The purpose of this study was to find out the relationship between role stress and health of employees. Stress is the body’s response to any kind of demand. Stress can be defined as physiological and psychological reaction to relatively excessive demands made on a person. Stress has been viewed as a stimulus, a response, or a process. In short, stress defined by the stimulus approach is the stressors, or objective stressful events; the stress defined by the response approach is the strains, or one’s reactions to stressors. The stress defined by the process approach puts emphasis on one’s subjective appraisal of the demands of environments (Sarafino, 2001). Stress can be classified into two categories namely personal stress and occupational stress.

Occupational stress is a strong predictor of several individual and organizational level outcomes. Occupational stress affects the organizational performance and health of individual very much. Work related stress is the response people may have when presented with work demands and pressures that are not matched to their knowledge and abilities and which challenge their ability to cope. Katz and Kahn (1966) suggested that an organization can be defined as a system of roles and they used three categories to define role stress: role ambiguity, role conflict, and role overload.

Role ambiguity refers to the situations where the role and responsibility deputed to the person has not been clearly defined (Knotts, 1996). Role ambiguity occurs when the individual has insufficient information to carry out his job adequately (Keenan & McBain, 1979). Role conflict refers to a situation in which a person is expected to play two incompatible roles at a time. Role conflict exists when an individual in a particular work role is torn by conflicting job demands or doing things he/she does not want to do or does not think as part of the job specification (Cooper & Marshall, 1976). Role overload occurs when an individual has too many role demands given the time available to satisfy them (Covermen, 1989).

Health can be defined as a sound mental and physical state, which helps individuals to adjust his each and every field of life. According to WHO (1948), Health is a complete state of physical, mental,
social, and spiritual well-being and not merely the absence of disease or illness. Disturbances in bodily functions commonly found in workers exposed to stressful situation in working life include Muscular symptoms e.g., tension and despair; Gastrointestinal symptoms e.g., indigestion, vomiting, heartburn, constipation, and irritation of the colon; Cardiac symptoms: palpitation and chest pain; Respiratory symptoms e.g., dyspnoea, and hyperventilation; Central Nervous System symptoms e.g., neurotic reactions, insomnia, weakness, and some headaches; Genital symptoms e.g., dysmenorrhea, frigidity, and impotence (Kahn, 1981; Levy, 1971).

Although, such every day symptoms are often considered unimportant by the physicians, they can cause much distress and suffering for the patient, high cost to public, and very significant loses for the employee. Cardiovascular symptoms have attracted the maximum attention among the so-called Psychosomatic disorders, particularly Coronary Heart Disease (CHD) and crucial hypertension. Other psychosomatic symptoms include ulcer, asthma, tension and migraine headache, diabetes etc.

Some of the early warning signs of job stress include: short temper, headache, shortness of breath, sleep disturbances, difficulty in concentrating, stomach upset, apathy, and job dissatisfaction. Over the long run, constant workplace stress can also lead to several types of chronic health problems. Sauter, Hurrell, Murphy & Levi (1997) reported that many studies show a positive link between stress and these conditions:

- Cardiovascular diseases —mainly related to lack of control in the work process
- Musculoskeletal disorders —particularly in the back and upper limbs
- Psychological disorders —mainly depression and burnout

