

**Impact of Work Environment on Project Success:
Mediating Role of Job Satisfaction and Moderating Effects
of Demographics.**

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DEDICATION

The dissertation is dedicated for the sake of Allah, my Creator and my Master. My great teacher and messenger, Muhammad (May Allah bless and grant him), who enlightened the purpose of our life. To my dear Parents Muhammad Khaqan&NargisBibi. My husband Asif Ali and my elder Brother Muhammad Zulqarnain who never stop giving of themselves in countless ways, their unprecedented prayers, and the lessons they taught me to work hard with dedication and confidence. They made me believe that my imaginations will drive, I could achieve anything what I want, but to have firm belief behind all my ideas, to stick with my goals and have an undying faith.

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Abstract

The overall objective of the study is to develop and test anticipated model to find out the relationship between work environment, job satisfaction and project success. In addition the demographics are added as the possible moderator for the relationship of the mentioned variables in the research model. The survey was conducted on employees working in Private Sector organizations currently working in Islamabad, Rawalpindi. Data was collected from 210 personnel through convenience sampling technique, using adopted questionnaires containing of assessing each variable on five point likert scales. For data analysis statistical tools such as reliability, correlation and Regression were tested. In this research, results shows that physical environment, mental environment and Social environment in organization has significant influence on the job satisfaction of employees. And Job Satisfaction has a significant mediating role between the relationship of Physical environment and project success, mental environment and project success and Social Environment and project success. Although demographics are used in this research (Age, Education and Gender) but it was not very studied well in previous researches. Research show that there is moderated mediation in all dimensions of work environment and project success where job satisfaction plays mediating role in presence of demographics of employee in organization as moderator. Result of this study shows that there is no moderated mediation in presence of age as moderator, level of education and gender in physical mental and social environment.

Key words: work environment, job satisfaction, Demographics, Project success.

CHAPTER 01

INTRODUCTION

1.1 Background

Nowadays, managers know the importance of work environment. In general, work environment is described as a place where employee associated his feelings to show some constructive involvement correlated to his/her job. Work environment generally depicts the conditions of surroundings in which employees operate to do his job. Insel and Moos (1974) assesses employee's perception of several broad dimension of their daily work environment. Work environment can also be determined as social interactions at work place along with interaction with colleague, managers and trainees. A hardworking, happy and satisfied employee is one of the biggest assets of an organization. Work environment is one of the important factors which decide the satisfaction level, happiness level and attention during job of employees. Work environment can be classified to many ways. It can be physical, social, mental and supportive. Leadership style can also be come into account to measure the work environment which can affect project success in industry. Work environment draws the surroundings and outer environment in which an employee operates(Csikszentmihalyi & Rochberg-Halton, 1981). Surroundings of work can be complied of physical conditions like office environment, physical properties of office including different equipment like laptops or handhelds. Apart from the core of job itself, one aspect that influence working condition directly is his environment(Wefald, Reichard, & Serrano, 2011). Working condition plays important role in searching of new job process. There is always a preference to get job in which work environment is better than existing job environment which includes everything in organization like behavior of colleague, office culture and relations with higher management and lower management etc. If work environment is good, workers will feel awesome arriving

to job and same sense contributes (desire to do something/reason for doing something) to sustain them throughout the day and ultimately proceeds to project/task completion. For searching new job, assessing the working condition is an extremely important step which can't be ignored. After all, organization is the place in which employee shows his/her will to stay in future and doesn't want to be coming insist every single morning. This creates a sense of security in employee's mind that they are member of organization. In that sense, what employee does is always full of attention and zeal which makes work them meaningful. Open discussions in organization gets people always engaged and makes the environment in which they can easily share their ideas, views and opinions on how to (accomplish or gain with effort) company goals which ultimately pushes management to give more incentives to employees which pushes whole organization towards a common goal.

Bakker and Leiter (2010) States that good workers are normally defined as the persons those do well in their jobs with their hard work and devotion to his job. Some workers are simply people those do not believe in sacrifice rather they treat job as a routine. Manager has responsibility to show and build a better understanding in their workers to maintain balance between work and life. Means they should not promote people who scarify their life in preference to work. In this case, organization has to build a better way of thinking and they have to take some bold step on work life balance by promoting a sense of equilibrium between their life and job. With the help of knowing this it will develop an importance of balance life in the mind of workers(Vogelgesang, Leroy, & Avolio, 2013). All employees become more unify towards organization's mission. There is back and forth/equal between people respect among all workers, (without any concern about/having nothing to do with) their official statuses. There is another school of thought that define work environment as a surrounding conditions (safety, temperature etc) in which group of people are working together.Gupta and Singh (2013) states the environmental condition through which all

employee operates in an organization. Physical condition which includes office condition or equipment such as personal inventory is one part of work environment. Work processes or standard operating procedure can also be associated with work environment. In current study, we will focus on physical environment which is a most important factor that directly effect on workers. Because everyone knows healthy body poses a healthy mind. Similarly, Physical inactivity is a crucial causal factor of sickness and even through sensible movement and healthy activities deliberate health benefit according to (Health & Services, 1996). Air quality influences people's health especially of those people who have respiratory diseases. It required us to focus on health issues and we should develop a sense of physical fitness with determinants and it is reliable to follow human behavior for the betterment of human ecological behavior which guide us as an individually and as well as socially. This kind of physical environment and the sense of prosperity will maximize the chance of 'person-environment fit' (Stokols, 1996). Giles-Corti and Donovan (2002) states that the physical surroundings provides hints/signals and opportunities for physical activity. Infectious disease may be transmitted through water. It includes ventilation and temperature in which employee is working and contributing the company toward the completion of project. Noise can severely affect the behavior of species housed. Effects of noise can include endocrine gland disturbances, serum cholesterol increase and grandma audio genic seizures, certainly disruptive to task and ultimately project success. Noise limiting designs and effective management practices at all levels are essential to eliminating noise problem. There is another dimension which is social environment that is how we act with each other in different situations with our relationship and ethnic group, our education and work, the condition and communities in which we live, and how we feel about ourselves are all elements of social environment. Cassel (1976) states that It is obvious that any disease process, and in fact any process within the living organism, might be affected by the actions and reactions of the

individual to his social surroundings or to other people. Social environment can affect the confidence level and performance of employees(Avey, Avolio, Crossley, & Luthans, 2009).Social environment consists of the sub total of a society beliefs, customs, practices and behaviors.

There is another dimension which is mental environment which refers to the sum of all society shapes upon mental condition.Attfield (1983) states that the attitude to the ethnic can guide and play a significant role that will affect their mental adaptation level and provide a true picture in the mind of people that correlate internal and external environment."We live in both a mental and physical environment. We can be influenced mentally and physically by our surroundings which is around us every time, but specifically to greater extent we are influenced by the mental environment. The mental environment contains powers that directly affect our way of thinking alongwith emotions and that can prevail our personal judgments" (Judge, 2013). It includes getting bore during work, showing attitude to colleagues during execution of project or task. In the 1980s it was shown that the depressive disorders risks in adult life were a function of afflicted parenting, rather than parental loss or death which is certainly disorderness in mental environment.

The term job satisfaction was firstly introduced by Hawthorn and Elton Mayo at Western Electric Company in Chicago where they used to do job in Hawthorn plant. The results depicted that working behaviors can be influenced by emotions of the employees. Researchers have put a lot of attention on research of job satisfaction because it depicts the employee's intentions to stay in an organization.Different researchers have defined job satisfaction in different ways. Carnevale (1992) concluded about job satisfaction such that it is the difference between two levels. One level is what employees want of his/her job in organization and second level is what employee working in an organization actually get from his/her job. This feeling is mainly based on person's perception of happiness (from meeting a

need or reaching a goal). Job Satisfaction like described by above scholars shows its importance in project success. Actually, job satisfaction means how employee is feeling about his/her job(Wefald et al., 2011; Weissmann & Müller, 1981). If employee will be satisfied with job, he/she will concentrate on work and will take part in productive activities in organization to make project very successful.

Project Success is defined as judging requirement are the standards by which the project will be evaluated at the end to decide whether or not it has been successful for people who are interested in project or business. Projects in construction industry are evaluated by the success of project(Leung, Chan, & Yu, 2009). Söderland, Geraldi, and Söderlund (2012) introduced five important key factors of success for any project. These are the level of project manager's capability, programming of tasks, assurance on organizations and responsibilities, supervision and continuous engagement during execution. Belassi and Tukel (1996) has identified eight numbers of success elements during implementation of project. These eight success elements are basically are the well-defined aims, philosophy of an organizational, management support and trust on employee, and allocation of tasks as per personal abilities, appropriate team selection, proper resources allocation, true data accusation methods and planning reviews. Atkinson (1999) has constituted nine numbers of success components of a project. Fortune and White (2006) these success components are identified as:

- (a) Goals and ambitions
- (b) Project management
- (c) Stakeholders
- (d) Relationships with client
- (e) Human grouping
- (f) Contracting

- (g) Effective accords and data accusation
- (h) Political affect
- (i) Efficiency of workman ship
- (j) Conflicts resolution
- (k) Profit

These above mentioned are the most important key factors of project success. If project is not meeting deadline then there can be a huge gap which may not be covered by technical team in account to make project profitable and valuable. Smart management in projects always engages the best appropriate allocation of labor, raw materials with equipment. Cost reduction includes let in buying, cost effective inventory, shop assembly and field servicing, necessitates during material handling(Bakker, Hakanen, Demerouti, & Xanthopoulou, 2007). Christian, Garza, and Slaughter (2011) states that the construction technology in construction industry has been changed by use of new equipment, new innovative ideas and interesting methods. Organizations which do not recognize the effect of different introductions of new things and have not adapted to changing surroundings have very (and good reason) been forced out of the part of regular majority of people of construction activities(Nsiegbe, 2014).

