A STUDY OF OCCUPATIONAL STRESS IN RELATION TO JOB SATISFACTION AND DEMOGRAPHIC VARIABLES OF SECONDARY SCHOOL TEACHERS AND THEIR COPING STRATEGIES

A SUMMARY OF THESIS

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INTRODUCTION

Modern living has brought with it, not only innumerable means of comfort, but also a plethora of demands that tax human body and mind. Now-a-days everyone talks about stress. It is cutting across all socio economic groups of population and becoming the great leveler. Not only just high pressure executives are its key victims but it also includes labourers, slum dwellers, working women, businessmen, professionals and even children. Stress is an inevitable and unavoidable component of life due to increasing complexities and competitiveness in living standards. The speed at which change is taking place in the world today is certainly overwhelming and breathe taking. In the fast changing world of today, no individual is free from stress and no profession is stress free. Everyone experiences stress, whether it is within the family, business, organization, study, work, or any other social or economical activity.

Stress is difficult to define precisely. The concept of stress was first introduced in the life sciences by Selye Hans in 1936. It was derived from the Latin word ‘stringere’; it meant the experience of physical hardship, starvation, torture and pain. Selye Hans, 1936 defined stress as “the non-specific response of the body to any demand placed upon it”. Further, stress was defined as “any external event or internal drive which threatens to upset the organismic equilibrium” (Selye Hans, 1956). In another definition given by Stephen Robbins (1999) stress has been stated as “a dynamic condition in which an individual is confronted with an opportunity, constraint or demand related to what he / she desires and for which the outcome is perceived to be both uncertain and important.” Stress affects not only our physical health but our mental well being, too. To successfully manage stress in everyday lives, individual can learn to relax and enjoy life. The best way to manage stress is to prevent it. This may not be always possible. So, the next best things are to reduce stress and make life easier. Stress refers to any environmental, organizational and individual or internal demands, which require the individual to readjust the usual behaviour pattern. Degree of stress results from events or situations that have potential to cause change. Stimuli or situations that can result in the experience of stress are called stressors. There are three major sources of stress- environmental, individual and organizational. Environmental stress is not only caused by the factors intrinsic to job, but also
influenced by the environmental or extra organizational factors. Stress results because of the individual’s interaction with environmental stimuli or factors such as societal or technological changes, political and economical uncertainties, financial condition, community conditions etc.

The stress which an individual experiences in an environment is carried with him in another environment also, thus increasing the stress and causing stress to others also. There are many factors at the level of individual which may be generated in the context of organizational life or his personal life like life and career change, personality types, role characteristics. Any change in career life of an individual puts him in disequilibrium state of affairs and he is required to bring equilibrium. In this process individual experiences stress. When people become members of several system like family, voluntary organization, work organization etc., they are expected to fulfill certain obligations to each system and to fit into defined places in the system. These various roles may have conflicting demands and people experiences role stress as they are not able to fulfill the conflicting demands or requirements. Stress has been considered as one of the major factors in work organization (Agrawal et al., 1979).

A high level of occupational stress, not only detrimentally influence the quality, productivity and creativity of the employees but also employee’s health, well being and morale (Cohen and Williamson, 1991). Job related stress tends to decrease general job satisfaction. Stress can be either temporary or long term, mild or severe, depending mostly on how long it continues, how powerful they are and how strong the employee’s recovery powers are. But major stress problems are sustained for long period. If one does not react to the stress, it may create some other Trauma. It is another severe form of stress. The specific stress experienced by people, often depends on the nature and demands of the setting in which people live. Thus, teachers, engineers, doctors, managers and people in other professions experience different types of stresses to different degrees. The professional role is extremely demanding because they serve to the society.

Stress among teachers has become a topic of professional interest but studies relating to teacher’s stress have not been carried out on large scale. Stress disturbs the equilibrium of the body. It affects physically, emotionally, and mentally. When individuals experience stress or face demanding situation, they adopt ways of dealing with it, as they cannot remain in a continued state of tension. How the individual deals with stressful situations is known as ‘coping’. There are two major targets of coping: changing ourselves or changing our environment. Coping refers
to a person’s active efforts to resolve stress and create new ways of handling new situations at each life stage (Erikson, 1959) The goals of coping include the desire to maintain a sense of personal integrity and to achieve greater personal control over the environment. Then he modifies some aspects of the situation or the self in order to achieve a more adequate person-environment fit. Coping thus, is the behaviour that occurs after the person has had a chance to analyze the situation, take a reading of his or her emotions and to move to a closer or more distant position from the challenge. Whenever there is a problem, previous means of coping and dealing with problems seem meaningless in face of new threats and challenges. It is important to know ourselves and restore the state of equilibrium in order to survive the problem situation. Facing and overcoming various life stresses enforces resilience towards extremely threatening life situations. Resilience enables one to protect oneself and bounce back from stressful circumstances more easily (Ferdrickson, 2001). Pearlin and Schooler (1978) conceptualized coping as any response to stimulational life stressor that serves to prevent, avoid or control emotional distress.

