

**CAPITAL UNIVERSITY OF SCIENCE AND
TECHNOLOGY, ISLAMABAD**



**Safety Specific Transformational Leadership and its
Impact on Project Safety Climate; Mediating Role of
Safety Compliance and Moderating Role of Attitude
towards Safety**

by

AMINA BINAT-I-YOUSAF

A thesis submitted in partial fulfillment for the
degree of Master of Science

in the

**Faculty of Management & Social Sciences
Department of Management Sciences**

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*Dedicated to my parents and siblings for their never ending support
and unconditional love*



CAPITAL UNIVERSITY OF SCIENCE & TECHNOLOGY
ISLAMABAD

CERTIFICATE OF APPROVAL

**Safety Specific Transformational Leadership and
its Impact on Project Safety Climate; Mediating
Role of Safety Compliance and Moderating Role
of Attitude towards Safety**

by

Amina Binat-i-Yousaf

MPM163022

THESIS EXAMINING COMMITTEE

S. No.	Examiner	Name	Organization
(a)	External Examiner	Dr. Khurram Shahzad	RIU, Islamabad
(b)	Internal Examiner	Dr. S.M.M Raza Naqvi	CUST, Islamabad
(c)	Supervisor	Dr. Sajid Bashir	CUST, Islamabad

Dr. Sajid Bashir

Thesis Supervisor

May, 2018

Dr. Sajid Bashir

Head

Dept. of Management Sciences

May, 2018

Dr. Arshad Hassan

Dean

Faculty of Management & Social Sciences

May, 2018

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Amina Binat-i-Yousaf

(MPM163022)

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Abstract

Employees health and safety remains a very crucial issue for any organization throughout the world. Even the most developed countries are still struggling to ensure the safety of their employees. This main objective of this research is to find out whether a leaders role is important for developing and implementing the safety rules in an organization or not. Safety Specific Transformational Leadership (SSTL), a research model that was used to improve the safety environment in any organization and what role it can play in other safety outcomes like project safety climate, safety compliance and attitude towards safety. Moreover we also tested the mediating effect of Safety Compliance (SC) and moderating effect of Attitude towards Safety (ATS). Data was collected through 270 respondents of project based organizations (Food supply chains, Beverages, IT project companies) in Pakistan. The study concluded the positive relation between Safety Specific Transformational Leadership and Project Safety Climate. This study also has some theoretical implications in leadership and employees safety literature and practical implication in Pakistani Context in project based organizations.

Keywords: Safety Specific Transformational Leadership (SSTL), Safety Compliance (SC), Project Safety Climate (PSC), Attitude towards Safety (ATS)

This research based on the relation between safety specific transformational leadership (SSTL) and project safety climate (PSC). Data was collected through 270 respondents of project based organizations in Pakistan. The study concluded the positive relation between SSTL and PSC. This study also has some theoretical and practical implication in Pakistani Context in project based organizations.

SSTL has a very powerful role in implementing the safety climate in organizations and especially in the project based organizations in Pakistan. A leadership plays a very important role in convincing his subordinates or worker to follow those safety measures or rules and regulations to develop the secure climate for work. Main attribute that highly contributes in making a safe climate for working is the

attitude of workers. So, its a leaders job that how he will be able to make his employees follow those rules and regulations.

Key words: Safety Specific Transformational Leadership, Safety Compliance, Project Safety Climate, Attitude towards Safety

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Abbreviations

SSTL	Safety Specific Transformational Leadership
PSC	Project Safety Climate
ATS	Attitude towards Safety
SC	Safety Compliance

Chapter 1

Introduction

1.1 Background of the Study

In 18th century the focus of the researchers was diverted towards the safety of the workers working in any organization. The main focus in this research was how effective or influential is a leader in any organization, so that he will be able to make his employees follow his instructions completely. SSTL means that what role a Leadership in maintaining the safety environment of any organization (Kelloway, Mullen, & Francis, 2006). If the focus is on safety climate then leaders role is more important in maintaining the safety environment as compare to the rules and regulations that are present in an organization (Zohar, 2000). The safety of any organization is related to the safety rules and regulations of that organization (Neal, Griffin, & Hart, 2000). Safety of any work place depends on the attitude of employees that how they react towards the rules and regulations of the work place (Michaelidou & Hassan, 2008).

This study specially in the energy domain, there is a need to implement safety rules based on the previous data and the losses that occurred due to lack of safety implementations. These rules must be followed to avoid any kind of loss in future in organization or on work site (Flin, Mearns, O'Connor & Bryden, 2000) This study compares the relationship between safety in knowledge area and employee's motivation towards safety in field in employee's participation towards safety, but

the role of leadership is still not discussed along with these variables (Jiang & Probst, 2016). The role of leadership to create a workable climate and outputs of the implemented safety measures has become a domain of interest for research in organizations (Smith, Eldridge & DeJov, 2016). Safety climate, limit upto which the employees implements the safety measures, is considered as a main reason in the reduction of injuries and maintaining safe work environment (Huang et.al, 2016). Specifically those organization, whose jobs are hazardous to health and safety, should promote the safety measures among the employees of the organization (Lee & Dalal, 2016). Many critical systems must apply certain safety standards during execution so that these systems won't be risks to people's health, property or the environment (Vara et.al, 2016). Previous research concluded that the attitude of employees towards the implementation of safety measures would increase the level of safety climate in an organization (Kvalheim & Dahl,2016).

The study calculated the effect of two types of leadership having some effect on the output of the safety measures taken by the employees (Kelloway, Mullen, & Francis, 2016). Previous researches were conducted between different aspects of safety measures but the contrast of these measures were not studied in the past, specifically in the construction sector of Pakistan. (Shen,Ju,Koh, Rowlinson & Bridge, 2017).

Transformational and transactional leadership and behaviour is required in the environment where safety conditions are highly critical (Willis, Calrke *Connor, 2017). The relationship between saying and performing the psychological safety climate is really important in order to get the employees safety, health and work (dollard & Idris, 2017) SSTL plays a moderating role along with the effect of variables like safety performance, behavior and attitude (Mullen, Kelloway & Tedd, 2017).

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(Dollard & Idris, 2017). SSTL plays a moderating role along with the effect of variables like safety performance, behavior and attitude (Mullen, Kelloway & Teed, 2017).

1.2 Gap Analysis

Leadership is a main factor influencing employees safety, but previous studies ignored the relation between the influence of leader on implementing the safety measures, and also the interaction of leader with different stakeholders who are involved in projects or organizations. This study tells the interaction between different stakeholders and leader for implementing safety measures (Wu, Wang, Zou & Fang, 2016). This study compares the relationship between knowledge and motivation related to safety in the field of safety participation, but the role of leadership is still not discussed along with these variables (Jiang & Probst, 2016).

SSTL is nowadays a popular topic among researcher. The researcher and practitioners have contributes a lot to highlights the consequences of SSTL and Safety measures. But limited studies had conducted to control and minimize the safety risk of the employees with in the organizations with the help of transformational leadership.

As far as projects are concerned there are very limited studies related to risk in projects. Previous researches were conducted between different aspects of safety measures but the contrast of these measures were not studied in the past, specifically in the construction sector of Pakistan (Shen, Ju, Koh, Rowlinson & Bridge, 2017). Along with the role of employee and worker in the safety of organizations there is another which is still untouched in which the effect of context and culture will be measured or examined on the safety climate of organizations (Petitta, Probst, Barbaranelli & Ghezzi, 2017). Means there is not that much study related to the context, which we are considering as project area.

This study compares the relationship between knowledge and motivation related to safety in the field of safety participation, but the role of leadership is still not discussed along with these variables (Jiang & Probst, 2016). Many critical systems

must apply certain safety standards during execution so that these systems won't be risks to people health, property, or the environment (Vara et.al, 2016). Also SC as a mediator and ATS as a moderator has not been studied yet.