Stress has tremendous impact on mental as well as physical health of individuals. These effects have been well documented in stress health literature. Over the past two decades, there has been an increasing belief that the experience of stress necessarily has undesirable consequences for health (Leventhal & Tomarken, 1987). Physical health is affected by different kinds of psychological stress. In a study, perceived stress was shown to be a strong predictor of both the frequency and severity of physical ill health (Wyler, Masuda & Holmes, 1968). Recent researches demonstrate that 90% of illness is stress-related. A considerable variety of pathologies, both psychological and physical, have been associated with the experience of stress through work as stress can manifest itself in numerous ways (Holt, 1982). People suffering from stress can suffer a range of minor ailments including tension headaches, allergies, back problems, colds and flu, depression (Arroba & James, 1990). More serious consequences of stress include bronchitis, coronary heart disease, high blood pressure, stroke cancer, mental illness, thyroid disorders, skin diseases, certain types of rheumatoid arthritis, obesity, tuberculosis, headaches and migraine, peptic ulcers and ulcerative colitis, and diabetes (Cooper, Cooper & Eaker, 1988; Cox, 1978; Quick, Nelson & Quick, 1990). Jamal (1990) found that work overload, role ambiguity, conflict, and resource inadequacy were significantly related to job satisfaction, organizational commitment, psychosomatic health problems, and turnover in a sample of nurses. Role conflict is considered a source of chronic stress and has been documented to have a significant impact on job satisfaction, psychological distress, burnout, and somatic complaints (Glazer & Beehr, 2005).
The mechanism linking stress to illness may include disorders in neuro-endocrine or immune system (Levy & Wise, 1987; O'Leary 1990) or changes in health-related behaviours e.g. alcohol use, poor diet, deficiencies in exercise patterns, failure in self-care or a combination of the two (Broadhead & Kaplan, 1991). Results of a meta-analysis of work hours and health studies by Sparks, Cooper, Fried, and Shirom (1997) found a small, but significant, positive trend of increased health symptoms with increasing hours of work. These health symptoms covered a broad range from mild psychosomatic symptoms (e.g., headache) to more severe health problems (e.g., myocardial infarction).

The effects of stress on a person are moderated by several factors such as cognitive appraisal, availability of coping mechanism and personality type. Among these, Locus of Control is one of the most influential factors that affects or moderated the stress response. It also exerts a direct effect on the person’s health. The concept of locus of control was developed by Julian Rotter in the 1960’s. The full name he gave it was “Locus of Control of Reinforcement”. Rotter bridged behavioural and cognitive psychology because he believed behavior was largely guided by “reinforcement” (rewards and punishments) and that through reinforcements individuals come to hold beliefs about what the contingencies between behaviors and consequences. These beliefs then, in turn, guide what kinds of attitudes and behaviors people adopt.

Locus of control refers to the extent to which individuals believe that they can control events that affect them. It can be defined as a person’s belief about the cause of events that occurs in his/her life. Simply stated, it is a causal inference about the event in terms of control. It can be either external or internal. Internal means that everything is in one’s control whereas external indicates that the individuals life and activities are controlled by the environment or other external factors. People who believe they are primarily responsible for what happens to them and who believe in personal power and control are said to have an internal locus of control. In contrast, people who believe that their actions have little impact on what happens to them and who attribute outcomes to fate and luck are said to have external locus of control (Rotter, 1966).

The relationships among locus of control, stress, and strains have been explored. Individuals with an external locus of control may see sources of stress as being outside their control. They will therefore cope less effectively, in a general sense, than will internals. Several research findings provide support for this hypothesis (e.g., Krause & Stryker, 1984; Sandler & Lakey, 1982). In a study, Sud and Malik (1999) have found that externally controlled subjects perceived more stress in three areas viz., Role conflict, Role overload and Role ambiguity. Those with an external locus of control are more susceptible to depression as well as other health problems, and tend to place themselves in situations where they will experience additional stress along with feeling helpless to change their own conditions, which just adds to their stress load (Elizabeth Scott, 2007).

The present study was conducted to investigate the moderating role of Locus of Control in stress-employee health relationship. The specific objectives of the study were delineated as follows:

- To find out the effect of Role Stress on somatic health complaints.
- To find out the moderating role of Locus of Control in the Stress -Health relationship.
METHOD

Sample
The present study was carried on 210 middle level managers of different private sector organizations in India. Participants age varies between 22-59 years (mean=43.13 and SD=9.10).

Tools
The following tools were used in this study:

Occupational Stress Index (OSI) by Srivastava and Singh (1981). In the present study, to measure the occupational stress only 15 items were selected from the full scale (OSI), which were related to role overload, role ambiguity, and role conflict. Five point response format from strongly agree (5) to strongly disagree (1) was used in this scale. The reliability of this sub scale was found to be 0.684 for role overload, 0.554 for role ambiguity, and 0.696 for role conflict. High score on this scale shows high level of occupational stress.

