the acceptable levels of the goodness-of-fit indices. By detailed assessment of the values it was found that indicators CrComnt-5 and CrComnt-7 were creating problems as they were highly correlated with other indicators. Therefore, these indicators were dropped. The final results of the CFA for this construct are reported in Table 4.

Table 4 Fit statistics for the five constructs

Construct	$\chi^2$	CMIN/DF	CFI	GFI	RMR	RMSEA	Sig
Career Planning	36.03	1.896	0.985	0.98	0.023	0.048	0.000
Career Management	11.71	2.927	0.987	0.99	0.028	0.073	0.000
Career Development	5.856	1.464	0.998	0.99	0.009	0.034	0.000
Career Commitment	11.92	2.981	0.985	0.99	0.020	0.074	0.000
Career Satisfaction	23.96	2.994	0.979	0.98	0.029	0.071	0.000

### Hypotheses Testing

After testing the validity of the individual constructs structural equation modeling was applied to the model as a whole. The hypothesized relationships of the model of the study were analyzed in two ways: individual tests and a test of the overall path model. Simultaneous equations' model estimation procedures were used. The results of the hypotheses testing are as under:

*H1: Career planning of employees' leads to their career development.*

This hypothesis was tested with aim to see whether the relationship between career planning and career development could be validated or otherwise. The resultant value represented by standardized path coefficient for this relationship is 0.540 and the *t*-value is 8.346 were significant at  $p = 000$ . These values validate the relationship and thus it can be concluded that the empirical data from the sample strongly support the hypothesis.

*H2: Career management employees' leads to their career development.*

This hypothesis was tested with the purpose to see the relationship between career management and employees' perception about the career development. The value for standardized path coefficient of is 0.120 and the *t*-value is 2.228 both were significant at  $p = 022$ . These values validate the relationship and thus it can be concluded that the empirical data from the sample strongly support the hypothesis.

*H3: Career development of employees' will have positive effects on their career satisfaction.*

This hypothesis was tested with the purpose to see the relationship between career development and employees' perception of career satisfaction. The value for standardized path coefficient is 0.604 and the *t*-value is 9.275. These values are significant at  $p = 000$ . These values validate the relationship and thus it can be concluded that the empirical data from the sample strongly support the hypothesis.

*H4: Career development of employees' will have positive effects on their career commitment.*

This hypothesis was tested with the purpose to see the relationship between career development and employees' perception of career satisfaction. The value for standardized path coefficient is 0.535 and the *t*-value of 8.192 were significant at  $p =$

000. These values validate the relationship and thus it can be concluded that the empirical data from the sample strongly support the hypothesis.

Table 5 Summary of Hypotheses Testing

<b>Hypotheses</b>	<b>Results</b>
H1 <i>Career planning of employees' leads to their career development.</i>	Strongly Supported
H2 <i>Career management employees' leads to their career development.</i>	Weakly Supported
H3 <i>Career development of employees' will have positive effects on their career satisfaction.</i>	Strongly Supported
H4 <i>Career development of employees' will have positive effects on their career commitment.</i>	Strongly Supported

## **Discussion**

The extant literature on career issues is replete with conceptual and empirical evidences wherein the researchers have hypothesized and then empirical tested the relationships among career constructs with organizational and employees' behavioural outcomes. These results have been found varying in degrees from culture to culture and organization to organization. This study was an effort to continue the empirical testing of these relationships in the colleges of a little bit backward and far flung areas of Khyber Pakhtunkhwa. The results validated most of the previous researches by supporting almost all of the hypotheses. These results connote that college employees in the Malakand Division share commonalities in their perceptions with employees in the advanced organizational cultures. These results strengthen the concepts and theories put forward by career theorists. They also illustrate the pervasiveness of employees' common concerns about their career issues and their appreciation for organizations that support them in their career development.

## **Limitations of the Study**

The study has a number of limitations. First, the study has taken a limited number of constructs exclusively related to career. Variables like organizational culture could have been made part of the study. Second, only teaching staff has been selected though administrative staff could also have been made part of the study. Third, analyses have been made only on the perceptions of the employees. Lastly, the results have been drawn on the sample data which could have same limitations like other sample studies.

## **Implications of the Study**

The study has both academic and practical implications. First, this study has been the first empirical study undertaken in the colleges in Malakand Division and thereby addressed the research vacuum. In other words the study would help the reader in enhancing their understanding regarding interdependent relationships among these constructs. More intensive research can be carried out in the light of the findings of this

study and can also be replicated. Similarly, findings of this study could help the policy makers in addressing the lacunas in the present career related HR interventions. If policy makers are sincere in providing quality education to the public, they must take care of the career of the teaching staff.

## **Conclusion**

Empirical investigations through the current study revealed that the effects of career planning and career management are significant on the career development of the teaching staff of colleges in Malakand Division of Khyber Pakhtunkhwa, Pakistan. It further investigated the subsequent effects on career commitment and career satisfaction of these employees. The results also demonstrated that career development positively influence career commitment and career satisfaction. In summary, these results reflect that the constructs of the study contribute to career development which further affects career satisfaction and career commitment. These findings have validated the findings of previous studies (Afonso et al., 2014; Appelbaum, Ayre, & Shapiro, 2002; Kapel & Shepherd, 2004; Kaye, 2005; Kong et al., 2012; Martin et al., 2001; Noordin et al., 2002) undertaken in the field of career.

These results have implications both for these colleges and the employees working there. There is a clear cut message for the management to show seriousness about career planning and career management issues of the employees in such a way that these efforts may promote career development. The empirical evidence manifests that there exists a relatively high difference between the path coefficients for career planning and career management (0.54 and 0.12 respectively) which again warrants the management about the tilted approach on the equally important career aspects. However, the findings regarding career satisfaction and career commitment have relatively close semblance. These findings from the current empirical evidence strengthen the model presented in the study and are a positive contribution to the field of career development.

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## WHY ARE NATIONAL PHARMACEUTICAL BRANDS MORE CONSIDER THAN MULTINATIONALS? A CASE OF PAKISTAN'S PHARMACEUTICAL INDUSTRY

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**Abstract:** *The aim of study to empirically evaluate the health care professional attitude towards the pharmaceutical products in context to the Pakistan pharmaceutical market current situation, that why are national companies' brands more consider than multinationals, based on primary data collected through self-administered questionnaire by field visits to 250 health care professional. Results of explanatory sequential method indicates that product efficacy is the primary factor to considered, followed by sales representative, promotional material and price factor including; some influence of new launches, packaging and availability of the products are reported. However the bio equivalence report and patient demands are rarely considered by HCP.*

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**Key Words:** *Generic brands, Research brands, Promotional mix, Health care professionals.*

### Introduction

Pharmaceutical industry is among the most scientific industries of the world. It is estimated by the intercontinental marketing services prognoses (2016) that the pharmaceutical market around the globe in terms of revenues is approximately 1.2 trillion US dollars. In which the majority of revenues about 50% are generated by western markets. However, it is forecasted by IMS (2016) future growth trends of pharmaceutical industry favor the Asia Pacific market. According to IMS health (2013) this economic shift of growth from western markets to Asian markets is indeed, due to the shift of global spending on pharmaceutical products from branded to generic based brands (copy product). It is expected that generic products shares will achieve 63% of the market share by the end 2017, which was 58% in the year 2012. Further this growth trend of generic brands is bigger than research brands, which seems uniform regardless of the markets either pharmerging or merged markets (developing or developed markets).