Therefore, coping strategies are those responses that are effective in reducing an unwanted load (i.e. the psychological burden). The effectiveness of coping strategy rests on its ability to reduce immediate distress as well as to contribute to more long term outcomes such as psychological well being. For many years researches on stress and coping strategies have been confined to clinical areas. The area of teaching has been considered as the easiest and least stressed. The role of schools and contributions of our teachers to society are immense. The strength of our economy, realization of democratic principles, and quality of life depend to a large extent on our educational system and quality of teaching. Teaching is inter-personal, attitudinal, extra-classroom as well as intra-classroom oriented. To be a teacher is to be a member of a special profession. A teacher has to display exceptional empathy, persistence, diligence, sincerity, research orientation, honesty and flexibility as a person. Teachers in our society have performed this role admirably and have shaped the accomplishments of whole generations of children. The nation not only expects them to continue, it depends on teachers to do so. The nation’s interest in training and maintaining the performance and fitness of our teachers continues to be high. The quality of a nation depends upon the quality if its teachers. Education is powerful instrument of the socio, political and economical development of the country. Hence, the success of the educational process to a great extent depends on the character, ability and personality of the
A teacher who is the foundation stone of the doorway of education. Teachers and teaching have been subjected to unrelenting criticism over the past three decades. What this has failed to recognize is the increasing complexity and responsibility of educating the children and youth. The ecology of the school and classroom of the 1940s was significantly different from that of today. It is thus not difficult to understand why teachers are so vulnerable to stress. Teachers enter the profession with high expectations, a vision of the future, and a mission to educate our children and youth. The demands, pressures, and conditions they work under can throttle this zeal and present obstacles in achieving their mission. This leads to disappointment and eventually stress.

Teachers play the most important role in the teaching learning process. Most teachers, howsoever bright, experienced and well read, experience some amount of stress in one way or the other. Like many of their counterparts elsewhere, teachers in India have to live up to a great many expectations. Besides routine work like preparing lessons, teaching, marking assignments, they have to individualize instruction, to personalize reinforcements, to be innovative and creative, to adapt to new changes and meet new challenges. They have to attend seminars and a variety of meetings with colleagues, students, parents, etc. They have to conduct and oversee extra-curricular activities, and morning assemblies. Their heavy work load is more than the teachers can shoulder. In the last few decades, the education expected by the society and the needs of the students have changed tremendously. People, especially parents, nowadays have been subjected to the daily diet of information and news about the world through the mass media. Parents as well as school principals have become more and more critical of both course content and teaching methods. Students are no longer contented merely with acquiring factual knowledge from textbooks. They are more active and inquisitive and would be dissatisfied if teachers just read from the books when they teach. In recent years, the general public has become more vocal in its criticism of school operation. Secondary school teachers are said to be experiencing greater degree of occupational stress in schools (Kahn 1977). Dr. Younghusband (2006) said that “the primary health problem of teachers is stress and that the causes are multiple and complex. Workplace stress has also been found to diminish teachers’ enthusiasm and distance them emotionally from their students, thereby lessening the teacher-student interaction.”

Teachers in our society are finding themselves under increasing pressures. There are greater demands, more complex responsibilities, and an expanding knowledge base which is continually
being upgraded. The rapid societal changes have also led to new and varied expectations of professionals, often accompanied by a sense of role ambiguity. The net effect of this situation is decreased personal and professional satisfaction.

Stressful and dissatisfied teachers are likely to have less attachment with their institution and less dedication to their profession. Their low level of involvement, unfavourable work values and dissatisfaction with teaching is detrimental for the interest of teaching as well as student community. This can lead to lowering the standard of education. The problem we are faced with is not a simple one. Stress is so prevalent in teaching that they have a vast detrimental effect on the teaching-learning process. Abreu and Merchant (1999) observed that stress was struck down by over workload, high ambitions and insecurity in the work. He further observed that work security in India has nose-dived due to the economic downturn. So, people are working longer and stressful hours just to retain their jobs instead of any proper job satisfaction.

In the review of literature Kayastha et al., (2012) and Shirotriya and Singh (2012) stated that teachers were stressed. Some studies (Murphy (1986), Alikah (1995)) stated that female teachers were more stressed than the male teachers. On the contrary, (Blanton (1985), Bhagawan (1997)) found that male teachers were significantly more stressed than female teachers. It was also found that no significant differences exist in stress level of male and female teachers (Hamdiah (1996), Kalyani et. al. (2009), Singh (2010), Khatal (2011)).

