Chapter VI

Findings, Suggestions & Conclusion
CHAPTER VI
SUMMARY OF FINDINGS, SUGGESTIONS AND CONCLUSION

6.1 INTRODUCTION

This chapter contains the findings of the study of impact of work environment on stress levels of workers: a study on the causes, consequences and coping techniques in tile factories of Kerala. The sample size consists of 548 workers, (378 males and 170 females). The data was analyzed by using (PAST 3.01 – University of Oslo and results were confirmed using SPSS 20).

6.2 FINDINGS

Objective: 1 - To envisage the causes of work stress among tile factory workers in Kerala through primary and secondary sources of data:

Below mentioned findings are drawn from the analysis with the help of Henry Garrett Ranking Technique and Mann – Whitney U Test.

➢ **A: Work Related**: It is clear that the male and female workers have given more importance to ‘dual career’ and ‘significant risk to health and safety’. The last two ranks given by male workers were ‘boring repetitive work’ and ‘inflexible work schedule’. The last two ranks given by female workers were ‘inflexible work schedule’ and ‘sustained over or under load’. We can conclude that there is no significant difference between the rankings of male and female tile factory workers with respect to the causes of work related stress.

➢ **B: Organization Related**: It is clear that the male workers have given more importance to ‘poor role in establishing rules of conduct’ and ‘poor communication’. It is evident that the female workers have given more importance to ‘no role in decision making’ and ‘poor role in establishing rules of conduct’. The last two ranks given by male workers were ‘authoritarian style of the management’ and ‘conflicting priorities’. The last two ranks given by female workers were ‘conflicting priorities’ and ‘authoritarian style of the management’ respectively. We can conclude that there is no significant difference between the rankings of male and female tile factory workers with respect to causes of organization related stress.
C: Relationship at work: It is clear that male workers have given more importance to ‘social or physical isolation’ and ‘unduly critical of others’. It is clear that female workers have given more importance to ‘unduly critical of others’ and ‘low self esteem’. The last two ranks given by male as well as female workers were ‘harassment and bullying’ and ‘trouble with boss’. We can conclude that there is no significant difference between the rankings of male and female tile factory workers with respect to causes of stress due to relationship at work.

D: Career improvement: It is clear that male workers have given more importance to ‘threat to job security’ and ‘career uncertainty’. It is clear that female workers have given more importance to ‘limited opportunity’ and ‘career uncertainty’. The last two ranks given by male workers were ‘lack of appreciation and ‘restructuring of role’. The last two ranks given by female workers were ‘lack of recognition’ and ‘restructuring of role’. We can conclude that there is no significant difference between the rankings of male and female tile factory workers with respect to causes of stress due to career improvement.

E: - Role related

Below mentioned findings are drawn from the analysis with the help of Kruskal – Wallis test.

There is no significant difference in the responses of male and female workers to the statements given to understand :-

(I) Self role distance
(II) Role stagnation
(III) Inter role distance
(IV) Role ambiguity
(V) Role expectation conflict
(VI) Role overload
(VII) Role isolation
Objective: 2: To study and analyze the consequences of stress among the tile factory workers

Below mentioned findings are drawn from the analysis with the help of Henry Garrett Ranking Technique and Mann – Whitney U Test.

- **A: Physical consequences:** It is clear that the male and female workers have given more importance to ‘backache’ and ‘headache’. The last two ranks given by male workers were ‘high blood pressure’ and ‘stomach disorder’. The last two ranks given by female workers were ‘skin disorder’ and ‘facial or jaw pain’. We can conclude that there is no significant difference between the rankings of male and female tile factory workers with respect to physical consequences of work stress.

- **B: Psychological consequences:** It is clear that the male workers have given more importance to ‘feelings of insecurity’ and ‘moodiness’. It is evident that the female workers have given more importance to ‘helplessness’ and ‘anxiety’. The last two ranks given by male workers were ‘loneliness’ and ‘anxiety’. The last two ranks given by female workers were ‘withdrawal from other people’ and ‘anger’. We can conclude that there is no significant difference between the rankings of male and female tile factory workers with respect to psychological consequences of work stress.

- **C: Behavioral / Emotional consequences:** It is clear that the male workers have given more importance to ‘carelessness’ and ‘hair pulling’. It is evident that the female workers have given more importance to ‘carelessness’ and ‘nail biting’. The last two ranks given by male workers were ‘increased alcohol / drug consumption’ and ‘nail biting’. The last two ranks given by female workers were ‘increased smoking’ and ‘increased alcohol / drug consumption’. We can conclude that there is no significant difference between the rankings of male and female tile factory workers with respect to behavioral / emotional consequences of work stress.