According to business monitoring international (2015) Pakistan pharmaceutical industry is the part of pharmerging markets. Its market size is approximately 2.3 billion US dollars. This is expanding with 12% cumulative annual growth rate (CAGR). According to research and markets (2016) national companies in Pakistan holding 60% of the market shares, the rest of 40% are with multinational companies, which was 40:60 in late 90's. National companies businesses primarily depends on generic products (copy product), while multinational mainly depends on their research products

(branded). Hence Pakistan pharmaceutical market current situation makes the problem under investigation, that why are national pharmaceutical companies brands more consider than multinationals in case of Pakistan's pharmaceutical?

Pharmaceutical companies in Pakistan promote their products to the health care professional (HCP) through direct and indirect marketing activities. The HCP get informed and influenced from the pharmaceutical companies in different manners to prescribe any product. Thereby; this study mainly documents the HCP perspective in context to marketing activities of pharmaceuticals, that how HCP consider the pharmaceutical marketing practices, while prescribing any product (Generic/Branded) to treat their patients.

### **Literature Review**

Worldwide literature on pharmaceutical industry marketing is widely available, however, in Pakistan prospects are that research work can be further expanded regarding pharmaceutical marketing practices. Below are some relevant published papers on pharmaceutical marketing practices As Tajdar *et al* (2015) HCP prescribing behavior can be influenced by many factors e.g. Medical representative, product price and efficacy of the drug including companies' indirect marketing activities. They have investigated that the product price, medical representative and country of origin of the product significantly impact on the HCP prescribing behavior. It has seen in study of Ahmed *et al* (2014) promotional material also can influence over the prescribing behavior of HCP. They have also highlighted the importance of other factors that HCP generally consider like patient demands, new launches and sales representative of the pharmaceutical companies. According to Shamim *et al* (2014) new drug launches and the promotional materials, which are being used by pharmaceutical companies, have differentiating impact over the HCP. Jamshed *et al* (2011) stresses on HCP to prefer generic brands for patient's affordability, he further suggested HCP should consider equally important bio equivalence or clinical reports, before to prescribing any generic product (copy product) directly into patients. Below (**Appendix C**) comprehend a summarized form of relevant literature specifically highlighting methodology, variables and key findings of the studies.

### **Literature Gaps**

The above mentioned and (Appendix C) published studies have their own attributes and contribution towards the development of literature for pharmaceutical marketing practices. However there is need to fill the gaps of some studies and their effects on HCP prescribing behavior. For example, the term promotional material is being used by authors for pharmaceutical promotional materials as a broad term. There is need to define the term promotional material that; what actually it consist or what sort of material comes under this definition? It is important to know that what factors actually stimulates the HCP to consider any product, in context to the 4 P's of marketing mix. More importantly, from the literature it has been observed that the studies have identified many variables and has established their influencing role over HCP

prescribing/considering behavior. For example; product price, country of origin of the product, sales representative, new launches and bio equivalence or clinical reports including patient demands. However, it is important to give an ordinal sequence to all those identified variables, to know the preferences of HCP among these identified variables that how HCP will rate these variables on ordinal scale on the basis of their importance, while prescribing/considering any product (generic/branded) to treat patients.

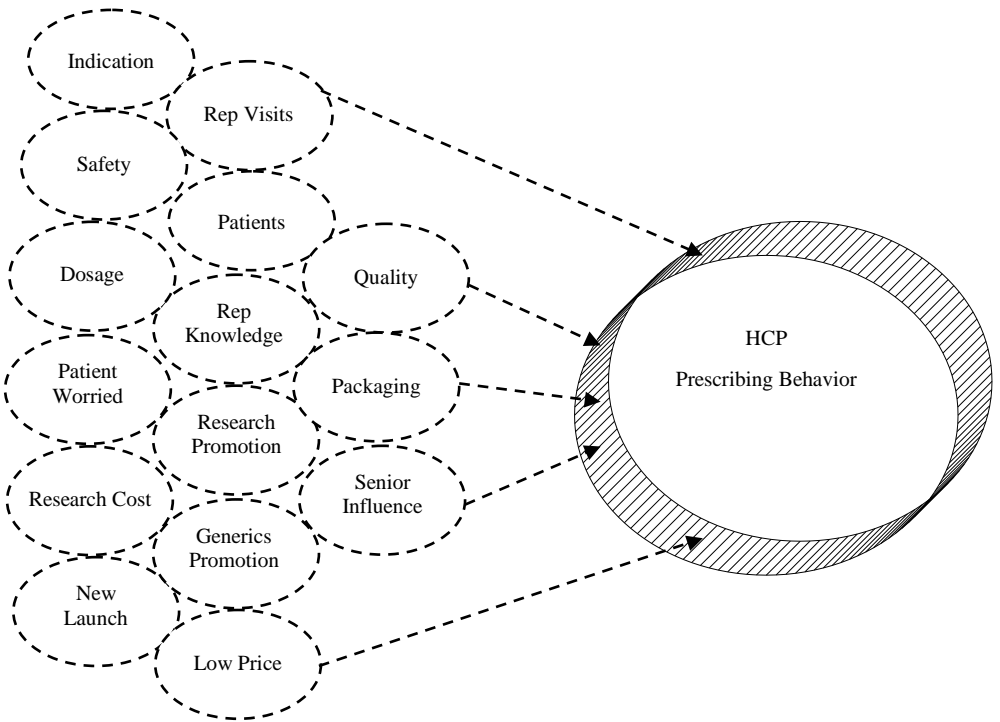
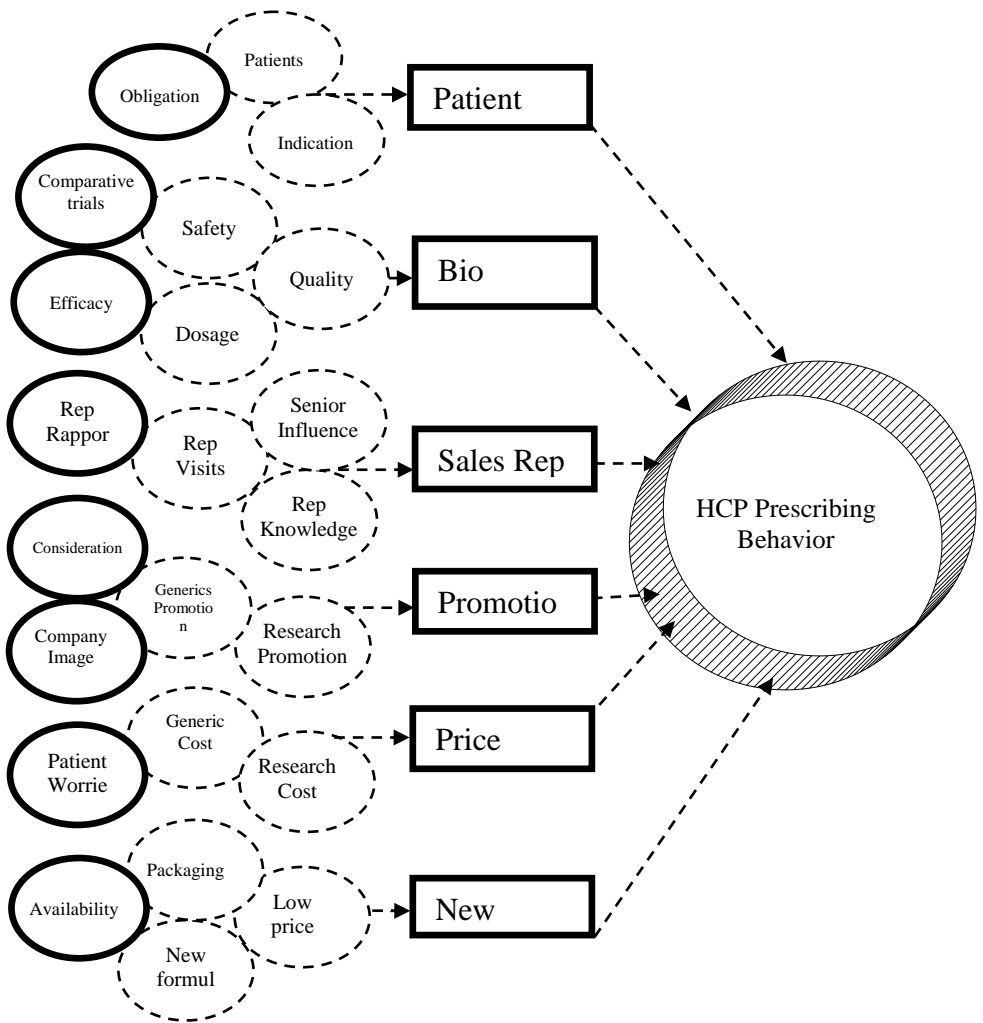