Watching, noticing, celebrating, obeying the (popular things/general ways things are going) in construction technology playing a very confusing and blend (because of two different possible meanings) picture. On one hand, since early twentieth century in construction industry they were doing things differently but using unchanged materials and mechanism. Many construction industries normally highlight important factors which a manufacturer cannot change due to a major affecting thing is lack of developments in technologies and cost increment required to change and update an industry. Due to these below mentioned subjects like; fear of infliction, surrounding protection restrictions and

territories limitations, teamwork as a group and experiencing major construction projects, labor laws which promote strikes of unions results as a disturbance, accomplishment of regulatory policies including building codes/standards and zoning ordinances/laws, and tax& custom laws are the major cause and sense of danger that prevent construction abroad(Rowlinson & Cheung, 2008). Due to this stiff foreign competition, policies and territories restrictions are the major causes that affecting development of technologies and industry progress as well.

This research's intention is to explore tempt of work surrounding or work environment on project success with mediating role of employee's job satisfaction. There are a lot of researches which identified the existing trend on success of project and work environment all around the world but there is scarcity of this in the local environment. Generous (people who worked to find information) accorded on their findings that project success was dependent element on work environment.

1.2 Problem Statement

In large companies based on project, proper scheduling and implementation is foremost thing and can't be delayed on basis of internal problems. Employee may affect mainly due to work environment. Reason being is to engage employees to meet the project scheduling on time and within budget. If employees have good working environment through physical, mental and social aspects, employees are satisfied with their jobs and make their work productive which ultimately help activities and project completion on time. If employees are feeling uncomfortable due to working environment then they are not be engaged in their work and unsatisfied which ultimately yield in project failure. High employee turnover may be faced in such organization which means more recurring cost on training for new professionals increasing operational costs resulting project failure.

In this study we have explored the unique relationship of work environment with project success with the mediation of job satisfaction.

1.3 Research Objective

The research's accusative is as follows:-

- To analyze impact of multi dimensions of work environment (surroundings) on job satisfaction.
- To know working conditions of employees.
- To know the satisfaction level of employees.
- To describe the different work environment dimensions that can affect and provide employee with job satisfaction.
- To ascertain tempt of social, physical and mental environment on employee performance.

1.4 Research Questions

Question 1:Is there a positive relationship between Work Environment and Project Success?

Question 2:Is there mediating role of job satisfaction between different dimensions of work

Question 3:environment and project success?

Question 4:How the demographic (Age, Gender and Education) moderates the relations of job satisfaction and project success?

1.5 Literature Gap

Work Environment is studied by many researchers but according to my information, the impact on Project success with the work dimensions, I have chosen in this research, hasn't been explored in any project research. Akanni, Oke, and Akpomemie (2015) explored environmental factor on project performance in delta state, Nigeria. This research study will

capture the area where this kind of work is not reported before by any researcher according to my knowledge. The link between work environment and project success is tested by one researcher's group (Pheng & Chuan, 2006). In my research, work environment is considered as independent variable and project success is considered as dependent variables respectively by using job satisfaction as a mediator because in previous research stated that more aspects of work environment should have to be taken with mediator place for inspection of validity of relationships. So, this study will take job satisfaction to mediating position to assure the validity of a new kind of relations in research study and to contribute in developing the field of work environment for the sake of strong development of organizations and helping them in retaining talent as well. Gray (2001) has studied impact of project managers on environmental factors and work performance in the construction industry. This study also highlight the effect of working environment (surrounding) on project manager's success in construction industry.

1.6 Supporting Theories

The current studies can be underpinned by two theories. one is two factor theory and other one is theory X and theory Y which somehow support my model.

1.6.1 Two Factor Theory

Two factor theory proposed by Fredrick Herzberg. Analyze Fredrick's perspective on motivating employees through his two factor theory. Management is tasked with differentiating when more job satisfaction is needed (providing intrinsic motivators) and when less job satisfaction is needed (providing extrinsic motivators). If management wants to increase employees job satisfaction, they should be concerned with the nature of work itself.

1.6.2 Theory X & Theory Y

Theory X of management, there is a clear distinction between them, as on the one hand play is controlled by the individual, while on the other hand work is controlled by others. Therefore, people look for any excuse not to go to work , in order to satisfy social and self-actualization needs. On the other hand, Theory Y practices focus on creating a pleasant work environment and aligning the individuals' goals with the organizational goals. In these organizations, the productivity levels are high and people come to work gladly, as the works satisfy their superior needs.

1.7 Significance of Study

This study will have the significance at two levels. On the first level this study will contribute in the work environment literature and on the second level this study will help the human resource managers, organizational development practitioners to better understand the work environment and the job satisfaction. So the managers can build a better environment on the project so that the employees become more satisfied. The academicians and managers will also be able to obtain better comprehensions of various elements of the work environment and the influence of these factors on employee's job satisfaction. They will also be able to understand relationship between work environment and job satisfaction.

- It helps managers comprehending the better understanding of multi dimensions of environment of work and impact of dimensions on employee for job satisfaction.
- To understand the work environment of employees.
- To understand relation among job satisfaction and work environment.
- To understand mediating role of job satisfaction.
- To understand the relation among project success and job satisfaction.
- To understand the relationship between work environment to project success.
- It helps organizations create effective work environment.
- It helps employees for growth opportunity.
- It helps design and maintain work environment

1.8 Structure of the Report

The course of the report is divided into five sections. At to start with, the section initiated with the introductory part of the study. It includes background, problem definition, research questions, and significance, aims to be addressed and definition of the variables. Subsequently, the second chapter establishes theoretical support to the underpinned study and development of hypotheses to be tested. Addition to this, the third chapter explains the methodology employed in the study. It comprises a data description and data processing measures. Here comes the core of the study, the fourth chapter that contains the illustration and discussion of results brought forward through various evaluation measures. The concluding chapter holds final discussion of the research, limitations, future directions and implications of the study.

CHAPTER02

LITERATURE REVIEW

Entire universe is fusion of flawlessly composed things where every last thing has its presence and reliably performing its obligations on the premise of their solid bonds and incorporation among them. All these things are well mindful of their impediments and this is the main cause that they all are spreading the arrangement of universe. At the point when their bonds are irritated by any way, then, their execution loses its pace. Essentially every single association is consolidation of diverse units and distinctive offices, where each division involves number of people groups and all these individuals with diverse considerations, state of mind, practices, values, convictions, and societies and encounters work for attaining some particular set of objectives. Effective and compelling accomplishment of these objectives is just conceivable when each part of every last one of offices and of all qualities ought to be well mindful of its obligations and impediments, and they can help one another in every allotted undertaking and can fortify the arrangement of the entire association.

In this research study, we took Project Success is an dependent variable that is going to affect by one independent variables in different ways like (Physical, Mental and Social dimensions of Work Environment) in presence of a mediating variable Job Satisfaction that creates impact on dependent variable by effecting different dimensions of independent variables(Physical, Mental and Social Environment). There are several studies related to this paper. The conceptual definitions of the variables focused in this research study are described by various researchers in their studies are as follows:

2.1 Work Environment and Job Satisfaction

Gupta and Singh (2013) identified the meaning of work environment such as physical dimensions of a working surrounding directly influences to creativity, health and safety essentials, productivity, consolation, attention which ultimately affects morale of the employee by dissatisfying of job within it.

Department of Health and Human Services US, 1996 stated that Physical sickness causes mental illness as well as effect health too and on other hand healthy life has control levels of benefits. Stokols (1996) stated that a center on extensive factors of health behavior is coherent with a social perspective those relate ecological domain of human behavior which suggests a treatment and an interaction between individual, social and physical environment to maximize the 'person-environment fit' need.

Insel and Moos (1974) assesses employee's perception of several board dimension of their daily work environment. Giles-Corti and Donovan (2002) states that the physical environment gives hints and chances for physical activity. Karl and Sutton (1998) was the first one to use the term of engagement in the organizational business context 24 years back. Studies have demonstrated that Karl's work on the idea of different dimensions of work environment towards association was delineated in the vast majority of the job satisfaction Kahn's commitment gave management to work environment as stated in (Rothbard, 2001).

Bryde (2008) opinion that all the managers take significant consideration on physical states of employee while planning the management strategies to avoid extreme point which can take advantage of available resource.

