

**KNOWLEDGE BASE DEVELOPMENT FOR STRESS CAUSING FACTORS****AMONG WOMEN EMPLOYEES****K. Bhuvanewari\* & T. Padma\*\***

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**Abstract:**

Women are performing indispensable responsibilities in the economical and social progress of the nations all over the world. Working women generally have overlapping responsibilities in multiple domains which includes home and workplace. The issues faced by them in everyday life are concerning with two positions, in family life and in professional life. Women have to take part in their role as a wife, a mother and an earner. Women have to manage their career while keep up traditional role as well as professional role. Stress has turn into a part of life for the women employees, as a life's answerability nowadays has become complex at home as well as outside and that it is impossible to avoid stress. This paper concentrates on creating a knowledge base that contains wide range of categories and sub-categories which causes stress among working women based on their diversified profession. The knowledge base creation has been carried out through literature survey, online/offline discussion with domain experts, and notion mapping techniques. Such a knowledge base is required for data analysis and women welfare related decision making.

**Key Words:** Stress, Knowledge Base, Notion Mapping, Hierarchical Structure & Domain Clusters

**Introduction:**

Nowadays stress becomes universal phenomenon. The term stress was first employed in a biological context by the endocrinologist Hans Selye. He later broadened and popularized the concept to include inappropriate physiological response to any demand. Stress in our society is not something that is invisible. Person whether a child, adult, men, women employed, unemployed everyone is facing stress in his/her own way [1]. Indian families are going through fast changes due to the increased pace of urbanization and modernization. Indian women fit in to all classes have entered into remunerated profession. At the present time, Indian women's experience to educational opportunities is significantly higher than it was some decades ago, particularly in the urban location. This has opened new vistas, increased awareness and move up ambitions of personal growth. This, along with economic pressure, has been instrumental in influencing women's decision to enter the work force. Most studies of employed married women in India have reported economic need as being the most important reason given for working [2]. Stress has become a part of life for the women employees, as life today has become so complex at home as well as outside that it is impossible to avoid stress.

**STRESS:**

The concept of stress was first introduced in the life sciences by 'Hans Selye' in 1936. It is a concept borrowed from the natural science. The concept of stress is derived from the Latin word 'stringer' [3]. Stress is the reactions of people which have excessive pressures or other types of demand placed on them. Work stress is explained as the adverse physical and mental reactions that appear when the job demands do not match with the abilities, skills, and requirements of the employees. Stress generates mental or physical changes which are mostly harmful and sometimes the signs of psychological or physical defects are observed. Stress is described as a worst condition of emotions in terms of physiological rise when people experience a negative situation in such a way that they perceive a danger to their prosperity. Women, have a lot of balancing to do between home and workplace, and balancing between social and personal requirements. Moreover, the conflict of women will be all the more intense if her employer, as well as her family members held unreasonable expectations from her. Women's involvement in multiple roles had a deleterious effect on their mental as well as their physical health. Due to this a woman is constantly under stress either at home or at workplace [4].

**Multiple Roles of Women:**

Women generally face multiple common life roles. The need to balance these different roles simultaneously is a reality for most individuals at various stages throughout their lives. Rather than following a transitional sequence from one role to another, women are required to perform an accumulation of disparate roles simultaneously, each one with its unique pressures. Multiple role-playing has been found to have both positive and negative effects on the mental health and well-being of professional women. In certain instances, women with multiple roles reported better physical and psychological health than women with less role involvement. In other words, they cherished motivational stimulation, self-esteem, a sense of control, physical stamina, and bursts of energy. However, multiple roles have also been found to cause a variety of adverse effects on women's mental and physical health, including loss of appetite, insomnia, overindulgence, and back pains.

**Need for Research in Stress:**

An increasing number of articles have promoted the importance of work-life balance. This highlights the current concern within society and organizations about the impact of multiple roles on the health and well-being of professional women and its implications regarding work and family performance, and women's role in society [2].