In some of the studies (Chavarria (1988), Ryhal and Singh (1996)) teachers with more than twenty years of experience were found to be significantly more stressed than those who have been teaching for 11-20 years, and further the teachers teaching for 11-20 years are more stressed than the teachers with less than 11 years of experience while others (Blix et.al.(1994), Bhagawan (1997)) stated that teachers with less than 10 years of experience had higher stress than faculty with more than 20 years of experience. Some of the researches (Friesen and Williams (1985), Hamdiah (1996)) found no significant differences in stress level among teachers of various age groups and lengths of service. However, some of the researches (Ansari and Singh (1997), Mehta and Kaur (2009)) found total service experience to be positively related to stress while others (Lingqi and Shujie (2008), Holeyannavar and Itagi (2010)) stated that higher the teaching experience, lesser the perceived stress.

For occupational stress and job satisfaction, Shamima (2009) found that both the male and female teachers are dissatisfied but the females were more dissatisfied than the male teachers,
while Darmody and Smith (2011) found that male teachers reported somewhat lower job satisfaction level than their female counterparts, whereas, Suryanarayana and Himabindu (2009) found no significant difference in levels of job satisfaction and occupational stress of male and female teachers. Prasad, (2008) found that some subscales of occupational stress i.e. unreasonable group, political pressure, powerlessness, poor peer relations and intrinsic improvement were not significantly related to any of the subscales of job satisfaction. Whereas, subscales of responsibility for others was found to be significantly and positively related with job abstract, community factor and total job satisfaction. The subscales of role ambiguity, role conflict, under participation, low status, strenuous working conditions and total scores of occupational stress had inverse relationship with some of the intrinsic and extrinsic subscales of job satisfaction and total of job satisfaction.

Mixed trends for use of coping strategies by the teachers was found. A few studies (Khan et al. (2005), Kalyani et al. (2009)) found no significant gender differences in different kind of coping strategies. Some studies (Folkman et. al. (1986)) stated that women tended to use relatively more positive reappraisal than did men, and men tended to use relatively more self-control than did women. However, it is also reported (Vitaliano et al. (1985), Chan and Hui (1995)) that women used relatively more problem focused coping, wishful thinking, social support, avoidance, and self-blame than did men. The results of some researches (Chaturvedi and Purushothaman (2009)) revealed that marital status, age, and experience were found to be significant determinants of stress-coping, whereas the sores did not differ significantly on the basis of level of teaching.

**STATEMENT OF THE PROBLEM**

**A STUDY OF OCCUPATIONAL STRESS IN RELATION TO JOB SATISFACTION AND DEMOGRAPHIC VARIABLES OF SECONDARY SCHOOL TEACHERS AND THEIR COPING STRATEGIES**

**OBJECTIVES OF THE STUDY**

The present study was conducted:

1. To study the occupational stress of secondary school teachers of Punjab.
2. To compare the occupational stress of male and female secondary school teachers of Punjab.

3. To compare the occupational stress of secondary school teachers of Punjab from different streams of teaching (science & mathematics stream and others).

4. To compare the occupational stress of more experienced and less experienced secondary school teachers of Punjab.

5. To compare the occupational stress of secondary school teachers of Punjab with different levels of job satisfaction.

6. To study the coping strategies used by secondary school teachers of Punjab.

7. To study the main and interactional effects of job satisfaction on occupational stress among secondary school teachers of Punjab in relation to following demographic variables:
   a. Gender
   b. Streams of teaching (science & mathematics stream and others).
   c. Experience

8. To compare the coping strategies used by male and female secondary school teachers of Punjab.

9. To compare the coping strategies used by more experienced and less experienced secondary school teachers of Punjab.

10. To compare the coping strategies used by secondary school teachers of Punjab from different streams of teaching (science & mathematics stream and others).

11. To study the main and interactional effects of job satisfaction on occupational stress among secondary school teachers of Punjab in relation to following demographic variables:
   a. Gender
   b. Streams of teaching (science & mathematics stream and others).
   c. Experience

12. To study the educational implications based on the findings of the study.
DELIMITATIONS OF THE STUDY

1. The study was limited to the schools of four districts of Punjab namely Mohali, Patiala, Ropar and Fatehgarh sahib from South-East malwa region of Punjab as cultural disparities of other regions may affect the variable of study.

2. The study was restricted to government schools because difference in organizational climate of private and government schools may affect the variables of the study.

HYPOTHESES OF THE STUDY

H1: There will be no significant difference in occupational stress of male and female secondary school teachers of Punjab.

H2: There will be no significant difference in occupational stress of secondary school teachers of Punjab with different streams of teaching (science & mathematics and others).

H3: There will be no significant difference in occupational stress of secondary school teachers of Punjab with different years of experience.

H4: There will be no significant difference in occupational stress of secondary school teachers of Punjab with different levels of job satisfaction.

H5: There will be no significant interactional effect of gender and stream of teaching on occupational stress of secondary school teachers of Punjab.

H6: There will be no significant interactional effect of gender and different years of experience on occupational stress of secondary school teachers of Punjab.