Mental environment refers to the addition of all societal impacts on mental health. Attfield (1983) states that the attitude to the ethnic can play an important role for the man to adopt his internal and external environment. "We are living in mental as well as physical environment. We can influence and can be influenced by the surroundings around us, but we are influenced

by the mental environment much more than physical environment. The mental environment contains all sorts of forces and pressures that affect our way of thinking along with emotions that can have great impact on our personality and personal minds." (Stansfeld & Candy, 2006). Cassel (1976) states that it is always a reality that due to interactions between persons or person to environment, it always influence the overall health of employee working in any organization. Social environment can affect the confidence level and performance of employees(Avey et al., 2009). Social environment consists of the sub total of a society beliefs, customs, practices and behaviors.

(Child, 1972; Gupta & Singh, 2013)studied effects of environment on progress and performance of managers. The purpose of the research is to study that how a project manager's performance can improve and through experience we are able to identify the variables that can affect working environment. Another objective of the research study is to establish factors that can affect progress and can cause delay in projects. With deeply study and analysis on these key points, industry will be able to enhance and flourish by targeting these factors that will enhance efficiency of managers lowering the effect of these factors which can affect their work conditions which will in the end increase productivity and project success. The result shows that there are some important factors that one should consider like work timings, physical forcible condition of project site, dynamics of project, project size and domain, duration of project and availability of time were treated important and discussed differently between two groups. Moreover, Anova test revealed that different managers having different school of thoughts based upon their experience generally consider environment very much important than others. This study identified that how working environment variables is crucial for the performance of a project manager. It also provides project manager no matter working in consultants side or contractor side a sound knowledge of understanding of their working environment.

Kennerley and Neely (2003) accompanied a study on Job Satisfaction in public sector organizations rather than private sectors. The main core and result findings in this study belief precise job features and work situation are commonly connected with the public sector are more satisfied and more significantly affecting their way of life in a positive manner. Furthermore, it shows that people are more interested in working with public organizations they believe that it will enhance their employees' job satisfaction and he should take into consideration how the work environment may impact their employees' insights and involvements on the job.

Project success has been described into two separate aspects; first one was project product success, which improves project objectives and end products of the project. Project management success mainly improves project management aspects such as its activities, procedures and processes(Atkinson, 1999).

Project management success primarily deals with two broad types first one is objectivity, hard and quantifiable. Their measurement criteria are time, cost and quality whereas second one deals with soft, subjective and qualitative. Their success criteria are satisfaction, effective communication and absence of conflicts (Belassi & Tukel, 1996).Wu (2006) has emphasized that the most important factors in improving project delivery consist of a combination of 'hard' features such as strong project monitoring through early stakeholder involvement as well as 'soft' features such as rich communication and greater quality of information sharing. He further emphasized that reliable project communication plays a key role in trust building among project stakeholders, which eventually contributed to a healthy and sustainable working relationship.

Pinto and Slevin (1989) have highlighted that measuring project success is unclear because project success and failure is perceived differently by various stakeholders of the project.

Factors effecting success and failure identified in the past studies have also been found to be different (Duy Nguyen, Ogunlana, & Thi Xuan Lan, 2004). It clarifies that difference between project success and project management are different terms. Studies in the past have shown that success in projects is tangible because of the goals or objectives set for the project and financial outlay, duration and output is used to measure project management success.

Organizations are aware of importance of critical effective leadership and team work in the success of strategic projects and ultimately organizational success (PMI, 2013). These leadership qualities have a great influence to meet time schedule that causes success of project and better performance of organizations. There is a great impact of Leadership attitude on performance and progress of an organization. P. W. Morris (1988) has concluded that an important factor that will directly affect performance of project at different phases is poor leadership style and they compromise on quality, which ultimately leads to incompetency and project failure. Sahm (2004) mentioned different factors such as leadership and team work, which impact success or failure of a project.

Müller and Turner (2007) mentioned various success factors affecting a project, which varies with a change in geography of the area, type of industry also play a very important role, thus different industries have their own requirements and require different criteria in this regard. Project managers does influenced critical success factors in a project and are influenced or controlled by factors namely project mission, type of personnel and inter communication with team members.

You can say that project success should be calculated as a cross product of project management success and project success (Baccarini, 1999). It has been advocated by various researchers in own takes, however, the most widely accepted and cited definition of project success was given by Takim and Akintoye (2002) where the project success was divided in

two categories. They are the success of project success itself and the success of project management team (Ullah Khan, 2014).

There has always been a lot of debate on the profit and loss of a project influenced by project manager's on success of any project but still lot of disagreements exists (Pinto & Slevin, 1989). We can term project success as various expectations of all participants like owner, manager, engineer, follower etc. are fulfilled (Sanvido, Grobler, Parfitt, Guvenis, & Coyle, 1992). Project is said to be successful when outcome is above than predicted or when project cost, timelines, quality and members satisfaction is considered (Ashley, Lurie, & Jaselskis, 1987). Project is called successful when the goals set are achieved or it complies with the defined performance specifications, and when higher echelons in the organization, project team and users or end customers are pleased with the project results (De Wit, 1988). We can do measurement of project success under gone evolution from just duration, budget and execution in the era of seventies transformed to "quality" centric approach in eighties and nineties (Nixon, Harrington, & Parker, 2012). Nowadays, project success is measured in terms of satisfaction of all key players, success of product, benefits accrued by the organization and team development (Atkinson, 1999). To judge whether a project is successful or it has been unsuccessful is a complex and vague. "Project Management Body of Knowledge" Thomas and Mengel (2008) has been mentioning about project success without defining it, however, it proposes that scope of the project should describe project success and goals, as well as success criteria to be defined during planning phase. Important stake holders perspective decides about the project success and there are two perspectives: macro perspective, cumulative effect of all key players and micro perspective, concerning with people having direct involvement with the project (Lim & Mohamed, 1999). Pinto and Slevin (1989) highlighted that measuring project success is unclear because project success and failure is perceived differently by various stakeholders of the project. Factors effecting success and

failure identified in the past studies have also been found to be different (Duy Nguyen et al., 2004). Different stakeholders of the project set their own preferences and goals for complete duration of the project according to their own level in the hierarchy (De Wit, 1988). It is very important for us to have a clear understanding of difference between project success and project management. Studies in the past have shown that success in projects is tangible because of the goals or objectives set for the project and financial outlay, duration and output progress is being used to measure project success due to good management and governance (Cooke-Davies, 2002). Since achievement in projects can only be gauged once the project reaches to culmination stage, however, the duration of project execution stage gives the account of performance in projects (Cooke-Davies, 2002). It has been stressed and now a days we consider it as a fact that project success should be measured as a product of both factors one is project success and other pillar is project management success (Baccarini, 1999).

The criteria of success in terms of relevant factors can be best explained by knowledge, ability, characteristic, purpose or any personal attribute which is necessary to perform any task or function which differentiates between good and excellent performance (Duy Nguyen et al., 2004). Some factors are basically very critical for success those have been identified as those important dimensions of plan which ensures attainment of objectives by a project manager during execution phase (Bullen & Rockart, 1981). In today's world critical success factors have been found to be similar in judging the success of projects (Nixon et al., 2012). Critical success factors are also described as those principles which must be followed rigidly by the managers to ensure best performance, and in turn they ensure success for both project manager and organizations (Boynton & Zmud, 1984). In case of projects and project management field, factors effecting success and failure of any project were highlighted for the first time by (Rubin & Seelig, 1967). Similarly, Bullen and Rockart

(1981) for the first time mentioned or identified the term critical success factors. In building or construction operation and projects related to transfer, Tiong, Yeo, and McCarthy (1992) recommended application of Critical success factor on the following:

- (1) The project.
- (2) Project sponsors or consortium and conglomerate.
- (3) Project location and environment.

Projects basing on their type can have varying set of critical success factors (Chua, Kog, & Loh, 1999). Without any question critical success factors impact the various dimensions of project success and ways to achieve success in a project, however, the application of critical success factors is still not very common. Probably it is due to the difficulty involved in the maximizing the objectives of the project. Hence it seems almost extremely difficult or at times impossible to create a balance in selection of critical success factors while viewing various project objectives. It is extremely important to understand the evident differences amongst the criterion and factors entailing successes (Cooke-Davies, 2002). There is another criterion for success has been recognized as strategy which can affect project success or failure or gauged and success factors are termed as type of feedback received at the management level which pays attention to the success of project directly or indirectly. These success factors are named as detailed planning, detailed design, commitment of project manager, motivation, technical expertise of project manager, scope of work and control systems (Ashley et al., 1987). Correspondingly, success criteria have been identified as project budget, performance as per schedule, satisfaction of client, functioning of project, satisfaction of manager/members (Ashley et al., 1987).