Figure 1. Pre Conceptual Framework



*Figure 2* Post Conceptual Framework

From the literature review, it has been revealed that there are many factors that can possibly stimulate health care professional to prescribe a product. However, for better understanding and confirmation of these variables, few interviews were conducted with pharmaceutical industry experts. Some variables are identified after conducting interviews (see figure 1.2 bold circled items) that can possibly stimulate the health care professional to prescribe a product. On the basis of literature review and interviews with industry experts, the conceptual frame work has been classified as pre-conceptual framework (figure 1) and post-conceptual frame work (figure 2). Pre-conceptual frame

work primarily depends on the factors that were identified during a literature review. While the post-conceptual frame work consists of the literature review as well as interviewed-identified variables. After a thorough review of literature and interviews, these identified variables were reclassified (see appendix A) on the basis of their nature and scope of marketing in the context of 4 - Ps of the marketing mix. This classification has helped to draft questionnaire theme based on six variables. The variables are sales representative, price factor, promotional material, new launch, bioequivalence and patient demands; that possibly can stimulate HCP to prescribe a product.

Besides through interviews the term 'promotional material' is explained in detail which means that there are 35 types (see appendix B) of different goods and services, which pharmaceutical companies are using named as promotional material/mix

### **Hypotheses**

According to Ahmed *et al.* (2012), the importance of generic products cannot be denied due to the affordability of generic products as compared to multinational brands. Therefore, generic products should be more preferred than multinational brands. However, the bioequivalence report of the generic brands is equally important and should be considered by the HCP in same manners like affordability is considered for generic brands. It has also endorsed by the Ahmed and Saeed (2014) that the qualities of national companies' products have been remarkably improved. National companies' products are providing clinical results to the HCP for their patients. However, the clinical trials are essential for generic products before using generic brands directly into patients. This direct use of generic products cannot be allowed only on the basis of pharmaceutical equivalence (physical resemblances). This study has selected the bioequivalence or clinical reports (interchangeably use words) variable to test the practices of HCP and pharmaceutical companies about bioequivalence or clinical reports. To know how well HCP are aware and consider these important reports during practice below hypothesis is being set to establish the fact about bioequivalence reports and, its ordinal number among other identified variables.

#### **H<sub>1</sub>: Generic brands are prescribing because of bio equivalence (BE)**

Moreover, in views of different authors like Lanjouw (2005) and Ahmed *et al.* (2012), the role of new launches either in the form of new packaging or new molecular formula has got importance to influence the HCP prescribing behavior. According to Shafiq *et al.* (2011), new product launch "marketing campaigns messages" are being exaggerated by the pharmaceutical marketers to influence the HCP. In views of Baig (2016), to exaggerate the brand campaign messages, they draft it in an emotional context by using the words like "halal" and "free from alcohol" targeting spiritual beliefs and values to influence the HCP prescribing behaviors towards the new product launch. This is also endorsed by the Chandra sekaran (2013). However, there is need to identify the amount of influence of the new product launch on HCP prescribing behavior. Therefore; the following hypothesis has been designed to find the ordinal number and the impact of new product launch either in the form of new packing or a new molecular formula on the prescription behavior of HCP;

## **H<sub>2</sub>: Generic brands are prescribing because of new launches (NL)**

According to Narendran and Narendranathan (2013), pharmaceutical companies' promotional material significantly influences the HCP prescribing behavior. In views of Tahir *et al.* (2013), HCP generally takes different kinds of gifts from pharmaceutical companies including expensive goods like perfumes and wrist watches. HCP also demands different types of goods and services which could be anything either of ethical or unethical nature. According to Siddiqi *et al.* (2011), "HCP prescription is significantly influenced by the scientific tools than all other things", which is contrary to what Ahmed *et al.* (2011), maintains. According to Kremer *et al.* (2008) "direct to HCP promotional material has very high elasticity than direct to price elasticity in studies where the price has been taken as an independent variable". Thus, to investigate the relationship between HCPs prescribing behavior and the promotional materials used by the pharmaceutical companies, the following hypothesis is being set to establish the ordinal number of promotional material among the other identified variables.

## **H<sub>3</sub>: Generic brands are prescribing because of promotional mix (PM)**

Ahmed and Sattar (2014) have found that "medical representative plays an important role while developing a relationship with HCP on behalf of pharmaceutical company". Similarly, Fugh and Ahari (2007) has provided the evidence that how pharmaceutical representatives scripted and trained to make a relationship with customers in order to influence them for prescription. This is also explained by Tajdar *et al.* (2015) that "a medical representative's has a very influencing role over HCP prescribing behavior. According to Shetty & Gujarathi (2013), the employee personal branding has got very much importance while branding the organization or organizational brands to the market. In this ongoing trial, the below hypothesis is being set in order to know the sequential order of 'medical representative' as an influencing factor among all other selected factors?

## **H<sub>4</sub>: Generic brands are prescribing because of sales representative rapport SR)**

According to Najmi *et al.* (1998), most of the time HCP feels neither under-pressure nor monitored by the country health system, that whether HCP prescribe the product in an appropriate way or not, to treat the patients. Even lack of demand and knowledge is observed in patients to ask about medicines from HCP. This shows that the sole decision maker is HCP to prescribe any product. While contrary to the findings of Nejmi *et al.*, Ahmed *et al.* (2012) stated that the importance of 'patient demand' for particular products usually is well entertained by the HCP. Therefore, to hypothetically test the situation and establish the ordinal sequence following hypothesis has been set,

## **H<sub>5</sub>: Generic brands are prescribing because of patient demands (PD)**

Furthermore, 'affordability' is the key factor while treating patients with medicines. According to Chintagunta and Desiraju (2005), pricing has a strategic importance all over the world. This is aligned with research results of Tajdar *et al.* (2015) which has demonstrated high importance of the role of price on HCP prescribing behavior. It is

also mentioned by Ahmed *et al.* (2012) and Jamshed *et al.* (2011). In views of Vogler (2012), medicines prices are kept low for generic products to increase the accessibility and affordability for those patients who pay out of their pockets. However, in the reimbursement cases, the price is not mandatory concern for stakeholders. Kremer *et al.* (2008) maintains that price does impact on HCP prescribing behaviors as an independent variable. In this investigation, the below hypothesis has been set to testify and know the ordinal number of price factors on the sequential ladder that can possibly influence or not the HCP prescribing behavior.

#### **H<sub>6</sub>: Generic brands are prescribing because of price factor (RS)**

#### **Methodology**

This research is based on mixed method of research adopted from Creswell (2014) explanatory sequential design. The primary data was collected from HCP by dividing them into two broad categories; practicing physicians and practicing surgeons from the 3 teaching hospital of Peshawar (lady reading hospital, Khyber Teaching Hospital and Hayatabad Medical Complex) each category has 20 units on an average and 5 consultants in each unit along with 10 residence medical officers as well 8 house officers. 50% of sample size of the total population (Approx 220 respondents) was conveniently selected, besides 30 top class general practitioners (GPs) who had participated as freelancers. Data was collected through self-administered questionnaire composed of 19 closed ended questions and one open ended question, questionnaire theme was based on post conceptual frame work. Initially through literature review one preliminary questionnaire was developed which later restructured according to the local practices and industry experts opinions. The reliability of the questionnaire was equal to “Cronbach Alpha 0.71”. For the analysis of data multiple regressions were applied through SPSS. In second phase, for qualitative analysis the follow up explanation model was conducted. In which randomly visited to 20 physician, 20 surgeons and 10 general practitioners to validate the quantitative interpretations in view of market practices.