Objective: 3  To measure the level of work stress among tile factory workers in Kerala

Below mentioned findings are drawn from the analysis with the help of Chi-square test.
➢ While analyzing the gender of the workers, it was found that female workers have perceived maximum level of work stress than the male workers.

➢ It was found that the maximum level of stress was perceived by male and female workers in the age group of 41 – 50 years.

➢ In the case of ‘marital status’, majority of the married male and female workers have perceived maximum level of work stress when compared to the unmarried workers.

➢ It is brought out from the analysis that the maximum level of stress was perceived by the male workers who were qualified with ITI / Poly Diploma and in the case of female workers maximum level of stress was perceived by those who were qualified with primary level.

➢ It is found that the male workers who had 1 to 3 dependents have perceived high level of work stress, while the maximum level of stress was perceived by the female workers with above 5 dependents.

➢ Maximum level of stress was perceived by male and female workers who belonged to nuclear family.

➢ It was found from the analysis that the maximum level of work stress was perceived by the male workers who had experience of 11 to 15 years, while the maximum level of work stress was perceived by the female workers who had experience of 16 and above.

➢ It was found that the maximum level of work stress was perceived by the male workers who had business, while the maximum level of work stress was perceived by the female workers who had no work / house wife.

➢ It was found that the maximum level of work stress was perceived by the male workers who had assistant, while the maximum level of work stress was perceived by the female workers who had technician.

➢ While analyzing the gender of the workers in production department, female workers have perceived maximum level of work stress than the male workers.

➢ While analyzing the income group, the male workers with the income range of above Rs.6000 got maximum level stress and the female workers with the income range of below Rs.4000 got maximum level stress.
It was found that maximum level of work stress was perceived by the male workers who had 1 – 5 km distance between company and residence. Maximum level of work stress was perceived by the female workers who had 6 – 10 km distance between company and residence.

It was found that the maximum level of stress was perceived by the male workers who had been working 7 – 9 hours. Maximum level of stress was perceived by the female workers who had been working above 9 hours.

Among the four categories of feel stressful, the maximum level of stress was perceived by the male and female workers who had ‘health problems’.

Objective: 4: To understand the impact of different causes of work stress (related to work environment) on the level of stress experienced by workers: -

As part of the research, the impact of different causes of work stress (related to work environment) on the level of stress experienced was further investigated along the following sub objectives.

Below mentioned findings are drawn from the analysis with the help of Chi-square test, Kruskal-Wallis test, Mann Whitney U test & Spearman’s rank correlation.

A : Work related: -

(a) To understand the impact of work related causes of work stress on the level of stress among male and female respectively:-

➢ There is a significant relationship between work related causes of work stress and level of stress experienced among male workers.

➢ There is a significant relationship between work related causes of work stress and level of stress experienced among female workers.

(b) To understand specifically the factors that affect the stress level of workers, out of various work related stressors:-

➢ It is found that there is a significant difference between the patterns of responses of male workers who had experienced different levels of stress with respect to different causes of work related stress.
- It is found that there is no significant difference between the patterns of responses of female workers who had experienced different levels of stress with respect to different causes of work related stress.

- It is found that there is no significant difference in the response to causes of work related stress between male and female workers with high, medium and low level of stress.

- It is found that there is a low level of correlation between the rankings of male and female workers, with regard to the causes of work related stress, when only the data of workers with high level of stress were considered.

- It is found that there is a low level of correlation between the rankings of male and female workers, with regard to the causes of work related stress, when only the data of workers with medium level of stress were considered.

- It is found that there is a moderate level of correlation between the rankings of male and female workers, with regard to the causes of work related stress, when only the data of workers with low level of stress were considered.

- It is found that there is a significant relationship between gender and the following causes of work related stress: constant exposure to dust and smoke, insufficient lighting and ventilation, poor pollution control, dual career and significant risk to health and safety.

- It is found that there is no significant relationship between gender and the following causes of work related stress: boring repetitive work, sustained overload and under load and inflexible work schedule.