1.3 Problem Statement

The extent literature on workplace safety relates it to the different antecedents including SSTL. But this concept has never been tested in the project based organizations and literature is indent in this domain. Moreover how SSTL will affect project success is also not well documented. Hence the study focuses on the mechanism through which SSTL affects PSC, SC mediates the relation and ATS moderates the relation. In addition it focuses a unique context which is project based organizations in Pakistan

1.4 Research Questions

In contrary to the above mentioned problems, the present study is used to find answers for some questions, questions are as follows;

Question 1: How Safety Specific Transformational Leadership can affect Project Safety Climate?

Question 2: What role Safety Compliance can play in the relationship between Safety Specific Transformational Leadership and Project safety Climate?

Question 3: Can Attitude towards Safety moderates the relationship?

1.5 Research Objectives

The main aim of this research is to develop and test the hypothesis based on the previous literature. Hypothesis will be tested on the basis of data collected. And to prove the relationships between indirect variables, direct variables, mediators and moderators. The specific objectives of the study are stated below;

1. To determine the relationship of Safety Specific Transformational Leadership and Project safety Climate
2. To examine the mediation between Safety Specific Transformational Leadership and Project safety Climate through SC
3. To examine the moderating effect of Attitude towards Safety on the relationship of Safety Compliance and Project safety Climate
4. To find out the effect of this study in project based organizations in Pakistan

1.6 Significance of the study

This study will be helpful to practitioners in developing the climate which is safe to work in, and also to increase the safety behavior among the employees in order to keep the project functions effectively. If the violation of safety rules occurs than the project managers should try to hire employees having high level of knowledge related to the safety issues in order to save employees from any harm. The role of leadership to create a workable climate and outputs of the implemented safety measures has become a domain of interest for research in organizations (Smith, Eldridge & Dejoy, 2016). Project based Organizations, Specifically the organization, whose jobs are hazardous to health and safety should promote the safety measures among the employees of the organization (Lee & Dalal, 2016). Previous research concluded that the attitude of employees towards the implementation of safety measures would increase the level of safety climate in an organization (Kvalheim & Dahl, 2016). Many critical systems must apply certain safety standards during execution so that these systems wont be risks to people health, property, or the environment (Vara et.al, 2016 Safety climate, the limit up to which the employees implements the safety measures, is considered as a main reason in the reduction of injuries and maintaining safe work environment (Huang at.el, 2016). Transformational and transactional leadership and behavior is required in the environment where safety conditions are highly critical (Willis, Clarke & Connor, 2017).

1.7 Supporting theory

Several theoretical perspective have been presented by different researchers which are used worldwide to support the studies of SSTL and SC like Leader-Member exchange theory and Affective events theory, but Social exchange theory can cover all the variables of the present study.

1.7.1 Social Exchange Theory

Human interactions is explained by the exchange behavior among people (Homans, 1958). Interaction developed in people through the social exchange behavior (Blau, 1964). While some doubts its status as a theory (Emerson, 1976), the process of exchange has found support across different disciplines repeatedly. Disciplines such as psychology, sociology and organizational behavior all supply social exchange in the study of reciprocal human behavior. Exchange behavior is basically the root cause of the interaction between the people, while in this cause this interaction is between the employees and leader of the organization. Exchange is basically from both sides, which if interaction between the employees and leader is effective then the bond between them remains strong and both will be willing to understand each others perspective. It depends on the actions of the individual with whom one is engaged in interaction and form a long lasting relationship. Its application in projects in the project based organizations is the exchange behavior of the employees and the leader of the organization to maintain a safety climate. Social exchange underlines SC as a mediator of transformational leadership-safety outcomes relationship. Exchanging trust between employees and leader provides supportive leadership, employees follow more SC behavior, thereby improves the overall safety climate.

Basically its a relationship and its a social exchange between employee and leader that how effective is a leader to convince their employees to follow safety measures. Leader focuses mainly on the safety measures taken by employees during execution of the projects. Employees safety is the first preference for leader to take care off. So, all the variables that are SSTL, PSC, SC and ATS are linked together. First

of all leader tell their employees to follow the rules and regulation related to the safety measures and if employees dont follow those measures then the leader should implement those measures forcefully.

Chapter 2

Literature Review

2.1 Safety Specific Transformational Leadership and Project Safety Climate

This study suggests and experiment a project-level model of safety climate to support the available organization-level model. According to this study leaders role is more important in maintaining the safety environment as compare to the rules and regulations that are present in an organization (Zohar, 2000). This study is based on three areas: Leadership style explains the limit up to which it is effective for subordinates; the leadership style provides the guidance for the subordinates; and Safety measures were announced by the leader and this way it will affect the employees more enthusiastically (Zohar, 2002). The study calculated the effect of two types of leadership having some effect on the output of the safety measures taken by the employees (Kelloway, Mullen, & Francis, 2006).

This study examines that how effective is the leadership style that will be able to handle the safety measures implemented by the employees of the organization. Leadership styles influenced the behavior of employees a lot. If leader is effective then he will be able to make his employees implemented those safety measures more accurately and efficiently (Clarke & Ward, 2006). Effect of transformational leadership was studied with the help of pre-test and post-test, in which the leaders from the random 21 health care organizations were selected and trained them

according to the rules and regulations for implementing the safety measures in their organizations. The post-test showed that there is a major difference in the safety measures that were taken in organizations before and after the trainings were held (Mullen & Kelloway, 2009).

This study shows the relationship between the variables not only with the mediator and moderators but also with the other established variables. These relationship were going on from the decades but this research was conducted with some new variables over the last 30 years e.g. leadership as a climate antecedent (Zohar, 2010). The present examines the reason behind the accidents and the injuries that were held in the warehouses in the past few years in many Dutch warehouses (Koster, Stam, & Balk, 2011). The recent study explains the effect of the leadership practices of effective supervisors on the safety measures of the employees who work for them. Unexpected reward and transformational leadership are tested under certain conditions of PSC in different sectors (Kapp, 2012).

The role of leadership to create a workable climate and outputs of the implemented safety measures has become a domain of interest for research in organizations (Smith, Eldridge & Dejoy, 2016). Project based Organizations, Specifically those organization, whose jobs are hazardous to health and safety should promote the safety measures among the employees of the organization (Lee & Dalal, 2016). Previous research concluded that the attitude of employees towards the implementation of safety measures would increase the level of safety climate in an organization (Kvalheim & Dahl, 2016). SSTL plays a moderating role along with the effect of variables like safety performance, behavior and attitude (Mullen, Kelloway & Teed, 2017).

H1: There is a positive association between SSTL and PSC

2.2 Safety Specific Transformational Leadership and Safety Compliance

SSTL plays an important role along with the effect of variables like safety performance, behavior and attitude (Mullen, Kelloway & Teed, 2017). Effect of transformational leadership was studied with the help of pre-test and post-test, in which the leaders from the random 21 health care organizations were selected and trained them according to the rules and regulations for implementing the safety measures in their organizations. The post-test showed that there is a major difference in the safety measures that were taken in organizations before and after the trainings were held (Mullen & Kelloway, 2009).

This study investigated the extent to which the safety performance of employees with 2 jobs was predicted by their respective supervisors' transformational leadership behaviors. employees who simultaneously hold 2 different jobs, each with a different supervisor, providing within-person data on the influence of different supervisors on employee safety performance across 2 job contexts (Inness, Turner, Barling, & Stride, 2010). This study suggests that SSTL may be a very important variable of safety performance than hazardous reducing systems. SSTL affects safety performance directly and strongly predicts safety performance even after controlling for the effects of hazardous reducing systems (Koster, Stam, & Balk, 2011).

Different study tells the effect of SSTL with the employees safety voice, but no one tell what make this leadership style more effective. This study tells how SSTL links with the employees safety voice through trust (Conchie, Taylor & Donald, 2012). A theoretical model of safety leadership tells the relationship between transformational leadership and transactional leadership along with the perceived safety climate and safety participation. The model through which we tested the relation approves the positive existence of relationship, hence perceived safety climate fully influence the relationship whereas safety participation partially influence the relation (Clarke, 2013).

