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The Significance of Management Commitment towards Safety in Construction Industry of Pakistan

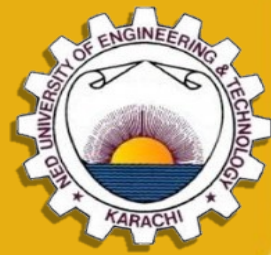
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Sequence of Presentation

- Introduction
- Research Objective
- Research Scope
- Research Methodology
- Data Analysis and Results
- Research Conclusions
- Recommendations
- Limitations and Future Research Directions



Introduction

- Construction industry is considered as the third highest risky Industry in the whole world after mining industry and agriculture industry (Shaikh et al., 2013)
- Except of this high risk, it is both economically and socially important (Farooqui et al., 2008)
- In the construction industry of developing countries, occupational safety remains neglected because of competing social, economic, and political challenges (Irfan, 2013)



Introduction

- **Pakistan** Is facing infrastructure growth over past few years. (Pakistan Government, 2001)
- Construction is major part of its gross domestic product. (Pakistan Government, 2001)
- About 9% of Pakistan's workforce is associated with construction industry. (Pakistan Government, 2001)
- Construction in Pakistan is more labor intensive, involving 2.5-10 times as many workers per activity. (Farooqui and Arif, 2009)

Workers are engaged in unsafe work behavior

Introduction



Who improve this unsafe work behavior?

MANAGEMENT

Prior Research

The project superintendents play a significant role in determining the safety performances on their projects.

(Hinze, 1988)

The management team is duty bound to create safety awareness throughout their organization.

(Choudhry and Fang, 2008)

The management seemed non-interested in emphasizing the need of safety practices among their workers

(Farooqui and Arif, 2009)

For management, as the work progresses their concerns for deadlines becomes a priority and they tend to pay less attention to safety.

(Farooqui et al., 2008)

Research Objectives & Scope



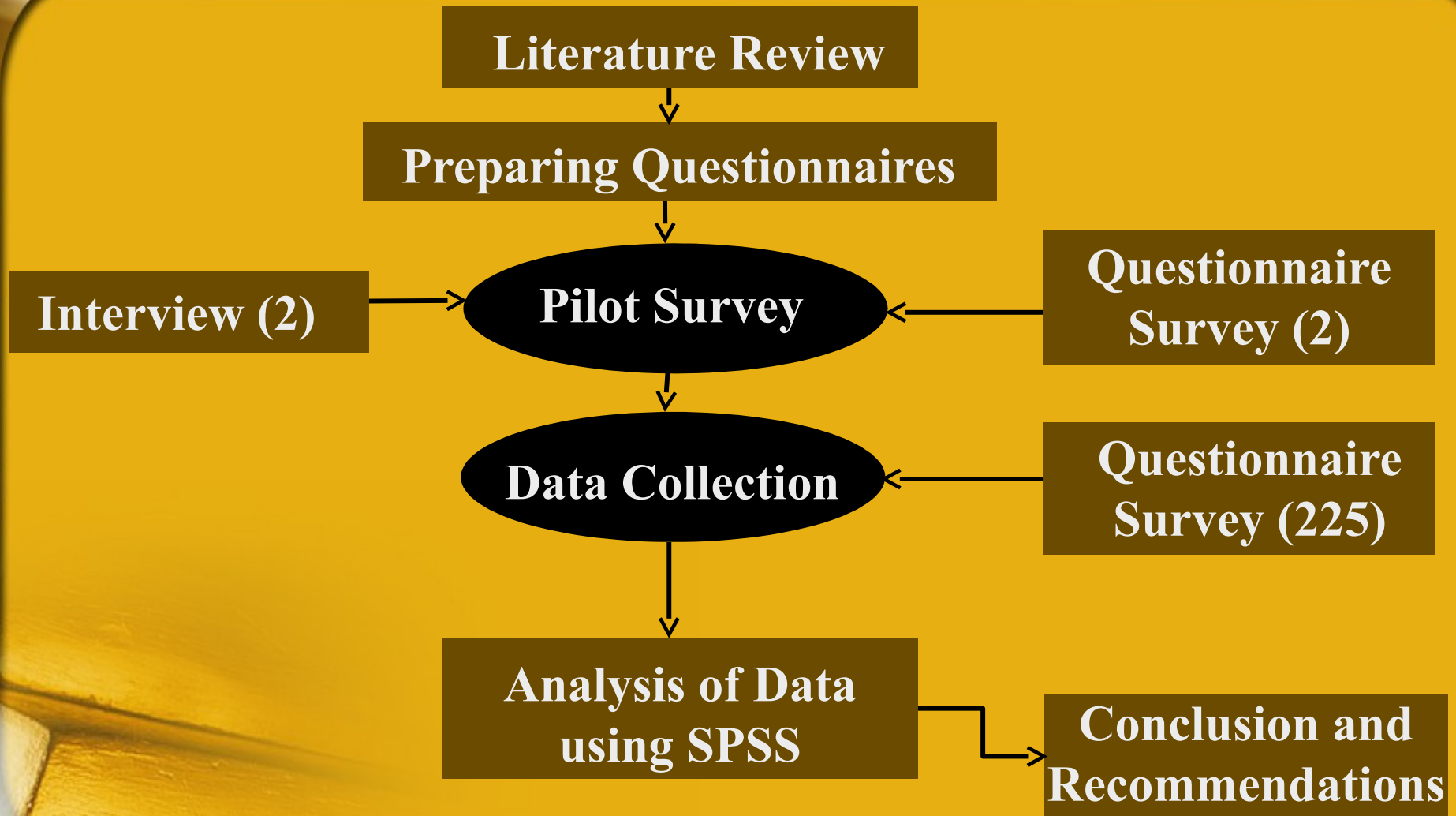
Research Objectives

To study the significance of management commitment towards safety in construction industry of Pakistan.