(c) To analyze the relationship in work stress due to work related stressors between male and female workers:

- It is found that there is a significant relationship between male and female workers with respect to the factor (a) constant exposure to dust and smoke, (b) dual career, (c) significant risk to health and safety.
B: Organization related

(a) To understand the impact of organization related causes of work stress on the level of stress among male and female workers respectively:-

- There is a significant relationship between organization related stress and level of stress experienced among male workers.
- There is no significant relationship between organization related stress and level of stress experienced among female workers.

(b) To understand specifically the factors that affect the stress level of workers, out of various organization related stressors -

- It is found that there is a significant difference between the patterns of responses of male workers who had experienced different levels of stress with respect to different causes of organization related stress.
- It is found that there is no significant difference between the patterns of responses of female workers who had experienced different levels of stress with respect to different causes of organization related stress.
- It is found that there is no significant difference in the response to causes of organization related stress between male and female workers with high, medium and low level of stress.
- It is found that there is a moderate level of correlation between the rankings of male and female workers, with regard to the causes of organization related stress, when only the data of workers with high level of stress were considered.
- It is found that there is a moderate level of correlation between the rankings of male and female workers, with regard to the causes of organization related stress, when only the data of workers with medium level of stress were considered.
- It is found that there is a moderate level of correlation between the rankings of male and female workers with regard to the causes of organization related stress, when only the data of workers with low level of stress were considered.
It is found that there is a significant relationship between gender and the following causes of organization related causes of work stress: poor communication, poor role in establishing rules of conduct, poor employee oriented policies and no role in decision making.

It is found that there is no significant relationship between gender and the following causes of organization related causes of work stress: authoritarian style of the management, lack of organizational information, malfunctioning of employee assistance programmes and conflicting priorities.

(c) To analyze the relationship in work stress due to organization related stressors between male and female workers:

- It is found that there is a significant relationship between male and female workers with respect to the factor ‘poor role in establishing rules of conduct’. ‘Poor communication’ is found to be significant factor for male workers where as ‘no role in decision making’ is a significant factor for female workers.

C: Relationship at work

(a) To understand the impact of relationship at work causes of work stress on the level of stress of male and female workers respectively:

- There is no significant relationship between level of stress experienced among male workers and ‘relationship at work’ causes of work stress.
- There is no significant relationship between level of stress experienced among female workers and ‘relationship at work’ causes of work stress.

(b) To understand specifically the factors that affect the stress level of workers, out of various relationship based stressors:

- It is found that there is a significant difference between the patterns of responses of male workers who had experienced different levels of stress with respect to different causes of relationship at work.
- It is found that there is no significant difference between the patterns of responses of female workers who had experienced different levels of stress with respect to different causes of relationship at work.
➢ It is found that there is no significant difference between the response to causes of relationship at work between male and female workers with have high, medium and low level of stress.

➢ It is found that there is a high level of correlation between the rankings of male and female workers, with regard to the causes of relationship at work when only the data of workers with high level of stress were considered.

➢ It is found that there is a low level of correlation between the rankings of male and female workers, with regard to the causes of organization related stress, when only the data of workers with medium level of stress were considered.

➢ It is found that there is a low level of correlation between the rankings of male and female workers, with regard to the causes of organization related stress, when only the data of workers with low level of stress were considered.

➢ It is found that there is a significant relationship between gender and the following causes of relationship at work: - non co-operative colleagues, social or physical isolation and unduly critical of others.

➢ It is found that there is no significant relationship between gender and the following causes of relationship at work: - trouble with boss, conflict with supervisors, harassment and bullying, conflict with the organization goal and low self esteem.

(c) To analyze the relationship in work stress due to relationship based stressors between male and female workers:

➢ It is found that there is no significant relationship between male and female workers with respect to relationship based stressors.

D: Career improvement

(a) To understand the impact of career improvement causes of work stress on the level of stress among male and female respectively:

➢ There is a significant relationship between career improvement and level of stress experienced among male workers.
There is a significant relationship between career improvement and level of stress experienced among female workers.

(b) To understand specifically the factors that affect the stress level of workers, out of various career improvement stressors:-

- It is found that there is a significant difference between the patterns of responses of male workers who had experienced different levels of stress with respect to different causes of career improvement.

- It is found that there is no significant difference between the patterns of responses of female workers who had experienced different levels of stress with respect to different causes of career improvement.

- It is found that there is no significant difference in the response to causes of career improvement between male and female workers with high, medium and low level of stress.

