

A Critical Review of Occupational Stress Literature

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Abstract: Occupational stress is an emerging issue for the management and stakeholders of organizations. It arises due to a mismatch of the capabilities, resources and needs of the worker with the requirements of the job. The effects of occupational stress not only adversely affect physically and psychologically of the employees but also enhance the cost for the organisations.

The present study analyzes the literature on occupational stress in terms of stated objectives, indices and scales for measurement of stress with a view to ascertain the gaps and trends in the studies of occupational stress. 80 research papers mostly of the last 15 years have been selected from the electronic database for the purpose of the analysis. The study concludes that the conceptualization of the stress phenomenon has not yet adequately matured. Further, the study also observes that organization-specific quantification of the cost of stress and expected benefits have been almost neglected. It also indicates that stress measurement scales are not yet attaining sufficient degree of accuracy and reliability. The study also observes that indices for stress measurement are far from being well-developed.

Key-Words: Occupational Stress, Indices, Stress Measurement.

Introduction:

Stress is a universal phenomenon which is encountered by every people in their lifetime. The origin of stress can be traced back in some literature since the 17th century. In this period, it was compared with hardship, adversity or affliction. During the 18th and 19th centuries, the meaning of stress kept changing which is identified as strain, pressures, or strong efforts with reference to a thing or an individual. Style (1936) was the first to conceptualise stress as a “non-specific response of the body to any demand made upon it.” Stress concept was changed to a social scientist from physicist by Cooper and Marshall in 1878. Further, Lazarus, Cohen, Folkman, Kanner and Schaefer in 1980 suggest that “stress is not only the response but also a function of individual appraisal of the situation. People do not respond directly to a stimulus as such, they respond to the meaning of the stimulus in relation to their perception of the environment.” An occurrence may be stressful provided when they recognize it to be threatening. Individuals do not depend on stress but stress is dependent upon individual reactions or appraisal of what is threatening based on the resources available with the individual to meet the demand. As such; an event which is stressful to an individual may not be stressful to another individual. Again, an event which is stressful to an individual in a situation may not be stressful in some other situation. Modern scholars review stress which arises as a result of a misfit between person and environment. Harrison 1978, suggested that stress arises when an individual is unable to cope with the demands of the environment.

Due to dramatic changes in technology, economic and social field complexities underpin organizational and non-organizational perspectives. As such, it is imperative to clarify the causes and factors for ensuring human well-being.

Occupational Stress is now an important issue for the management and other stakeholders of the organisations. “Occupational Stress can be defined as the harmful physical and emotional responses that occur when the requirements of

the job do not match the capabilities, resources or needs of the worker. Occupational Stress can lead to poor health and even injury.” (United States National Institute of Occupational Safety and Health, 1999).

Further, the cost of occupational stress is very significant in many organizations in various countries.

The present study attempts to analyze 80 literatures on occupational stress published in different countries from different perspectives.

Objectives of the Study:

The purpose of the study review the occupational stress literatures in terms of -

1. Stated objectives
2. Scales used for measurement of occupational stress.
3. Indices of stress measurement
4. Ascertain the trends and gaps in the reviewed literatures.

Research Methodology

With a view to designing the study, a number of research papers on occupational stress were selected. The study “A Critical Review on Occupational Stress Literature” encompasses different aspects of stress research. (Genesis of stress, indices and scales used for measurement of occupational stress) in a global perspective.

Search strategies for identification of the study

The main literature sources consulted for use in this study were empirical studies on occupational stress, burn out and stress management interventions. Grey literature such as research papers, websites, and government and commission reports on occupational stress with a focus on definition, genesis, measurement, intervention strategies and coping strategies on occupational stress.

Electronic Database:

Electronic database consulted range across nursing and social sciences (such as bank employees, teachers, health care, nursing, etc.). Eighty papers were downloaded from the website for this study.

Synthesis Process:

To sharpen the focus of the literature search, only studies on workers/ employees were included in the review and only English language data relating to occupational stress or burnout focus were included. In this study, only those papers were considered which were published within the last 10 years. However, there were certain exceptions in older publications with particular significance were considered. All the articles considered in this study were systematically screened for information relevant to the research objectives, i.e., genesis of stress, definition of stress, measurement of stress, impact of stress and coping mechanisms.

