Stress Management in Public Sector Undertaking With Special Reference to BPCL, Naini, Allahabad

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Abstract
Objective of the study was to find out the level of stress amongst employees of BPCL, Naini, Allahabad. Next, to find out the Stress coping techniques which they use to reduce stress. Attempt was also made to find out the relationship between the stress level and the coping techniques. On the basis of the above analysis it was found that the stress level among the employees of the BPCL is low. This study revealed that there are various organisational factors which cause stress. The respondents use problem focus coping skill more as compared to emotion focus. Use of emotion focus increases the level of stress as they tried to ignore the stress full situation. Use of problem focus coping skills provide a planned solution of the problems. BPCL is a growing organisation and the top level managers must act as positive role models, especially in times of high stress.

Introduction
Stress may be considered as any physical, chemical, or emotional factor that causes bodily or mental unrest and that may be a factor in disease causation. Physical and chemical factors that can cause stress include trauma, infections, toxins, illnesses, and injuries of any sort. Emotional causes of stress and tension are numerous and varied. While many people associate the term "stress" with psychological stress, scientists and physicians use this term to denote any force that impairs the stability and balance of bodily functions.

Stress has been defined as “the state manifested by the specific syndrome, which consists of all the non-specific induced changes in a biological system”(Selye, 1974). The causes of stress are many. Stress falls into different groups—physical, environmental, cultural expectations and personal and social expectations. Stress affects both physical and emotional well-being of an individual. Managing stress is more than coping. It is learning to cope adaptively and effectively. Coping with stress is the process of developing ways to decrease its effects and to get through difficult tasks despite the stress coping is an ability to reduce disappointment and anxieties.

If stress disrupts body balance and function, then is all stress bad? Not necessarily. A mild degree of stress and tension can sometimes be beneficial. For example, feeling mildly stressed when carrying out a project or assignment often compels us to do a good job, focus better, and work energetically. Likewise, exercising can produce a temporary stress on some body functions, but its health benefits are indisputable. It is only when stress is overwhelming, or poorly managed, that its negative effects appear. An important goal for those under stress is the management of life stresses. Elimination of stress is unrealistic, since stress is a part of normal life. It's impossible to completely eliminate stress, and it would not be advisable to do so. Instead, we can learn to manage stress so that we have control over our stress and its effects on our physical and mental health.

Literature review:
In a review of literature authors Toru Uehara, Kaoru Sakado, Miwako Sakado, Tetsuya Sato, Toshiyuki Someya in their article on “Relationship between Stress Coping and Personality in Patients with Major Depressive Disorder” (1999) have given that “Stress coping is defined as a behavioral or cognitive response of an individual to uncomfortable or difficult situations. It has been suggested that coping, like personality, is related to the pathology and course of mental disorders.” Bernadette M. Gadzėlea, Devin Pierce, Adena in college student journal 2008, titled “Young Development and analyses of the coping stress inventory” “The group who rated a stressful experience that was very meaningful and important used more strategies to deal with stress, such as, taking pain killers, crying, needing advice and moral support, and praying. When confronted with stressful situations, women tended to go to sleep, took pain killers, felt they needed moral support, wanted to
take out on others, and prayed; whereas, men tended to get angry and hit others, and drank alcohol. Further analyses of the CSI responses were recommended.

