



## EMPLOYEE'S COPING WITH OCCUPATIONAL HAZARD: A STUDY IN EDUCATIONAL SECTOR

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### Abstract

The purpose of this paper is to explore the coping strategies of the people who are into teaching profession, in dealing with the hazards they face in their occupation and to determine the possible contributing factors of these strategies for escalation or de-escalation of hazardous process. The research method that is used to identify the hazards and also the factors influencing the coping strategies are mixed in nature i.e is both qualitative and quantitative research. The factors are identified using the qualitative content analysis method on secondary data and written narratives of in-depth interviews taken. Based on the conceptual framework that is obtained from qualitative data hypothesis is formulated. Based on these hypothesis questionnaire is designed and data is collected from the respondents. The hypothesis is then tested using various statistical tests. Three main concepts have been identified which influences the coping strategies. They are Personality traits of Teachers, Stakeholder Complexity and Task Complexity. On analyzing these concepts it was found, that the personality traits and the task complexity has significant impact on the coping strategies. Whereas, the stakeholder complexity escalates the hazards of teaching occupation.

**Keywords:** Coping Strategies, Teaching Occupation, Occupational Hazards, Personality Traits, Stakeholder Complexity, and Task Complexity.

### Introduction

We all are aware that every occupation has its own perils and dangers and teaching profession is no exception. But the hazards in the teaching profession are quite peculiar in nature as few are overt and few are covert. The overt hazards are those which are quite visible like disease transmission, physical injury due to violence, voice problem etc. The covert hazards are more of psychological than physical. Also the hazards are mostly of cumulative character than immediate. The effect of these hazards is very slow in developing and takes a time period to make they felt. Since they do not impact immediately hence most of the time they are imperceptible.

Being a teacher has rewards that no other jobs can boast. Due to these rewards there is a frequent migration of personnel to teaching profession from other jobs. Teachers take the pleasure of helping their students to discover their skills and ability, which will in turn take the students to the peak of success. But this joy of teaching comes with the hazards. Data collected by the U.S. Bureau of Labour statistics have found out that there were 169 fatalities in the year 2010 among employees belonging to teaching sector. (Morgan, 2016).

Normally when we speak of job hazards we refer to the definition of Occupational hazards. As per the Collins Dictionary Occupational Hazard is something unpleasant that you may suffer or experience as a result of doing your job or hobby. The Ontario Ministry of labor claims that Occupational illness normally develops over a period of time because of workplace conditions. Under the Occupational Health and safety Act, Occupational illness is defines as a condition that results from exposure in a workplace to a physical, chemical or biological agent to the extent that the normal physiological mechanisms are affected and the health of the worker is impaired.

Occupational hazards can be categorized into various types like Physical, Chemical, Biological, Mechanical and Psychological. For the purpose of research main focus is given on the Physical and Psychological hazards which creates exhaustion, injury, lack of job satisfaction, insecurity, poor interpersonal relation, work pressure, ambiguity, aggressiveness, anxiety, depression etc. in employees and changes their behavior.

In-depth interview of few teachers and detailed analysis of different news regarding problems faced by personnel in teaching profession has revealed few of the hazards which are faced by them. They are burnout, illness, violence, false accusations, disease transmission, workplace violence, ergonomic issues, work related stress, legal considerations etc. A brief description of these hazards will help the people of this profession to take good care and prepare themselves to cope with the situations.

The descriptions are as follows:-

- **Legal Considerations:** Educators must comply with laws designed to ensure that all students have equal rights for educational opportunities. In this context lots of rules and policies are set by the government, institutions, board and



universities. These should be understood and followed completely. Failing to comply with these laws, rules, and policies puts teachers in the risk of losing their professional credentials.