Locus Of Control (LOC) by Rotter (1966). Locus of control was assessed by using Social Reaction Inventory. This inventory was developed to measure person’s internal-external locus of control by Rotter (1966) and is based upon his identification of the construct which deals with a person’s perception of contingency relationship between his own behavior and events which follow that behavior. The inventory consists of 29 question pairs, using a forced choice format, plus 6 filler questions. Internal consistency coefficient of this inventory was found to be 0.70. High score on this scale shows external locus of control and low score shows internal locus of control.

Somatic health complaints by Singh and Srivastava (1997). This five point rating checklist was examines the health status of the individual. Somatic health complaints scale consists of 25 items. High scores on this checklist show high level of somatic health complaints.

RESULT AND DISCUSSION
Initially, bivariate correlations was computed to examine the strength of relationship between variables.

<table>
<thead>
<tr>
<th>Variables</th>
<th>Somatic Complaints</th>
<th>Locus of Control</th>
</tr>
</thead>
<tbody>
<tr>
<td>Role Overload</td>
<td>.118</td>
<td>.130</td>
</tr>
<tr>
<td>Role Ambiguity</td>
<td>.135</td>
<td>.308**</td>
</tr>
<tr>
<td>Role Conflict</td>
<td>.221**</td>
<td>.147*</td>
</tr>
<tr>
<td>Stress Total</td>
<td>.218**</td>
<td>.262**</td>
</tr>
<tr>
<td>Somatic Complaints</td>
<td></td>
<td>.089</td>
</tr>
</tbody>
</table>

*p<.05, **p<.01
The findings are reported in Table 1, which shows that role conflict \( (r = .221, p \leq .01) \) and overall stress \( (r = .218, p \leq .01) \) are significantly positively correlated with somatic complaints but no significant correlation was found between other dimensions of role stress and somatic complaints. Locus of control was positively correlated with somatic complaints but the correlation was not significant. Further, Locus of Control had a significant, positive relationship with the total role stress score as well as two of its characteristics, i.e., role ambiguity and role conflict.

The present results indicate that somatic health complaints of managers are significantly positively correlated with role conflict and overall stress. This result is also supported by Deckard and Present (1989) and Singh, Srivastava and Mandal (1999). In their work life employees face many types of events. They consider some of these as advantageous and recognize them as positive challenge to their self-esteem; where as some of these are interpreted as negative or unwanted. Because stress is not only a simple response to the life changes but it is the cross product of perception of any threatening life situation and the individual’s interpretation of those changes determines whether they are negative/unwanted or positive/advantageous. The attribution of stress depends on how desirable events are and how much adjustment is required for that. Negative interpretation of the events or situations makes them worried about those events and as a consequence person is more susceptible to develop health complications.

The stepwise multiple regression analysis was performed to check the relative contribution of each variable in predicting somatic complaints.

**TABLE 2**

**Step-wise multiple regression analysis (Role stress and locus of control as predictors and Somatic complaints as a criterion)**

<table>
<thead>
<tr>
<th>Model</th>
<th>R</th>
<th>R Square</th>
<th>Adjusted R Square</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>.221</td>
<td>.049</td>
<td>.044</td>
</tr>
</tbody>
</table>

Model 1. Predictors: (constant) Role conflict

The findings reported in Table 2, show that only role conflict shows a significant contribution in explaining somatic complaints. It explains almost 4.9% of total variance in explaining somatic health of employees.