#### **Results**

Table 1 *Regression Model Summary*

<b>Model</b>	<b>R</b>	<b>R Square</b>	<b>Adjusted</b>	<b>Std. Error of the Estimate</b>
1	0.647 <sup>a</sup>	0.418	0.404	0.56642

a: (Constant) Predictor: PM, SR, RS, NL, BE, PD.

Result of R-square suggests that approx. 42% (0.418) of the variation is explained by the independent variables in the dependent variable, representing the amount of change occurring in HCP prescription behavior due to the predictors / marketing activities of pharmaceutical companies (Table 1).

The ANOVA test values (Table 2) are indicating that the overall model is statistically significant (0.000).

Table 2 ANOVA

	<b>Model</b>	<b>Sum of Squares</b>	<b>Df</b>	<b>Mean Square</b>	<b>F</b>	<b>P-value.</b>
1	Regression	56.062	6	9.344	29.12	0.000 <sup>a</sup>
	Residual	77.963	243	0.321		
	Total	134.025	249			

Table 3 Coefficient

<b>Model</b>	<b>Un Std</b>		<b>Std Coefficients</b>		
	<b>B</b>	<b>Std. Error</b>	<b>Beta</b>	<b>T</b>	<b>P-value.</b>
(Constant)	0.946	0.273		3.469	0.001
Promotional Mix (PM)	0.242	0.067	0.208	3.61	0
Sales Rep (SR)	0.354	0.055	0.386	6.454	0
Product Price (RS)	0.171	0.075	0.144	2.265	0.024
New launch (NL)	0.098	0.049	0.104	2.011	0.045
Patient Demand (PD)	-0.047	0.046	-0.05	-1.014	0.312
Bio Equivalence (BE)	-0.035	0.04	-0.043	-0.869	0.386

b: (Dependent variable): HPB.

Findings of the coefficient results (table 3) indicated that the HCP prescribing behavior has a direct dependence on investigated variables which are sales representative (SR), promotional mix (PM) and price factor (RS) including new launches (NL) of the products (significant at 5% confidence interval). However, bioequivalence (BE) and patient demands (PD) are immaterial to health care professionals and has no dependence (insignificant at 5% confidence interval). The significant along with insignificant results have been re-confirmed in qualitative analysis, that were follow-up visits to HCP, in which it has been revealed through open-ended questions that in practice, health care professionals do not ask from pharmaceutical companies to provide bioequivalence or clinical reports. The HCP emphasize on pharmaceutical equivalence or empirical results of the generic products instead of bioequivalence or clinical reports. HCP also mentioned that they do not entertain patient demands for



particular product. Because HCP generally follow the prescribing protocols approved by the food and drug administration (FDA) or health regularity entities. Moreover, the availability of the product in nearby pharmacy or institution has somewhat influence over the prescription of HCP.

## **Discussion**

Previous studies show that the prescribing behavior of HCP depends on many factors. Pharmaceutical companies are using different tools to influence the prescribing behavior of health care professionals in order to increase their business shares. The aim of the research study was to understand that why national companies are more prescribing than multinational companies in case of Pakistan pharmaceutical industry. For this research purpose, 250 participants' responses were analyzed on the basis of identified variables and set hypothesis. The overall result of the study was significant and aligned with previous literature diagnosis in regards to the marketing practices of pharmaceutical companies. Further, it has been inferred why national companies are more growing than multinationals on the basis of results that give an ordinal sequence which is product efficacy on priority followed by a sales representative, promotional mix and price factor including new launches in terms of new packaging or advancement in formula and availability of the products.

On the basis of ordinal sequence, we can say that quality of national companies' products has been improved to compete with multinational products. Therefore, HCP are prescribing national companies' brands more as stated by Ahmed & Sattar (2014). National companies' sales representatives are more successful in building a good rapport with customers. They are more frequent to provide and remind the right information about their products as compared to a multinational sales representative. This research study results are contrary to Siddiqi *et al.* (2011) who mentioned that scientific tools are more influencing than other promotional tools. Although scientific tools come under the umbrella of promotional tools because any type of investment on HCP with objectives to yield prescription comes under the marketing expenditure for companies. National companies are spending more on the promotional mix (tools) to support sales representatives to aggressively promote their brands in the market. While on other hand, multinational companies having limited promotional tools list pre-approved from international federation of pharmaceutical manufacturer association (IFPMA) and the central office of the company. Beside this, the national companies' products are more economical than multinational brands. This is another reason for getting more prescriptions from national brands than multinationals. Another very important aspect for the organization prosperity is organic growth that is also favoring the national companies. Because national companies new launching are at a higher side with advancement in drug molecule, manufacturing technique and product packagings for patient's compliance. These are the factor that goes into national companies favor. Therefore, their market expansion rate is higher than multinationals. The two factors go probably into multinational favor which is bioequivalence and patient demands, unfortunately, are immaterial for HCP in Pakistan pharmaceutical market.

According to Tajdar (2015) who has proven that the price and medical reps having significant influence over HCP prescribing behavior. The research study results are in line with additional explanation that is the degree of significance of these variables on HCP prescribing behavior in terms of the ordinal sequence. Moreover, Ahmed *et al.* (2014) also found that medical reps and promotional tools have significant influence on HCP prescribing behavior. In this regard, this study has provided a detailed list of promotional tools that pharmaceutical companies are using in Pakistan market (Appendix B). Apart from this, Jamshed *et al.* (2011) have stated that the price and medical reps play an important role in influencing the HCP prescribing behavior. This research results show alignment with above findings with further explanation of HCP preferences. It has also been proved that patient demand and bioequivalence has a very limited role in influencing the HCP prescribing behavior as described by Ahmed *et al.* (2012).

### **Conclusion**

The results of this study witnessed that in Pakistan pharmaceutical market, national companies products are more considered than multinationals by the HCP. On the basis of results it can be inferred that help to give an ordinal sequence to all those factors which have been tested. According to the ordinal sequence, at 1<sup>st</sup>, there is the product efficacy to cure the disease or disease symptoms, followed by the sales representative role on 2<sup>nd</sup> and at 3<sup>rd</sup> the promotional mix are highly influencing factors for the health care professionals. Besides these, the product price is at 4<sup>th</sup> and new launches are at 5<sup>th</sup> either in the form of new packing or new molecules, including product availability (nearby institution/formulary) at 6<sup>th</sup> have low influencing effects on HCP prescribing behavior.

### **Contribution of the Study**

The study will have a practical impact based on conclusion presented, which could help to give an ordinal sequence (see conclusion for ordinal sequence) to all those pharmaceutical marketing factors, which can possibly influence the HCP. This ordinal sequence will help to understand HCP preferences in terms of ordinal number, when HCP prescribe product (generic/branded) to treat patients.

### **Policy Recommendations**

Pharmaceutical multinationals in Pakistan can resume their contribution shares by adapting the national companies marketing approach. In which national companies are more HCP centric than patients. While multinational companies are more patients centric than HCP. Earlier this study has proved that patient demands are rarely consider by HCP. The sole authority to prescribe a product is with HCP. Hence shifting the centre of activities can help to resume the market shares. In case of constraints to adapting national companies approach, as contingencies; multinational should outsource (give marketing rights) their products to the national companies can help to achieve the productivity of business operations in Pakistan market.