H7: There will be no significant interactional effect of gender and different levels of job satisfaction on occupational stress of secondary school teachers of Punjab.

H8: There will be no significant interactional effect of stream of teaching and different years of experience on occupational stress of secondary school teachers of Punjab.
H9: There will be no significant interactional effect of stream of teaching and different levels of job satisfaction on occupational stress of secondary school teachers of Punjab.

H10: There will be no significant interactional effect of different years of experience and different levels of job satisfaction on occupational stress of secondary school teachers of Punjab.

H11: There will be no significant interactional effect of gender, streams of teaching and different years of experience on occupational stress of secondary school teachers of Punjab.

H12: There will be no significant interactional effect of gender, streams of teaching and different levels of job satisfaction on occupational stress of secondary school teachers of Punjab.

H13: There will be no significant interactional effect of gender, different years of experience and different levels of job satisfaction on occupational stress of secondary school teachers of Punjab.

H14: There will be no significant interactional effect of streams of teaching, different years of experience and different levels of job satisfaction on occupational stress of secondary school teachers of Punjab.

H15: There will be no significant interactional effect of gender, streams of teaching, different years of experience and different levels of job satisfaction on occupational stress of secondary school teachers of Punjab.

H16: There will be no significant relationship between nature of coping strategies used by male and female secondary school teachers of Punjab.

H17: There will be no significant relationship between nature of coping strategies used by less experienced and more experienced secondary school teachers of Punjab.
H18: There will be no significant relationship between nature of coping strategies used by secondary school teachers of Punjab from different streams of teaching (mathematics and science and others).

**DESIGN OF THE STUDY**

Descriptive method of research was employed for the present study as this method is concerned with surveying, describing and investigating the existing phenomenon or issues, conditions and relationships that exist.

A 2X2X2X3 ANOVA design was employed and the two independent variables were: scores on job satisfaction and demographic variables i.e. Gender, Streams of teaching (Mathematics/Science and Others). Occupational stress and coping strategies are the dependent variables.

Also, a comparison of coping strategies used by male and female secondary school teachers and those used by more and less experienced teachers was also studied.

**SAMPLE**

**Sample for the main study**

For the current investigation, the sample was the 750 teachers of Govt. secondary school of Punjab from four districts namely Mohali, Patiala, Ropar and Fatehgarh sahib.

The sample was collected at two levels, viz.

- Secondary school level
- Teachers sample

**Secondary school level**

At this level cluster random sampling technique was used. A list of all Govt. Secondary schools (581) of four different districts was obtained to select the schools. Nearly 53 schools were needed to collect the data of 750 teachers. In all 58 Secondary schools were selected randomly (Appendix IV) as the number of teachers available in each school on the day of data collection may vary.
Teachers sample

Random sampling technique was used at this stage. From the above 58 schools, 750 secondary school teachers were chosen. Care was taken that at least 375 teachers were male and 375 female. From each school approximately 16 teachers (8 male and 8 female) of which 4 each from mathematics and science stream and others stream were chosen. Only those questionnaires were retained which were complete in all respects. The sample distribution for the teachers has been presented in figure 1.1.

![OCCUPATIONAL STRESS (750 Teachers)](image)

**Fig. 1.1 The sample distribution for the teachers**

**TOOLS DEVELOPED**

Teachers Stress Inventory was developed and standardized by the investigator. The statements of teachers stress inventory were formed in the nine (9) dimensions identified for measuring the occupational stress of teachers namely work overload, role uncertainty, role conflict, less involvement, impoverished relations, low status, undue pressures, professional distress and strenuous working conditions.
Initially 80 statements concerning the occupational stress of teachers were framed by consulting various psychologists, educationists, books, journals and already existing tools. The list of 80 statements was scrutinized by teachers, teacher educators and experts in writing statement items. According to the suggestions given by the judges, statements that seemed repetitive, ambiguous or about which there was disagreement were eliminated.

As such 40 statements were retained, 18 were reframed, 08 new statements were framed and remaining i.e. 16 were dropped as either no agreement was found or they were labeled as doubtful. Thus, the final draft had 64 items. Final draft of Teachers stress inventory containing 64 statements was administered to a sample of 50 teachers from various schools of Chandigarh region. Test-retest reliability and inter consistency scores (Cronbach Alpha) was assessed. Same teachers were administered the test after an interval of 1 month. The test-retest reliability of the scale came out to be 0.89. The value of cronbach’s alpha of teachers stress inventory was 0.921.

The item to total correlation of the nine dimensions of the teachers stress inventory was also calculated. The item to total correlations of all the statements from 9 dimensions of teachers stress inventory were calculated. All the item to total correlations were above 0.60. This The values of Cronbach’ alpha for nine dimensions of teachers stress inventory are entered in Table 1.1.