The step-wise regression analysis indicated that only role conflict was a significant predictor of somatic complaints. Findings of a lot of studies support that role conflict is a potential cause of poor health of employees (Bedier, Armenakis, and Curran, 1981; Humphrys and O’Brien, 1986; O’Driscoll and Cooper, 1996). Although role stress comprises of all three characteristics namely role overload, role ambiguity, and role conflict, the present study shows that role conflict is a stronger predictor of health complaints in comparison to role overload and role ambiguity. The basic reason behind this finding is routed within the manageability of these three situations. Although the demanding intensity of these all situations is same but first two are somewhat manageable characteristics. Role overload and role ambiguity are not consistent characteristics of role structure. In the situation of role ambiguity individuals have unclear information about their role and in the situation of role overload individuals have more task in a given time period, but in spite of these role obstructions they have a
wider span of time and autonomy in comparison to role conflict that provide them the opportunity to manage these role situations. Role conflict is a persistent stressor of work place. It is either related to employee’s persistent personal characteristics or the job situation itself. Due to this persistent nature, role conflict is less manageable in comparison to rest of the two, and produces diverse negative impact on individual’s performance as well as health and well being.

Moderated regression analysis was also employed on the data to test the moderating role of locus of control in role stress and somatic health complaints.

Table 3 shows that locus of control significantly moderate the relationship between role overload and somatic complaints, and role conflict and somatic complaints but not between role ambiguity and somatic complaints.

The result of moderated regression analysis shows that locus of control significantly moderate the relationship between role overload and somatic health complaints and role conflict and somatic health complaints. The effect of stress on personal or work related variables are not always independent. This is well documented in various studies that sense of control positively affects the feeling of health and is a significant moderator between stress health relationships (Fusilier, Ganster & Mayes, 1987; Johnson & Sarason, 1978; Rotter, 1966). Locus of control is not only a personality disposition but also cognitive styles which create a control appraisal. This appraisal performs a stress control function and lessens the effects of stress. Studies indicate that personal control has a stress buffering, self esteem enhancing and health promoting effect (Bandura, 1977; Sandlar & Lackey, 1982; Schaubroeck & Fink, 1998). People with high on internal locus of control perceive that they have high control of events that shape their lives to a greater extent than external; who feel that control is external to them. Specially, with respect to stress, the traditional assumption is that “to the extent that an individual judges himself to have control or mastery in the situation, the probabilities is that he will be less likely to perceive the situation as threatening or stress-inducing and in turn, less likely to manifest adverse reaction pattern” (Chan, 1977). Therefore internals are less likely to be stressed, because they believe that they can exert control over what happens to them, while extreme external feel helpless and stressed.
REFERENCES


Locus of control refers to the extent to which people feel that they have control over the events that influence their lives. When you are dealing with a challenge in your life, do you feel that you have control over the outcome? Or do you believe that you are simply at the hands of outside forces? Internal locus of control is often used synonymously with “self-determination” and “personal agency.” Research has suggested that men tend to have a higher internal locus of control than women and that locus of control tends to become more internal as people grow older. Experts have found that, in general, people with an internal locus of control tend to be better off.

Find out What New Findings of Research Say About Stress and Health. By Elizabeth Scott, MS. Furthermore, locus of control may moderate the relation between incentives and motivation and between satisfaction and turnover. Little attention has been given to individual personality in research on job motivation and satisfaction. The general theory of locus of control arose from observation and research in clinical psychology. Both the measurement and theory have been refined so that the concept is heuristically useful. Over two dozen studies of locus of control have been related specifically to attitudinal, motivational, and behavioral variables in organizational settings.

Requests for reprints should be sent to Paul E. Spector, Florida Mental Health Institute, 13301 North 30th Street, Tampa, Florida 33612. Internal locus of control and are referred to as internals. Locus of control is the degree to which people believe that they, as opposed to external forces (beyond their influence), have control over the outcome of events in their lives. The concept was developed by Julian B. Rotter in 1954, and has since become an aspect of personality psychology. A person's “locus” (plural “loci”, Latin for “place” or “location”) is conceptualized as internal (a belief that one can control one’s own life) or external (a belief that life is controlled by outside factors) which Employees stress is a growing concern for organizations today. Stress can be defined as a lively circumstance in which people face constraints, opportunities, or loss of something they desire and for which the consequence is both unpredictable as well as crucial. Stress is the response of people to the unreasonable/excessive pressure or demands placed on them. Stress is not always negative. It may also bring out the best in individuals at times. It may induce an individual to discover innovative and smarter way of doing things. This positive dimension of stress is called as enstress. But usual