- It is found that there is a low level of correlation between the rankings of male and female workers, with regard to the causes of career improvement stress, when only the data of workers with high level of stress were considered.

- It is found that there is a low level of correlation between the rankings of male and female workers, with regard to the causes of career improvement stress, when only the data of workers with medium level of stress were considered.

- It is found that there is a moderate level of correlation between the rankings of male and female workers, with regard to the causes of career improvement stress, when only the data of workers with low level of stress were considered.

- It is found that there is a significant relationship between gender and the following causes of work stress due to career improvement: - career uncertainty, threat to job security, threat of redundancy and limited opportunity.

- It is found that there is no significant relationship between gender and the following causes of work stress due to career improvement:- frustration over career ambition, lack of appreciation, lack of recognition and restructuring of role.
(a) To analyze the relationship in work stress due to career improvement between male and female workers:-

- It is found that there is a significant relationship between male and female workers with respect to the factor ‘career uncertainty’. ‘Threat to job security’ is found to be a significant factor for male workers whereas ‘limited opportunity’ is a significant factor for female workers.

Objective: 5 To study and improve the coping techniques adopted by workers to tackle their work stress:

Below mentioned findings are drawn from the analysis with the help of Henry Garrett Ranking Technique and Mann-Whitney U test.

Coping techniques: - It is clear that the male and female workers have given more importance to ‘spending time with family / friends’ and ‘sleep and relaxation’. Last two ranks were given by male and female workers to ‘jogging’ and ‘outing / picnic’. We can conclude that there is no significant difference between the rankings of male and female tile factory workers with respect to coping techniques of work stress. The details on coping techniques that help the workers to overcome their stress are given in the next section.
SUGGESTIONS

The study reveals that a majority of tile factory workers were stressed at considerable level and therefore, the most effective method for stress reduction seems to lie in the solution that combine stress reduction strategy at both the organizational and individual level. Of the two, organizational strategies are more effective in reducing long-term stress and its effects. However, it is just important that individuals have coping techniques at their disposal.

Coping techniques at individual level

- Balance between work and family or personal life. Spend some time with one’s family, even if it is of short duration. Also, having a humorous attitude towards life can make the problems in life less tensed and brings in more moments of joy and laughter.

- Be positive and constructive in one’s attitudes towards others, oneself and events. The presence of negative statements and other irrational ideas about oneself in ones internal dialogue stimulate self-defeating behavior that creates stress.

- Positive addiction and enjoyment: - Physical or mental activities when done regularly become addictive in a positive way and persons who are positively addicted can cope with stress and be successful in what they do. Activities such as running, riding or meditating, when done regularly and chosen freely can have positive and soothing effect.

- Avoid being unduly critical : - Rather than focusing on other people’s weak points and mistakes use the same energy to concentrate on the strong points, and to help the individual to develop these.

- Build relationship: - Humans are social animals and seek companionship, support, approval and acceptance from others at work, at home and at leisure. Mental health and stress prevention process are greatly helped by living in a network of close, warm and sharing relationship, in which love, acceptance, support, advice and respect are present.

- Master the benefits of relaxation because relaxation can reduce stress response, pain and fatigue. It can promote sleep, improve personal relationships and self-esteem through self-awareness.
- Muscle relaxation: - This technique involves tensing specific muscle groups and relaxing them. For each muscle group, such as forehead, hands, forearms, shoulders, back etc., a method is described for creating tension and achieving relaxation.

- Breathing and stretching exercises: - Breathing exercise helps in growing some extra doses of oxygen which helps to feel better. Occasional stretching of limbs and body helps in the relaxation of the muscles.

- Eat healthy: - Taking a lot of fresh fruits, consuming plenty of fluids and green vegetables resembles a healthy food habit. Avoid junk food steps, oily substances, and high-fat items.

- Drink plenty of water: - Water is a universal solvent. It cleanses the body, energizes it, and tones it up. It also provides a soothing effect to the body.

- Stop smoking and curving alcohol: - Curving, smoking, and the intake of alcohol controls the blood pressure and diminishes the risk of cardiovascular and respiratory diseases.

- Engage in some hobbies: - Hobbies like gardening, cooking, painting, reading etc. provide a creative satisfaction to oneself.

- Take small breaks during long spells of work. It can really leave one energized and reloaded.

- Accept changes as an everyday reality. Inability to accept it will only lead to an isolated feeling and stress.

- Avoid arguments: - Sharp arguments only cause emotions to run high resulting in anger, heartburns, and stress.