Table 1.1 Cronbach’s alpha for dimensions of teachers stress inventory

<table>
<thead>
<tr>
<th>S.No.</th>
<th>Dimensions</th>
<th>Cronbach’s alpha</th>
</tr>
</thead>
<tbody>
<tr>
<td>1.</td>
<td>Work overload</td>
<td>0.872</td>
</tr>
<tr>
<td>2.</td>
<td>Role uncertainty</td>
<td>0.722</td>
</tr>
<tr>
<td>3.</td>
<td>Role conflict</td>
<td>0.779</td>
</tr>
<tr>
<td>4.</td>
<td>Less involvement</td>
<td>0.720</td>
</tr>
<tr>
<td>5.</td>
<td>Impoverished relations</td>
<td>0.836</td>
</tr>
<tr>
<td>6.</td>
<td>Low status</td>
<td>0.775</td>
</tr>
<tr>
<td>7.</td>
<td>Undue pressures</td>
<td>0.760</td>
</tr>
<tr>
<td>8.</td>
<td>Professional distress</td>
<td>0.888</td>
</tr>
<tr>
<td>9.</td>
<td>Strenuous working conditions</td>
<td>0.832</td>
</tr>
</tbody>
</table>
Since, the present instrument has been developed based on the detailed analysis of the prescriptive, conceptual, practitioner and empirical literature, the content validity of the teachers stress inventory was established. Moreover, the content validity of the instrument was also ensured through a thorough review by experts (both academia and school teachers) in the field.

**STATISTICAL TECHNIQUES USED**

Descriptive statistics i.e. mean, median. Mode, kurtosis, skewness was calculated to determine the nature of distribution of variables.

Analysis of variance i.e. ANOVA was employed to study the main and interactional effect of variables using 2X2X2X3 design. T-Test was employed to study the mean difference where the effects came to be significant.

Chi- Square ($\chi^2$) was employed to study the coping strategies used by secondary school teachers. Since, sample size was large and the Chi Squared matrix was bigger than a 2 x 2 matrix, Cramér's $V$ was applied.

**FINDINGS AND CONCLUSIONS**

**Effect of demographic variables on occupational stress**

- Male and female teachers did not differ significantly ($F= 1.284$) on mean scores of occupational stress. The variable of gender was not a significant factor that affects occupational stress of secondary school teachers of Punjab. However, mean of occupational stress of female teachers ($M=171.53$) was higher than mean score of occupational stress of male teachers ($M=166.61$).
  
  In terms of mean scores female teachers were more stressed as compared to male teachers.

- The mean scores of occupational stress of teachers with different years of experience did not differ significantly ($F= 1.205$). The variable of experience did not affect the occupational stress of teachers. However, the mean of occupational stress of teachers
with less than 10 years of experience was more than teachers with more than 20 years of experience. Teachers between 11 to 20 years of experience were least stressed.

On the basis of above conclusions, hypotheses H1 and H3 were accepted and are stated as:

**H1:** There will be no significant difference in occupational stress of male and female secondary school teachers of Punjab.

**H3:** There will be no significant difference in occupational stress of secondary school teachers of Punjab with different years of experience.

The variable of streams of teaching contributed to significant differences in the occupational stress of secondary school teachers. In other words, significant differences occurred in the occupational stress scores of teachers for two streams of teaching i.e. mathematics and science stream and others stream (F= 4.521). The teachers from others stream of teaching were significantly more stressed than teachers from mathematics and science streams. It might be due to the reason that teachers from mathematics and science streams are able to handle the problems better than teachers from others stream.

Thus, hypotheses H2 stating, ‘there will be no significant difference in occupational stress of secondary school teachers of Punjab with different streams of teaching (science & mathematics and others)’ was not accepted.

**Effect of job satisfaction on occupational stress**

The effect of job satisfaction on occupational stress was not found to be significant (F= 0.908). The mean scores of occupational stress of teachers with different levels of job satisfaction did not differ significantly. This leads to the acceptance of hypotheses H4 which is stated as:

**H4:** There will be no significant difference in occupational stress of secondary school teachers of Punjab with different levels of job satisfaction.
Two Level Interactional Effects

In two level interactional effects, following six combinations of variables were studied:

- Gender X Streams of teaching
- Gender X Experience
- Gender X Job satisfaction
- Streams of teaching X Experience
- Streams of teaching X Job satisfaction
- Experience X Job satisfaction

The results of two level interactions are given below:

- **Gender X Streams of teaching**
  
The interactional effect of streams of teaching (mathematics and science and others) and gender (male and female) was not found to be significant at .05 level (F= 0.725). This suggests that the variables of gender and streams of teachings interacted with each other not to produce any significant variations in occupational stress of secondary school teachers of Punjab.

