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Healthy Working Environment in Accounting firms: Ergonomic Solution

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Abstract - Ergonomicstries to combine the physical attributes of person to the physical environment he/she works in.Ergonomics is derived from the Greek word *ergon* which means *work*, and *nomoi* which means *natural laws*. It is the science of changing the design of products to make them fit for human use. Human characteristics, such as weight, height, and proportions are considered, as well as sight, hearing, temperature etc. Ergonomics is also known as human factors engineering.

In an accounting firm computers and related products, such as computer desks and chairs, are the items considered for ergonomic design. Most of us use these products for extended periods of time throughout our work life. The person using them may suffer unnecessary fatigue, stress, and even injury, if these products are poorly designed or improperly adjusted for human use. There is enough research pointing out at the drawbacks of poor ergonomics leading to physical discomfort and musculoskeletal disorders, especially in the construction, medical care and manufacturing sector, there is a wide scope for research in accounting and auditing firms in India.

This paper is an attempt to collate information published in journals/blogs/articles etc by researchers, practioners and ergonomics experts. The paper is an attempt to reiterate the belief that an ergonomically sound workspace does affect the physical and mental wellbeing of accountants.

Keywords: Ergonomics, Accountants/Auditors, workspace, working conditions, physical and mental well being

I. INTRODUCTION

A pleasant and healthy work place needs to be properly regulated and organized. The intention to change the work space to psychophysical abilities of the people is in vogue. More than just adapting principles of OSHA, an integrated approach to workplace health-promotion programs should include attention to the ergonomics. Ergonomics helps in designing good workplaces that not only reduce injury risks but also enhance health and capacity of workers.

An accountant's typical job requires them to sit while working. Unsuitable seating arrangement can lead to back pain and upper limb discomfort. This may lead to absenteeism and lower productivity. Accounting errors are too costly to recover. A zero before a number may be insignificant but every zero succeeding a number is very important for an accountant. They are responsible for every rupee they debit or credit. This may be monotonous and unengaging. An ergonomically poor chair, table, mouse and keypad will only worsen the accountant's misery. While it sounds outlandish to expect employees bring a chair or a table that suits their body type, it's Definitely not wrong if employees expect companies to take care of it.

Right from our childhood we have been brought up by notions like sitting upright, having an organized study table with good lighting, and studying one subject at a time makes us better students. Surprisingly these lessons are often forgotten when we join companies where working on deadlines, hectic weekends and the never-ending auditing season bogs accountants.

II. LITERATURE REVIEW

Accounting firms are known for their "busy season," when accountants work for more than ten hours per day and an extended period, sometimes for several months leading to excessive stress. During the busy season, accountants face frequent and demanding deadlines, causing conflict between work and family responsibilities, and little or no time for any leisure activities (Fogarty et al. 2000; Sanders et al. 1995; Friedman et al. 1958). Sarbanes-Oxley Act of 2002 regulations added to this problem. Lee (2007) pointed out increased capital market activity IPOs, mergers and acquisitions, etc. , as well as the economic downturns and recovery, require constant attention to professional accountants' services. Carpenter and Hock (2008) argue that an entry-level employee must find time to study for the CPA exam, which one must pass to continue employment

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as a public accountant. They observe fewer individuals taking up this exam due to the multiple demands on their time, and link decline in the number of accountants appearing for the exam to fewer professionally qualified individuals for public accounting firms. Figler(1980)feels public accountants are trained to be critical and many bring work-related stress home from the workplace, which leads to additional interpersonal stress. A PwC study in 2004, concurred with the above findings.

A great deal of frustration among employees and seniors with the hours in public accounting, as well as the unpredictable nature of the schedule was found in a study by Church (2014). Likewise, Dalton, Buchheit, and McMillan (2014) argued that ‘‘students who plan to pursue careers in tax perceive that they will have a more stable daily routine if they work in tax as opposed to working in audit.’’ Thus, there are concerns about the day-to-day workload and the predictability of one’s schedule.