Many critical systems must apply certain safety standards during execution so that these systems won't be risks to people health, property, or the environment (Vara et.al, 2016). Safety climate, the limit up to which safety measures are implemented by employees to be a priority in their company, is considered as a key factor in the reduction of injuries and maintaining safe work environment (Huang et.al, 2016). The role of leadership to create a workable climate and outputs of the implemented safety measures has become a domain of interest for research in organizations (Smith, Eldridge & Dejoy, 2016). The relationship between saying and performing the psychological safety climate is really important in order to get the employees safety, health and work (Dollard & Idris, 2017).

H2: There is a positive association between SSTL and SC

2.3 Safety Compliance and Project Safety Climate

According to the previous research a very few work has been done on the relationship of safety climate and safety behavior. This recent research examine the effect of safety climate with safety performance. The result were concluded and safety climate have a positive effect with the safety performance, that if the climate provided to employees in which they will working will be safe then the safety performance of the organization will increase automatically (Neal, Griffin & Hart, 2000). Research done in the area of organizational climate and work performance was done to find out the effect of safety at work place. This recent research examine the effect of safety climate with safety performance. The result were concluded and safety climate have a positive effect with the safety performance along with the leadership style, that if the climate provided to employees in which they will working will be safe then the safety performance of the organization will increase automatically (Griffin & Neal, 2000).

In this study a research has been done on the employees point of view on the safety measures that were implemented in the industrial area, and what exactly

were the measures taken by the management of the industries (Gershon et.al, 2000). This research provides an overview of a study concluded the pros and cons of safety climate and safety behavior. A model is presented to found out the relation between safety climate, safety knowledge, safety motivation, and safety behavior. Findings from a no of studies the result concluded was that there exists the relation between safety climate and safety behavior (Neal & Griffin, 2002). Organizational climates have been studied separately at both organization as well as project level but in this study a multilevel research has been done to study the combined effect, so the effect has studied on both levels simultaneously which concluded that project or group level mediates the relation properly (Zohar & Luria, 2005).

This study examines the effect of safety climate, employees motivation, and employees behavior at 2 different time periods and linked them to the accidents over a 5-year period. A series of experiments examined the influence of top-down and bottom-up approaches operating simultaneously over time (Neal & Griffin, 2006). The recent study was conducted to examine the relationship between SC, safety performance and the work place injuries. Previous studies were held on the relationship between SC and safety performance but almost negligible data is available along the injuries that occurs at the workplace during projects. So, this study finds out the relationship between the safety behavior of the employees at work place and performance of the employees along with injuries that occurs in the organizations or at the project sites (Clarke, 2006).

Following more than two decades of safety-climate research focusing on measurement and application, it is time for renewal and progress. This study suggests and experiment a group-level model of safety climate to support the available organization-level model. According to this study leaders role is more important in maintaining the safety environment as compare to the rules and regulations that are present in an organization (Zohar, 2000). The recent study explains the effect of the leadership practices of effective supervisors on the safety measures of the employees who work for them. Uncertain reward and transformational leadership are tested under certain conditions of PSC in manufacturing as well as in

constructions sectors (Kapp, 2012).

Safety climate in a work place is really important and this perception is concluded with the help of the employees behavior and response. Past 35 years research shows that safety climate is an important indicator of safety behavior and outputs of the safety measures such as accidents and injuries. Firstly we analyze the conceptual foundations of safety climate and explore how the construct can be applied to different levels of analysis. We then review ways that safety climate effects persons processes of sense making, motivation, and work behavior (Griffin & Curcuruto, 2016). Specifically those organization, whose jobs are hazardous to health and safety should promote the safety measures among the employees of the organization (Lee & Dalal, 2016).

H3: There is a positive association between SC and PSC

2.4 Mediating role of Safety Compliance

The recent study was conducted to examine the relationship between SC, safety performance and the work place injuries. Previous studies were held on the relationship between SC and safety performance but almost negligible data is available along the injuries that occurs at the workplace during projects. So, this study finds out the relationship between the safety behavior of the employees at work place and performance of the employees along with injuries that occurs in the organizations or at the project sites (Clarke, 2006). Safety climate remained the focus of research for decades but not at different levels. Now the main purpose of this study is to calculate the effect of safety climate on different levels like organizational level and group level. This study improves the concepts related to the safety climate on different levels (Dov, 2008).

Effect of transformational leadership was studied with the help of pre test and post-test, in which the leaders from the random 21 health care organizations were selected and trained them according to the rules and regulations for implementing the safety measures in their organizations. The post-test showed that there

is a major difference in the safety measures that were taken in organizations before and after the trainings were held (Mullen & Kelloway, 2009). The recent study explains the effect of the leadership practices of effective supervisors on the safety measures of the employees who work for them. Uncertain reward and transformational leadership are tested under certain conditions of PSC in manufacturing as well as in constructions sectors (Kapp, 2012). The effect of leadership on safety climate and outputs of implemented safety measures has become an important domain of research in organizational, leadership and safety sciences. There is proof that safety-specific transformational leadership positively impacts outputs of implemented safety measures including safety climate and safety behaviors. However, these relationships have not been thoroughly discussed within the fire services. The role of leadership to create a workable climate and outputs of the implemented safety measures has become a domain of interest for research in organizations (Smith, Eldridge & Dejoy, 2016).

Specifically those organization, whose jobs are hazardous to health and safety should promote the safety measures among the employees of the organization (Lee & Dalal, 2016). Safety climate in a work place is really important and this perception is concluded with the help of the employees behavior and response. Past few years research shows that safety climate is an important indicator of safety behavior and outputs of the safety measures such as accidents and injuries. Firstly we analyze the concepts of safety climate and explore how the conditions can be applied to different levels of analysis. Research then review ways that safety climate effects persons processes of sense making, motivation, and work behavior (Griffin & Curcuruto, 2016).

H4: SC mediates the relationship between SSTL and Safety Climate

2.5 Moderating role of Attitude towards Safety

Attitude strength remained the focus of a very wide area of research in psychology and related sciences for decades. This study tells largely about the functioning of attitude towards the product, that how attitude helps an individual to behave

specifically according to the situation (Howe & Krosnick, 2017). Construction is one of the most dangerous work area all over the world. Awareness in workers about the ATS could be helpful in reducing the accidents. The aims of this study were to determine workers aptitude towards safety and the accidents that occurs because of the behavior of the workers during the execution of tasks (Gharibi, Mortazavi, Jafari, Malakouti, & Abadi, 2017).

Employees are really reluctant related to the services they avail from any organization (Wilcock, Pun, Khanona & Aung, 2004). The role of leadership to create a workable climate and outputs of the implemented safety measures has become a domain of interest for research in organizations (Smith, Eldridge & Dejoy, 2016). Specifically those organization, whose jobs are hazardous to health and safety should promote the safety measures among the employees of the organization (Lee & Dalal, 2016).

Previous research concluded that the attitude of employees towards the implementation of safety measures would increase the level of safety climate in an organization (Kvalheim & Dahl, 2016). Many critical systems must apply certain safety standards during execution so that these systems wont be risks to people health, property, or the environment (Vara et.al, 2016). The relationship between saying and performing the psychological safety climate is really important in order to get the employees safety, health and work (Dollard & Idris, 2017). SSTL plays a moderating role along with the effect of variables like safety performance, behavior and attitude (Mullen, Kelloway & Teed, 2017).

