

A Study on the Existence of Work-Related Stress Among Construction Workers in Kanchipuram District

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ABSTRACT

Stress is positive to some extent as it can catalyze and motivate people to follow a timeline for activities but in the case of construction workers, it is often distress which has a negative outcome on their physical and mental health. The factors that lead to occupational stress among construction workers is unique. This paper unfolds the basic dimensions of occupational stress in construction workers working in Kanchipuram. The data was collected through interview schedule and focus group discussion conducted during October 2015. Percentage analysis, Garrett ranking and ANOVA were used to analyze the data collected. The informal meetings with the workers brought to light the fact that in many cases the workers were unaware that they were stressed. Lack of adequate break time and job insecurity is the main psychological stressor that tormented them.

KEY WORDS: Occupational stress, construction workers, task related stressors.

1. INTRODUCTION

Occupation is a set of job roles, which perform similar or related set of functions in an industry. Occupational stress is anything regarding the working environment or nature of work itself that causes individual's perceived stress (Rohany, 2003). Occupational stress occurs, when there is a discrepancy between the demands of the environment/workplace and an individual's ability to carry out and complete these demands. A stressor can lead the body to have a physiological effect, which leads to physical and mental strain of a person.

Stress is positive to some extent as it can catalyze and motivate people to follow a timeline for activities but in the case of construction workers, it is often distress which has a negative outcome on their physical and mental health. The occupational stress may even go to the extent of challenging their lives as one of the outcomes of stress is the lack of concentration. Further, the factors that lead to stress among construction workers is unique. So, it was considered pertinent to study the various causes of stress among construction workers in order to devise remedial action among the stakeholders.

2. STATEMENT OF THE PROBLEM

Despite the fact that the unorganized sector as a whole contributes a sizeable amount to the GDP, it has been overlooked. Kanchipuram district was chosen as the study area as real estate industry is booming in the district involving more construction workers and hence a study on the occupational stress of construction workers in the area is necessitated.

3. IMPORTANCE OF THE STUDY

Volume of research on certain aspects of unorganized sector is diminishing and remains unattended.

- Many of the labor issues are apparent but the latent issue which has been neglected though highly significant is the occupational stress that emanate from the issues.
- A majority of research has focused on the occupational health, hygiene and safety of workers in construction industry.

4. OBJECTIVES OF THE STUDY

- To study the level of occupational stress of the Construction workers in Kanchipuram district.
- To study the awareness of occupational stress among construction workers.
- To identify the physical and psychological stressors which are task related.

5. SCOPE OF THE STUDY

It is proposed to analyze

- The demographic dynamics of the unorganized workers (both men and women) in construction sector.
- Nature of work, work system and opinion of the workers about their job in the above mentioned sector.
- The issues in work place that lead to stress among the construction workers.

6. LITERATURE REVIEW

Lewin (1951) observed that an individual's personal characteristics interacted with their work environment to determine strain, and consequent behaviour and health. This concept was developed into the Person- Environment fit model (French, 1973), which suggests that the match between a person and their work environment is key in influencing their health. For healthy conditions, it is necessary that employees' attitudes, skills, abilities and resources match the demands of their job, and that work environments should meet workers' needs, knowledge, and skills potential.

Cary Cooper, (1983) has developed a concise yet complete list of six sources of work stress:

- (1) Job Conditions - Quantitative & qualitative work overload, people decisions, physical danger, techno stress
- (2) Role Stress - Role ambiguity, sex bias and sex-role stereotypes
- (3) Interpersonal Factors - Poor work and social support systems, lack of management concern for the worker, political rivalry, jealousy, or anger.
- (4) Career Development - Underpromotion, overpromotion, job security, frustrated ambitions
- (5) Organizational Structure - Rigid and impersonal structure, political battles, inadequate supervision or training, non participative decision making.
- (6) Home-work Interface - Spillover, lack of support from spouse, marital conflict, dual career stress.