Literature Review:

In order to strengthen the theoretical background of the study, a number of literature on occupational stress in the context of specified objectives were reviewed.

Mark A. Stall (2004) , in his study on literature review based on the synthesis of the earlier reviews, suggested that the scientific community is still struggling to define the concept of stress. He viewed that it would not be appropriate to measure stress since it couldn't be yet properly defined. However, a number of models and structures were endeavored to describe stress, and off course, in some aspects, predict human performance which suffers under stress continuously being published. According to him, most of the literatures were either a repetition or a reproduction of the contributions of the previous literatures. On the grounds of simplicity and harmony, he has considered the definition of stress proposed by Mc. Grath (1976) who conceptualises stress as “the interaction between perceived demand, perceived ability to cope and the perception of the importance of being able to cope with the demand.” Stall viewed the effect of stress on the basis of literatures, as psychological stress including various forms of workload trying to focus attention, providing less emphasis on other related information and tasks and concentrating on main tasks. The main distinction between the main tasks was that whatever the stimulus is perceived provides the greatest importance to the person, giving no importance on what is perceived.

Gaillard (2001) was of the view after reviewing the stress literature that stress has varied perspectives; which include; work demand, psychological threats or unacceptable and unhealthy environments. He referred to these as input functions. This input function has output functions which are manifested in the behaviour and psychological and subjective response of the individual. Further, these outputs lead to some aversive state where the individual feels strain and subjective threats. Finally, these stages or processes result in an inferior work capacity. His works help to understand that pushing to the limit of endurance can sustain performance for a short duration before having high psychological and physiological costs.

Christianson (1992) concluded certain conclusions in his study 'Review of the research on stress and memory.' These were-

- a. Memory of an individual obstructed for a short term when recollecting occurrence before or after an emotional incident.
- b. The memory of an emotional occurrence is not essentially obstructed during stressful situations.
- c. There is a possibility to improve recollection for central features provided such occurrences are emotional rather than neutral.
- d. Better recollection for such occurrences does not persistently under situations of recognition and recollection.
- e. Peripheral incidents are less recollected when the primary occurrences are emotional.
- f. The deviation in recollections relates to selective visual concentration suggested by the individual.

Interestingly, Christianson's own experiments provided an opposite conclusion:

- g. Memory is likely to be affected by context effects, more specifically, it is positively developed when retrieval conditions are congruent with encoding conditions.
- h. His study suggested that individuals may be emotionally valuable information and
- i. There is a less significant difference between laboratory and real-world findings relating to emotional arousal and memory performance. He also suggested that highly emotional occurrences are retained, more specifically their main features.

Abiemo, M.K. (2009) argued in his study on a review of stress management literature that the meaning of stress differs from person to person. Some individuals view stress as conditions or occurrences that react to or feel stress, tension, anxiety, or negative emotional outcomes. On the other hand, some perceive stress as the response or reaction to these situations or conditions. He suggests stress "as an unpleasant state of emotional and physiological arousal that people experience in situations that they perceive as dangerous or threatening to their well-being." Further, he argued that stress results in both positive and negative outcomes. In a relatively less complex task, moderate stress may increase performance and motivation.

Pardee, T.M. and Hanicke, B. (1998) state that the progress in stress research gained momentum after the publication of Seyle's book in 1950. Changes in the views of human physical strain and psycho-physiology in stress feelings have accelerated the pace of stress in varied dimensions. He advocates that favourable outcomes of stress management depend on the ability of the clinician who trained techniques and the victim's relationship with the clinician.

Shapiro, S.L., Shapiro, D.E., and Shapiro, D.E. (2000) reviewed over 600 literatures on research on stress, a maximum number of these articles were related to the significance of stress and medical education. Interestingly, on 24 studies intervention strategies and only 6 of them were conducted adopting true scientific methodology. The outcomes of this study disclosed that the medical trainees involved in the stress management process showed better immunologic functioning, were able to reduce depression and anxiety, enhance empathy and moral inwardness, increase adequate and effective education for the future, able to convince and understanding the effect of stress, intensify appropriate coping strategies and eliminate the role conflict among stress victims. They, however, concluded that in spite of these positive outcomes, the studies had a number of limitations.