H5: ATS moderates the relationship between SSTL and SC; such that if ATS is high than the relationship between SSTL and SC would be strengthened

2.6 Research Hypotheses

H1: There is a positive association between SSTL and Safety Climate

H2: There is a positive association between SSTL and SC

H3: There is a positive association between SC and PSC

H4: SC mediates the relationship between SSTL and Safety Climate

H5: ATS moderates the relationship between SSTL and SC; such that if ATS is high than the relationship between SSTL and SC would be strengthened

2.7 Research Model

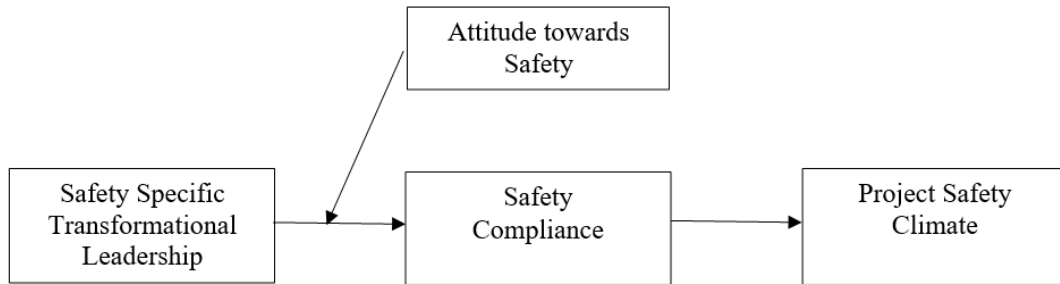


FIGURE 2.1: Research Model of SSTL and its impact on PSC; Mediation of SC and Moderation of ATS

Chapter 3

Research Methodology

This chapter contains detail information about all the steps required in this research to get the authentic results. The discussion includes Design of research, population, sampling techniques, sampling characteristics, instruments and reliability of all the variables and items involved in this research.

3.1 Research Design

3.1.1 Type of study

This study is used to tell the impact of affective contribution of the leader on the safety measures in the project, for that co-relational study has been used in this research. For this purpose, project based organizations has been targeted to get the required data needed to get the authentic results. Initially 400 questionnaires were set as a target but 270 genuine responses were collected. The sample that was selected for this research is assumed to represent the entire population of Pakistan. This will help to generalize the results from the sample statistics that will likely to be exhibited by the whole population of Pakistan.

3.1.2 Research philosophy and quantitative research

This research follows the hypothetical deductive research method which is totally based on the determinism philosophy, in which previous literature and already existing theories and were used to explain and support our hypothesis which will then be tested empirically for verification of the proposed hypothesis.

As to reach a large scale of population, generally quantitative methods are used and appreciated. Hence, in this research quantitative research has been used in order to collect the quality data for explaining the nature of relationship between the variables used in the research.

3.1.3 Unit of analysis

Basically the unit of analysis is the most important characteristic in any research study. In research study, unit of analysis is single. This study is focusing on the relationship between leader, employees and safety. In order to assess the safety measures in project through employees ATS, study needed to approach the specific sector of project based organization which basically required and promoted safety measures in their tasks, activities and projects under affective presence of the leader.

3.2 Population and sample

3.2.1 Population

The population sample used in this study involves project leaders and their workers working in different organizations in Pakistan. As project based organizations are the main source of competitive advantage for Pakistan, in this way, This sector is contributing in a huge way to attract other foreigners to invest in Pakistan, which in return is increasing the global reputation of Pakistan as a new emerging and developing country. Areas from where we collected data are IT project companies, Food supply companies and Beverages supply companies.

3.2.2 Sample and sampling technique

As it is impossible to collect data from the entire population due to resource constraints and other limitations of time, Sampling is the most commonly used procedure to collect data. For that purpose a specific group of people are selected that are the true representatives of the whole population. Generally, only those project based organizations were approached who have given a vital importance to the safety measures in the projects? Hence the sample selected for the research represents all the elements needed to get the required results and is the true representative of the whole population.

Since this study is going to contribute towards the novel aspects in enhancing the safety environment of the projects, so the main focus would be the project based organizations of Pakistan. The sample consists of both leader and employee level of different project based organizations, hence data will be collected through self-reported questionnaires. Almost 400 questionnaires were distributed in the project based organizations. Due to certain limitations convenient sampling was used. Participants were made assured of the confidentiality about the information that they will provide for the research purpose.

In this study, convenience sampling technique was used on which the sample was drawn. Convenience sampling is one of the main techniques of non-probability sampling technique, in which data is collected randomly based on the feasibility to collect data. Hence, Convenience sampling is the most appropriate technique to be used in this research because through this technique data can be randomly collected from the organizations that are mainly project based in Pakistan which will tell the most genuine picture of the whole population in demonstrating the impact of affective role of leader on implementing safety measures in project through communicating with the employees.

3.3 Sample Characteristics

The demographics used in this study are; gender, age, qualification and experience. Sample characteristics details are following:

3.3.1 Age

Age is considered as one of the most important demographics, to which respondents sometimes feel insecure to tell openly. So, for the convenience of respondents range of ages was used instead of the exact ages of the respondents. Table 3.1:

Age	Frequency	Percent
18-25	81	30
26-33	152	56.29
34-41	24	8.89
42-49	10	3.70
50 and above	3	1.11
Total	270	100.0

TABLE 3.1: Frequency by Age

It has been shown in Table 3.1 that most of the respondents were having age between the range of 26-33, that means 56.29% of maximum respondent were having age ranging between 26-33, 30.00% of respondents were having age ranging between 18-25 which is concluding the young generation contribution towards development of element of creativity in the projects, 8.89% respondents were having age ranging between 34-41, 3.70% respondents were having range from 42-49 and only 1.11% of the employees were having age range of 50 or above.

3.3.2 Experience

Again to collect information according to the experience of the respondents, different ranges of experience time period were given so that every respondent can easily select the specific time period of their experience.

Table 3.2:

Experience	Frequency	Percent
05-10	137	50.74
11-16	94	34.81
17-22	12	4.44
23-28	14	5.18
29-35	10	3.70
36 and above	3	1.11
Total	270	100.0

TABLE 3.2: Frequency by Experience

It can be seen from the Table 3.2 that most of the respondents were having an experience ranging between 05-10 years, which conclude that 50.74% respondents were having experience between the range 05-10 years, 34.81% respondents were having experience ranging between 11-16 years, 4.44% respondents were having experience ranging between 17-22 years, 5.18% respondents were having experience ranging between 23-28 years, 3.70% respondents were having experience ranging between 29-35 years and only 1.11% of respondents were having experience ranging between 36 years and above.

3.3.3 Gender

Gender is an element which is really important to maintain gender equality, so it is also considered as the important element of the demographics because it makes a major difference between male and female in a given population sample. In this study, it has been considered to make sure the privilege of gender equality but still it has been observed that ratio of male employees is considerably greater than the ratio of female employees.

Gender	Frequency	Percent
Male	210	77.78
Female	60	22.22
Total	270	100.0

TABLE 3.3: Frequency by Gender

Table 3.3 depicts the ratio of male and female respondents. As we can see majority of the respondents were male, which shows that male respondents were 77.78% and the female respondents were 22.22%.

3.3.4 Qualification

Education is the major element which participates towards the success of the whole Nation and it is also the basic need of the time to compete globally. Hence after gender, qualification/education is another important dimension of the demographics. Education opens up many new and unique opportunities for students to flourish in order to compete with the students amongst all the other countries around the globe. Probably education plays an important role in demonstrating creativity and innovation in project tasks by facilitating the effective knowledge management.

Qualification	Frequency	Percent
Matric	0	0
Bachelor	105	38.88
Master	83	30.74
MS/M.Phil.	71	26.29
PhD	11	4.07
Total	270	100.0

TABLE 3.4: Frequency by Qualification

It has been shown in Table 3.4 that most of the respondents were having qualification of Bachelors, which comprises 38.88% of the total respondents chosen as the true representative sample of the whole population. 26.29% respondents were having qualification of MS/M.Phil., 30.74% of the respondents were having qualification of Masters and 4.07% of the respondents were PhD amongst the 270 respondents.