2.2 Job Satisfaction and Project Success

Job satisfaction along with project success has already been identified many times by researchers in a hefty manners including collaborating with different aspects of individual's

work which basically includes compensation, promotions opportunities and job security (Howell, Bellenger, & Wilcox, 1987). Job satisfaction is considered to be the most powerful factor determining project success in all context of research(Bechtold, Szilagyi, & Sims, 1980). Several researches are correlated to personal job satisfaction with organizational project success (Futrell & Parasuraman, 1984; Pettit, Goris, & Vaught, 1997)(Michaels, Cron, Dubinsky, & Joachimsthaler, 1988). Likewise, empirical work presented by Howell et al. (1987) identified that job performance is positively related to job satisfaction. If job performance of individual will be highly correlated with job satisfaction then more attention that specific individual will give to organization and ultimately yield in project/organization success. In other words, performance may be a source of affection to satisfaction level.

2.3 Mediating Role of Job Satisfaction

In organization or institutions, employees work day and night and spent a lot time of their lives in organization. Maslow theory (1956) identified the importance of job satisfaction within the workers in organizations date back to the second half of the 20th century. After that, many researchers have been working on importance and affects of job satisfaction which may has great impact on employers as well as employees. Employers want highly productive work from low wage employees which directly hit satisfaction level of job and ultimately reduce the capacity of productive work in organization. Nevertheless, employees might need to feel content with the job as well they do and provide the amount of time that they need to dedicate for all through their working lives(Duy Nguyen et al., 2004). Job satisfaction is important for employees and organization.

Soltani, Al-taha, Mirhousseini, and Mortazavi (2015) examine the effect of environment factors on job satisfaction in auto industry in Kula Lumpur, Malaysia. They collected data from 170 samples through questionnaires. A survey related to job was used as a tool to gather the data. Their findings highlighted the significant relationship between job satisfaction and

project performance. Study further identified that variety of different skills have outstanding affect in the study of job satisfaction for auto industries and implicitly automotive industries may benefit from the methodology as it can diagnose job satisfaction to maintain performance and productivity.

2.4 Work Environment and Project Success

Projects are unique and of different nature with each other which often initiates problems for even the most experienced project leaders due to different dynamics. Projects can be different in size, complexity, duration, building rate and type of projects aspects. Decisions and risks which are definitely associated with projects should be tackled in a smart way which can affect project in destructive as well as constructive manners depends on way of implication of decisions. Since surrounding and environment more or less depends on projects, environment may has directly or indirectly influence decisions which actually tell the fate of project to be more or less productive. Identification of environmental analysis should be carried out at starting phases of estimation of project including risks and their probability of occurrence which will help project manager to be prepared for alternative ideas and to make contingency plans. Sensitivity in environment during execution Being sensitive to the project, work environment can lead to better performance of the project may lead to project success directly.

(Gudienė, Banaitis, Podvezko, & Banaitienė, 2014; Gupta and Singh (2013))states that there is a lack of understanding of the working environment importance and its impact on the project success.

(Herzberg, Mausner, and Snyderman (2011); Paul and Phua (2011)) researches that job satisfaction nature is U-shaped in age, as higher level of satisfaction among new joiners and

with the passage of time it starts decreasing and eventually as the employment period starts increases the satisfaction also again start increases.

Highly qualified worker found to be more satisfied from its job as compare to the less educated one the reason is that highly qualified get better job as compare to low qualified job (Verhofstadt, De Witte, & Omeij, 2007). Oshagbemi (2000) mentioned that employment status is important in measuring the employee job satisfaction where satisfied workers prefer to stay longer in organization and dissatisfied workers try to quiet the organization. According to the work of Oshagbemi (2000) job satisfaction level varies according to the age. Müller and Turner (2007) relate that project success with project manager age as “project managers who are older in experience pays more weight in performance of project” and it also proved that higher the experience of project manager more project will be successful which shows that experience has significant direct relation with project success.

Jain and Kaur (2014) examines the impact of work environment on job satisfaction. The study has been conducted in Dominos in Jaipur, India. He collected data from 100 samples through structured questionnaire. He used convenient and random sample techniques. The result of the study indicates that job dissatisfaction among employees are caused because of high work load, disturbance due to stress, overtime and doing boring works in job. On the other hand, good working conditions, refreshment, health and safety facility and fun at work place increase the degree of job satisfaction.

Bakotic and Babic (2013) examines the relationship between working conditions and satisfaction of job. The study has been conducted in a shipbuilding company. He collected data from 60 samples through questionnaires. He used random sample technique. The result of the study was that workers who work in normal working conditions are more satisfied with working conditions than workers who work under difficult working conditions.

Testa (2001) examines the influence of work environment factors on employee's job satisfaction. Purpose of empirical research was to investigate the impact of work environmental factors on employee's job satisfaction at Mahan Air Company in Iran and determine the most important work environment factors for Mahan Air employees. They collected data from 102 employees through questionnaire. Quantitative method was chosen in data analyzing. The result of the study was that all the work environment factors have significant influence on employee's job satisfaction at Mahan Air but employee participation has the greatest influence on employee's job satisfaction and performance feedback has the least influence.

Elnaga (2013) explored the link between work environment, motivation and job satisfaction. Study found in detailed manners after collection of data through descriptive approach that the motivation and work environment are considered as a most critical factor which affect on job satisfaction. The result of the study was that impact of the employee's perceptions for the nature of their work and the level of overall job satisfaction, financial compensation has a great impact on the overall satisfaction of employees.

Wood and Tandon (1994) examined that job satisfaction is indirectly related to success or failure. Actually job satisfaction is related to individual performance and ultimately success or failure for manger and system as well. Comer (1985) and Lysonski and Woodside (1989) note that the product management system has a tendency to produce high turnover among product managers in sense of job satisfaction and ultimately affects overall organizational performance.

Bagozzi (1978) stated that Job satisfaction has been studied extensively in a variety of settings including sales management and marketing, and has been related to numerous facets of one's work, including compensation, promotional opportunities and job security which goes ultimately project success.

Müller and Turner (2007) states that the literature on project success factors, surprisingly, is very quiet about the role of the project manager and his or her leadership style or competence. Leadership style and competence are seldom identified as critical success factors on projects.

Jugdev and Müller (2005) (in press) state the changing understanding of project success is discussed. They identify four periods, each widening the definitions of success. In the 1970s, project success focused on implementation, measuring time, cost and functionality improvements, and systems for their delivery. During the 1980s and 1990s, the quality of the planning and hand-over was identified as important. Lists of Critical Success Factors, which also took into account organizational and stakeholder perspectives, became popular. More recently, frameworks were developed on the basis that success is stakeholder-dependent and involves interaction between project supplier and recipient. Additional dimensions taken into account were the project product and its utilization, staff growth and development, the customer, benefits to the delivery organization, senior management and the environment.

J. Turner, Andersen, Grude, and Haug (1987) identified project pitfalls, things that project managers might do, or not do, which increased the chance of failure. J. R. Turner and Müller (2005) states that recently, there has been a revival of interest in project success factors. Akintoye identified a list of ten factors for Information Systems projects, very similar to Pinto and Slevin (1989) list. In that list, it is clearly mentioned that project success or project failure has a relation with environment.

Cooke-Davies (2002) list was obtained from benchmarking project performance in several benchmarking networks he manages, so is based on subjective assessment of actual project performance. He also does not overtly mention the project manager, but since he has identified project management success factors, he is implying that the project manager should be competent.

Kendra and Taplin (2004) used a model of success factors grouped into four types: micro-social, macro-social, micro-technical, and macro-technical. The leadership, behavior, and personal attributes of the project manager are proposed as one success factor in the micro-social list.

Project Management Journal (June 2005)P. Morris and Jamieson (2005) states that Project managers have a leadership role in creating an effective working environment for the project team that goes for project success.

2.5 Moderating Role of Demographic variables

(Herzberg et al. (2011); Tan & Waheed, 2011) researches that job satisfaction nature is U-shaped in age, as higher level of satisfaction among new joiners and with the passage of time it starts decreasing and eventually as the employment period starts increases the satisfaction also again start increases. Highly qualified worker found to be more satisfied from its job as compare to the less educated one the reason is that highly qualified get better job as compare to low qualified job (Verhofstadt et al., 2007). Oshagbemi (2000) mentioned that employment status is important in measuring the employee job satisfaction where satisfied workers prefer to stay longer in organization and dissatisfied workers try to quit the organization. According to the work of (Oshagbemi (2000)), job satisfaction level varies according to the age. Müller and Turner (2007) relate that project success with project manager age as “Older project managers assign higher importance to teambuilding than their younger colleagues” and it also proved positive relation between project manager experience and project success.

2.6 Research Framework

Representatives of any organization are similar to licensed innovation, and on the premise of this property they can pick up the focal point against alternate organizations. Along these

lines, more the representatives are prepared and fulfilled by the ecological conditions, the more they can give point of interest to the firm. Henceforth, helping through from past it is not unforeseen that giving trust and certainty to representatives by rehearsing equity and transparency in correspondence is a noteworthy wellspring of incorporating workers' capacities, responsibility and expert delights with the sought focuses of the organization.