Research Scope

The research scope is limited to Residential and Commercial buildings.

Research Methodology





Research Methodology

Questionnaire Development

Two questionnaires were designed

The questionnaires comprised statements, adopted from reported research studies (Mohamed, et al., 2009; Farooqui and Arif, 2009; Choudhry and Feroz, 2008; Feroz, et al., 2005)

1 Management

2 Labor

Construct of Questionnaire

Survey Variables

Management Commitment

Construct of Questionnaire

Survey Variables

Management Commitment

20

Labor Behavior

3

Total

23



Research Methodology

Respondents were asked to endorse the statements of questionnaire using a five-point Likert-type scale (from 1= “strongly disagree” to 5= “strongly agree”).

Sampling Area

Sampling area include construction sites of Karachi and Interior Sindh.

No. of Questionnaire

Questionnaire	No. of Sites	Respondents on Each Site	Total Respondents
Management perspective	45	1	45
Labor perspective	45	5	225

Research Methodology



Management Respondents Experience

Experience	No. of Respondents
<5	7
5-10	15
10-15	8
15-20	10
>20	5

Labor Respondents

Skilled	75
Unskilled	150

Labor Respondents Experience

Experience	No. of Respondents
<5	83
5-10	72
10-15	30
15-20	25
>20	15



Analysis of the Data

- **Software Used**

Data was analyzed by using SPSS-17.0

- **Test Conducted**

1. Cronbach's Coefficient Alpha
2. Hypothesis test using One-Sample T-test.
3. Correlation Test
4. Kruskal-Wallis Test



Analysis of the Data

Reliability of data

The reliability and validity of data was assessed using Cronbach's Coefficient Alpha Method

Questionnaire of	Cronbach's Alpha	N of Items
Management	0.906	20
Labor	0.807	23

Are **GOOD VALUES** > 0.70 which is usually accepted as the minimum desired value of the Cronbach's alpha (litwin 1995).



Analysis of the Data

Hypothesis Test

Hypothesis testing is done by One-Sample T-test.

Results:

By this we can interpret that

- ✓ Management said that they are dedicated to safety, they provide safety manuals, motivates trainings etc. But reality is they are not; as labor are disagree on this. !

if $\mu > 0.05$, the management is not committed to safety. TRUE !



Analysis of the Data

- **Correlation Test**

Correlation analysis measures the strength of the relationship between variables

Correlation Test Between Variables

First correlation between management commitment variables and labor behavior variables was done

Purpose

The purpose of this test is to check how significantly management commitment correlated with labor behavior.

Analysis of the Data

Only those variables which had minimum and negative correlation coefficient values are shown:

LB \ MC	6	13	14	15	16	20
1	-	0.239	0.263	0.201	0.22	0.382
2	-	0.244	0.286	0.170	0.156	0.218

Variables	Labor Behavior (LB)
1	I wear PPE and follow safety rules.
2	My management provides all safety procedures for fulfillment of safety standards.
3	Under pressure I am conscious about the safety of my coworkers.

Variables	Management Commitment (MC)
6	Management acts only after accidents have occurred.
13	There are sufficient recourses available for safety in my company
14	Supervisor has positive safety behavior.
15	The supervisors in your company are good at detecting unsafe behavior and ensuring safety at work.
16	Supervisor usually engages in regular safety talks.
20	Management motivates training.

Analysis of the Data



Results:

By this we can interpret that

- ✓ Labor behavioral statements like labor wear PPE, management provides all safety procedures to them and they are conscious about the safety showed minimum or negative correlation with management commitment variables.
- ✓ This explains that management commit that they have sufficient resources available for safety. On the other hand labor said that they are not provided with PPE because company lacks resources.

Analysis of the Data



- **Kruskal Wallis Test**

Purpose:

This test was done to check similarity between the management commitment and labors observation

If significance value > 0.05 , it means labor observed that management is committed to safety.

Analysis of the Data

Your senior management takes safety seriously.	0.015
Management expresses concern if safety procedures are not adhered to.	0.04
Management praises site employees for working safely.	0.011
Management disciplines site employees for working unsafely.	0.039
Management encourages feedback from site employees on safety issues.	0.001
Supervisor usually engages in regular safety talks.	0.023
Management motivates training.	0.004

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Results:

- ✓ Most of the variables in the category of management commitment and support found less significant.
- ✓ This showed that management commit that they take safety seriously, take measures to disciplines site labors etc. but labor did not observe these commitments.

Research Conclusion



- Management is not serious about safety, this result in unsafe labor behavior.
- Labor not ask management to give them PPE and safety procedures
- Management claims that they have maintained safety standards but work is more important.
- Management not have overall frame of reference for getting feedback from labors.



Recommendations

- There is need of supportive physical, & organization environment from management.
- Management should announce rewards for labors who worked safely.
- Management should take feedback of their performances; by this they can improve their commitment towards safety.
- There should be trainings for the management and workers both.
- There should be a regulatory body which defined and enforced safety regulations among management levels.

Limitations and Future Research Directions



Limitations

- ✓ The analysis in this study was focused to Residential and Commercial buildings construction. Further analysis need to be done for other sectors of construction such as residential, infrastructure, and industrial.
- ✓ To take responses from labor was other limitation of the research as the attitude of labor were lethargic.

Future Research Directions

This study will further be conducted to develop a SEM model using factor analysis technique and AMOS software. The model relates constructs (categories) and generates such results which will help in better reshaping of industry.

Questions/Queries?