### **Limitation of the Study**

There are some factors which are beyond the scope of the study. For example, Pakistan's political, economic and law order situations. These factors can impact the businesses in either way as barrier or driver. Besides companies standard operating procedure (SOP) can also affect the decision-making process of business operations in Pakistan.

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**Appendix: A**

**Stimulation factors from marketing prospects:**

<b>4 - P's</b>	<b>Attributes</b>	<b>Categories</b>
<b>Product</b>	1. Product Efficacy	1. Bio Equivalence (BE)
	2. Product Quality	
	3. Product Safety	
	4. Product dosage	
	5. Comparative trials	
<b>Price</b>	6. New Molecule	2 New Launches (NL)
	7. New Packing	
	8. Availability	
<b>Promotion</b>	9. Affordability	3. Product Price (RS)
	10. Type of material	4. Promotional Material (PM)
	11. Type of campaign	
	12. Company image	5. Sale Representative (SR)
13. Sales representative		
<b>Place</b>	14. Senior influence	6. Patient Demand (PD)
	15. Patient Need	
	16. Patient Disease	
	17. Patient obligation	

**Promotional materials named as promotional mix**

<b>Promotional Mix (Tools)</b>	
1. Drug samples.	18. Product pens.
2. Product brochures.	19. Paper pads / Slips.
3. Medical books.	20. Table organizers.
4. Clinical reports.	21. Office equipments.
5. Brand presentations.	22. Personalized gifts.
6. CME: Local / Int.	23. Stationary.
7. Foreign trips.	24. Free drug camps.
8. Events, celebrations.	25. Free diagnostics camps.
9. Events are sponsored.	26. Food, refreshments.
10. Medical journals.	27. Free hotelling / Picnics.
11. Special events	28. Cash donations.
12. Family events.	29. Office renovation / Decoration.
13. New Year calendars.	30. Ward renovation / Decoration
14. Diagnostic equipments.	31. Free registration for events.
15. Magazines Add.	32. Trade schemes / Bonuses.
16. Instruments.	33. Printings.
17. Round table discussions.	34. Speaker presentation.
	35. Personnel relationship

*Source: Literature review and industry expert interviews*

**Summary of Previous Studies**

<b>Research</b>	<b>Methodology</b>	<b>Variable</b>	<b>Findings</b>
<b>Tajdar et al., (2015)</b>	Self-administered questionnaire, Samples Size 100 from local Peshawar hospitals. Technique - Chi Square, frequency tables.	Country of origin (COO), Price, and medical representative.	Prescription of physician can influence by many factors, including price, medical rep, and country of origin along with companies senior management.

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<i>Ahmed et al, (2014)</i>	<i>1. Self-administered questionnaires, Samples size 100, all were doctors. Technique - Multiple Regressions.</i>	<i>Physician Prescribing Behaviors- Product samples, Literatures, Gifts / Give-away &amp; CME (continue medical education) Round table discussion.</i>	<i>The researcher concluded that all the promotional material can influence the prescribing behavior of physicians. Medical rep's knowledge and personal relationship.</i>
<i>Shamim et al, (2014)</i>	<i>Primary data via questionnaire (Likert Scale: 1 to 5) Samples size 263, Technique – Regression and Factor analysis</i>	<i>Physician Prescribing Behaviors. New drug Brand prescriptions sponsorship Promotional Tools Drug samples</i>	<i>Result suggested that new drug, promotional tools and drug samples significantly affect the prescribing behavior of physicians.</i>
<i>Ahmed &amp; Sattar, (2014)</i>	<i>Secondary data on current pharmaceutical marketing Mix (Tools) using by companies in Pakistan to promote their Products.</i>	<i>Strategies &amp; approaches. 1. Product Chain 2. Prescription Chain 3. Products Types 4. Types of mix (Tools): Samples/Literatures Gifts/Giveaways Symposium/CME (continue medical education E-Marketing/table discussion Personal Relations</i>	<i>The quality of medicines and effectiveness of marketing teams has remarkably improved to compete the multinationals. Direct to consumer marketing is yet to gain ground in Pakistan.</i>

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<p><i>Ahmed &amp; Saeed, (2014)</i></p>	<p>Primary data via questionnaire, Samples size 300 from Karachi. Technique - Multiple Regression</p>	<p>Unethical practices in pharmaceutical industry. Pharmaceutical companies Doctors Hopitals Pharmacies Govt. Officials Patients</p>	<p>Pharmaceutical companies and doctors both are responsible for unethical practices. However the levels of unethical practices are higher at rural area than the urban area of Karachi.</p>
<p><i>Narendran &amp; Narendranathan, (2013)</i></p>	<p>Primary data via questionnaire Sample size 50 Doctors &amp; 53 sales persons. Technique - Regression analysis, graphical presentation</p>	<p>Physician Prescription Behavior: 36 different independent variables in context to: Direct Marketing Personal Selling Advertisement Public Relationship Sales Promotions</p>	<p>Pharmaceutical marketing significantly nfluencing the physician prescription behaviors.</p>
<p><i>Khan et al, (2013)</i></p>	<p>Primary data via. Self-administered questionnaire, samples size 400. Technique - Regression Analysis</p>	<p>Emergence of unethical practices and influencing factors like Doctors, Companies, sales promotion officer and Patients</p>	<p>35% doctors believe that doctors are responsible for the emergence of unethical practices while 46% replied that pharmaceutical companies are responsible.</p>
<p><i>Akhtar et al, (2013)</i></p>	<p>Primary data via questionnaire. Sample size 20 GP 200 patients. Technique - Spearman, non-parametric.</p>	<p>Generic prescription, price and drug prescribing protocol.</p>	<p>Result suggested that 0% generic prescription and no single prescription was prescribed in accordance with national drug prescribing policy or FDA – WHO</p>



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<i>Ahmed et al, (2012)</i>	<p><i>Primary data via questionnaire. Samples size 250 doctors from Karachi area GP &amp; Physicians. Technique-Chi-Square, Mega state software.</i></p>	<p><i>Physician prescription behavior: Patient demand, where does a patient get information, Condition where the Physician prefers to prescribe generic drug, pharmaceutical companies influence, Unbiased drug data.</i></p>	<p><i>General practitioner &amp; Physician prescribe generic drugs mainly because of drug representative regular visits &amp; cheaper drugs.</i></p>
<i>Jamshed et al, (2011)</i>	<p><i>Primary data semi structured long interviews. Sample size 11 dispensing doctors 9 males &amp; 3 female. Technique - descriptive analysis.</i></p>	<p><i>Level of knowledge about generic, attitude towards generic, perception about generic and marketing practices of companies for generics.</i></p>	<p><i>The generic should be more prefer. However bio equivalence testing and rigorous guideline are required before prescribing generic.</i></p>
<i>Zaman, (2011)</i>	<p><i>Secondary data from IMS and PEC. Technique - descriptive analysis.</i></p>	<p><i>Current pharmaceutical marketing strategies and future pharmaceutical marketing strategies.</i></p>	<p><i>Right marketing strategy can bring results for companies, Like: Digital marketing, internet and multi channels.</i></p>