- **Gender X Experience**
  
  No significant differences were found in the interaction of variables of gender (male and female) and three levels of experience (up to 10 years, 11-20 years and more than 20 years). The F value was 0.303 which was not found to be significant at .05 level. This suggests that the variables of gender and different years of experience interacted with each other not to produce any significant variations in occupational stress of secondary school teachers of Punjab. The trends of mean reveal that female teachers with 11 to 20 years of experience were more stressed.

- **Gender X Job satisfaction**
  
  The F value for interactional effect of gender and two levels of job satisfaction was not found to be significant at .05 level (F=0.692). This suggests that the interaction of variables of gender and different levels of job satisfaction did not produce any significant
variations in occupational stress of secondary school teachers of Punjab. It was found that female teachers had high mean score of occupational stress for both the levels of job satisfaction as compared to male teachers.

- **Streams of teaching X Experience**

  The interaction of streams of teaching (mathematics and science and others) and three levels of experience (up to 10 years, 11-20 years and more than 20 years) was not found to be significant at .05 level (F= 0.328). This suggests that the variables of streams of teaching and different levels of experience interacted with each other not to produce any significant variations in occupational stress of secondary school teachers of Punjab. Teachers from mathematics and science streams at all levels of experience scored less on mean of occupational stress.

- **Streams of teaching X Job satisfaction**

  The interactional effect streams of teaching and two levels of job satisfaction was not found to be significant at .05 level (F=0.928). This suggests that the variables of streams of teaching and different levels of job satisfaction interacted with each other not to produce any significant variations in occupational stress of secondary school teachers of Punjab.

- **Experience X Job satisfaction**

  The F value for interaction of three levels of experience (Up to 10 years, 11-20 years and more than 20 years) and two levels of job satisfaction (high job satisfaction and low job satisfaction) was not found to be significant at .05 level (F= 0.730). This suggests that the variables of different years of experience and different levels of job satisfaction interacted with each other not to produce any significant variations in occupational stress of secondary school teachers of Punjab.

Since, all the two level interactions were insignificant, hypotheses H5, H6, H7, H8, H9 and H10 were accepted and are stated as:
H5: There will be no significant interactional effect of gender and stream of teaching on occupational stress of secondary school teachers of Punjab.

H6: There will be no significant interactional effect of gender and different years of experience on occupational stress of secondary school teachers of Punjab.

H7: There will be no significant interactional effect of gender and different levels of job satisfaction on occupational stress of secondary school teachers of Punjab.

H8: There will be no significant interactional effect of stream of teaching and different years of experience on occupational stress of secondary school teachers of Punjab.

H9: There will be no significant interactional effect of stream of teaching and different levels of job satisfaction on occupational stress of secondary school teachers of Punjab.

H10: There will be no significant interactional effect of different years of experience and different levels of job satisfaction on occupational stress of secondary school teachers of Punjab.

Three Level Interactional Effects

In three level interactional effects, following four combinations of variables were studied:

- Gender X Streams of teaching X Job satisfaction
- Gender X Streams of teaching X Experience
- Gender X Experience X Job satisfaction
- Streams of teaching X Experience X Job satisfaction

The results of three level interactions are given below:

- Gender X Streams of teaching X Job satisfaction

  The interactional effect of gender, streams of teaching (mathematics and science and others) and levels of job satisfaction was found to be significant at .05 level (F= 3.748). This suggests that the variables of gender, streams of teaching and different levels of job satisfaction interacted with each other to produce significant variations in occupational
stress of secondary school teachers of Punjab. Following conclusions were drawn on the basis of significant interactional effect:

i. Male teachers from mathematics and science stream with low level of job satisfaction i.e. M Ma&Sc. L.J-I differed significantly from male teachers from mathematics and science teachers with high level of job satisfaction i.e. M Ma&Sc. H.J-II (t=2.68). Male teachers from mathematics and science stream with low level of job satisfaction (M=175.64) were more stressed than male teachers from mathematics and science teachers with high level of job satisfaction (M=144.74), due to the reason that male teachers from mathematics and science streams with low levels of job satisfaction find it hard to deal with the problems they face at the professional front.

ii. Male teachers from different streams of teaching with same level of job satisfaction differed significantly (t= 3.25 for M Ma&Sc. H.J-II and M Ot H.J-IV). Male teachers from others stream with high level of job satisfaction were more stressed (M= 178.15) than male teachers from mathematics and science stream with high level of job satisfaction (M= 144.74). They are not able to handle the problems as effectively and efficiently as their counterparts from mathematics and science stream and hence face more stress.