In a review of literature on coping stress two areas of interest were noted: (a) the strategies people used to cope with stressful situations and (b) how coping stress inventories were developed. Weiten and Lloyd (2003) defined coping stress as "efforts individuals make to master, reduce, or tolerate the demands created by stressful situations" (p. 95). Over the years, researchers have attempted to identify and classify techniques and strategies people used in dealing with stress (Craver, Scheier, & Weintraub, 1989; McCrae, 1984). Weiten and Lloyd (2003) cited two types of researchers who studied coping strategies. One type of researchers tended to examine coping strategies that were of relatively little value, for instance, studies done by: Seligmen (1974; 1992) on helplessness; Dollard, Doob, Miller, Mower, and Sears (1939) on aggression; Moors and Billings (1982) on alternative rewards; Cohen and Lichenstein (1990) on consumption of alcohol and drugs; and Ellis (1987) on blaming oneself. The other type of researchers, mentioned by Weiten and Lloyd, studied individuals who were engaged in more 'constructive' healthy coping stress patterns. Researchers mentioned in this group were: Mahoney (1979) and Chang and Kelly (1993) on problem-solving; Ellis (1995) on rational thinking; Willis and Fegan (2001) on seeking help; Lakein (1996) on using time effectively; Mayer and Salovey (1997) on distracting oneself; Carrington (1993) on meditation; and Benson (1975) on relaxation. A review of literature also showed that other researchers reported participants' responses to specific stressors, for instance: Greene and Wing (1994) on eating disorders; Carver, et al. (1993) on breast cancer victims; and Folkman and Lazarus (1985) on college students taking examinations.

On developing coping stress inventories, researchers tended to use an empirical or theoretical model approach (Carver, Scheier, & Weintraub, 1989; Heszen-Niejodek, 1997). In the empirical approach, a large number of specific, diverse, and representative samples of potential coping responses to items were selected, and then, a statistic used to determine whether the items showed important underlying dimensions. Carver, et al. (1989) indicated that, in this approach, studies still showed the items were loosely linked to theoretical principles.

In the other approach to developing coping stress inventories, researchers used theoretical model guidelines. A review of literature showed a number of theoretical models. However, the Lazarus' model influenced many researchers in developing their coping stress inventories (Carver, et al. 1989). In 1984 and 1985, Lazarus and colleagues designed a scale known as Ways of Coping. This scale provided two types of responses to the coping strategies: (a) problem-focused (aimed at problem-solving or altering the stressful source) and emotion-focused (aimed at reducing or managing the emotional distress). Carver, et al. (1989) indicated that, in the Ways of Coping scale, respondents might interpret the items differently, and as a result, provide more than two types of responses. Other researchers (Edler & Parker, 1990; 1994) added a dimension (which they labeled as avoidance) to Lazarus' classification of coping stress. In 1996, Holahan, Moors, and Schaefer listed two other classifications which they referred to as: a method of coping (behavioral or cognitive) and focus of coping (problem or emotional). Other modifications were made to the coping stress scales, labeled as problem-approach and emotional-approach (Heszen-Niejodek, 1997).

**Stress at work:**
Employers should provide a stress-free work environment, recognise where stress is becoming a problem for staff, and take action to reduce stress. Stress in the workplace reduces productivity, increases management pressures, and makes people ill in many ways, evidence of which is still increasing. Workplace stress affects the performance of the brain, including functions of work performance; memory, concentration, and learning. In the UK over 13 million working days are lost every year because of stress. Stress is believed to trigger 70% of visits to doctors, and 85% of serious illnesses (UK HSE stress statistics). Stress at work also provides a serious risk of litigation for all employers and organisations, carrying significant liabilities for damages, bad publicity and loss of reputation. Dealing with stress-related claims also consumes vast amounts of management time. So,
there are clearly strong economic and financial reasons for organisations to manage and reduce stress at work, aside from the obvious humanitarian and ethical considerations.

**Stress causes:**
Stress is caused by various factors - not all of which are work-related of course, (which incidentally doesn't reduce the employer's obligation to protect against the causes of stress at work). Causes of stress - known as stressors - are in two categories: external stressors and internal stressors.

**External Stressor:**
physical conditions such as heat or cold, stressful psychological environments such as working conditions and abusive relationships.

**Internal Stressor:**
physical ailments such as infection or inflammation, or psychological problems such as worrying about something.

Stressors are also described as either short-term (acute) or long-term (chronic): Short-term 'acute' stress is the reaction to immediate threat, also known as the fight or flight response. This is when the primitive part of the brain and certain chemicals within the brain cause a reaction to potentially harmful stressors or warnings (just as if preparing the body to run away or defend itself), such as noise, over-crowding, danger, bullying or harassment, or even an imagined or recalled threatening experience. When the threat subsides the body returns to normal, which is called the 'relaxation response'. (NB The relaxation response among people varies; ie., people recover from acute stress at different rates.)