- **Work-Related Stress:** The sources of stress are multiple for the teachers. Few of the sources include size of the class, student performance objective, lack of control over work hours and methods, lack of student motivation, difficulty handling parents, lack of work recognition, inadequate salary etc. Individuals react to these stresses in different ways but generally too much stress affects the mood, behavior and the physical health of the individuals. The Mayo Clinic says that stress can lead to headache, sleep problems, fatigue, muscle tensions, upset stomach, chest pain and muscle pain. It can also cause anxiety, irritability, depression, anger, drug or alcohol abuse, social withdrawal and changes in appetite.
- **Ergonomic Issues:** Ergonomics involves fitting the work environment to the employees. Employers use the principle of ergonomics to reduce the risk of repetitive stress injuries and other occupational health problems. Teachers spend much of the time standing, and may have to bend, stretch, lift to use educational aids or equipments like black/white boards, projectors etc. These puts them into the risk of muscle strain, strain on legs etc.
- **Work place Violence:** The American Psychological Association reports that approximately 7% of teachers of United States are threatened with injury each year. Violence in educational institutions is not a new phenomenon. Even the academicians of west Bengal have shown deep concern on the huge escalation of campus violence and urged all to take a firm and active stand on this menace.
- **Disease Transmission:** Teachers spend their days with students, colleagues and parents making them susceptible to bacterial infection. A study led by investigations from MGEN Foundation for public health revealed that teachers are more susceptible to certain types of infections than any other workers.
- **Burn-Out:** Dealing continuously with unhelpful parents, belligerent students and lackluster administrators can make even the most enthusiastic teachers burn out. Add pressure to increase standardized test scores, poor school resources and an increasing number of non-teaching-related tasks and you have a recipe for burnout.
- **False accusations:** False accusations of wrongdoing have been nightmares for some unfortunate teachers. It's probably the last thing you'd ever imagine would happen to you, but even innocent teachers have ended up on the evening news because of a child's accusation.

Whenever these hazards are faced individuals cope them in their own way by adapting to some coping strategies. The essence of this research is to identify these coping strategies and what factors are influencing these strategies. When we speak of coping then let us understand what coping is all about.

Coping is defined as the cognitive and behavioral effort to manage specific external and or internal demands that are appraised as taxing or exceeding the resource of of the person (Lazarus & Folkman, 1985). Many studies have distinguished between problem focused coping aiming at altering stressful situation and emotion focused coping which is directed towards reducing and managing emotional distress resulting from stressful event.

Research and discussion on occupational hazards in India started from 1965-66 by the establishment of National Institute of occupational Health (1966) and Industrial Toxicology research centre (1965) and is rapidly increasing. A considerable number of articles have been written on the topic of occupational hazard in agricultural sector, chemical sector, coal sector etc. Very few have focused on the education sector. The current research is aimed to identify the factors affecting the coping strategies adapted by the personnel of the education sector to cope with the occupational hazards. Initially qualitative study is done to identify the factors affecting the coping strategy. Then based on these factors questionnaire is designed to establish the hypothesis. The Research questions for this research are:-

RQ1: What are the hazards faced by the personnel working in the education sector?

RQ2: How do these hazards impact the personnel?

RQ3: What could be the sources for these hazards?

RQ4: Which sources are more instrumental in creating occupational hazards?

RQ5: What coping strategies are adopted by the personnel facing the hazards in the educational sector?

RQ6: What are the factors that influence the personnel to adopt the coping strategies?

### Research Method

Mixed research design in terms of both qualitative and quantitative research design approach has been adopted for achieving the objective of the research. The research design is divided into two phases.

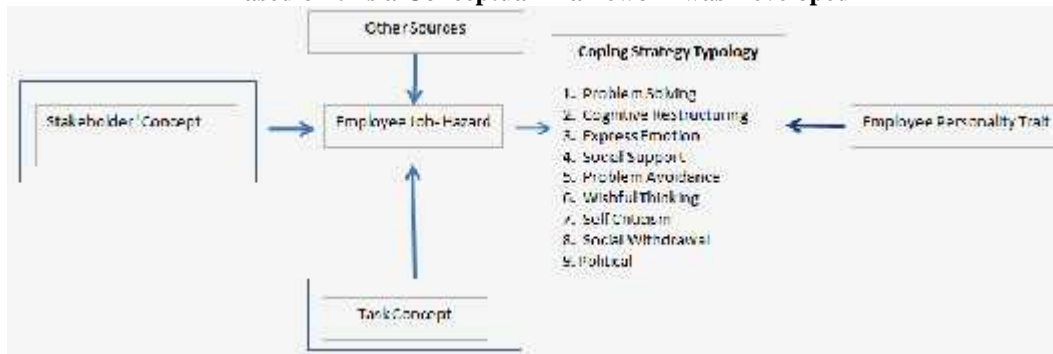
#### Phase -1

In this phase a descriptive qualitative design is used to facilitate an in-depth exploration of the respondents' experience regarding the hazards faced during their occupation, perceived sources for these hazards and also their coping methods to