3.4 Instrumentation

3.4.1 Measures

The data was collected through the questionnaires selected from different authentic sources through adoption of those questionnaires. Questionnaires were distributed in English. Almost 50-60 questionnaires were distributed in each project based organization that has been visited. Questionnaires were also distributed online to the websites of project based organizations for the quick response. As according to past researches, online collection of data is the more easiest and fastest way of collecting data, as respondents have ease to fill the questionnaires as compared to the process of filling questionnaires manually and regardless of the method of collection of data there is no significant impact on the quality of data while using any of the two methods mentioned above (Church, Elliot, & Gable, 2001).

All the items i-e SSTL, PSC, SC and ATS has to be filled by the employees. All the items of the questionnaire are to be filled on a 5-points Likert-scale where 1 represents (strongly disagree), 2 represents (disagree), 3 represents (Neither agree nor disagree), 4 represents (Agree) and 5 represents (strongly agree). All these scales were approved by passing them through reliability test.

The questionnaire includes 29 questions in total having 5 sections i-e demographics, SSTL, SC, PSC and ATS. Demographic information which includes the variables Gender, Age, Qualification and Experience, will also be collected in order to make the results more accurate and authentic by making it sure that information provided by the participants will be kept secret.

400 questionnaires were distributed in total but only 347 were received. But the actual numbers of questionnaires used for data analysis for calculating the results were 270. The discarded questionnaires out of 347 questionnaires were incomplete or many of the questions were unfilled, hence making them not suitable for the analysis. So, we had a total response of 67.5% out of 100%.

4. Safety Specific Transformational Leadership

The 10 item scale developed by (Barling, Loughlin & Kelloway, 2002). The responses will be obtained through Likert scale, having 5 points ranging from 1= Never to 5= Always. The items from the scale are; Express satisfaction when I perform my job safely. Cronbachs alpha was 0.896.

5. Safety Compliance

To 3 item scale developed by (Neal & Griffin, 2006). The responses will be obtained through Likert scale having 5 points, ranging from 1= Strongly disagree 5= Strongly Agree. The items from the scale are I promote the safety program within the project base organization. Cronbachs alpha was 0.707.

6. Project Safety Climate

The 6 item scale developed by (Chowdhury, Sanjib, & Megan, 2010). The responses will be obtained through Likert scale, having 5 points ranging from 1= Never to 5= Always. The items from the scale are safety Climate; To what extent do your supervisors regularly approach you to bring safety issues to your attention? Cronbachs alpha was 0.737.

7. Attitude towards Safety

A 10 item scale developed by (Kendrick, Denise, Lindsay, Groom & Julia, 2003). The responses will be obtained through Likert scale, having 5 points ranging from 1= strongly disagree 5= strongly agree. The items from the scale are Accident prevention is predominantly the responsibility of the individual or parent. Cronbachs alpha was 0.899

a. Statistical Tool

Firstly single linear Regression was done in order to find out the casual relationship between the Independent variable SSTL and Dependent variable PSC. Regression analysis is generally used when we have to study the impact of multiple factors on the dependent variable under the study. Regression analysis will make it assure that the previous study regarding the variables is still supporting the acceptance or rejection of the proposed hypothesis or not.

Variables		Source	Items
Safety Transformational Leadership (IV)	Specific	Barling, Loughlin Kelloway (2002)	10
Safety Compliance (Med)		Neal Griffin (2006)	3
Project Safety Climate (DV)		Chowdhury, Sanjib Megan (2010)	6
Attitude towards Safety (Mod)		Kendrick, Denise, Lindsay, Groom Julia (2003)	10

TABLE 3.5: Instruments

Then for further analysis three steps of Preacher and Hayes (2004) were used. In these three steps, first we have to put our dependent variable i-e PSC in the outcome column, then our independent variable i-e SSTL in the IV column and after that we have to put all the demographics in covariant column. Along with all these steps we have to choose our Model number, as we have to perform both mediation and moderation through Preacher and Hayes we have to separately perform the analysis both for mediation and moderation by selecting model 1 for moderation and model 4 for mediation respectively for both analyses.

b. Pilot Testing

Before going to perform something on a larger scale it would be a very dedicated and effective approach to conduct a pilot testing for it, as it will avoid many risks related to wastage of resources and time. Hence, Pilot testing of nearly 30 questionnaires were conducted to check that whether the results are familiar and are relevant to the proposed hypothesis or not. After conducting the pilot testing it was concluded that there was no significant problem in the variables and the scales were absolutely reliable for the pilot study conducted.

c. Reliability analysis of scales used

Reliability is referred to a process of giving similar results over and over again when the specific item is being tested over number of times, same is for the scales.

Reliability of scale depicts the ability of the scale to give similar results when it is being tested for number of times. I have conducted reliability test through Cronbach alpha, it tells about the internal reliability of the variables and tells about if those variables have a link between them or not. Cronbach alpha have a range from 0 to 1. The greater the value, the higher is the reliability of the scale. Value of alpha above 0.7 is considered to be reliable and below 0.7 is considered to be less reliable in measuring the selected no of questions.

Variables	Cronbachs Alpha	Items
SSTL (IV)	0.896	10
SC (Med)	0.707	3
PSC (DV)	0.797	6
ATS (Mod)	0.899	10

TABLE 3.6: Scale reliabilities

In Table 3.6, displayed the Cronbach alpha values for all variables. All the values of Cronbach alpha for the no of questions used under the study are above 0.7. The items i-e SSTL and aptitude towards safety, having values 0.89 shows that these two scales are highly reliable to be used in this study according the context of Pakistan.

d. Data Analysis Technique

After completion of the data collection process from 270 respondents, the data was then analyzed on SPSS. I have gone through series of steps while analyzing the data, such steps are as following:

1. Firstly, only the questionnaires which were filled properly that were selected for the analysis.
2. Each variable of the questionnaire were given specific code and each specific code of the variable was used for analysis of the data.
3. Tables that include frequency were used in order to explain the sample characteristics.
4. Detailed information was required for analysis by using the numerical values.

5. Cronbach coefficient alpha values were used to check the reliability of variables.
6. Correlation analysis was conducted in order to check whether there is a significant relationship exist between the variables or not.
7. Single linear regression analysis of Independent and Dependent variable was examined in order to determine the proposed relationship.
8. Preacher and Hayes Process were used to conduct mediation and moderation to determine the existence of the role of mediator and moderator between the Independent and dependent variables.
9. Through correlation and Preacher and Hayes method, the proposed hypotheses were tested for rejection and acceptance of the hypothesis

Chapter 4

Results

4.1 Correlation Analysis

Generally correlation analysis is performed to explain the relationship between the variables. In this study the basic aim to conduct correlation analysis is to find out the relationship between SSTL and its impact on PSC, mediating role of SC and moderating role of ATS; to make the proposed hypotheses valid.

Correlation analysis is performed to tell about the type of variation between the two variables that if the variables vary together simultaneously or not. Basically correlation analysis doesn't tell relationship between two or more than two variables because it is totally different from the regression analysis.

In correlation analysis, Pearson correlation analysis tells about the strength and nature of the relationship through Pearson correlation range i.e. from -0.1 to 0.1. Hence, through magnitude value we can conclude the strength of the relationship between two variables and that magnitude value can generalize by the distance of correlation from zero. If the correlation is distant from zero that means the relation between the two variables is strong and vice versa. But if the values are zero that straightly means that there exist no relationship between the understudied variables. Positive and negative sign depicts the nature of the relationship, positive sign indicates that increase in one variable causes increase in the other variable and that is considered as direct relationship and in the same way negative sign

indicates that increase in one variable will cause decrease in another variable and that would be an indirect relationship.