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## Sources of Stress:

- ✓ **The Environment:** The environmental stressors such as weather, noise, crowding, pollution, traffic, unsafe, insecurity and substandard housing, and crime.
- ✓ **Social Stressors:** Social stressors such as occupation deadlines, financial problems, job interviews, presentations, disagreements, demands for the women's time and attention, loss of a loved one, divorce, and co-parenting. These stressors are arising due to demands of the different social roles such as parent, spouse, caregiver, and employee.
- ✓ **Physiological:** Physiological stressors include rapid growth of adolescence, menopause, illness, aging, giving birth, accidents, lack of exercise, poor nutrition, and sleep disturbances.
- ✓ **Thoughts:** Human brain interprets and perceives situations as stressful, difficult, painful or pleasant, in such situation our brain determines whether they are problems to us or not.

## Types of Stress:

- ✓ **Eustress:** These are also known as Positive Stress, which makes us to feel good and exerting healthy effect. This type of Stress occurs short period of time. Eustress gives ability to person to generate optimum output by performing best. In such situation person may thrilled, excited while watching horror movie, Excited when won the prize, Zeal for purchasing first car, happiness in accomplishing challenges, etc.
- ✓ **Distress:** This is called as Negative Stress, bad stress. This is opposite to Eustress. Death of someone you love, Illness, Financial crisis, Heavy work load etc, leads to Distress. It has two types such as Acute Stress and chronic Stress.
- ✓ **Hyper-Stress:** If a person pushed beyond what one can handle, which turns into hyper-stress. Most of the times it occurs because of excess of workload or over worked. This type of stress occurs when constant heavy financial difficulties, work both at home and office, continuous tension, travelling day and night etc.
- ✓ **Hypo-stress:** This is directly opposite to hyper-stress. This type of stress has been experienced by people when they constantly feel bored, repeatedly performing the same type of task, restless work and lack of inspiration [5].

## Literature Review:

K. Kiruthika, V. Veerajayasri, M. Lavanya and M. Surya [6] have observed that analyzing stress on social media through Data mining, that social media plays an important role in impacting the culture, economy and overall view of the world. Social media is a new forum that brings people to exchange idea, connect with, relate to, and mobilize for a cause, seek advice, and offer guidance. Social network has gained remarkable attention in the last decade. Accessing social network sites such as Twitter, Whatsapp, Facebook and Hike through the internet will cause for stress. This paper uses the data mining algorithm AD Tree and Wekatool, and analyzes the level of stress through collecting a questionnaires' from different set of people such as students, professors, IT employees, business persons. From their answers the paper concludes that the social media Facebook was a cause for more stress among people and it is also analysed that the people of the age between 20 to 25 have more stress than the other age groups by comparing their lifestyle with others [6].

Sonal Pathak and Anil Sarin [7] highlighted the critical need to investigate the various stressors for women workers in the BPO industry. They applied a hybrid method approach which involved both self completing questionnaire and in-depth personal interviews and analyzed nature of stressors. According to new HR practices and demand of outsourcing industry which deals with UK and USA based companies, there is need for employees to work for 24\*7. These stressors make employees mentally and physically overburdened and increases tension, strain, pressure, anxiety to the employees and ultimately the employee's productivity decreases. The results of this study revealed women employee can adopt with any of the situations by way of undergoing a suitable alternative practices such as relaxation exercises (meditation & yoga practices), mentoring programs (career counselling & time management), assistance programs for women employees, small workshops on child care, balancing between work –life, arrangement of recreational activities etc.

Sudhir Chandra Das [8] has focussed on the strength of work-life balance practices between private and public sector insurance companies by two step cluster analysis, the algorithm undertakes a procedure that is very similar to the k-means algorithm. Based on these results, the two-step procedure conducts a modified hierarchical agglomerative clustering procedure that combines the objects sequentially to form homogenous clusters. This is done by building a so-called cluster feature tree whose "leaves" represent distinct objects in the dataset. The procedure guides the decision of how many clusters to retain from the data by calculating measures-of-fit such as Akaike's Information Criterion (AIC) or Bayes Information Criterion (BIC). The study suggests that private sector employees enjoy considerably less work-family integration than public sector employees.