these hazards. The data is collected through un-structured interviews. Qualitative research interview allows obtaining information about topics in which different level of meaning need to be explored. (King, 1994). Therefore, a qualitative design is used to help discover the different meanings and characteristics of impacts of occupational hazards, sources and coping with respect to occupational hazards from the respondent's perspective. The focus of the present study is to explore and develop a conceptual framework on the occupational hazards, sources of these hazards and the coping strategies adopted. The sampling aimed here is towards the theory construction and not for population representativeness. The qualitative research method was adapted for the reason to clarify the occupational hazards and the sources of these hazards and also the coping strategies adopted along with the factors influencing the coping strategies in the educational sector of west Bengal with the help of "public voice". Open answers unstructured interview as a conversation between two people e.g. researcher and the personnel working in academic sector of west Bengal on particular topic (e.g. occupational hazard and coping strategy) was adopted. Obtained information from the interview was transcribed into report in the form of field notes. All the interviews were taken by the researcher herself who is experienced in taking such interviews from her past jobs handled. Each face to face interview extended to 20 to 35 minutes. The interviewee was approached multiple times to get rich data. In order to build up the concepts the reports written were analyzed and the common elements extracted from the reports. The critical incident technique was adopted for enabling the extraction of elements common to occupational hazards and sources for these hazards and also the coping strategies. This procedure resulted in identifying the 7 types of occupational hazard faced by the personnel working in the education sector of west Bengal. Along with this 12 sources for these hazards were identified. The other concepts that emerged were Stakeholder Concept, Task Concept, Personality traits and 9 types of coping strategies.

#### Based on this a Conceptual Framework was Developed



#### Phase -2

The concepts evolved from the phase – 1 were utilized in developing a questionnaire for testing the conceptual framework so evolved. The questionnaire consists of eight sections. These eight sections are to capture data of Demographic details of the respondent, Occupational information of the respondent, Personality trait identification, impact of occupational hazard, sources of occupational hazard, Stakeholder related information, Task related information and coping strategy questionnaire.

#### Sampling and Collection Data

The study primarily aimed to interview people from education sector. Purposive sampling techniques are used and 10 respondents were identified for the purpose of the unstructured interview. Extensive notes were taken for all the interviews. The respondents were interviewed by using unstructured questions based on the literature and secondary data obtained from news paper, news channel regarding the hazardous events occurring in the organizations belonging to the educational sector of West Bengal. The interview was conducted in two sittings. Each sitting was about 20 to 40 minutes. In the first sitting the questions that was included in the interview was about the general characteristics of the respondents and events (i.e. the demographics of the respondents, information of their workplace, information of their job description, types of hazards and its impact on the respondent, perceived sources of these hazards). In the second sitting the questions were basically targeted towards the coping strategies adopted to cope with the hazards mentioned by the respondent in the first sitting along with their perception on the factors influencing the coping process.

#### Analyzing the Data

All the written narrative were transcribed verbatim and the data was analysed using the qualitative content analysis method, which is efficient in examining the patterns in the documents and is considered as a method that increases the researchers understanding of a particular phenomenon such as occupational hazard (Krippendorf, 2004). The texts were read repeatedly in order to obtain a sense of wholeness. The narrative texts about the respondent's experience regarding occupational hazard



and coping with it constituted the unit of analysis. The texts were divided into meaning units which comprised of several words, sentences and phrases related with the aim of the study. Then, meaning units were considered, abstracted and labeled with codes. (Graneheim & Lundman, 2004). The coping strategies mentioned in (Tobin D. L., 2001) and in the previous researches in coping with occupational hazards helped me to define the key concepts and the initial coding scheme for coping strategies. However the previous studies mentioned did not limit the development of further themes, codes and categories in the current study. Thus the codes were developed and refined by the use of a deductive and inductive process which is a common and powerful way to perceive qualitative data analysis. (Evers & Van Staa, 2010). For instance detailed codes for coping strategies like self-criticism (working harder at the work place to avoid the accusation of negligence) or political to reduce emotional exhaustion was derived inductively.