S. No.	Variables	1	2	3	4
1	SSTL	1			
2	PSC	.610**	1		
3	SC	.430**	.490**	1	
4	ATS	.524**	.567**	.498**	1

TABLE 4.1: Means, Standard Deviation, Correlation

0.01 is the significant level **Correlation (2-tailed). N=270. *P_i0.05, **P_i0.01, ***P_i0.001 (SSTL= SSTL, PSC= PSC, SC= SC, ATS= ATS). The above table shows the mean, standard deviation and correlation between the variables that are being studied under this study. And the values of correlation are depicting the nature and magnitude of relationship between the variables.

SSTL has a mean of 3.9694 with a standard deviation of .55292. The mean of PSC is 3.8565 where as standard deviation is .48722. SC mediated the relation between SSTL and PSC has a mean value of 3.8106 and a standard deviation of value .67452. ATS which acts as a moderator between SSTL and SC, reported a mean value of 3.8806 and a standard deviation of .73030.

The Correlation Findings according to the Table 4.1 are as following:

Correlation table shows that there is a positive and significant relationship between SSTL and PSC, where $r = .610^{**}$ at P_i 0.01. It can be seen from the table given above that SSTL has a positive relationship with SC, where $r = .430^{**}$ at P_i 0.01. It was seen that at $r = .524^{**}$ at P_i 0.01, SSTL has a significant relation with the ATS. There is a positive relationship between PSC and SC, where $r = .490^{**}$ at P_i 0.01. A positively significant relationship exists between PSC and ATS, where $r = .567^{**}$ at P_i 0.01. SC with ATS also as a significant positive relationship, where $r = .498^{**}$ at P_i 0.01.

4.2 Regression Analysis

As we have performed correlation analysis to check the existence of relationship between the variables used under the study, but we just cannot only rely on the correlation analysis because it just tells the existence of relationship between variables through and doesn't tell about the casual relationship amongst the variables. Therefore it is highly required to perform regression analysis in order to collect authentic evidence of dependency between the variables. Regression analysis basically tells the limit to which one variable depends on another. In this study I have used Preacher and Hayes (2004) analysis for both mediation and moderation regression analysis. Moderation regression analysis is conducted to find out the interaction effect of ATS on SSTL and SC. Like-wise mediation regression analysis was conducted to find out the mediation effect of the SC sharing on the relationship of SSTL and PSC. Following the moderation-mediation Preacher and Hayes (2004) total of 3 steps are carried out separately both for mediation and moderation.

	B	SE	t	P
SSTL → PSC	0.58	0.04	16.50	0.00
SSTL → SC	0.55	0.06	8.51	0.00
SC → PSC	0.19	0.03	6.45	0.00
Bootstrap results for indirect effect		0.6		0.14

TABLE 4.2: The mediating effect of SC and moderating effect of ATS

Note. Bootstrap sample size 2000. LL = lower limit; CI = confidence interval; UL = upper limit. N=300, Control variables were, Gender, Age, Experience and Qualification, * $P < .05$; ** $P < .01$ From Table 4.2, it is concluded that SSTL has a direct positive and significant relationship with the PSC, hence the unstandardized regression co-efficient indicates that (B= .58, t= 16.50, P= .00), the results in the above table provides strong justification for the acceptance of hypothesis. So the hypothesis H1 i-e There is a positive association between SSTL and PSC is accepted. Results also shows that there is a positive and significant

relationship between SSTL and SC as indicated by un-standardized regression coefficient ($B = .55$, $t = 08.51$, $P = .00$), hence the hypothesis H2 i-e There is a positive association between SSTL and SC is accepted. It is predicted from the table given above that SC and PSC also have a significant relationship between each other. Evidence is provided through the un-standardized regression co-efficient as ($B = .19$, $t = 06.45$, $P = .00$) and from these values it is concluded that H3 i-e There is a positive association between SC and PSC is totally accepted.

Results indicates that SC mediates the relationship between SSTL and PSC, as the indirect effect of SSTL on PSC through SC has the upper and lower limits of 0.06 and 0.14 and doesnt contain zero in the bootstrapped 95% confidence interval, thus it is concluded that the hypothesis H4 i-e SC plays a mediating role between SSTL and PSC is accepted.

	B	SE	t	P
ATS → SC	0.18	.03	7.25	.00
	LL95%CI		UL95%CI	
Bootstrap results for indirect effect	0.7		0.14	

TABLE 4.3: The moderating effect of ATS

It has been concluded from the Table 4.3, that ATS act as a moderator between SSTL and SC, as indicated by the un-standardized regression analysis ($B = 0.18$, $t = 7.25$, $P = .00$), hence the hypothesis H5 i-e ATS moderates the relationship between SSTL and SC; such that if ATS is high than the relationship between SSTL and SC would be strengthen is accepted because $P = .00$ is showing a significant value and doesnt contain zero in the bootstrapped 95% of the confident interval as its upper and lower limit (0.07, 0.14) which indicates the acceptance of the H5 hypothesis.

Figure 4.1 and Figure 4.2 shows that the ATS directly effects the model or moderates the relationship positively. Means ATS has direct effect on SSTL and SC, such that if employees ATS increases then the SSTL also increases in the project based organization, similarly SC also increases positively. Its means that if the

				B	SE	t	p	Lower Limit 95% CI	Upper Limit 95% CI
Int- term	→	Safety Compliance	Low	.50	.06	8.51	.00	.07	.15
			Moderate	.75	.12	9.50	.00	.16	.27
			High	1.01	.18	10.51	.00	.23	.33

FIGURE 4.1: Conditional effect of Interaction term on Safety Compliance

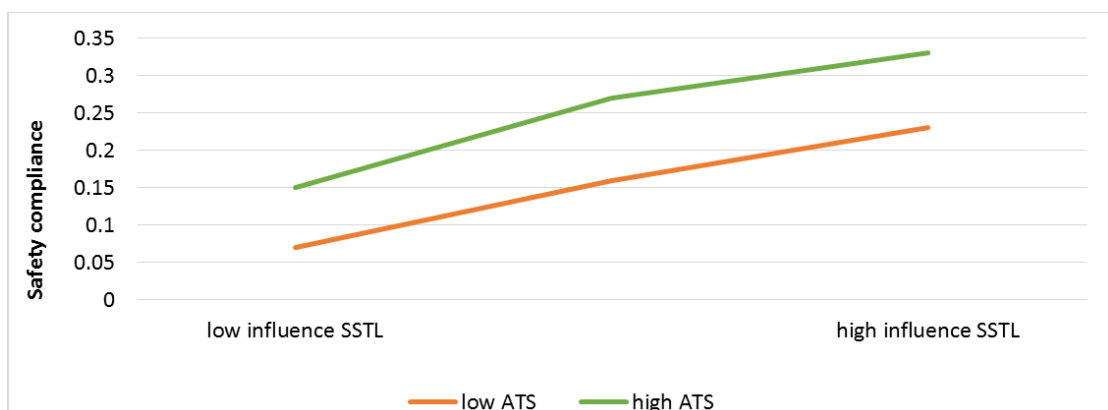


FIGURE 4.2: Moderation Graph

influence of the leader is effective on the employees and he is able to make the attitude of the employees towards safety positive then the rules and the regulations of the organization will be followed more effectively.

4.3 Summary of Accepted/Rejected Hypothesis:

Table given below will show the summarized results of the proposed hypotheses under this study.

Hypotheses	Summarized	Results
H1	There is a positive association between SSTL and PSC.	Accepted
H2	There is a positive association between SSTL and SC.	Accepted
H3	There is a positive association between SC and PSC.	Accepted
H4	SC mediates the relationship between SSTL and PSC.	Accepted
H5	ATS moderates the relationship Specific Transformational Leadership and SC; such that if ATS is high than the relationship between Specific Transformational Leadership and SC would be strengthened.	Accepted

TABLE 4.4: Hypotheses Summarized Results

Chapter 5

Discussion and Conclusion

The main purpose of this study was to develop an integrated model of perception of politics with its dual outcomes. In order to attain the purpose, the research questions were articulated and tested with respective hypothesis. Generally, we found a good support for our hypotheses, while some results were contrary to expectation. In following chapter, the possible reasons for these results are discussed in detail.