Johnson et.al, (2005) have carried out the study on the experience of work-related stress across occupations. They have discussed three stress related variables like psychological well-being, physical health and job satisfaction and these variables are compared among 26 different

occupations like ambulance workers, teachers, social services, customer services - call centers, prison officers and police. The study reveals the high emotional labour associated with the high stress jobs is discussed as a potential causal factor.

7. METHODOLOGY OF RESEARCH

Primary data was collected from construction industry workers through constructive questionnaire. Different employment units/groups located in & around kanchipuram were selected by random sampling technique. Attempts were made to cover all the workers in each selected unit with 120 persons selected on the basis of random sample techniques. A questionnaire was prepared, tested and validated. These subjects were appraised according to the study protocol.

Secondary data was collected from published research reports and web-based sources.

8. RESULTS & DISCUSSIONS

Construction laborers and helpers typically do the following:

- Clean and prepare construction sites by removing debris and possible hazards
- Load or unload building materials to be used in construction
- Build or take apart bracing, barricades, forms (molds that determine the shape of concrete), scaffolding, and temporary structures
- Dig trenches, backfill holes, or compact earth to prepare for construction
- Operate or tend equipment and machines used in construction, such as concrete mixers.
- Follow construction plans and instructions from the people they are working for.

The responses collected from selected construction workers working in kanchipuram district during October 2015 were tabulated for analysis and the following are the results and discussions pertaining to the demographic profile, working hours and the task related stressors.

DEMOGRAPHIC DISTRIBUTION OF THE RESPONDENTS

DEMOGRAPHIC VARIABLES	NO. OF RESPONDENTS	PERCENTAGE
Gender		
Male	48	40
Female	72	60
Total	120	100
Age		
Below 25	36	30
26-39	66	55
40-45	18	15
Total	120	100
Marital Status		
Married	84	70
Unmarried	36	30
Widowed/ Separated	-	-
Total	120	100
Educational Qualification		

Illiterate	36	30
Primary	60	50
Secondary	24	20
Total	120	100

TABLE NO 1

Table-1 represents the demographic profile of the construction workers who were interviewed. As depicted in the table, male constitute around 40% of the respondents. With respect to the distribution of the age, it was evident that 55% of the respondents are in the age group between 26 years and 39 years. Out of 120 respondents, 50% had completed primary education and 30% are illiterate.

**CLASSIFICATION OF THE RESPONDENTS BASED ON
THEIR WORKING TIME PERIOD**

PARTIC ULARS	NO. OF RESPONDENTS	PERC ENTAGE
Working hours		
Less than 8 hours	6	5
8 hours	114	95
More than 8 hours	-	-
Experience in years		
5-7 years	48	40
7-10 years	30	25
More than 10 years	42	35
Duration of work at present site		
1-3 months	18	15
4-7 months	30	25
7-12 months	72	60
Duration of breaks in minutes		
0-15	62	52
16-30	58	48

TABLE NO 2

Table-2 represents the working hours per day, the experience of the respondents in years and the duration of work in the present site. This classification was made to analyse the impact of these factors on the incidence of stress among construction workers. From the table, it is evident that 95 percent of the respondents worked for 8 hours a day and 40% of the respondents had an experience ranging between 5 to 7 years and 35% of respondents had more than 10 years of experience. With regard to the duration of work at present site, 60% of construction labourers worked for more than 7 months in the current site. The duration of breaks in minutes for 52% of respondents was 15 minutes or less and the number of breaks was usually only twice in a working day.

**RANKING OF PHYSICAL PROBLEMS AS A CAUSE OF
OCCUPATIONAL STRESS BY THE RESPONDENTS**

S.NO.	PHYSICAL PROBLEMS	GARRETT MEAN SCORE	RANK
1	Noise	72.8	I
2	Poor/inadequate Lighting	69.2	IV
3	Excessive heating	69.7	III
4	Excessive cold	66.4	V
5	Over crowding	66.4	V
6	Poor ventilation	65.1	VIII
7	Dust or fumes	71	II
8	Poor maintenance of equipment	66.4	V
	Psychological problems		
1	Shift work	72.3	IV
2	Inadequate break time/meal time	76	I
3	Unsocial houses	70	V
4	Very heavy workload	73.7	III
5	Unfair distribution of works	68.4	VI
6	Repetitive/boring work	66	VII
7	Job insecurity	74.9	II
8	Meeting deadliness	65.2	VIII
9	Under-Utilization of skills	64.3	IX