### **Reliability and Validity of Data**

To ensure the reliability and validity of data the qualitative research results were used to develop a questionnaire. The questionnaire was used to collect responses from 180 purposive samples of Professors, Teachers of university, colleges and schools. The questionnaire was then tested for the reliability. The factors that emerged in the questionnaire for collecting of responses were tested for internal reliability using Chronbach's Alpha which indicates the average inter-item correlation within each of the factors. Those factors resulting in Chronbach's alpha of 0.7 or greater are generally considered to be reliable and therefore are used for further analysis as a part of specific variables.

### **Data Analysis**

The result section is divided into two parts where the first part focuses on the analysis of qualitative data and the second part focuses on the result of analysis of quantitative data mostly applying the statistical tools.

### **Result of Analysis of Qualitative Data**

Analysis of qualitative data revealed nine major coping strategies and three major factors for occupational hazards and one major factor influencing the coping strategy.

#### **Theme-1 : Personality Trait as a Factor Influencing the Coping Strategy.**

The theme represents the respondents view as to why he has adopted a particular strategy for a specific occupational hazard and where as his peers has adopted a different strategy for the same occupational hazard. It also included the narratives of the respondent's behavior, personality, grooming as a reaction to the hazard.

#### **Theme – 2: Sources for Occupational Hazard**

This theme represents the other sources that create the hazardous environment for the respondent for doing their job. These other sources that the respondents mentioned are Government Educational policy, Organisations policy, career development, career instability, campus violence, management issues, work environment, family problems, stakeholder issues. This stakeholder issues were dealt in dept in the theme stakeholder concept. Apart from this the Stakeholder Complexity and Task complexity is also considered.

#### **Theme – 3: Coping Strategy**

This theme represents the respondents view as to how they coped with such situations when there was any hazardous event occurring in their job premises. Some respondents spoke about being quite proactive in predicting such unpleasant situation might occur and tried to eliminate the cause from its root. These respondents belonged to the category of **Problem-Solving**. Few respondents remained passive in their behavior and claimed that they do not have any knowledge of such unpleasant situations occurring in the job. These respondents were considered to apply **Problem-Avoidance** strategy. Few respondents used the situation to develop new dimensions in their career by taking it as a challenge. These respondents belonged to the category of **Cognitive Restructuring**. Few respondents became highly emotional on the event and tried to blow out their steam either by shouting, quarrelling or by crying. These respondents belonged to the category of using **Emotion-Focused** coping strategy. Few of the respondents complained about their physiological and psychological health issues when adopting the coping strategies by seeking support from their peers, friends, mentors etc. Seeking **Social Support** was a common coping mechanism reported by most of the respondents. Few respondents even blamed themselves for such unpleasant situation and hence and hence accepted the consequences. This type of coping approach was termed as **Self-Criticism**. Some respondents withdrew themselves and preferred staying alone in such unpleasant situations. This type of coping strategy is termed as - **Social Withdrawal**. The other type of coping strategy reported by the respondents were that of remaining in contact always with the influential stakeholders and political powers which enabled the respondents to be untouched from such unpleasant situation occurring in their jobs. The coping strategy that is adopted in this case is considered to be **Political**. Few respondents even waited for miracles to happen and solve all problems. This type of coping strategy was termed as **Wishful Thinking**. Irrespective of the coping strategy adopted by the respondents, the respondents complained about their health related issues like loss of appetite, sleeplessness, nightmares, headaches and fatigues. Because of this health issues



they had to take the support of medicines. Many respondents spoke about being depressed and tired of such situations. The concepts emerged from the qualitative analysis became the precursor for the Quantitative data collection method. All these concepts were utilized in the development of a questionnaire which was circulated to 180 respondents in a purposive sampling method for data collection. The respondents belonged to the Universities, Professional Institutes, Colleges and Schools of West Bengal.