In this research study, the important variables include;

- Work Environment (Physical)
- Work Environment (Social)
- Work Environment (Mental)
- Job Satisfaction
- Project Success

In this research, Work Environment (Physical, Mental and Social) is independent variable and Project Success is a dependent variable while Job Satisfaction is playing a mediating role.

Framework is look like as follows:

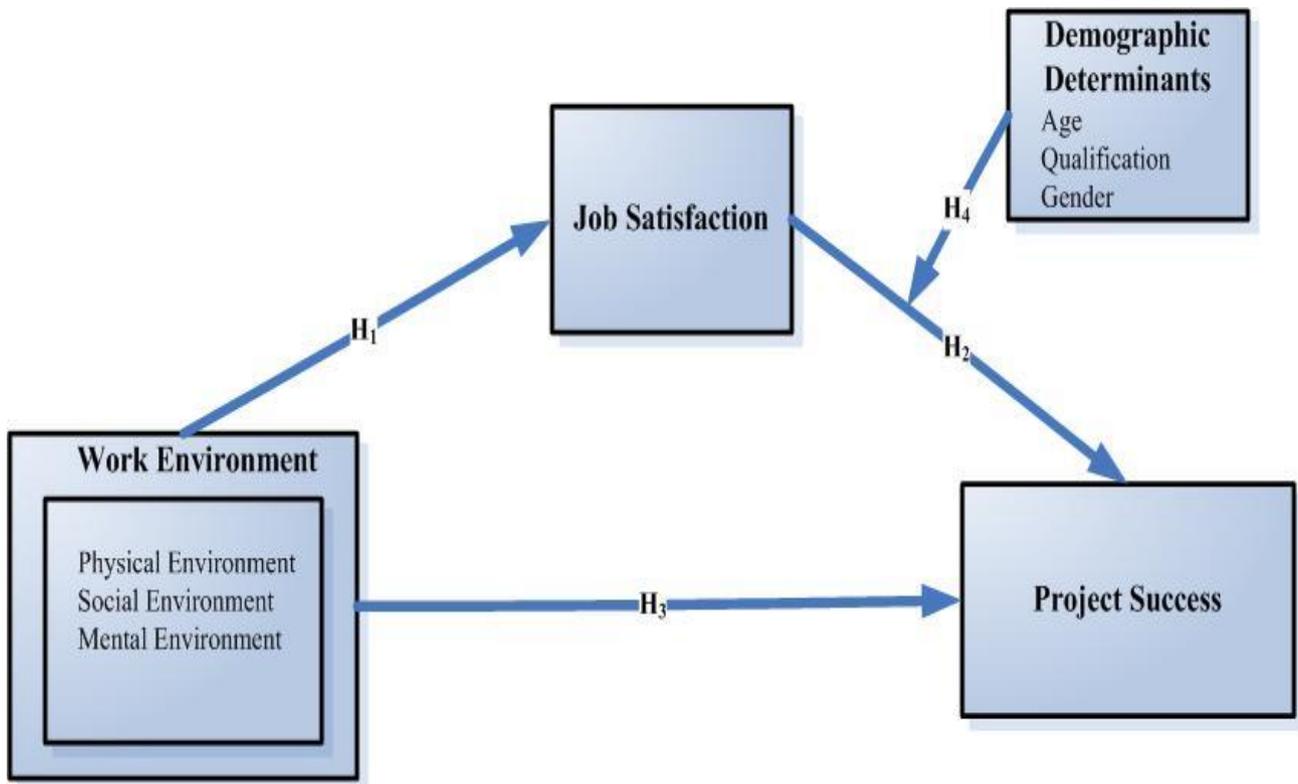


Figure.1: Research Framework

2.7 Research framework and hypotheses

Generally, the aim of this research is to determine impact of work environment elements on project success with mediating role of employees job satisfaction. Research framework suggests the work environment has an influence upon job satisfaction of employees. Job satisfaction has impact on project success. In this research, work environment includes three elements of environment i.e. Physical, Mental and Social environment. The research framework for the study can be illustrated in Fig. 1.

In this research study work environment are considered as independent factors and job satisfaction as mediator and project success as dependent factor. The research tries to explore the potential influence of work environment on employees, job satisfaction and project success.

The hypotheses for this research are as follows:-

H1: Physical environment in organization has significant influence on the job satisfaction of employees

H2: Mental environment in organization has significant influence on job satisfaction of employees.

H3: Social environment in organization has significant influence on job satisfaction of employees.

H4: Job Satisfaction has a significant mediating role between the relationship of Physical Environment and project success.

H5: Job Satisfaction has a significant mediating role between the relationship of Social Environment and project success.

H6: Job Satisfaction has a significant mediating role between the relationship of Mental Environment and project success.

H7: Age of the employees have significant moderating role on the relationship of Job Satisfaction and Project Success.

H8: Qualification of the employees have significant moderating role on the relationship of Job Satisfaction and Project Success.

H9: Gender of the employees have significant moderating role on the relationship of Job Satisfaction and Project Success.

2.8 Chapter Summary

A wide range of work experiences that could be termed as challenging or hindering demands in the literature to epoch have been enlightened in this chapter. In addition, theoretical framework, hypothesis development and conceptual model for present study have been presented.

CHAPTER 03

RESEARCH METHODOLOGY

3.1 Research design

Research design includes the process of investigating and managing the research. The data was collected from Private sector of Pakistan. It includes CSCEC (China state construction Engineering corporation), Siemens, MMP, HRL and VINCI. This part of chapter includes study type, its time frame, unit of analysis, data collection process and sampling units etc. Actually, the procedure by which researchers go through their work and after that they describe, explain and predict the cause and effect is called research methodology. Research methodology uses to collect data for our research work. The purpose of methodology is to describe the mechanism of the research. It includes the research design, the reasons of choosing the methodology that fits the purpose of the study, sampling and measurement techniques and sample size.

3.1.1 Type of Study

The study is empirical in nature and cross sectional in terms of time-frame. The study was completed over a time period of six months.

3.1.2 Unit of Analysis

Respondent was Individual. Individuals working in Pakistan who have worked in project settings, at some point in time, and possess expertise required for the job as well as having a good understanding of being knowledge workers (able to produce, codify, use and transfer knowledge) based on the nature of their work.

3.2 Population and Sample

All the observations of the census is known as the population and all the project based companies operating in Pakistan will be the population of this study. But it is impossible to collect the data from the whole population so, a selected elements of the population will be selected which is known as the sample. This study will collect data from 250 employees working in different companies. Therefore the sample size will be 250 and the non-probability sampling approaches will be used, because the total no of employees working in companies are unknown. Convenience and judgmental sampling approach will be used.

3.2.1 Sampling Technique and Sample Selection

The sampling technique selected for this empirical study is based on non-probability sampling techniques namely, Convenience and judgmental sampling approach. Convenience sampling is a non-probability sampling technique where subjects are selected because of their convenient accessibility and proximity to the researcher. To ensure generalization of study results, emphasis was placed on the sampling technique having known the population size, a sample size of 250, according to (O'Leary, 2010), would accurately reflect the population mentioned in the target frame with an estimated margin of error deemed acceptable for this study and this along with a selected confidence interval of +/- 5% and 95 % confidence level. The employees of multinational companies in Rawalpindi/Islamabad were the participants of the study and the sample of the population was around 250 employees from the companies located in Rawalpindi/Islamabad. Questionnaires were distributed among the employees from different companies (CSCEC, Siemens, MMP, and VINCI) in the sample. This study followed the Process, by Andrew. F Hayes to evaluate the mediation and moderation relationship between the study variables and was done by using SPSS v.20. All of these steps were taken to ensure that the sample would be representative of the population so that the

generalization of results becomes more acceptable and applicable to the industry in the context of this study.

3.2.2 Sample Size

Due to limited availability, Samples were around 250 from different multinational companies in Rawalpindi and Islamabad region.

3.2.3 Sample Characteristics

In the total sample of 210 the population, 61 were female and 149 were male, having percentage of 29% and 71% respectively. In 210 respondents' majority were young. The respondent between age 18 to 25 years were 60, while the respondents of 26 to 33 year age were 101, as the age between 18 and 33 considered young, they contributed 76.7% of the total responses of the present study. The middle age responded from age 34 to 41 years were 33 and the responded of age 42 to 49 years were 6 and above 50 years were 10. Out of 210 respondents 26 have 14 years of education, 151 have 16 years of education and 33 have 18 years of education.

Table 1: Gender

	Frequency	Percent	Cumulative Percent
Female	61	29.0	29.0
Male	149	71.0	100.0
Total	210	100.0	

Table 2 : Age of Employees

	<i>Frequency</i>	<i>Percent</i>	<i>Cumulative Percent</i>
18-25	60	28.6	28.6
26-33	101	48.1	76.7
34-41	33	15.7	92.4
42-49	6	2.9	95.2
50 and above	10	4.8	100.0
Total	210	100.0	

Table 3: for Qualification of Employees

	<i>Frequency</i>	<i>Percent</i>	<i>Cumulative Percent</i>
14 Years	26	12.4	12.4
16 Years	151	71.9	84.3
18 Years	33	15.7	100.0
Total	210	100.0	

Data Primary data was taken.