iii. Male teachers from mathematics and science streams with high level of job satisfaction (M Ma&Sc. H.J-II) differed significantly from female teachers from same stream of teaching and same level of job satisfaction (F Ma&Sc. H.J-VI) (t=3.16). Female teachers from mathematics and science stream with high level of job satisfaction are more stressed (M= 175.66) than male teachers from mathematics and science streams with high level of job satisfaction (M= 144.74). Murphy (1986) and Alikah (1995) also stated that female teachers were more stressed than male teachers. Although these studies did not explore the interactions. The high level of stress among female teachers might be due to the fact that since, female teachers have to shoulder responsibilities both at home as well as in the profession; they are always under one or other kind of stress.
iv. Male teachers from mathematics and science stream with high level of job satisfaction i.e. M Ma&Sc. H.J-II differed significantly from female teachers from others stream with low level of job satisfaction i.e. F Ot L.J-VII (t= 2.30) and F Ot H.J-VIII i.e. female teachers from others stream with high level of job satisfaction differ significantly (t= 2.91). Female teachers from others stream irrespective of levels of job satisfaction were more stressed (M= 170.30, low job satisfaction and M= 178.94, high job satisfaction) than male teachers from mathematics and science stream with high level of job satisfaction (M= 144.74). Females by nature tend to take more stress, here also we find that female teachers from others stream of teaching are more stressed as they might not have been able to handle the situations rationally and as efficiently as male teachers.

v. M Ot L.J-III i.e. Male teachers from others stream with low level of job satisfaction and female teachers from mathematics and science stream with high level of job satisfaction i.e. F Ma&Sc. H.J-VI differ significantly (t=2.60). Female teachers from mathematics and science stream with high level of job satisfaction are more stressed (M= 175.66) than male teachers from others stream with low level of job satisfaction (M= 157.69). As females have to shoulder the responsibility both at family and professional front, they are more stressed than male teachers.

On the basis of above results and discussions, hypotheses H12 stating “there will be no significant interactional effect of gender, streams of teaching and different levels of job satisfaction on occupational stress of secondary school teachers of Punjab” was not accepted.

- **Gender X Streams of teaching X Experience**

  The interactional effect of gender (male and female), two types of streams of teaching (mathematics and science and others) and three levels of experience (up to 10 years, 11-20 years and above 20 years) was not found to be significant at .05 level (F= 1.910). The trends of means showed that both male and female teachers from others stream of teaching with experience of 11-20 years (M= 162.45, males and M=174.24, females) were more stressed than the male and female teachers from mathematics and science streams with same experience (M= 153.53, males and M=159.68, females). Both male
and female teachers from mathematics and science streams might be more rational and logical in solving the problems as compared to teachers from others stream, but with experience, teachers from others stream might learn ways of dealing with professional problems as efficiently as teachers from mathematics and science streams.

- Gender X Experience X Job satisfaction

The F value for interaction of gender, different years of experience and different levels of job satisfaction was not found to be significant at .05 level (F= 1.330). This suggests that the variables of gender, different years of experience and different levels of job satisfaction interacted with each other not to produce any significant variations in occupational stress of secondary school teachers of Punjab. The trends of means indicated female teachers to be more stressed. This might be due to the reasons that females by nature are very emotional and sensitive and take things more seriously than the males.

- Streams of teaching X Experience X Job satisfaction

The variables of streams of teaching, three levels of experience and two levels of job satisfaction interacted and F value was 0.715 which was not found to be significant at .05 level (F= 0.715). This suggests that the variables of streams of teaching, different years of experience and different levels of job satisfaction interacted with each other not to produce any significant variations in occupational stress of secondary school teachers of Punjab. However, no trends of means could be drawn.

In the light of insignificant interactional effects hypotheses H11, H13 and H14 were accepted and are stated as:

H11: There will be no significant interactional effect of gender, streams of teaching and different years of experience on occupational stress of secondary school teachers of Punjab.

H13: There will be no significant interactional effect of gender, different years of experience and different levels of job satisfaction on occupational stress of secondary school teachers of Punjab.
H14: There will be no significant interactional effect of streams of teaching, different years of experience and different levels of job satisfaction on occupational stress of secondary school teachers of Punjab.

Four Level Interactional Effects

The interactional effect of gender (male and female), two types of streams of teaching (mathematics and science and others), three levels of experience (up to 10 years, 11-20 years and more than 20 years) and two levels of job satisfaction (low job satisfaction and high job satisfaction) was studied in four level interaction. This interaction was not found to be significant at .05 level (F= 0.561). This suggests that the variables of gender, streams of teaching, different years of experience and different levels of job satisfaction interacted with each other not to produce any significant variations in occupational stress of secondary school teachers of Punjab. The trends of means showed that female teachers from others streams irrespective of years of experience and levels of job satisfaction were more stressed. In earlier sections also, we have found that female teachers from others streams were more stressed.

In the light of insignificant interactional effect hypotheses H15 was accepted and is stated as:

H15: There will be no significant interactional effect of gender, streams of teaching, different years of experience and different levels of job satisfaction on occupational stress of secondary school teachers of Punjab.

Coping strategies and demographic variables

I. The relationship between coping strategies and gender was found to be significant at 0.01 level ($\chi^2= 81.67$). This shows that there existed significant relationship between the coping strategies used by male and female secondary school teachers of Punjab. The value of cramer’s $V$ i.e. 0.32 shows that there was a moderate relationship between nature of coping strategies used by male and female secondary school teachers.