Alessica, D.A., and Fred, R.H. (2003) studies literatures on occupational stress and mental health outcomes within 1993-2002. The outcomes of the study reveal that the models that appeared in the 70th and 80th have played a great role in this stress literature. These models can provide more direction to empirical research and create theoretical stress on stress research. The review concludes that stress is a multi-dimensional concept, which signifies that in order to draw a meaningful conclusion on dates of stress research, it is important to provide more focus on more than a single

stressor at a time. Since there are methodological limitations and gaps in the knowledge on stress concept, it has been accepted and illustrated that stress is a dynamic process rather than a variable, which is associated with varied structure and its results. As such, stress can not signify the ‘back side of work.’

Literature review on stress research conducted by **Kavanagh, J.** (2005) on the interlink among stressors, stress and performance in varied contexts on military personnel. The sum of the observations in this study was that the stressors have some negative impact on the physiological aspect of military personnel in the form of increased heartbeats and bear impact on the performance of a complex task. Interventions such as training and providing knowledge on this issue can positively help to adapt to such challenges of stressors and maintain a better performance level.

Gardner, S. (2010) conducted a literature review on “Stress among Perspective Teachers” which discloses an apparent loss of performance in the profession when they suffer psychological strain. This also is responsible for deteriorating the student-teacher relationship. A systematic intervention process in the form of incorporating CBT and mindfulness can reduce the challenges to a great extent.

From 1983 to 2003, a literature review was conducted by **Mc. Vicar A.** (2003) adopts key words nursing, stress, distress, stress management, job satisfaction, staff turnover and coping with a view to identify the sources of stress in adult and child care nursing. The study concludes that the progression of continuation of eustress to distress is qualitative based on the relationship between an individual and the environment. The workload, leadership style, professional relationship and emotional need are signified as major stressors that cause workplace stress for workers. The concept of the workplace is also very dynamic, lack of adequate incentives and allotment of shift duties are the major factors of stress for nurses.

The project conducted by the **Education, Audiovisual and Cultural Executive Agency, U.S.A.** (2008) showed that the majority of intervention processes adopted were individual-oriented on organizations. However, the study suggested that the effectiveness of such intervention strategies were fully profitable and effective provided both individuals and the organization should be targeted instead of only individuals to combat stress in an organization.

Analysis and Interpretation:

The literatures considered for the analysis have been taken from the websites (open access free downloads). A total of 80 papers were downloaded. The stated objectives, scales and indices for measuring the occupational stress were classified and the frequency of occurrences of each category was determined and tabulated.

1. **Stated Objectives:** The following table represents the classifications and digital representations of different stated objectives amongst reviewed literatures.

Table: 1: Classification and numerical representation of various stated objectives

SL No	Stated Objectives	Nos. of Papers	Percentages (Round off)
A	Related to Genesis of Stress	29	36%
B	Related to variation of stress level among targeted groups	18	33%
C	Relating to stress reduction strategies	19	24%
D	Relating to effects of stress.	26	33%
E	Relating to the measurement of stress.	15	19%
F	Relating to the Conceptualization of stress and stress models.	4	5%

It appears from the above table that 36% of the reviewed articles have stated objectives relating to the genesis of stress. This highest frequency may express one or both of the following:

- i) The general conceptualization of the stress phenomenon is still very incomplete and not attained maturity and much studies remain to be done in this area.
- ii) The Genesis of stress varies from environment to environment and needs to be studied by individual organizations.

If the second one is the reason for the high focus on the genesis of stress, we would have at least a comparable percentage of papers seeking to study the variation of stress amongst the employee groups. The fact that only 22% of the researchers have sought to study the variation of stress levels amongst different groups of employees indicates that the conceptualization of the stress phenomenon is yet to be matured. Stress reduction strategies have drawn the attention of 24% of the researchers revealing that application studies are gradually gaining momentum. Moreover, 33% of the scholars have studied the issue relating to effect of stress. It is significant to note that none of the reviewed papers have attempted to quantify the financial cost of stress, which might have been essential for determining the budget for stress mitigation strategies.