3.2.4 Data collection

The data was collected through questionnaire. There were two parts in questionnaire. In first part, demographic information has been asked from respondent such as age, gender, education, in organization.

In second part, questions of work environment, job satisfaction and project success have been asked from respondents. The questionnaire consists of a set of Likert-type-scale. In order to excel in the study the researcher will collect primary data and the questionnaire will be used for this purpose. The primary data is the data which is collected from the sight of occurrence and have the benefit of up to date information. Data was collected through the adapted questionnaire added in the appendix. The questionnaire was sent to email addresses of organizations listed in the directories maintained by the regulatory and governing bodies mentioned in the population frame. The emails included requests for the HR Departments and Offices to get the online questionnaire filled by relevant personnel possessing the right technical skills. Actual instructions on filling out the questionnaire along with a brief purpose of study were included in the questionnaire itself. The original requests were followed up every four days up till a time period of three weeks, after which the collected data was used for analysis.

3.3 Pilot Study

Pilot study was conducted so that it could be assure that questionnaires are valid and respondents easily understand them. Data was collected from the respondents from our target sample for feedback. The study showed the satisfactory alpha coefficient values: work environment: Physical environment .78, Social environment .79, Mental environment .82 ,Job satisfaction .83, Project success .75.

Table 4: Instrumentation, Sources, Items& Reliabilities

Variable		No. of Items	Reliability
Work environment	<u>Robert Ouko (2011)</u>		
Physical Environment		10	.78
Social Environment		10	.79
Mental Environment		5	.82
(IV)			
Job satisfaction	Schleicher, Watt and Greguras,	18	.83
(Med)	(2004)		
Demographics			
(Mod)			
Project Success	Turner and Muller(2005)	9	.75
(DV)			

3.4 Research Instrument

There are a lot of techniques used for the collection data. Here, questionnaires were used for data collection. Questionnaires are data collection instruments that enable the researcher to pose questions to subjects in his/her search for answers to the research questions.

3.4.1Instrument development/Measurement:

Majority of the questions used to measure the concepts were adapted from already published research work. The study instrument for analysis was based on the theoretical support of literature of the variables and in totaling to a quantity of questionnaires used in

previous studies. The questionnaires for each variable were selected on the basis of their relevance and best availability to the study. Questionnaire was adopted to measure the dependent, independent variables and the effect of mediator on them. The questionnaire was focusing on all the variables and their effects on each other. The study chose the well-established scales to measure the variables in this study. All items of the all scales were originally in English. Ownership measures used a 5-points likert-type scale. Response categories range from 1 (Negligible) to 5 (Strongly Agreed).

3.4.1.1 Work Environment

To measure Work Environment, the scale developed by Robert Ouko (2011) will be used. There were three dimensions of the Work Environment, Physical, Social and Mental. There were ten items in the scale to measure the Physical Environment of the project, the sample question will be, "I feel that my work place is a safe environment". There were ten items in the scale to measure the Social Environment of the project, the sample question was, "I am satisfied with the support the organization has given me when making suggestions". The Mental Environment was measured by using the five items in the scale, the sample item was, "I feel stressed at work".

3.4.1.2 Job Satisfaction

The job satisfaction was measured by using the 18 items from the scale developed by Schleicher, Watt and Greguras, (2004). The sample questions was "I am satisfied with my job".

3.4.1.3 Project Success

The Project Success will be measured by using the scale developed by the Turner and Muller (2005). The scale contained eight items and the sample item was, "Projects resulted in increased sales growth/market share/competitive position of your organization".

Questionnaires should be made simple and easy for the respondents. The responses were taken on the five point Likert scale ranging from “Strongly Disagree” to “Strongly Agree”.

3.4.1.4 Questionnaire

Questionnaires are simply used for collection of data. It can be structured or non-structured which enables researcher to impose questions related to research/topic to respondents through set of questions.

3.5 Data Analysis

Once the data will be collected through questionnaire, the study made use of descriptive analysis as well as inferential analysis, such as frequencies, means, standard deviations, correlation analysis and regression analysis. The data was analyzed for correlation and regression.

3.5.1 Data Analysis Tools

Data for the study was collected using already developed and validated scales. SPSS 20 was used to analyze the data. Cronbach alpha was calculated using reliability analysis. Descriptive statistics were calculated and impact of control variables were also assessed using ANOVA. So that if any of demographics have its impact over outcome variables, its impact needs to be controlled. Correlation, regression, mediation and moderation analysis were performed to confirm the hypothesis. Further, Preacher & Hayes (2008) in SPSS 20 was used to run mediation. Correlation analysis is performed to check the strength and direction of relationship between predictor and outcome variable whereas regression analysis is performed to inspect that how much variance in outcome variable is expected because of predictor.

3.6 Chapter Summary

This chapter has explained the population of interest, sample used and sampling technique adopted. Moreover, the procedures of data collection have been stated that were adopted, along with the scales used to measure the study variables and the applied data analysis techniques in order to infer results.

CHAPTER 4

RESULTS

In the results, Statistical Package for Social Science (SPSS) was used for data analysis.

4.1 Measurement Model

In order to justify Confirmatory Factor Analysis (CFA) was used, the measurement model (Anderson & Gerbing, 1988) which consisted of three variables: work environment, job satisfaction, and project success. The combination of different fit indices: model chi-square, incremental fit index (IFI), comparative fit index (CFI), Tucker-Lewis index (TLI) and root mean square error of approximation (RMSEA) were used in order to assess the model fit. The measurement model delivered an excellent fit to the data against the alternative models (df=1.45, IFI=0.77; TLI=.85; CFI=.87; RMSEA=0.05). These CFAs results showed that five-factor model had satisfactory discriminate validity.

4.2 Reliability analysis

Reliability analysis is taken as the ability of a scale to provide the same results constantly when tested various times. The Cronbach Co-efficient Alpha (internal consistency reliability) value range starting from 0 to 1. Alpha values “0.7 “are considered to be more consistent whereas values less than 0.7 are considered to be less consistent (Nunnally & Bernstein 1994).

See Table no 1 for figures.

4.3 Descriptive Statistics

The details about the data collected in this research investigation are presented in the table below “Descriptive Statistics”. The first column of the table comprises of the detail of

variables, the second column enlighten us about the sample size of the study, third & fourth column demonstrates the minimum and maximum mean values for the data collected. Maximum value for Gender is 1 as the gender has been measured on two factor category where 0 show female & 1 represents male. All the five variables of the current study were measured in values from 1 to 5. The independent variables i.e. Physical Environment has a mean of 3.57 and a standard deviation of 0.864, Social Environment has a mean of 3.68 and a standard deviation of 0.714 and Mental Environment has a mean of 3.63 and a standard deviation of 0.751. The dependent variable Project Success has a mean and standard deviation values of 3.61 and 0.714 respectively. The mediator, Job Satisfaction showed a mean of 3.77 and a standard deviation of 0.792.

Table 5: Descriptive Statistics

Variable	Sample Size	Minimum	Maximum	Mean	Std. Deviation
Gender	210	0	1	-	-
Age of Employees	210	1	5	-	-
Qualification of employees	210	2	4	-	-
Physical Environment	210	1	5	3.57	.894
Social Environment	210	2	5	3.68	.714
Mental Environment	210	1	5	3.63	.751
Job Satisfaction	210	2	5	3.77	.792
Project Success	210	2	5	3.61	.714

Correlation analysis: Table 6: Means, Standard Deviations, Correlations, Reliabilities()

Variables	Mean	S.D	1	2	3	4	5	6	7	8
1 Gender	-	-	1							
2 Age of Employees	-	-	.014	1						
3 Qualification of employees	-	-	.020	.086	1					
4 Physical Environment	3.57	.894	.012	.049	.074	(.82)				
5 Social Environment	3.68	.714	.057	.068	.123	.363	(.75)			
6 Mental Environment	3.63	.751	.061	.071	.048	.432	.484	(.80)		
7 Job Satisfaction	3.77	.792	.052	.120	.112	.349*	.578*	.592*	(.72)	
8 Project Success	3.61	.714	.025	.091	.011	.543*	.593*	.568*	.409*	(.77)