Long-term 'chronic' stressors are those pressures which are ongoing and continuous, when the urge to fight or flight has been suppressed. Examples of chronic stressors include: ongoing pressurised work, ongoing relationship problems, isolation, and persistent financial worries.

The working environment can generate both acute and chronic stressors, but is more likely to be a source of chronic stressors.

**Causes of stress at work:**
1. Bullying or harassment, by anyone, not necessarily a person's manager
2. Feeling powerless and uninvolved in determining one's own responsibilities
3. Continuous unreasonable performance demands
4. Lack of effective communication and conflict resolution
5. Lack of job security
6. Long working hours
7. Excessive time away from home and family
8. Office politics and conflict among staff
9. Feeling that one's reward is not commensurate with one's responsibility
10. Working hours, responsibilities and pressures disrupting life-balance (diet, exercise, sleep and rest, play, family-time, etc)

**Factors influencing the effects of stress and stress susceptibility**
A person's susceptibility to stress can be affected by any or all of these factors, which means that everyone has a different tolerance to stressors. And in respect of certain of these factors, stress susceptibility is not fixed, so each person's stress tolerance level changes over time:
1. Childhood experience (abuse can increase stress susceptibility)
2. Personality (certain personalities are more stress-prone than others)
3. Genetics (particularly inherited 'relaxation response', connected with serotonin levels, the brain's 'well-being chemical')
4. Immunity abnormality (as might cause certain diseases such as arthritis and eczema, which weaken stress resilience)
5. Lifestyle (principally poor diet and lack of exercise)
6. Duration and intensity of stressors

**Symptoms of Stress:**
At a clinical level, stress in individuals can be assessed scientifically by measuring the levels of two hormones produced by the adrenal glands: cortisol and DHEA (dehydroepiandrosterone), but managers do not have ready access to these methods. Managers must therefore rely on other signs. Some of these are not exclusively due to stress, nor are they certain proof of stress, but they are indicators to prompt investigation as to whether stress is present.

1. Sleep difficulties
2. Loss of appetite
3. Poor concentration
4. Performance dip
5. Uncharacteristic errors
6. Anger or tantrums
7. Anti-social behaviour
8. Emotional outbursts
9. Alcohol or drug abuse
10. Nervous habits

**Company profile**
Bharat Pumps & Compressors Ltd., Naini, Allahabad is a Certified integrated Management Systems Company having ISO 9001:2008, ISO 14001:2004, OHSAS :2007 Includes Environment, Occupational Health & safety Management Systems, with the objective to design, manufacture and supply capital goods in the fluid handling field including provision of services connected therewith. BPC caters to the need of core sector of the economy such as oil exploration and exploitation, refineries, petro-chemicals, chemicals and fertilizers, process industries and power plants and indigenously designs and manufactures heavy duty centrifugal pumps, reciprocating pumps, reciprocating compressors and high pressure seamless gas cylinders and other hi-tech oil field equipments such as cementing units, sucker rod pumps etc.

**Capabilities:**

**Test facilities:**
The factory is equipped for full load testing of various parameters for complete product range upto 2000 KVA.

**Quality Assurance:**
Quality Assurance Department ensures that the products-pumps and compressors meet the specifications of international codes such as API and are fully guaranteed for performance on the basis of proven and most updated designs. Gas cylinders are manufactured as per specifications of international standards such as DOT, BS, BIS, ISO etc. and usage approval from recognized national/international agencies.
Range of products