5.1 Discussion

The main purpose of conducting this study is to assess the answers of many questions which were unanswered regarding the relationship of SSTL and PSC specifically in project based organizations. Along with other variables i-e SC which is assessed as mediator and ATS which is assessed as a moderator between SSTL and SC.

Data for the understudied proposed hypothesis is collected from the project based organizations of Pakistan. As the first hypothesis H1, which depicts that SSTL plays an important role in implementing the safety measures in project based organizations approves to be accepted. As SC is the integral part of spreading awareness throughout the project based organization in almost every level of department through SSTL in order to improve safety level in projects, so the second

and third hypotheses H2 and H3 are also accepted which shows a significant relation of SC with SSTL and PSC.

Moreover, SC acts efficiently as a mediator between the SSTL and PSC in project, hence the fourth hypothesis H4 is also accepted because safety rules and regulations are really important to follow when you want to improve safety level for employees in projects. After conducted analysis it was concluded that ATS is acting as a moderator, so H5 is also accepted. That means the employees attitude is very much important if a leader wants to implement the safety measures in project because without their attitude the level of safety in projects can't be increased.

The detailed discussion on each hypothesis is as following:

There is a positive association between SSTL and PSC.

This hypothesis was accepted. The results shows significant relationship ($B = .58$, $t = 16.50$, $P = .00$).

SSTL has the t value of 16.50, which shows high significance level of the relationship. This hypothesis having t value of 16.50 indicates statistically significant relation of SSTL and PSC. value of B co-efficient was .58 which shows that if there is a change of one unit in SSTL then the change of 58% in the relationship between SSTL with PSC will occur, which strengthen the relationship. Hence, the above mentioned results are based on the basis of the past literature also provides evidence for the positive relationship of SSTL and PSC.

As manager plays a vital role in leading every task and activity towards success, SSTL in the project based organization will automatically boost up the moral of the employees to work more safely to lead the project towards success by promoting safety rules and regulations for employees. Therefore, in an organization where SSTL acts as a supportive role in order to appreciate safety measures taken by employees, safety level itself is increases in the project. So, SSTL implements high level of safety measures in project for following safety rules and regulations by the employees.

SSTL plays an important role in maintaining the safety climate in project based organizations. As leader is a role model for the employees and they follow the

leader if the role of the leader is effective and convincing. First leader have to follow the safety measures then he will be able to make his employees follow those measures. There can be different ways in which a leader will be able to make his employees or workers follow those safety measures. As leader is the head of the project so he should know that what must be the strategies that will help him in implementing the safety measure in project based organization. Especially in Pakistani context its the highly required attribute for making a project successful. There is a positive association between SSTL and SC. This hypothesis was accepted. As the results shows significant relationship ($B = .55$, $t = 8.51$, $P = .00$). SSTL has the t value of 8.51, which shows high significance level of the relationship. This hypothesis having t value of 8.51 indicates statistically significant relation between SSTL and SC. And the value of B co-efficient was .55 which shows that if there is a change of one unit in SSTL then the change of 55% in the relationship between SC with SSTL will occur, which strengthen the relationship. Hence, the above mentioned results are based on the basis of the past literature also tells a positive relationship between SSTL and SC.

Communication is one of the most important arts which a leader must consider as an important element of leading the project team and project towards the desired results. A project leader is he who is responsible for implementing those rules and regulations by the employees during the working of the projects. If the employee dont care about the safety measures then leader is the one who is responsible for implementing those safety measures either by communicating or forcefully. Moreover proper safety rules and regulations can only be implemented through proper and active participation of a project leader because project leader is the main person who needs to communicate to every individual involved in the project, in order to make them aware of the safety measures which are necessary to be known to complete the project effectively. Hence, SSTL is highly required for implementing the laws throughout the project based organization at every level so that employees can have proper information regarding every important element, procedures, plans and policies of regarding safety measures. Because in a project or organization leader is the one who is responsible for the safety of his employees

or staff. So, leader should have those qualities that will make his workers follow those defined rules and regulations in project based organization and especially in Pakistani project based organizations. Because Pakistani organizations have almost neglected this issue.

There is a positive association between SC and PSC.

This hypothesis was accepted. As the result shows significant relationship ($B = .19$, $t = 6.45$, $P = .00$).

SC has the t value of 6.45, which shows high significance level of the relationship. This hypothesis t value of 6.45 indicates positive significant relation of SC with PSC. And the value of B co-efficient was 0.19 which shows that if there is a change of one unit in SSTL then the change of 19% in the relationship between SC with PSC will occur, which strengthen the relationship.

The recent study explains the effect of the leadership practices of effective supervisors on the safety measures of the employees who work for them. Uncertain reward and transformational leadership are tested under certain conditions of PSC in manufacturing as well as in constructions sectors (Kapp, 2012). High level of SC will provide more chances for employees to take safety measures by sharing the importance of taking safety measures while performing tasks with the employees at every level of project which will definitely improves the level of safety in the project and leads the project towards desired level of safety in the project.

Every organization have some safety rules and regulations defined for the organization to complete the projects safely. The safety of employees is way more important, because they are the real assets of the organization. So if the employees follow those rules and regulations properly and then it is possible to create a safety climate for the employees in an organization. Rules and regulations are already defined in project based organizations now its the employees duty to follow those measures for creating a safe and danger free environment. In Pakistani project based organizations safety is the highly recommended attribute.

SC mediates the relationship between SSTL and PSC.

This hypothesis was accepted. As the results shows significant relationship of SC as a mediator between SSTL and PSC as the upper and lower limit (.06, .14) indicated by the unstandardized regression co-efficient are both positive and there exist no zero in the bootstrapped 95% interval around the indirect effect of the relationship between SSTL and PSC through SC.

There is proof that safety-specific transformational leadership positively effects safety outcome. However, these relationships have not been thoroughly studied within the fire service. The role of leadership on safety climate and outcomes of the implemented safety measures has become a domain of interest for research in organizations (Smith, Eldridge& Dejoy, 2016). All these results have come out with the past literature which supports the significant role of SC as a mediator between SSTL and PSC.

Climate that reflects safety in a work place is really important and this perception is concluded with the help of the employees behavior and response. Past few years research shows that climate that reflects safety is an important indicator of safety behavior and outputs of the safety measures such as accidents and injuries. Firstly we analyze the foundations of climate that reflects safety and explore how the conditions related to safety can be applied to different levels of analysis. We then see that the climate which reflects safety effects persons behavior at work (Griffin & Curcuruto, 2016). Hence, leaders affective participation and presence fosters safety measures in project through effective SC rules and regulations which are instilled by the leader in his/her employees through proper consoling within the project based organization to enhance employees safety level in project.

SC plays a very important role in making the projects successful. Basically these are the rules and regulations related to the safety measures in Projects or projects based organizations. Organization should have some strict policies for following these rules and regulations. If any worker shows any type of carelessness regarding these safety measure then there must be taken some strict action against that person. SC mediates the relation between SSTL and PSC, such that leader should strictly implement those rules for making the projects successful especially in project based organizations in Pakistan.

ATS moderates the relationship between SSTL and SC; such that if ATS is high than the relationship between SSTL and SC would be strengthened.

This hypothesis was accepted. As the results shows significant relationship (B= 0.18, t= 7.25, P= .00).

ATS has the t value of 7.25, which shows a very high significant level of the relationship. So, this hypothesis having t value of 7.25 indicates statistically significant relation of ATS as a moderator between SSTL with SC. And the value of B coefficient was 0.18 which shows that if there is a change of one unit in SSTL then the change of 18% in the relationship between SSTL with SC will occur, which strengthen the relationship.