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

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

In the above table of correlations displays the correlation between the variables of the current study. Gender has non-significant correlated with Age of Employees ($r = .014$, $p = .25$), Qualification of employees ($r = .020$, $p = .20$), Physical Environment ($r = .012$, $p = .10$), Social Environment ($r = .057$, $p = .25$), Mental Environment ($r = .061$, $p = .26$), job Satisfaction ($r = .052$, $p = .15$) and Project Success ($r = .025$, $p = .18$). Age of Employees has non-significant correlated with Qualification of employees ($r = .086$, $p = .13$), Physical Environment ($r = .049$, $p = .33$), Social Environment ($r = .068$, $p = .12$), Mental Environment ($r = .071$, $p = .18$), Job Satisfaction ($r = .120$, $p = .36$), Project Success ($r = .091$, $p = .38$). Qualification of employees has also non-significant correlation with Physical Environment ($r = .074$, $p = .25$), Social Environment ($r = .123$, $p = .30$), Mental Environment ($r = .048$, $p = .15$), Job Satisfaction ($r = .112$, $p = .19$) and Project Success ($r = .011$, $p = .22$). Physical Environment has non-significant correlation with Social Environment ($r = .363$, $p = .10$) and Mental Environment ($r = .432$, $p = .15$) and significant correlation with Job Satisfaction ($r = .349^*$, $p = .03$) and Project Success ($r = .543^*$, $p = .05$). Social Environment has non-significant correlation with Mental Environment ($r = .484$, $p = .18$) and significant correlation with Job Satisfaction ($r = .578^*$, $p = .04$) and Project Success ($r = .593^*$, $p = .03$). Mental Environment has significant correlation with Job Satisfaction ($r = .592^*$, $p = .02$) and Project Success ($r = .568^*$, $p = .05$). Job Satisfaction has significant correlation with Project Success ($r = .409^*$, $p = .05$)

Mediation of Job Satisfaction between Physical Environment and Project Success

Table 7: Regression results

Relationships	R ²	F	Sig
Physical Environment and Job Satisfaction	0.30	56.25	0.000
Physical Environment and Job Satisfaction with Project Success	0.40	44.64	0.000
Physical Environment and Project Success (total effect model)	0.29	50.65	0.000

Table 7.: Mediation of Job Satisfaction between Physical Environment and Project Success

	Effect	SE	T	P	BootLLCI	BootULCI
Total effect	0.43	0.04	9.31	0.0000	0.34	0.52
Direct effect	0.17	0.04	3.87	0.0001	0.08	0.26
Indirect effect	0.25	0.04	-	-	0.18	0.34

Getting regression results under the mediation analysis, it was found that physical environment positively predicted job satisfaction of employees with (R^2 0.30, $p < 0.05$). Therefore, hypotheses 1 is substantiated which stated that Physical environment in organization has significant influence on the job satisfaction of employees. Jointly, physical environment and job satisfaction also positively predicted project success with (R^2 0.40,

p<0.05).Physical environment has also positively influenced project success with (R^2 0.29, p<0.05).

The total, direct and indirect effects can be observed in table. The total (0.43) and direct effect (0.17) came out to be significant at p<0.05. Whereas, the effect size in the presence of the mediating variable i.e. job satisfaction turned out to be 0.25 with no zero value lying between ULCI (0.34) and LLCI (0.18). Consistent with Preacher and Hayes, (2004), the presence of a non-zero value between the upper and lower boot limits demonstrates that the mediating variable mediates the independent-dependent variable relationship. Given the above statistical results there is ample evidence to accept H4 i.e. Job Satisfaction has a significant mediating role between the relationship of Physical Environment and project success.

Mediation of Job Satisfaction between Mental Environment and Project Success

Table 8: Regression results

Relationships	R^2	F	Sig
Mental Environment and Job Satisfaction	0.33	67.14	0.000
Mental Environment and Job Satisfaction with Project Success	0.39	62.22	0.000
Mental Environment and Project Success (total effect model)	0.31	58.21	0.000

Table: Mediation of Job Satisfaction between Mental Environment and Project Success

	Effect	SE	T	P	Boot LLCI	BootULCI
Total effect	0.82	0.03	25.23	0.0000	0.76	0.89
Direct effect	0.65	0.03	18.48	0.0000	0.58	0.72
Indirect effect	0.16	0.03	-	-	0.11	0.22

Getting regression results under the mediation analysis, it was found that physical environment positively predicted job satisfaction of employees with (R^2 0.33, $p < 0.05$). Therefore, hypotheses 2 is substantiated which stated that mental environment in organization has significant influence on job satisfaction of employees. Jointly, mental environment and job satisfaction also positively predicted project success with (R^2 0.39, $p < 0.05$). Mental environment has also positively influenced project success with (R^2 0.31, $p < 0.05$).

The total, direct and indirect effects can be observed in table. The total (0.82) and direct effect (0.65) came out to be significant at $p < 0.05$. Whereas, the effect size in the presence of the mediating variable i.e. job satisfaction turned out to be 0.16 with no zero value lying between ULCI (0.22) and LLCI (0.11). Consistent with Preacher and Hayes, (2004), the presence of a non-zero value between the upper and lower boot limits demonstrates that the mediating variable mediates the independent-dependent variable relationship. Given the above statistical results there is ample evidence to accept H6 i.e. Job Satisfaction has a significant mediating role between the relationship of Mental Environment and project success.

Mediation of Job Satisfaction between Social Environment and Project Success

Table 9: Regression results

Relationships	R ²	F	Sig
Social Environment and Job Satisfaction	0.28	48.64	0.000
Social Environment and Job Satisfaction with Project Success	0.35	50.55	0.000
Social Environment and Project Success (total effect model)	0.32	42.75	0.000

Table 9.1: Mediation of Job Satisfaction between Social Environment and Project Success

	Effect	SE	T	P	BootLLCI	BootULCI
Total effect	0.69	0.05	13.85	0.0000	0.59	0.79
Direct effect	0.35	0.07	4.83	0.0000	0.21	0.50
Indirect effect	0.33	0.08	-	-	0.17	0.50

Getting regression results under the mediation analysis, it was found that social environment positively predicted job satisfaction of employees with (R^2 0.28, $p < 0.05$). Therefore, hypotheses 3 is substantiated which stated that social environment in organization has significant influence on the job satisfaction of employees. Jointly, social environment and job satisfaction also positively predicted project success with (R^2 0.35, $p < 0.05$). Social environment has also positively influenced project success with (R^2 0.32, $p < 0.05$).

The total, direct and indirect effects can be observed in table. The total (0.69) and direct effect (0.35) came out to be significant at $p < 0.05$. Whereas, the effect size in the presence of

the mediating variable i.e. job satisfaction turned out to be 0.33 with no zero value lying between ULCI (0.50) and LLCI (0.17). Consistent with Preacher and Hayes, (2004), the presence of a non-zero value between the upper and lower boot limits demonstrates that the mediating variable mediates the independent-dependent variable relationship. Given the above statistical results there is ample evidence to accept H5 i.e. Job Satisfaction has a significant mediating role between the relationship of Social Environment and project success.

Table 10: Moderation Analysis for Gender between Job Satisfaction and Project Success

	ΔR^2	F	P
Job Satisfaction x Gender	0.037	0.11	0.20

n= 210

From the above table: moderation of gender between job satisfaction and project success. It is mentioned in the above table that gender does not moderates the relationship between job satisfaction and project success. By incorporating the moderator the change in R-square is at very minimal point 0.037 (3.7%) and also significance value is greater than 0.05 which is (p= 0.20). On the basis of the above information gender does not moderates the relationship between job satisfaction and project success. Thus H9 i.e.: Gender of the employees have significant moderating role on the relationship of Job Satisfaction and Project Success.

Table 10.1: Moderation Analysis for Age between Job Satisfaction and Project Success

	ΔR^2	F	P
Job Satisfaction x Age	0.050	0.13	0.15

n= 210

From the above table: moderation of age between job satisfaction and project success. It is mentioned in the above table that age does not moderates the relationship between job satisfaction and project success. By incorporating the moderator the change in R-square is at very minimal point 0.050 (5%) and also significance value is greater than 0.05 which is (p= 0.15). On the basis of the above information age does not moderates the relationship between job satisfaction and project success. Thus H7 i.e.: Age of the employees have significant moderating role on the relationship of Job Satisfaction and Project Success.

Table10.2: Moderation Analysis for Qualification between Job Satisfaction and Project Success

	ΔR^2	F	P
Job Satisfaction x Qualification	0.070	0.14	0.10

n= 210

From the above table: moderation of qualification between job satisfaction and project success. It is mentioned in the above table that qualification does not moderates the relationship between job satisfaction and project success. By incorporating the moderator the change in R-square is at very minimal point 0.070 (7%) and also significance value is greater than 0.05 which is (p= 0.10). On the basis of the above information qualification does not moderates the relationship between job satisfaction and project success. Thus H8 i.e.: Qualification of the employees have significant moderating role on the relationship of Job Satisfaction and Project Success.

4.4 Hypotheses Results

H1: Physical environment in organization has significant influence on the job satisfaction of employees (**Accepted**)

H2: Mental environment in organization has significant influence on job satisfaction of employees (**Accepted**)

H3: Social environment in organization has significant influence on job satisfaction of employees (**Accepted**)

H4: Job Satisfaction has a significant mediating role between the relationship of Physical Environment and project success (**Accepted**)

H5: Job Satisfaction has a significant mediating role between the relationship of Social Environment and project success (**Accepted**)

H6: Job Satisfaction has a significant mediating role between the relationship of Mental Environment and project success (*Accepted*)

H7: Age of the employees have significant moderating role on the relationship of Job Satisfaction and Project Success(*Rejected*)

H8: Qualification of the employees have significant moderating role on the relationship of Job Satisfaction and Project Success(*Rejected*)

H9: Gender of the employees have significant moderating role on the relationship of Job Satisfaction and Project Success(*Rejected*)

CHAPTER 05

DISCUSSION

CONCLUSION AND RECOMMENDATIONS

5.1 Discussion

Accusative of this study is to find out relationship between different dimensions of work environment with project success while job satisfaction plays a mediating role in presence of demographics as moderator. This chapter holds the discussion on the results brought forward after the analysis of the study.