### Result of Analysis of Quantitative Data

The quantitative data that is obtained from the questionnaire is tested by various statistical tools and interpreted on the basis of the hypothesis formed.. Correlation analysis allows one to examine the extent of interrelatedness of variables such as sources of hazards and ways of adopting coping strategies as suggested by Govender 1995, Healy and McKay 2000 and Lee 2003.

**Hypothesis-1: H<sub>01</sub>:** There is no significant difference in the impact of the Occupational Hazard between personnel working in the Education sector of West Bengal with respect to their gender, age groups, marital status, Educational Level, earning status, working modes, different work experience, different organizational types, different funding bodies of organization, occupying different positions in the organization and different personality traits.

One Way Analysis of Variance is applied the mean of the impact of occupational hazards among the different gender, age groups, marital status, Educational Level, earning status, working modes, different work experience, different organizational types, different funding bodies of organization, occupying different positions in the organization and different personality traits individually. It was found that there was significant difference among the variables like Age groups ( $F = 3.65 > 2.42(\text{Fctit})$ ), Educational levels ( $F = 2.69 > 2.66(\text{Fctit})$ ), Earning status ( $F = 2.21 > 1.67(\text{Fctit})$ ), Work Experience ( $F = 3.73 > 2.66(\text{Fctit})$ ), Organisation Type ( $F = 5.45 > 2.42(\text{Fctit})$ ), Funding Body of the Organisation ( $F = 4.82 > 2.42(\text{Fctit})$ ), and Current Position Held( $F = 3.73 > 2.42(\text{Fctit})$ ).

### Analyzing the Sources of Occupational Hazards

The Sources of Occupational Hazards was treated with Correlation analysis in SPSS .It was found that there was high co linearity among the variables itself. Hence it was treated with Factor Analysis in SPSS . The result obtained is 4 Factors got extracted from 13 variables. The 4 factors were Stakeholder interaction, Campus Violence, Management Work Culture and Policies (Organisation/Government). With these 4 factors 2 more factors are considered one being the stakeholder concept and another being the task concept. A regression analysis on the 6 factors with the impact of occupational hazard showed that all the 6 Factors were useful to predict the impact of occupational hazard on the personnel. We find that Campus Violence (**Beta = 0.262**) and Policies of Institution or Government (**Beta = 0.223**) are significant predictors.. Secondly we find that Campus Violence has a higher impact than Policies of institution or government. On applying One Way ANOVA on the sources of occupational hazards with variables like gender( $F = (m)2.96, (f)9.04 > 2.63(\text{Fctit})$ ), age group ( $F = 45.9 > 2.40(\text{Fctit})$ ), educational level ( $F = 5.96 > 2.62(\text{Fctit})$ ), organization type ( $F = 5.98 > 2.63(\text{Fctit})$ ), personality trait ( $F = 5.2 > 2.7(\text{Fctit})$ ) it was obtained that there was a significant difference among the means with respect to gender, age group, educational level, organization type and personality trait.

### Analyzing the Coping Strategies Adopted

**Hypothesis – 2: H<sub>2</sub>:** There is no significant difference in adoption of coping strategies among the personnel when faced with occupational hazards in the education sector of west Bengal with respect to the variables like gender, age group, educational level, earning status, working mode, organization type, position held and personality trait.

On applying One Way ANOVA it was obtained that there is significant difference in means with respect to gender ( $F = 4.08 > 3.89(\text{Fctit})$ ), organization type ( $F = 5.62 > 2.44(\text{Fctit})$ ), position held ( $F = 2.21 > 2.19(\text{Fctit})$ ) and personality traits ( $F = 3.31 > 1.95(\text{Fctit})$ ).

### Discussion

The aim of this study was to initially identify the occupational hazards and its impacts and then to find out the sources of these hazards. Then the study was focused on the coping strategies adopted by the personnel facing these hazards and also the factors that influence the personnel to adopt the coping strategies.Based on this the interpretation of data analysis is done in three sections. The first section deals with information related to occupational hazard, the second section deals with the information of sources of occupational hazard and the third section deals with the information on coping strategies.