Significantly to any application study, is the issue of measurement of stress. Unfortunately, reliable and accurate measurement of stress is intrinsically problematic. This required focused studies on this issue. This issue has drawn only 19% of the researchers. As such, it appears that we are into application studies without adequate foundation for it.

2. Scale Used for measurement of occupational stress:

The following table indicates the various scales used for the measurement of occupational stress.

Table: 2: Scale used for measurement of occupational stress.

SL No	Scale Used	Nos. of Papers	Percentage (Round off)
A	Pareek ORS Scale (1981)	15	19%
B	Khan, Wolfe, Quinn and Snook (1964)	3	4%
C	Srivastava & Singh (1981/82)	8	10%
D	Ranta (2004)	2	3%
E	Singh Personal Stress Inventory (2004)	1	1%
F	Jamal and Baba (2004)	1	1%
G	Osipow & Devis (1998)	1	1%
H	Johnson & Hall (1988)	1	1%
I	Chinese Version Personal Strain Questionnaire	1	1%
J	Pronit & Pareek (2010)	1	1%
K	Self Developed	28	35%
L	Scales not based on a defined model	18	23%

The above table shows that 42% of the reviewed papers have used established scales based on defined models. It indicates that 42% of the scholars have confidence in defining models and establishing scales based on them. 35% of the reviewed papers have selectively used the parameters listed in defined models/scales (self-developed scales). In other words, these 35% of scholars have partial confidence and reliability on established scales and their respective models. Further, 23% of scholars have expressed a lack of confidence in these established models. This analysis reveals that more studies are required relating to the measurement of occupational stress.

3. Indices of measurement of occupational stress:

The following table shows the numerical representation of indices of occupational stress measurement in the reviewed works of literature.

Table: 3: Indices of measurement of occupational stress

SL No	Indices	Nos of Papers	Percentage (Round off)
A	Related to Role	40	50%
B	Related to organisational support	21	26%
C	Related to Job Satisfaction	10	13%
D	Related to job security	10	13%
E	Related to Skill/capacity and job requirement mismatch.	24	30%
F	Related to work condition	3	4%
G	Length of office time	9	11%
H	Related to political pressure	4	5%
I	Biological	14	18%
J	Family/social life and work imbalance	8	10%
K	Psychological	11	14%
L	Personal development	1	1%

Stress in a psychological sense is a phenomenon which can be observed by the investigator but may be felt by the subject. As such, the subject's response to the investigators' query on his/her state of stress offers the only direct measurement of stress.

A number of factors cause stress in a subject. A study of the prevalence of generally recognized causative factors provides the first indirect means of measuring stress. Stress produces a variety of effects on an individual. A study of the effect of stress provides the second indirect means of measuring stress.

As far as all the reviewed papers are concerned, these sought to investigate stress in terms of various related aspects within an organization, direct measurement of stress, invariably used in conjunction with indirect measurement and never independently. Causative factors have far outweighed effects as indices of measurement.

The term occupation is related to production and productivity/efficiency. Hence, occupational stress has to be viewed in the light of productive efficiency which is affected by stress. Interestingly, indices related to the effect of stress were used only by 18% of the researchers. All of them have used physiological parameters, while 14% have used psychological parameters in addition to physiological ones. None of them have quantified the effect of stress on productivity and production. This appears a poor focus on the economic effect of stress.

Stress in an individual is the cumulative effect of occupational and non-occupational factors moderated by the subject's emotional intelligence. As such, background stress due to non-occupational factors and emotional intelligence need to be taken into consideration for any detailed accurate assessment of stress. Significantly, focus on these two aspects is still at a low level.

Conclusion:

The study based on the existing occupational stress literatures in terms of stated objectives, scales and indices used for measurement with the help of the above analysis and interpretation the following conclusion can be drawn.

- a) Conceptualization of the phenomenon of stress is yet to be matured and needs more studies.
- b) The foundation for application studies is yet to be adequately laid as
 - i) Quantification of the cost of stress is still neglected.
 - ii) Quantification of expected benefits from intervention effects has still been ignored.
 - iii) Techniques for the measurement of stress are still to be attained with a sufficient degree of accuracy and reliability.
 - iv) Effect indices for stress measurement are far from being well-developed.

We are, however, optimistic that in the coming years, stress research will attain maturity to address the above issues.

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