Straker and Mathiassen (2009) in their work sight that sedentary occupations and technology developments have resulted in low physical workloads for many employees. They believe insufficient physical stress is known to have detrimental short- and long-term effects on health and physical capacity. They argue that many modern workers are at risk of insufficient physical workload. They are of the opinion that the traditional physical ergonomics paradigm of reducing risk by reducing physical loads is not applicable for modern occupations where technology has reduced the need for physical work. They proposeda new paradigmwhere ‘more can be better’. They express concerns that a majority of workers in jobs which are sedentary in nature, now face the significant threat to health due insufficient physical workload. They think ergonomics can design a workspace that can not just reduce injury risk but enhance health and capacity. The rise of an information driven economy has been accompanied by an increase in tasks focused around sitting at a computer. As per statistics from Australian Bureau of Statistics, 43% of Australian businesses used computers in 2003 but this has increased to 83% by 2014.

Klucharev et al. (2000) and Hjortskov et al. (2004) state that a sedentary office work in general, and computer work, is associated with low physical stresses, thereby less physical activity. Another recent study by Arvidsson et al. 2006 on air traffic controllers using a computer-based communication system found almost 50% of the working time was spent with least physical movement. Sweeney and Summers(2002) found significant increase in public accountants’ burnout during the busy season and established high level of emotional exhaustion felt by their sample of public accountants at the end of the busy season.

Anshel (2005)The visual requirements for computing are different from what is required for normal viewing Working with avideo display terminal (VDT) screen at an awkward angle of view and distance is an adaptation our visual system hasto make.As computer usage becomes more common and becomesstandard of operation, the problems associated with it will only increase. It may start with a simple eye strain and may lead to serious vision problems. While input device is found to make our entries easier (e.g., voice activation), the output of computers will always involve the visual system.Ergonomic furniture, monitor placement, mouse dimensions, proper lighting, body posturing, and many other factors must be considered while designing a work station.

Literature is abundant when it comes to research highlighting the challenges of a public accounting firm. The work of an accountant has long been known to be a very demanding profession, with frequent concerns raised about employee stress, burnout, and turnover. While the physiological and psychological health problems associated with sedentary office work are well documented, their solutions remain elusive.

However, it is quite surprising that Edelson and Danoffz,way back in 1989 conducted an experiment with employees working on VDT. They came up with an interesting conclusion that “treadmill walking and routine word processing can be performed concurrently without a decrement in work performance, and that certain physiological and psychological benefits may result.” To convince them of their studies health researchers (Haskell 1985, Mason and Powell 1985, Rosch 1985) emphasised the physical and psychological benefits of walking and similar long term, low-intensity physical activities. Similar studies suggested that slow-paced walking should not interfere with keyboard typing or similar operations (Ogden 1979, R. Smith 1981, Reilly 1986, Winkel and Jorgensen 1986).

Suggestions to overcome problems of physical inactivity at workplace, include allowing workers to perform a variety of exercises while seated in their chairs, and advising them to take frequent breaks away from their desks (M. Smith et al 1981, Hunting 1984, Sauter et al 1984, Winkel & Jorgensen 1986). ButCorlett (1983) finds workers feel awkward and to engage in chairbound exercises, also their work situations often prevent them from leaving their monitors and keyboards for longperiods, to recover from postural strains.

As far as hardware is concerned, a variety of "ergonomic" furniture has been developed which, produces significant benefits when used correctly as claimed in a certain study by Shute and Starr (1984). Positive steps in the direction of reducing burnout among accountants, such as flexible work arrangements and hiring part-time employees, with the objective of reducing overwork and turnover (Collins & Killough 1989; Shellenbarger 1998) has been initiated by few companies.

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It is heartening to note that theoretical explanations exist with some attention focused on ways to mitigate factors that lead to physical and psychological problems that may arise due to sedentary work life (Hermanson, Hill, & Ivancevich 2009; Kalbers & Cenker 2007; Sweeney &Summers 2002; Almer & Kaplan 2002; Fogarty, Singh, Rhoads, & Moore 2000). Sweeney and Summers(2002) suggest reducing or capping the extra hours worked by public accountants during busy season to control burnout and its undesired consequences but express concern, as reductions in the busy season workload may be difficult due to fee pressures resulting from the competitive nature of public accounting and an environment that has accepted and practised a "workaholic" culture.

A number of factors are responsible for visual strain as reported in studies like, Rechichi et al., (1996)weekly time spent using computers, Bergqvist and Knave(1994) computer display location and orientation. Sommerich(2002) in a study of desktop and notebook computer-using professionals found that eye discomfort was the most common body part where respondents reported discomfort. 76% percent of the participants reported they suffered some sort of eye discomfort in the 12 months preceding the study, surprisingly 68% of those who experienced eye discomfort complained that on-the-job activities made their eye discomfort worse. Cole (2003) found that in appropriate lighting and glare and other environmental factors (such as dust or dry air) will cause eye strain.