Muddanagouda Patil [3] has focussed on stress among working and non working women. The study was conducted on 90 samples including 45 each in working and non working women. Stress scale defined by M.Sing was applied where this tool is a self report questionnaire with 40 items. Statistical tools, such as mean, standard deviation and t-value were used. This study found that working women have significantly higher level of stress than non working women. Married working women have significantly higher level of stress than married non working women. There is no significant deference between unmarried working women and unmarried non-working women and the results conveyed that stress among working women is higher than non-working women [3].

Nezhad et.al [9] examined the occupational stress and family difficulties among working female. A sample of 250 married working women with two or more children was taken. Sources of work stress inventory consisting of sources of stress scale and general work scale and five point Likert scale was used. Data was analysed using multivariate and correlation analysis. Family and difficulty are inter-related. Stress and work family difficulty can make negative influence on individual's attitude and health. Three hypothesis were assumed first was a positive relationship exists between occupational stress and family difficulties,

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second was significant multiple relationship will exist between sources of stress and the third was work home interface was best predictor for family difficulties in working women. The results supported the entire three hypotheses and it was suggested that mothers with high level of stress experiences difficulty in family. The authors suggested that educational tools must be developed to teach and reduce stress among working women [9].

## Knowledge Base Generation:

Knowledge base generation is a process that acquires in-depth domain knowledge which is required for further analysis and decision making [10]. This process consists of a fusion of knowledge attainment methodologies and most vital methods used in this work include the following.

- ✓ Preliminary performance analysis
- ✓ Literature analysis and
- ✓ Notion mapping techniques

**Preliminary Performance Analysis:** This analysis obtains an overview of the problem and determines main aspects of stress among women employees. A preliminary survey has performed that will be useful in classifying the stress causing factors into several major clusters.

**Literature Analysis:** Literature analysis is an extension of preliminary analysis to discover categories of main factors and also sub factors associated with each main factor that causes stress among women employees. The literature includes assets of information about the main and sub factors of stress among women employees.

**Notion Mapping Techniques:** Notion mapping technique is a graphical tool for organizing and representing knowledge. They include notion, usually enclosed in circles or boxes of some type, and relationships between notions or concepts indicated by a connecting line linking two concepts. The knowledge arrived at from preliminary performance analysis and literature analysis stages are graphically represented and discussed with domain experts. The changes will be included in the notion map and the final version of the knowledge out of this step will provide a drilled down and well refined knowledge about the problem domain. Thus the major and sub categories of stress causing factors are identified in order to construct the knowledge base. The recognized main categories of risk factors of stress among women employee are (i) Family Oriented, (ii) Job Oriented, (iii) Personal Oriented and (iv) Environment Oriented factors. Similarly the sub factors identified under each of the major categories are as below.

- ✓ Family Oriented: Children, Spouse, In-laws and Family commitments.
- ✓ Job Oriented: Inter Role Distance, Role stagnation, Personal inadequacy, Role ambiguity, Role overload.
- ✓ Personal Oriented: Age, Education, Health condition, Occupation.
- ✓ Environment Oriented: Environment disturbance, Relationship with neighbors, Climatic condition, and Physical working environment.

## Conclusion:

Women with stress are able to be productive and constructive when stress is rightly identified and well managed. The knowledge base constructed in such a way explained in this paper will help consultants' in diagnosing and decision making while analyzing stress conditions. The future work of this research will analyze the dominant stress causing factors among women employees of a selective group of occupations and foresee their stress level based on their responsibilities and way of life. Positive attitude, meditation and yoga will be helpful for cope with stress. Thinking in a broader perspective of life will definitely change stress. Thus the outcome of this research work will technically helps in medical diagnosis and women will be advised by scientific means to trail a healthy lifestyle and well balance the personal and organizational responsibilities in an improved way.

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