5.1.1 Discussion On Research Question No 1:

The first question which current study was trying to answer was mentioned in chapter 1:

Question 1: Is there a positive relationship between Work Environment and Project Success?

In order to find answer to the 1st question, a hypothesis was developed and tested, that

H1: Physical environment in organization has significant influence on the job satisfaction of employees.

The results of correlation analysis show that Physical environment and employee job satisfaction are positively correlated with each other. The regression analysis indicates that Physical environment is a positively significant determinant of employee job satisfaction.

Gupta and Singh (2013) identified the meaning of work environment such as physical dimensions of a working surrounding directly influences to creativity, health and safety essentials, productivity, consolation, attention which ultimately affects morale of the employee by dissatisfying of job within it.

Department of Health and Human Services US, 1996 stated that Physical sickness causes mental illness as well as effect health too and on other hand healthy life has control levels of benefits. Stokols (1996) stated that a center on extensive factors of health behavior is coherent with a social perspective those relate ecological domain of human behavior which suggests a treatment and an interaction between individual, social and physical environment to maximize the 'person-environment fit' need.

Insel and Moos (1974) assesses employee's perception of several broad dimension of their daily work environment. Giles-Corti and Donovan (2002) states that the physical environment gives hints and chances for physical activity. Karl and Sutton (1998) was the first one to use the term of engagement in the organizational business context 24 years back. Studies have demonstrated that Karl's work on the idea of different dimensions of work environment towards association was defined in the vast majority of the job satisfaction Kahn's commitment gave management to work environment as stated in (Rothbard, 2001).

Bryde (2008) opinion that all the managers take significant consideration on physical states of employee while planning the management strategies to avoid extreme point which can take advantage of available resource.

H2: Mental environment in organization has significant influence on job satisfaction of employees.

The results of correlation analysis show that mental environment and employee job satisfaction are positively correlated with each other. The regression analysis indicates that mental environment is a positively significant determinant of employee job satisfaction.

Mental environment refers to the addition of all societal impacts on mental health. Attfield (1983) states that the attitude to the ethnic can play an important role for the man to adopt his internal and external environment. "We are living in mental as well as physical environment. We can influence and can be influenced by the surroundings around us, but we are influenced

by the mental environment much more than physical environment. The mental environment contains all sorts of forces and pressures that affect our way of thinking along with emotions that can have great impact on our personality and personal minds." (Stansfeld & Candy, 2006). Cassel (1976) states that it is always a reality that due to interactions between persons or person to environment, it always influence the overall health of employee working in any organization.

H₃: Social environment in organization has significant influence on job satisfaction of employees.

The results of correlation analysis show that social environment and employee job satisfaction are positively correlated with each other. The regression analysis indicates that social environment is a positively significant determinant of employee job satisfaction. Social environment can affect the confidence level and performance of employees (Avey et al., 2009). Social environment consists of the sub total of a society beliefs, customs, practices and behaviors.

(Child, 1972; Gupta & Singh, 2013) studied effects of environment on progress and performance of managers. The purpose of the research is to study that how a project manager's performance can improve and through experience we are able to identify the variables that can affect working environment. Another objective of the research study is to establish factors that can affect progress and can cause delay in projects. With deeply study and analysis on these key points, industry will be able to enhance and flourish by targeting these factors that will enhance efficiency of managers lowering the effect of these factors which can affect their work conditions which will in the end increase productivity and project success. The result shows that there are some important factors that one should consider like work timings, physical forcible condition of project site, dynamics of project, project size and

domain, duration of project and availability of time were treated important and discussed differently between two groups. Moreover, Anova test revealed that different managers having different school of thoughts based upon their experience generally consider environment very much important than others. This study identified that how working environment variables is crucial for the performance of a project manager. It also provides project manager no matter working in consultants side or contractor side a sound knowledge of understanding of their working environment.

5.1.2 Discussion On Research Question No 2:

The second research question which this study attempt to answer was stated in chapter 1, that

Q.Is there mediating role of job satisfaction between different dimensions of work environment and project success?

The results of correlation analysis show that mediating role of job satisfaction between different dimensions of work environment and project success are positively correlated with each other. The regression analysis indicates that positively significant mediating role of job satisfaction between different dimensions of work environment and project success.

H4: Job Satisfaction has a significant mediating role between the relationship of Physical Environment and project success.

Past researches also revealed that physical environment plays crucial role in project performance. Akanni et al. (2015) researches that physical environment plays important role in project performance. By using demographics, he researched that physical environment has significant relationship with project performance. This research also support the same result of Cheung, Suen, and Cheung (2004) that environmental factors affects project performance and satisfaction level. Similarly, Pheng and Chuan (2006) identified that physical environment affects project performance which is actually support of hypothesis H4.

H5: Job Satisfaction has a significant mediating role between the relationship of Social Environment and project success.

J. R. Turner and Müller (2005) studied that job satisfaction affects the team executing project and project success but in this research relation exists between job satisfaction and project success. Organizations don't want to pay a lot to achieve satisfaction level of employee. On the other hand, due to cost overrun and limited time, project managers don't invest a lot. Müller and Turner (2007) studied the relationship between job satisfaction and project performance through traits. Result shows that job satisfaction significantly affects project performance but this research shows that there is significant relation between job satisfaction and project performance. Iyer and Jha (2005) identified that there is a significant relation between project performance and social climate of organization which is actually support of H5 hypothesis of this research.

H6: Job Satisfaction has a significant mediating role between the relationship of Mental Environment and project success.

White (2006) identified that mental disturbance affects the project performance and success. Terry, Nielsen, and Perchard (1993) identified that mental disturbance or mental environment directly affects to job satisfaction which supports our research but somewhere in presence of demographics, it is contradicting to research. Jamal (1990) also identified that mental environment directly affects job satisfaction and capacity of employees to do work. Thamhain (2004) identified that human plays very important role to fulfill commitments of organization and project which is supportive of our research which shows that social environment affect job satisfaction. Spector (1997) also studied that social environment affects on job satisfaction but in some cases, due to different dynamics of project, social environment doesn't affect job satisfaction and even project success. It may be because of isolation of field and work and avoidance of social interaction within organization.

5.1.3 Discussion On Research Question No 3:

The third research question which this study attempt to answer was stated in chapter 1, that

Q. How the demographic (Age, Gender and Education) moderates the relations of job satisfaction and project success?

The results of correlation analysis show that the demographic (Age, Gender and Education) moderates the relations of job satisfaction and project success are insignificantly correlated with each other.

Although demographics are used in this research (Age, Education and Gender) but it was not very studied well in previous researches. Müller and Turner (2007) also stated the effect of demographics (gender, age, and education). Study indicated that old aged employee, higher experience and higher education affects project success which are somehow supportive to this research. Result of this study shows that there is no moderated mediation in presence of age as moderator, level of education and gender in physical mental and social environment.so rejected H7,H8,H9. While moderated mediation is present position in organization in all aspect which shows that position within organization plays very well role for job satisfaction as well as project success.

5.2 Conclusion

In this research, results shows that physical environment, mental environment and Social environment in organization has significant influence on the job satisfaction of employees. And Job Satisfaction has a significant mediating role between the relationship of Physical environment and project success, mental environment and project success and Social Environment and project success. Although demographics are used in this research (Age, Education and Gender) but it was not very studied well in previous researches. Research show that there is moderated mediation in all dimensions of work environment and project

success where job satisfaction plays mediating role in presence of demographics of employee in organization as moderator. Result of this study shows that there is no moderated mediation in presence of age as moderator, level of education and gender in physical mental and social environment.

5.3 Practical Implications

Project based organizations are grounded on completion of projects on time within allocated budget. Current research can be implicated to determine what type of employee should be at what position in organization to make project more success. That specific employee should be how much old and much educated with gender specification in certain organization which can help an organization to contribute in organization. What are the factors which may affect satisfaction level of employee which may shrink turnover and may reduce operational cost to train new employees. What type of environmental factor which may affect project success and satisfaction level of employee working in that organization which may help any organization to minimize/neglect that factor to make more revenue.

5.4 Limitation and Recommendations

Current research is conducted only for project based companies in Rawalpindi and Islamabad region which is basically limitation of this research. Research from all over the country can be conducted to validate results or may discuss different behavior due to different dynamics of project and location. This research can also be conducted to validate results of project based organization. Moderated mediation can also be checked by using employee engagement instead of job satisfaction within the organization as mediator. Diversified sample is also recommended to study the behavior of employee in project based organization. Since the organizations are multinational so culture can be a factor to determine the position of any organization which can determine the level of project success.

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