<table>
<thead>
<tr>
<th>Products</th>
<th>Maximum Power</th>
<th>Maximum Pressure</th>
<th>Maximum capacity</th>
<th>Fluids Handled</th>
</tr>
</thead>
</table>
| Centrifugal Pumps        | 2500KV        | 140 kg/cm²       | 12,000 M³/Hr     | Dimineralized water, Sea water,  
                             |               |                  |                                               | Hydocarbons, Naphtha, LPG, Carbonate  
                             |               |                  |                                               | Solution, Boiler Feed Water, Benefield  
                             |               |                  |                                               | solution, Alkaline and Acidic Solution,  
                             |               |                  |                                               | Ammonia liquor and slurry               |
| Reciprocating Pumps      | 1700 KW       | 675 kg/cm²       | 315 M³/Hr        | Drilling Mud, Cementing Slurry, Crude  
                             |               |                  |                                               | Oil steam, Condensate, Heavy Water, Fatty  
                             |               |                  |                                               | Acids, Ammonia Carbonate, Liquid Ammonia,  
                             |               |                  |                                               | Water Injection                        |
| Reciprocating Compressors| 25,000 KW     | 450 kg/cm²       | 70,000 NM³/Hr    | Air, Nitrogen, Oxygen, Carbon Di-Oxide,  
                             |               |                  |                                               | Hydrocarbons, Ammonia, Synthesis Gas,  
                             |               |                  |                                               | Hydrogen Sulphate, Coal Gas etc         |
| Gas Cylinders            | ---           | 400 kg/cm²       | 110 Litres.      | Oxygen, Nitrogen, Hydrogen, Argon, Air,  
                             |               |                  |                                               | Helium, Carbon Di-Oxide, Nitrous Oxide,  
                             |               |                  |                                               | Acetylene, Ammonia, Chlorine, Freon,  
                             |               |                  |                                               | LPG, Compressed Natural Gas (CNG)       |

Objective of the study
1. To find out the level of stress amongst employees of BPCL, Naini, Allahabad
2. To find out the Stress coping techniques which they use to reduce stress.
3. To find out the relationship between the stress level and the coping techniques

Research methodology:
The methodology adopted for the study as follows:This study is based on the empirical method.

Sample:
The study was carried out on a representative sample of 50 employees (Male) of BPCL, Naini, Allahabad. All the respondents were from the 40-50 years age group. Random sampling was employed.

Tools:
Two tools were used to collect data. The first one was prepared on the basis of the “Stress management intake questionnaire” of “UNH health service, Office of Health Education and Promotion” and second one was based on the “Coping Inventory” by Charls Carver, Michael Scheier, and Weintraub (1989).

Statistical tools:
Mean and Standard Deviation were used to get the level of stress and coping techniques.

Stress Questionnaire:
This Questionnaire consists of two subsets physical and mental dimension. There are 15 item in the questionnaire. For each statement there are 5 point scale was given which ranged from (1) Never, (2) Seldom, (3) To some extent, (4) Many time, to (5) Often. The respondent can mark his own choice in the response sheet. The final score can be calculated by calculating the item Mean and total Mean of collected responses to get the stress level.

Stress Coping Inventory:
This Inventory consists of two dimensions problem focus and Emotion focus like restraint coping, suppression of competing activities, denial, seeking social support for emotional reasons, seeking social support for instrumental reasons, positive reinterpretation, acceptance and planning. For each statement there are 4 point scale was given which ranged from (1) Never, (2) Seldom, (3) To some extent, (4) Many time, to (5) Often. The respondent can mark his own choice in the response sheet. The final score can be calculated by calculating the item Mean and total Mean of collected responses to get the coping techniques.
extent, to (4) Often. The respondent can mark his own choice in the response sheet. The final score can be calculated by calculating the item Mean and total Mean of problem focus items and emotion focused items.

**Analysis and Interpretation:**
The Mean and Standard Deviation for stress level and stress coping skills of the sample were calculated.

**Table-I. Means and Standard Deviation of Scores of stress level and stress coping Skills of employees of BPCL.**

<table>
<thead>
<tr>
<th></th>
<th>Stress Level</th>
<th>Problem Focus Coping Skills</th>
<th>Emotion Focus Coping Skill</th>
</tr>
</thead>
<tbody>
<tr>
<td>N</td>
<td>50</td>
<td>50</td>
<td>50</td>
</tr>
<tr>
<td>Mean</td>
<td>14.04</td>
<td>19.66</td>
<td>17.86</td>
</tr>
<tr>
<td>Standard Deviation</td>
<td>17.51</td>
<td>30.81</td>
<td>71.81</td>
</tr>
</tbody>
</table>

Above data shows that mean of stress level is 14.04. It indicates low level of stress among the employees of the BPCL. Most of the person feel stress to some extent as most of the responses lies on the (2) rating scale.