SSTL plays a moderating role along with the effect of variables like safety performance, behavior and attitude (Mullen, Kelloway & Teed, 2017). All these results were similar with the past literature which actually supports the role of SC as a mediator between SSTL and PSC. Previous research concluded that the attitude of employees towards the implementation of safety measures would increase the level of safety climate in an organization (Kvalheim & Dahl, 2016). Hence, employees ATS is really very important because its the behavior of the employee that makes him to follow those rules and regulations regarding the safety measures of the employees. If employees follow those safety measures then its for their own safety and that improves the safety level in projects.

ATS is the main component for making the projects successful. Actually its the employees attitude that convinces him to either follow those safety measures or not. Employees attitude is the key ingredient that makes an environment safe for practical work and implementations. Along with the employees attitude a leader also plays a major role in making an environment practically secure for working. Pakistan is a country in which organization gives the least priority towards this safety issue, although employees safety should be the key priority for organizations.

5.2 Conclusion

In this study I have developed a domain of SSTL and its impact on PSC, which is the most demanding domain in the recent time in order to compete globally amongst the entire emerging creative project based organizations around the globe. The main reason of this study is to find out the impact of SSTL on PSC. This study explained the role of SC as a mediator between the SSTL and PSC. Along with that, another unique role of ATS as a moderator has studied between of SSTL and SC.

Data was collected through questionnaires, which were distributed to the project based organizations of Pakistan. This study and the proposed hypotheses are being supported through social exchange theory. Total of 400 questionnaires were distributed but received were 270 only that can be utilized for the analysis purpose because those 270 questionnaires were having the most accurate information that can be used for analysis of the study.

This study is going to contribute a lot in the existing literature because there has been a limited work on study of the impact of SSTL on PSC along with SC as mediator and ATS as moderator. In this study, there are 5 hypotheses which are being analyzed and tested according to the context of Pakistan. Moreover, H1, H2, H3, H4 and H5 all are being accepted according to the support of past literature.

5.3 Practical and Theoretical Implication

This study has participated towards a new domain in the previous literature where the relation of SSTL is tested and analyzed with other variables such as SC and safety climate. This study has added very significant aspects SSTL towards the past literature by analyzing its impact with PSC. As safety is the most popular demand of this age in project sector, hence this study has illustrated new concept of resolving safety issues in the project through proactive and affective participation of a leader.

In this study, new relations have been analyzed which are very significant for achieving the competitive advantage in this continuously changing and creative environment of emerging organizations. This study has participated in a meaningful way in the literature by explaining the role of SC as a mediator between the SSTL and PSC along with explaining the role of ATS as a moderator between SSTL and SC. As ATS is one of the vital and unique variables, so analyzing this variable comes out as the unique research which has contributed significantly in the literature for future results.

This study is equally important for managers, subordinates, supervisors and employees, as Pakistan is facing a lot of problems related safety issues which needs a lot of new researches to overcome such dimension of Pakistani culture that will illustrate the concepts of SSTL, subordinates and supervisors in order to enhance the relationship between leader and employees by using effective communication channels and procedures to entail safety in the projects which is the most demanding need of this century.

5.4 Limitations of Research Work

Similar to every research, this study also has some limitations which arise mainly due to lack of time and resources. As data were collected from the organizations which are mainly project based in Pakistan, hence there is a chance that results might be quite different if the data will be gathered from organizations in Pakistan.

Another limitation arises due to the reason that, we collect information only from employees and there is chance that the results might be different when we took suggestions from leaders, many difficulties were raised during the collection of data. Even many of the employees were not willing to provide the data so to convince them was a difficult task. Convenience sampling is another limitation related to this research work. Due to lack of resources like money and time, so it was convenient to use this sampling technique with the given resources. As data was collected through convenient sampling, so it may not be the true representative of

whole population. The results may be different if data will be collected from true sample of the population.

5.5 Future Research Directions

In this study the hypothesis are being tested for the impact of SSTL on PSC, but to work in future with these variables can be studied with in other domains of safety along with improvement in the leader-employee relationship through other facts like team co-operation.

Moreover, the study on SSTL and PSC needs more attention of researchers, because these variables can further be studied in other areas where safety is required i-e civil engineering sector, electronic sector by comparing it with such areas where safety is highly required in jobs. Hence, this study could be further enhanced and elaborated with the help of given future research guidelines.

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Appendix-A

Dear Participant, I am student of MS Project Management at Capital University of Science and Technology Islamabad. I am conducting a research on ' ' Safety Specific Transformational Leadership and its impact on Project Safety Climate; mediating role of Safety Compliance and moderating role of Attitude towards Safety'. You can help me by completing the attached questionnaire, you will find it quite interesting. I appreciate your participation in my study and I assure that your responses will be held confidential and will only be used for education purposes.

Regards

Amina Binat-i-Yousaf

	1	2
Gender	Male	Female

	1	2	3	4	5
Age	18- 25	26-33	34-41	42-49	50 and above

	1	2	3	4	5
Qualification	Metric	Bachelor	Master	MS/M.Phil	PhD

	1	2	3	4	5	6
Experience	5 10	11 16	17 22	23 28	29 35	36 and above

Safety Specific Transformational Leadership						
1	Expresses satisfaction when I perform my job safely.	1	2	3	4	5
2	Makes sure that we receive appropriate rewards for achieving safety targets on the job.	1	2	3	4	5
3	Provides continuous encouragement to do our jobs safely.	1	2	3	4	5
4	Shows determination to maintain a safe work environment.	1	2	3	4	5
5	Suggest new ways of doing jobs more safely.	1	2	3	4	5
6	Encourages me to express my ideas and opinions about safety work environment.	1	2	3	4	5
7	Talks about his/her values and beliefs of the importance of safety.	1	2	3	4	5
8	Behaves in a way that displays a commitment to a safe workplace.	1	2	3	4	5
9	Spends time showing me the safest way to do things at work.	1	2	3	4	5
10	Would listen to my concerns about safety on the job.	1	2	3	4	5

Safety Compliance						
1	I promote the safety program within the organization.	1	2	3	4	5
2	I use the correct safety procedures for carrying out my job.	1	2	3	4	5
3	I ensure the highest levels of safety when I carry out my job.	1	2	3	4	5

Please tick the relevant choices:

1= Strongly disagree, 2= Disagree, 3= Neutral, 4= Agree, 5= Strongly Agree

Project Safety Climate						
1	To what extent do your supervisors regularly approach you to bring safety issues to your attention?	1	2	3	4	5
2	To what extent do your supervisors regularly monitor you more closely when anyone violates a safety rule?	1	2	3	4	5
3	To what extent do your supervisors regularly get annoyed with nurses who ignore safety rules?	1	2	3	4	5
4	To what extent do your supervisors regularly ensure that there are no hazards in the work environment?	1	2	3	4	5
5	To what extent do your supervisors regularly create an atmosphere in which nurses can say whatever they think about safety?	1	2	3	4	5
6	To what extent do your supervisors regularly consider safety performance in performance evaluations and in promotion reviews?	1	2	3	4	5

Attitude towards Safety						
1	Accident prevention is predominantly the responsibility of the individual or parent.	1	2	3	4	5
2	Most accidents are preventable.	1	2	3	4	5
3	I believe employees can be effective in preventing accidents.	1	2	3	4	5
4	Other agencies have greater responsibility for accident prevention than the employees.	1	2	3	4	5
5	Organization will probably increase current spending on accident prevention.	1	2	3	4	5
6	Accident prevention strategies can save money by reducing the number of accidents that need treatment.	1	2	3	4	5
7	Organization should fund safety equipment for those on low incomes.	1	2	3	4	5
8	National and regional agencies are better placed than local ones to educate the public about accident prevention.	1	2	3	4	5
9	Organization should be involved in lobbying or campaigning on local safety issues.	1	2	3	4	5
10	It is important for our organization to collect data on accidents.	1	2	3	4	5