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<i>Siddiqi et al, (2011)</i>	<p><i>Cross sectional survey. Sample size 200 doctors and 200 medical representatives. Primary data via questionnaire adapted from Girish et al Technique - Regression analysis.</i></p>	<p><i>Physician Prescription Behavior: Influencing factors on physician prescribing behavior.</i></p>	<p><i>Physician prescription more influenced by scientific tools than any other promotional tools. Medical representative had similar perception.</i></p>
<i>Ahmed et al, (2011)</i>	<p><i>Sample size 400 doctors and 100 pharmaceutical companies. Primary data via self-administered questionnaire. Technique - Graphs, Frequency tables.</i></p>	<p><i>Physician perception about marketing tactics using by pharmaceutical companies in ethical contexts.</i></p>	<p><i>58% of doctors believe that pharmaceutical marketing practices are unethical.</i></p>
<i>Hakonsen, (2011)</i>	<p><i>Sample size 83 Pakistani with an average age of 58 years.</i></p>	<p><i>Branded medicines, Substitute medicines with different names and the satisfaction of patients.</i></p>	<p><i>Substitute or generic medicines may have negative effects on Pakistani immigrants in Oslo.</i></p>
<i>Masood et al, (2009)</i>	<p><i>Secondary data, to provide a detailed basis to understand pharmaceuticals marketing practices.</i></p>	<p><i>Types of tools using by pharmaceutical companies and their abuse used.</i></p>	<p><i>All the codes of conduct, self-regulations and laws developed to control pharmaceutical promotion and marketing seem ineffective.</i></p>

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*Lanjouw, (2005)*

*The descriptive and explanatory research, Secondary data, Sample size 22 countries by dividing on the basis of income classes. Technique (s) - Regression analysis.*

*Patents, Price Control, New Drug, Market entry and affects the patient access to the medicines*

*Patents and price can affect the patient access to new molecules in poor countries; however, in high income earning countries does not matter.*

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## EXPLORING THE RELATIONSHIP OF NETWORK CENTRALITY AND ACADEMIC PERFORMANCE OF FEMALE STUDENTS

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**Abstract:** *This research endeavor aims to investigate the impact of network centrality (degree, closeness and betweenness) on academic performance (CGPA) of female students in an academic advice network. Where degree centrality refers to the number of direct links that an actor has with other actors, betweenness centrality refers to the degree to which an actor lies on the geodesic paths between other actors and closeness centrality focuses on how close a member is to all other members in network. Data was collected from 182 female students enrolled in various programs at a public sector University in Baluchistan through name generators for egocentric network by Burt. Techniques of correlation and standard multiple regression analysis are employed to test the hypotheses. The results of statistical analysis revealed that high degree and betweenness centrality leads to increase academic performance of students whereas higher closeness centrality leads to decrease academic performance. The result of the study has practical implications for students' academic life: it will aid the female students to discover structural pattern of social ties of their advice network and enhance their tendency for forming more ties related with academic advices for the achievement of excellent academic performance.*

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**Key words:** Network centrality, academic performance, advice network

### Introduction

According to the “social network approach”, the performance of a person is affected by the types of ties, and structural characteristics of network more than by qualities, traits, characteristics that an individual owns (Yang & Tang, 2003). Structural characteristics refer to the complete arrangement of relations among the system's actors (Tichy, Tushman, & Fombrun, 1979), like, clustering, bridge, gatekeeper, density and centrality etc. Structural characteristics (Granovetter, 1985) in social network have the power to impact positively or negatively on performance of entities (Yang & Tang, 2003). Structural characteristics (Granovetter, 1985) served as focal principle in social network studies. The unique characteristic of this stream of investigation lies in how it

pleas to the structural properties of social networks in clarifying results (Sparrowe, Liden, Wayne, & Kraimer, 2001). From this point of view, people enjoy gains or suffer damages by virtue of social structure (their places inside social networks) in any kind of situation. For example, organizational integration (Sparrowe & Liden, 1997), advancement, progress, development or promotion (Burt, 1992), authority, power, control (Brass, 1984), creativity (Ibarra, 1993), learning aftermaths (Baldwin, Bedell, & Johnson, 1997), and job successes (Sparrowe, et al., 2001) all depends on actors position in social network. In addition, individuals embedded in advice networks can benefit from the ties by gaining structurally beneficial positions in the advice network to derive positive outcomes for example enhanced research performance (Badar, Hite, & Ashraf, 2015).

Several studies were conducted to prove impact of structural social capital (Zheng, 2008) on performance but their unit of analysis was comprised of both genders, disregarding (ignoring) individuals- just male or female students and their position in social networks which influence their academic performance. Researchers like, Guldner and Stone-Winestock (1995); Baldwin et al. (1997); Sparrowe et al. (2001) conducted research to find the impact of structural social capital on students' performance and confirmed that student's location in social network enhance their academic performance.

Researchers (particularly in education) have been quite interested in exploring the factors which significantly contribute for performance improvement of students (Shah, Rahman, & Abbas, 2015). Some scholars have conducted research on females' centrality in network but their context were different from education like, Burt (1998) tried to find the impact of structural social capital on women manager's advancement and concluded weaker relationship among these variables. Hence, this research endeavor (unlike others) attempts to encompass the knowledge of advice networks by concentrating on a social structure of female student's network and studying the influence of three traditional dimensions of centrality (degree, closeness and betweenness) on female student's academic performance.

### **Centrality**

Centrality is defined as the level to which a focal actor is linked to other actors within identified network (Wasserman & Faust, 1994). Freeman (1979) suggested three measured of centrality, commonly used to show position of actor in network, that are *degree centrality* which is based on the number of direct links that an actor has with other actors, *betweenness centrality* that is the extent to which an actor lies on the geodesic paths between other actors and *closeness centrality* focuses on how "close" a member is to all other members in network. This current research used these dimensions to predict impact of centrality on academic performance of female students in advice network.

Centrality is one of the most significant notions in social network analysis (Domhoff, 2013). Central position of individuals offers them a lot of benefits (Tsai & Ghoshal, 1998) like firm's innovation (Ahuja, 2000) and performance (Tsai 2001; Yang, 2007)

and a person's ingenuity (Smith & Shalley, 2003) and knowledge creation (Mcfadyen & Cannella, 2004). Baldwin et al. (1997) indicated that network centrality has positive effect on MBA team member's success. Similarly, Hopp, Irvani, Liu and Stringer (2011) indicated that individuals having central position in advice network show good job performance. Likewise, Brass (1981) revealed that the flow of the work represented by centrality of one's position indirectly impact performance. Aktamov and Zhao (2014) concluded that firms having higher degree centrality leads in the field of innovation. It is affirmed by researchers e.g. Spillane and Kim (2012) that actor who occupies central position in networks are better linked than others and are more noticeable in the network.

### Academic Performance

The utmost critical assets of educational institutes are students. The development of any country depends on number of qualified individuals, larger the number of quality graduates opens up endless ways for country to run on the road of success (Mushtaq & Khan, 2012). The best and easiest way to judge presence of quality graduates with in country is to check the academic performance of students through academic reports. As suggested by Allen (2005) academic performance of students are conversed through academic report that tells about students' progress/ achievement (in terms of CGPA/ GPA) established during course of study in particular discipline. The foremost purpose for allocating CGPA/GPA is to generate a public record of student's academic success that can perfectly and excellently communicate the level of mastery of a subject a student has demonstrated (Airasian, 1991).

### Conceptual Framework

This conceptual framework is showing the relationship between centrality measures (degree centrality, degree closeness, betweenness centrality) and academic performance of female student's in advice network.