Problem Focus coping is ongoing high level as its mean is 19.66 and the mean of emotion focus coping skill is 17.86 and it indicates that most of the employees use problem focus coping to reduce stress. They use active coping skill to reduce stress. Problem focus technique is helpful to reduce the stress as respondent seeks systematic solution for reducing the stress but in emotion focus coping they try to avoid the stress causing situation so the stress remain with them and it increases with time passes.

**Conclusion:**
On the basis of the above analysis I found that the stress level among the employees of the BPCL is low. As this study was not related to the job stress but there are various organisational factors which causes stress. The respondent use problem focus coping skill more as compared to emotion focus. Use of emotion focus increase the level of stress as they tried to ignore the stress full situation, use of problem focus coping skills provide a planned solution of the problems. BPCL is a growing organisation and the top level managers must act as positive role models, especially in times of high stress. Managing stress is all about taking charge: taking charge of thoughts, emotions, schedule, environment, and the way we deal with problems. The ultimate goal is a balanced life, with time for work, relationships, relaxation, and fun – plus the resilience to hold up under pressure and meet challenges head on.

**Recommendations:**
Some of the suggestions to reduce the stress are as follows:

1. **Express your feelings instead of bottling them up:** If something or someone is bothering you, communicate your concerns in an open and respectful way.
2. **Be willing to compromise:** When you ask someone to change their behavior, be willing to do the same.
3. **Be more assertive:** Don’t take a backseat in your own life. Deal with problems head on, doing your best to anticipate and prevent them.
4. **Manage your time better:** Poor time management can cause a lot of stress.
5. **Reframe problems:** Try to view stressful situations from a more positive perspective. Look at it as an opportunity to pause and regroup, listen to your favorite radio station, or enjoy some alone time.
6. **Look at the big picture:** Take perspective of the stressful situation. Ask yourself how important it will be in the long run.
7. **Adjust your standards:** Perfectionism is a major source of avoidable stress. Stop setting yourself up for failure by demanding perfection.
8. **Focus on the uncontrollable:** Rather than stressing out over uncontrollable, focus on the things you can control such as the way you choose to react to problems.
9. **Look for the upside:** When facing major challenges, try to look at them as opportunities for personal growth. If your own poor choices contributed to a stressful situation, reflect on them and learn from your mistakes.

10. **Share your feelings:** Talk to a trusted friend or make an appointment with a therapist. Expressing what you’re going through can be very cathartic, even if there’s nothing you can do to alter the stressful situation.

Some suggestions for the work environment

**Improve communication**
- Share information with employees to reduce uncertainty about their jobs and futures.
- Clearly define employees’ roles and responsibilities.
- Make communication friendly and efficient, not mean-spirited or petty.

**Consult your employees**
- Give workers opportunities to participate in decisions that affect their jobs.
- Consult employees about scheduling and work rules.
- Be sure the workload is suitable to employees’ abilities and resources; avoid unrealistic deadlines.
- Show that individual workers are valued.

**Offer rewards and incentives**
- Praise good work performance verbally and institutionally.
- Provide opportunities for career development.
- Promote an “entrepreneurial” work climate that gives employees more control over their work.

**Cultivate a friendly social climate**
- Provide opportunities for social interaction among employees.
- Establish a zero-tolerance policy for harassment.
- Make management actions consistent with organizational values.

**Time management tips for reducing job stress**
- Create a balanced schedule.
- Don’t over-commit yourself.
- Try to leave earlier in the morning.
- Plan regular breaks.

Task management tips for reducing job stress
- Prioritize tasks.
- Break projects into small steps.
- Delegate responsibility.

References:
5. Schattner P. Stress in general practice—how can GPs coping
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7. Toru Uehara, Kaoru Sakado, Miwako Sakado, Tetsuya Sato, Toshiyuki Someya Relationship between Stress Coping and Personality in Patients with Major Depressive Disorder 1999