- Don’t expect too much: - Unfulfilled expectations are major cause of stress both at home and at workplace.

- Meditation and yoga: - Meditation is an act in which one can seek to gain mastery over the process of attention. It is a form of relaxation technique that can be used for the relief and management of stress. Yoga is a traditional and cultural science of India, which preaches ideal lifestyle and maintenance of health. Yoga brings about suitable changes in the behavioral pattern and the attitude of a person.

- Have a good night’s sleep: - A sound and uninterrupted sleep during the night can be a very effective stress cutter.
Organizational level

Adoption and proper implementation of the following stress reduction strategies are recommended:

- Implement participatory ergonomic programmes as a number of respondents belonging to both genders have reported musculoskeletal disorders at severe level.

- Reduce environmental stress by restructuring the workplace to include natural lighting, improving airflow, reducing noise level and controlling pollution.

- Establish work schedules that are compatible with demands and responsibilities outside the job and offer supportive services. For example, allowing workers flex time to start or end the work day earlier or later can reduce work / life stress especially for working parents. Flex time can help the aged workers reduce their stress commuting in rush hour traffic. Arrange worker transportation when needed. Address the needs of the family and children, in addition to care for the worker.

- Ensure that work loads are in line with workers capabilities and resources. Avoid repetitive and monotonous work by job rotation and ensure adequate work breaks and, whenever practicable allow some flexibility in the timing of breaks. Make sure that there are enough breaks.

- Implement direct worker consultation at work and improve communication between groups of workers and between workers and supervisors. Also provide clear job descriptions and job promotion rules and paths.

- The organization should also provide opportunities for meaningful interpersonal interaction and communication both for emotional support and support in fulfilling jobs tasks and other assigned responsibilities. Arrange regular meetings in which work problems can be discussed and solved.

- Schedule stress management workshops that educate workers about the source of stress, effects on their health and how they can reduce stress effectively. It should be backed by practical stress reduction techniques that workers can use on and off the job.

- Educate the workers about the early warning signs of stress and fatigue. Encourage them to report their tiredness and take breaks when they need to.
➢ Offer the services of an expert who can personally address health care issues and help workers reduce their worry, healthy and safety concerns and stay focused in the job.

➢ Improve the quality of welfare facilities such as providing separate rest rooms, dressing rooms, toilets etc. to the female workers.

➢ Organization should make it sure that various committees such as employee assistance programmes, grievance handling cell and welfare committees are functioning in a well defined and proper manner according to the level of workers, because there is a strong relation between level of stress and level of workers. If necessary the services of experts should be made available.

➢ A vast majority of both male and female respondents were found under severe financial stress. Hence, a moderate revision of pay according to their years of experience will be a great relief for the worker community.

➢ At the implementation level, participation of the worker is crucial has they best understand their work and often have ideas on how to improve it.

➢ Evaluate the stress prevention programmes and determine the implementation process has been successful in producing the desired result.

➢ Prevention of stress should not end with evaluation. Rather, stress prevention should be seen as a continuous process that uses evaluation data to refine or redesign the intervention strategy.
CONCLUSION

The results of the present study indicate that work environment of a majority of tile factories in Kerala are unsafe and unhealthy. Some work environments have physical conditions that place the workers out of their comfort zone. These include poorly designed work stations, outdated machinery, lack of ventilation, insufficient lighting, excessive noise, dust and smoke, insufficient safety measures and lack of personal protective equipments. Apart from the above, dual career, poor communication, social or physical isolation, threat to job security, limited opportunity, no role in decision making or establishing rules of conduct, frustration over career ambition, lack of appreciation and recognition, income level, age, unfriendly working hours, health problems etc. are also found responsible for high stress to the tile factory workers.

People working in tensed environment are prone to accidents and occupational diseases, which will often result in reduced worker performance and aggravate the experience of stress. Ultimately, this will impact worker morale, productivity and error rate, level of innovation and social behavior of the workers.

The workers are seen to have given more preference to techniques like spending time with family/friends, sleep, relaxation etc. It is also evident from the study that a majority of the workforce is not fully aware of the importance and effectiveness of coping techniques and they lack systematic training in various relaxation techniques.

As organizations and work environments constantly change to keep up with the developments of globalization, the causes of work stress may change as well. Therefore, there is a need to continuously and consistently monitor the organizations and the work environments for causes of work stress alongside other health risks.