### Section – 1

The occupational hazards identified through the mode of interviewing the personnel working in the education sector of West Bengal are Legal Considerations (n = 8), Work Related Stress (n = 10), Ergonomic Issues (n = 7), Work place Violence (n –



9), Disease Transmission (n = 5), Burn-Out (n = 10) and False accusation (n = 7). These hazards are normally of cumulative character than immediate. The impact of these hazards is very slow in developing and takes a time period to make them felt. Since they do not impact immediately hence most of the time they are imperceptible. The impacts of these hazards are assessed by whether the respondent is suffering from the problem, had to take medicines, whether the work suffered, relationships with colleagues suffered, family suffered, got shaken up from the event, feeling of anxiety, tired or depression etc. From the data it was found that there is no significant role in escalating or de-escalating the occupational hazard faced by the personnel belonging to different genders, different marital status, working in different working modes and belonging to different personality traits. One important finding in this context is maximum personnel in education sector belonged to the personality type ESTJ (n = 96). ESTJ means Extraverted Sensing Thinking Judging.

The variables like age group, educational level, earning status, work experience, organization types, Organisation Funding mode, Position held in the organization, have influence in either escalating or de-escalating the occupational hazards on the personnel working in the education sector of West Bengal.

### Section – 2

The sources of occupational hazard that was identified are Educational or organizational policies, Career up gradation, disciplinary or guidance work, management issues, work environment, stakeholder complexity and task complexity. The six factors were Stakeholder interaction, Campus Violence, Management work culture, Policies of Organisation or Government, Stakeholder concept and Task Concept. Out of which the Campus Violence has greater impact in escalating the occupational hazards. The significant sources were Stakeholder interaction, Campus Violence, Management Work Culture and Policies of the Organisation or government. The perception of sources escalating or de-escalating the hazards is gender, age group and organization type, on analysis of the sources of occupational hazard it was found that co linearity existed among the variables itself. Therefore factor analysis was conducted and 6 factors were evident.

### Section – 3

The coping strategies that were identified were Problem Solving, Cognitive Restructuring, Express Emotion, Social Support, and Problem avoidance, Wishful Thinking, Self Criticism, Social Withdrawal and Political. On analysis of these coping strategies it was found that the factors influencing the adoption of coping strategies by the personnel facing occupational hazards are to some extent gender, mode of working in the organization, Organisation Type, Position held in the organization and Personnel's Personality Trait.

### Conclusion

We all know that Teachers literally create every other profession in the world. Teaching is the fundamental basis of every facet in the society. Without Teachers there would be no society. Hence it is very important to minimize the occupational hazards faced by the personnel working in the education sector. This research will help to formulate policies in the organization to reduce the hazards and train the personnel to use the positive coping strategies to cope with all hazards successfully.

### References

1. Evers, J., & Van Staa, A. (2010). Qualitative Analysis in case study. In A. Mills, G. Durepos, & E. Wieb, *Encyclopedia of Case Study Research Part 2* (pp. 749-775). CA: Sage.
2. Graneheim, U., & Lundman, B. (2004). Qualitative content analysis in nursing research: concepts, procedures and measures to achieve trustworthiness. *Nurse Education Today* , 105-112.
3. King, N. (1994). *The qualitative research interview*. London: Sage.
4. Krippendorff, K. (2004). *Content Analysis: An Introduction to its Methodology*. CA: Sage.
5. Lazarus, R., & Folkman, S. (1985). If it changes it must be a process: study of emotion and coping during three stages of a college examination. *Journal of Personality and Social Psychology* , 150-170.
6. Morgan, L. (2016). The Hazards of Being a Teacher. *Houston Chronicle*.
7. Tavakol, M. (2011). Making sense of Cronbach's alpha . *International Journal of Medical Education* , 53-55.
8. Teichmann, & Mare. (2010). Sources of occupational stress in technical university academics., (pp. 448-453) Estonia.
9. Tobin. (1984). The influence of self-efficacy expectations on coin efforts. Philadelphia.
10. Tobin, D. L. (2001). *User Manual For the Coping Strategy Inventory*.