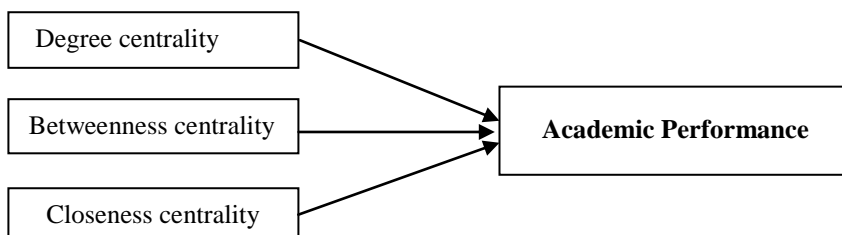


Figure 1 Conceptual Framework

### Theory and Hypothesis

#### Centrality and academic performance

Advice networks means set of ties through which individuals share information, data, knowledge, facts and guidance that assist them in the completion of their assigned task (Webster & Hackley, 1997) in better way. Student's position in advice network plays a

dynamic role (Picciano,2002) but if a student resides the central location s/he can get much more academic benefits. Gaining advices from number of contacts, not only develop (Tsai, 2001) intellectual ability of student but can aid him in locating, griping, diffusing, and blending relevant advices into valuable resources and ultimately enhancing performance (Borgatti, 2005; Tsai, 2001). Student can also get assistance form advice network, if s/he became only source of interaction among other two or more students. Asking for advices from each other they have to depend on him/her (Spillane & Kim, 2012). While helping other students in exchange of advices, s/he gain a lot of advices which can be used by him/her in resolving his own study related problems (Hopp, Iravani, Liu, & Stringer, 2011). Access to timely and dissimilar advice's is also possible for students only if they are at shortest geodesic distance from others in network. By finding position near to others saves his cost and energy too in searching for required academic advices. With the help of timely and dissimilar academic advices he can solve his difficulties which impede his performance instantly and hastily.

Thus, it was proposed that:

- H1:** Female students with higher degree centrality scores in advice network will have higher academic performance (in terms of CGPA).
- H2:** Female students with higher betweenness centrality scores in advice network will have higher academic performance (in terms of CGPA).
- H3:** Female students with higher closeness centrality scores in advice network will have higher academic performance (in terms of CGPA).

## Method

### Sample

182 female students enrolled in various programs at a public sector university served as sample of this study. Convenience sampling technique was used to collect data.

### Measures

**Dependent variable: Academic performance.** CGPA of each student was used to measure academic performance. Which was taken from university examination record but CGAP can be calculated with the help of grades, grade weights (A=4, B=3, C=2, D=1), credit hours attempted, and number of semesters / classes / subjects attended.

**Independent variables: centrality measures.** According to Freeman, (1979), the indexes/measures of centrality .i.e. degree, closeness and betweenness are used as a measure of closeness centrality, degree centrality, and betweenness centrality of female student's advice network. Where degree is the total sum of links to other people in the network. Betweenness states the level to which a person lies in the middle of other actors in the network. Closeness is the level to which a person is positioned near all the other individuals in a network (directly or indirectly).

### Procedure

Data was collected through network questionnaire based on name generators (these are type of questions that ask central/ focal personal to list the names of those individuals from whom s/he receive or to whom s/he provide resources)for egocentric network. Name generator was adapted from standard method of name generator for egocentric (personal) network as developed by Burt (1984) that is also used in United States general social surveys (GSS) since 1984 (McPershon, Smith-Lovin, & Brashears, 2006). Name generators asked the respondents to write the names of those learners/students with whom the s/he (respondent) most frequently discuss their study related problems and take academic advices. Reliability of questionnaire was determined by Cronbach's alpha to be 0.69. Participants were given questionnaire along with informed consent form. Participants were requested to read inform consent form carefully and if they agree to take part in this study then sign on form. After that participants were requested to read the guidelines cautiously and sensibly to fill out demographic and name generator sections of the questionnaire.

### **Ethical guidelines**

It was announced that participants are free to withdraw participation. When all questionnaires were returned back participants were praised and let them know that the study was in fact considering for association among social network structure and academic performance of students. It was made sure to participants that data would be used for research purpose only and their names were kept anonymous. Participants were given the right to ask question if they want. The data collection instrument by Burt (1984) is free to use for all researchers so no permission was required.

### **Analysis**

The study was carried out using the statistical techniques of correlation and standard multiple regression. Correlation is used to show the relationship of all dependent and independent variables with each other while, standard multiple regression is used to predict the effect of predictor variables on the dependent variable. Analysis was performed using Statistical Package for the Social Sciences (SPSS) 20.0 to determine potential associations amongst the variables and effect of independent variables on dependent variable.

Performance of students was measured by CGPA that was taken from university examination record. Data about academic advice was collected through questionnaire based on name generator (Burt, 1984) for egocentric network. With the help of data collected through name generator 182 X 182 matrix was constructed in MS Excel, where zero (0) shows absence of advice tie and one (1) shows presence of advice tie. This matrix was later on imported in UCINET VI (Borgatti, Everett, & Freeman, 2002) where three centrality measures were calculated (degree, closeness and betweenness). Data was coded, entered and analyzed through IBM SPSS 20.0 to determine potential relationships among the variables.

### **Correlation**



The means, standard deviation and Spearman's correlation coefficients can be seen in Table 1. Total number of students participated in the study was 182. Table 1 also shows the data about the performance of students in exam as measured by their CGPA. The highest possible CGPA was 3.85. The lowest possible CGPA was 0.24. The mean CGPA score of all students was 2.74 ( $S.D=0.74$ ). The measures of centrality were likely to be correlated with the academic performance but were also expected to be non-parametric in nature (Yan & Ding, 2009). Therefore, Spearman's correlation was calculated to measure strength and direction of relationship among variables. The correlation table disclosed that degree centrality have positively and significantly correlated with CGPA ( $r = .60, p < 0.05$ ), closeness centrality also shows positive and significant correlation with CGPA ( $r = .39, p < 0.05$ ) and betweenness centrality positively but non-significantly correlated with CGPA ( $r=.33, p>0.05$ ).

Table 1: *Summary Statistics and spearman's Correlation Matrix*

	Mean	Std. Dev	1	2	3	4
1. CGPA	2.74	.74	___			
2. degree_centra	.01	.01	.60**	___		
3. betweenness_centra	.03	.09	.39**	.63**	___	
4. closeness_centra	18.33	79.17	.33**	.57**	.18*	___

\*\* . Correlation is significant at the 0.01 level (2-tailed).

\*. Correlation is significant at the 0.05 level (2-tailed).

### Regression Analysis

Before applying multiple regression some assumptions related with multiple regression must be addresses like normality of residuals, no outliers, independence of residuals, Multicollinearity.

The assumption of normality of residuals and independent variable was checked by using histogram (figure 1), and normal P-P (figure 2) and Q-Q plots (figure 3). The shape of histogram curve nearly approaches a bell-curve, which means that residuals are approximately normally distributed. All data points at normal P-P and Q-Q plot lies near or on the straight line which also give indication of normality of data.

The assumption of no outlier can be checked through histogram. Outlier is an observation that is different from general configuration of distribution. Through graphical examination of histogram we concluded that overall trend of data set is almost same, so there is no significant outlier.