- Male teachers use maximum ‘Planful problem solving’ strategy for coping stress followed by ‘seeking social support’.
• Approximately 40% of female teachers use ‘Seeking social support’ strategy for coping stress followed by ‘Accepting responsibility’ and ‘self controlling’ strategy which was used by 20% female teachers.

II. The relationship between coping strategies and experience was found to be significant at 0.01 level ($\chi^2 = 81.89$). This shows that there existed significant relationship between the coping strategies used by secondary school teachers of Punjab with different years of experience. The value of cramer’s $V$ i.e. 0.33 shows that there was a moderate relationship (Cramer, 1999) between nature of coping strategies used secondary school teachers of Punjab with different years of experience.

• Teachers with less than 10 years of teaching experience use ‘Seeking Social Support’ as strategies for coping stress followed by ‘Escape- Avoidance’ and ‘Self controlling’ Strategy.
• Teachers with 11 to 20 years of teaching experience use ‘Seeking Social Support’ as strategies for coping stress. ‘Accepting Responsibility’ and ‘Planful Problem Solving’ are other preferred coping strategies.
• Teachers with more than 20 years of teaching experience prefer to use ‘Planful problem solving’ strategy for coping stress. The second most widely used coping strategy for teachers with more than 20 years of experience was ‘Seeking Social Support’.

III. The relationship between coping strategies and streams of teaching was found to be significant at 0.01 level ($\chi^2 = 55.24$). This shows that there existed significant relationship between the coping strategies used by secondary school teachers of Punjab from different streams of teaching. The value of cramer’s $V$ i.e. 0.32 shows that there was a moderate relationship (Cramer, 1999) between nature of coping strategies used by male and female secondary school teachers.

• Teachers from mathematics and science streams use ‘Planful problem solving’ strategy for coping stress followed by ‘Seeking Social support’ strategy.
Maximum teachers from other streams of teaching prefer to use ‘Seeking Social support’ strategy for coping stress followed by ‘Self Controlling’.

Thus, hypotheses H16, H17 and H18 were not accepted and are stated as:

H16: There will be no significant relationship between nature of coping strategies used by male and female secondary school teachers of Punjab.

H17: There will be no significant relationship between nature of coping strategies used by less experienced and more experienced secondary school teachers of Punjab.

H18: There will be no significant relationship between nature of coping strategies used by secondary school teachers of Punjab from different streams of teaching (mathematics and science and others)

It can be concluded that ‘Seeking social support’ strategy to combat stress has been the most widely used strategy for teachers irrespective of gender, different years of experience and different streams of teaching. This finding is in congruence with the finding of Markham (1999) and Mathew (2005) who stated that ‘Seeking social support’ was the most favoured coping strategy used by the teachers.

EDUCATIONAL IMPLICATIONS

Any educational research is worthwhile if it results into fruitful educational implications. In so far as the present investigation is concerned, it can be said that fruitful information has been obtained on the stress of teachers and the effect of demographic variables (gender, streams of teaching, experience) on the occupational stress of teachers. Also, information on coping strategies used by teachers from different streams of teaching and with different years of experience was also obtained.

The findings of the present study can be of immense use by educational planners, thinkers, demographers, teachers, psychologists, administrators and policy makers. The major recommendations of the study were:
i) There is a need to organize workshops especially for teachers from other streams of teaching to develop skills among them to cope with stress.

ii) Training sessions must be arranged for the female teachers irrespective of experience to develop among them coping skills. Various techniques like breathing, relaxing must be taught so that the stress level does not affect their efficiency in teaching.

iii) Yoga classes and sessions should be organized for the teachers to help them cope better with stress.

iv) Coping with the stress of teaching needs to be addressed at the pre-service stage of the teachers career so that they know where to draw a line to prevent their social and personal life from being absorbed by their professional life. The methods which can help a teacher to reduce these must be taught to the teachers.

v) ‘Seeking social support’ strategy is the most preferred coping strategy by all the teachers. They should also be provided with information about other coping strategies like ‘Planful problem solving’ and ‘self controlling’ and encouraged to use these coping strategies in different situations.

SUGGESTIONS FOR FURTHER STUDY

The touchstone of any research investigation happens to be its potentiality to indicate “field unknown and pastures new”. The present study brings to light several topics on which further researches can be directed; some are listed below:

1) The present study was conducted on a sample of secondary school teachers. It can be replicated on elementary and high school teachers.

2) Similar study can be taken up for teachers of higher educational institutions for general and technical education.
3) The occupational stress of teachers from others stream of teaching was found to be more than teachers from mathematics and science stream, a study on comparison of occupational stress of teachers from languages and social science can be conducted.

4) An experimental study identifying the effects of various coping strategies on the levels of stress of teachers can be conducted.