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Sommerich(2005) suggested designing the work space to allow for variation in work postures, optimization of workload and variety of different tasks may be useful in reducing eye strain.Appropriate illumination is important, and it should be evaluated for each task as the relationship between illumination on the task and performance achieved will vary according to the type of task (Boyce & Simons, 1977). They also revealed the effect of veiling reflections and the complexity of the task and concluded its significant effect on job performance. Lighting is one of the greatest factors in the work environment which causes vision discomfort for computer users. It is not just the amount of light but what is also important is light distribution. Sheedy(2005) suggested that a good light distribution is accomplished when all the objects in the field of view have approximately equal brightness. The author is of the opinion that bright lights or windows are common offending sources and cause discomfort.

Blais(2005) suggested few ways to reduce glare on VDT screens, such as • Placing visual display terminals out of direct line with or facing windows • Using window films and coverings • Using dull, textured surfaces • Using indirect lighting • Using eye shades, among others. Some of the recent studies have added additional insights into the work environment in public accounting. Jones, Norman, and Wier (2010) posit the role of a healthy lifestyle in coping with the stress of public accounting. They suggest a healthy lifestyle to overcome negative consequences of role stress and burnout. Her da and Lavelle (2012) while establishing the relation of organizational fairness with burnout and turnover intentions, claim that greater fairness is associated with a lower incidence of burnout and reduced intention to leave the firm. Kacjan and Govekar (2016) opine that an ergonomically sound working environment is the responsibility of the employer. They believe that accounting firms are aware of the problem of overload in the work space and are taking care of the realignment, improvements, and appropriate measures. "We spend a great part of our life at the workplace, therefore, it is important that the work conditions are good and the work itself does not pose a risk to health." Conclude the authors.

III. METHODOLOGY

A systematic literature review was undertaken where the researcher tried to synthesise a lot of small studies related to the impact of physical elements of a workplace on healthy lifestyles of employees. While it is interesting to note that the literature available becomes the population, the researcher had to identify a methodology to review the ones relevant to the theme. An attempt was made to first screen all the articles based on keywords. The keywords used were ergonomics, healthy workspace and auditing firms.

The search primarily focussed on work environment of auditing and accounting firms. Though an attempt was made to select articles related to auditing firms in India, authentic studies related to Big 5 accounting firms were available forcing the researcher to relax the norm for selecting India specific research articles.

While the inclusion criteria were match with keywords as stated, exclusion criteria was research based on other industries, owing to a seemingly large set of data available regarding ergonomics issues in manufacturing, construction and medical fields. To avoid any bias based on the notion of "recent study is only relevant" the researcher attempted

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to collate articles across different timelines. Some articles though relevant had to be left out owing to access or copyright issues, while a few had limited access through a hefty payment. Since access to databases like ProQuest and EBSCO were available via institutional access, researcher could improve the quality of review thoroughly.

IV. DISCUSSION

The literature aims to profess the link between changes in physical environment such as light, sound, air quality etc leading to a healthy work environment While it is evident from the review that ergonomically sound office boosts employee wellbeing, the results are likely to pave way for a deliberate effort by companies to bring about meaningful changes in the workplace. Interestingly the outcome is likely to be a validation of what corporates tend to do as part of redesigning workspace as though it is a 'matter of fact'. These findings are expected to lead to policy decisions by the participating firms, thereby adding value to the researcher's work. Subscribing to the researcher's findings and suggestions stands as a testimony to the usefulness of the research undertaken.

Edelson, N., &Danoffz, J (1989) gave a treadmill walking suggestion as highlighted in the literature review, they give a clarion call to consider"activation" of other currently sedentary regimens of modem life. They go ahead and conclude "If homo sapiens is to avoid becoming homo sedans, the development of a variety of active alternatives to our increasingly chair-bound behaviours may well be necessary."

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V. CONCLUSION

While there is no discounting the physical and mental exhaustion auditors face, there is hope in some sort of physical exercise as suggested in the review. Theaimof ergonomics is to protect employee's health. While physical ergonomics aimed at realising this aim by eliminating high physical workloads, lack of physical activity is found to be a major health threat for many workers, thereby prompting further research into the realms of ergonomically sound workspaces providing minimum physical stress to avoid sedentary work styles.

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