TABLE NO 3

The respondents were asked to rank the physical problems that cause occupational stress among construction workers and the mean score of the ranks awarded was calculated. The Garrett ranking revealed that noise at work and dust or fumes were the main physical stressors. Many respondents felt that they did not have adequate break time which often resulted in missing out their meals or lunch. They do not dare to ask for breaks as they fear being rendered jobless in the next contract period. Thus inadequate break time and job insecurity are the prime psychological stressors. This ranking brings to light the fact that much psychological impact is created when the job fails to accommodate the basic needs of the employee.

ASSOCIATION OF WORK RELATIONSHIP AND INCIDENCE OF OCCUPATIONAL STRESS

In order to study the relationship between work relationship and the incidence of occupational stress in work place, 'ANOVA' test was administered with the following null hypothesis:

Null Hypothesis H_0 : There is no significant difference in work relationship and incidence of stress.

The result of 'ANOVA' test is presented in the below table:

RELATIONSHIP BETWEEN WORK RELATIONSHIP AND INCIDENCE OF STRESS IN WORK PLACE

WORK RELATIONSHIP	SUM OF SQUARES	DF	MEAN SQUARE	F	SIG. VALUE
Between groups	251.322	3	83.74	2.507	0.610
Within groups	520.268	156	33.98		
Total	541.5	159			

TABLE NO 4

Table-4 reveals that the calculated 'F' value is 2.507 which is significant at the 'p' value of 0.610. Since the respective 'p' value is higher than 0.05, the null hypothesis is ACCEPTED. Therefore, it may be concluded that there is no significant variation in work relationship and the incidence of stress among construction laborers in Kanchipuram district. This implies that the relationship in the workplace was not identified as the reason for stress by the respondents.

9.FINDINGS OF THE STUDY

- The study reveals that the main priority of the construction workers is to find work on a regular basis and improve their income. Females are employed only as helpers and continue working as helpers throughout their working lives.
- Many respondents have primary and secondary level of education but some are illiterate which leave them with no other option than to continue with the current occupation and learn to live stress. Although the average daily wage is well above the legal minimum, most workers are unable to find work throughout the year.
- The main physical task related stressors are noise and dust which creates a lot of health hazards in construction workers.
- Inadequate break time and job insecurity are the prime psychological stressors.
- The work relationship with co-workers and supervisors did not in any way affect the workers. Most of them were bothered about job security and not about the way they were treated by their supervisors or co-workers.
- Many of the respondents were not aware that they had stress but displayed symptoms of stress. They described the task related stressors as a disturbing phenomenon.
- The survey showed that most workers are not satisfied with their work and most of those employed within the sector would not want their family members to join the sector.

10. SUGGESTIONS

The following suggestions, if adhered, can improve the productivity of the construction workers:

- 1) Adequate break time should be ensured so that their basic needs of rest and food is satisfied.
- 2) Proper safety equipments should be made available. The contractors and supervisors should also ensure that the safety equipments are used by the workers on site.
- 3) The supervisors should be sensitized to understand the problems that stimulate stress so as to avoid accidents and mishap in the construction sites as chronic stress can cause lack of concentration.

11. CONCLUSION

The workers in the construction sector are exposed to a variety of physical problems which are peculiar to the sector which causes health hazards. When health is challenged, the workers are unable to meet the demands of their job and this can lead to stress. The informal networking of construction workers ensures the regularity of contracts but they work in pitiable working conditions besides being exposed to life hazards. The main causes of occupational stress are lack of adequate break time and job insecurity which is highly prevalent in the construction sector. Occupational stress is also caused by an increased workload without the addition of employees to take on that additional work. If the problems that stimulate stress are understood by the supervisors and addressed, the construction workers can be more productive and efficient.

12. REFERENCE

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