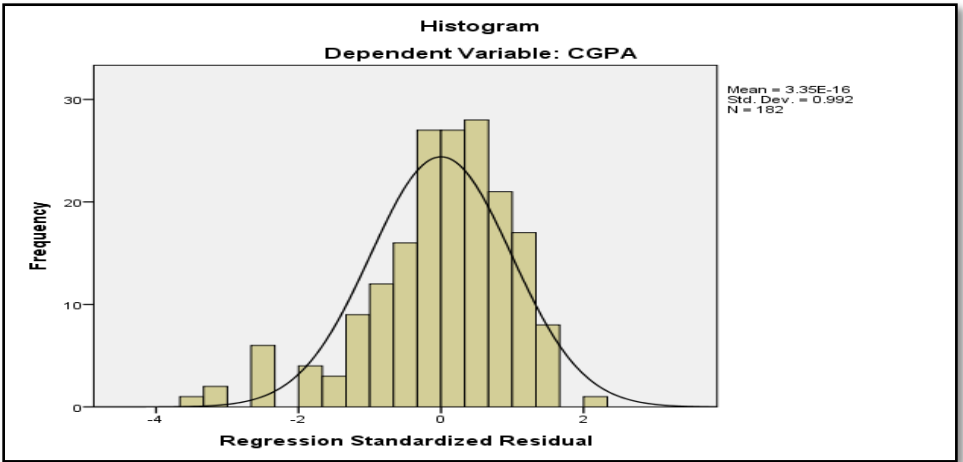


Figure 2 Histogram of standardized residuals

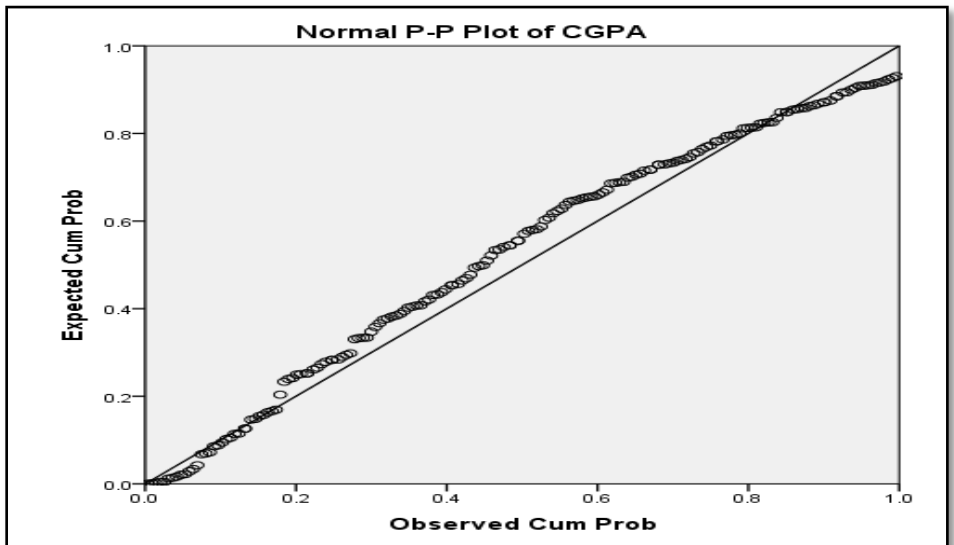
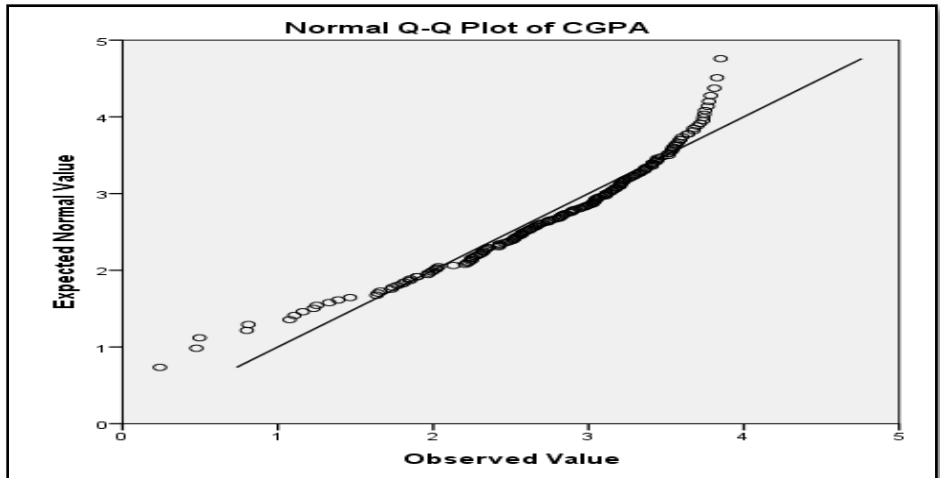


Figure 3 Normal P-P plot of CGPA

Figure 4. Normal Q-Q plot of CGPA



To check that the three measures of centrality (independent variables) can significantly predict the academic performance (dependent variable) of female students, standard multiple regression analysis was executed. Result of the standard multiple regression is reported in Table 2. This table also shows the value of Durbin-Watson statistic through which we can check the assumption of independence of residuals (autocorrelation). Independence of residuals means that error should not be interconnected to another error. The value of Durbin-Watson statistic always lies between 0 and 4. Zero (0) means positive autocorrelation, values near 4 mean direct negative autocorrelation and values near 2 indicate no autocorrelation. In case of current study the value of Durbin-Watson statistic was near 2 (1.63) indicating our data has almost no autocorrelation.

Multicollinearity is another problem associated with regression analysis. Therefore, data should be checked for this problem before to apply regression. Multicollinearity means that independent variables show high or moderate level of association with each other to such an extent that they make it difficult to recognize the contribution of single independent variable in predicting dependent variable. The assumption of no multicollinearity was checked through the values of VIF. Normally, it is believed that the value of VIF below 10 indicates no or low level of multicollinearity (Myers, 1990). Table 2 specifies that there is no problem of multicollinearity as all values of VIF were lower than 10.

Table 2 shows the result of the multiple regression i.e. positive and significant relationship between degree centrality ( $\beta_1=0.74$ ,  $p<0.05$ ), betweenness centrality ( $\beta_2=0.32$ ,  $p < 0.05$ ) and academic performance.

Table 2: Summary of Slandered Multiple Regression Analysis

Model	Unstandardized		Standardized	VIF
	Coefficients		Coefficients	
	B	Std Error	$\beta$	
Degree centrality	28.22	3.79	.74*	2.62
Betweenness centrality	267.1	57.34	.32*	2.61
Closeness centrality	0.00	0.00	-0.03	1
R <sup>2</sup>		0.32		
F		28.13**		
Durbin Watson		1.63		

Independent variable: Degree centrality, Betweenness centrality, Closeness centrality.

Dependent variable: Academic performance.

### Discussion and Conclusion

Based on results, we find support for H1 and H2. This means that female students having high degree centrality and betweenness centrality in their advice network are expected to achieve better academic performance. This study findings are supported by prior researchers like, Aktamov and Zhao (2014); Tsai (2001); Cross and Cummings (2004). While closeness centrality and academic performance shows negative and insignificant relationship ( $\beta = -0.03$ ,  $p > 0.05$ ) finding no support for H3, that means academic performance of female students is reduced with every increment in closeness of female students in advice network. This finding challenges the prior studies like, Claro, Neto, and Claro (2013) but conform the finding of some researchers like, Aktamov and Zhao (2014); Perry-Smith and Shalley (2003).

Closeness centrality shows negative relationship with female student's academic performance this may be due to defining our limited network boundary (students were restricted to give answer to questions, just remembering to their ties with class fellows not individuals outside of their class). It is argued that too high or too little network centrality may be restraining. There should be an intermediary degree of network centrality which wins the maximum incentives and/or rewards (Rotolo & Petruzzelli, 2013; Mcfayden & Cannella, 2004; Badar et al., 2015). In case of current research closeness centrality is high (all advisers are from the same class) due to which students can get access to large but conflicting viewpoints (Podolny & Baron, 1997). Which may be the cause of negative relationship between closeness centrality and female student's academic performance.

This study aimed to explore and investigate the effect of structural social capital on female student's academic performance in advice network. Our findings of degree centrality and betweenness centrality are in line with what was found in prior studies, indicating that higher degree centrality and betweenness centrality higher would be academic performance of female student's. While, closeness centrality shows negative relationship with female student's academic performance which means that higher closeness centrality lower would be academic performance of female student's.

## Limitations and Recommendations

This study has certain limitations e.g. our study lack generalization as female students of one university may not represent all. More disseminated findings should be created through involvement of other university female students and results of research can be strengthen by increasing sample size.

The result of closeness centrality is different from scholar expectations of current study. Therefore, it is recommended that more future research should be done concerning relationship between closeness centrality and female student's academic performance with an enlarged network boundary.

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