

Occupational hazards and obesity in India- a public health menaces

Mohammad Ehteshamuddin^{1*}, Dr. Vijayendra Gupta

ABSTRACT

There are discrete evidences coming across the country that obesity and overweight has significant relation with adverse work conditions which is further origin of many diseases. An employee with any form of ailment may not be able to contribute significantly in the productivity of companies and therefore it may affect the country economy adversely. In India, globalization has created new paradigm in organizational culture. Prolonged working hours at workplaces, work stress and sedentary lifestyle to achieve the organizational targets has become the part of the day for employees especially working in corporate sectors. By doing this study, researcher wanted to understand the organizational behavior and available facilities to identify the occupational hazards which is contributing to overweight and obesity, which further become basis of a range of other non-communicable diseases. In this study, Researcher has tried to measure the sociodemographic, workplace related variables and health of the workers of the multinational companies working mostly in metro cities. Two stage sampling method was adopted to identify the samples on set inclusion criteria. A quantitative questionnaire was developed with three points Likert scale to assess the satisfaction level of employees. Findings of the study suggested that there is significant relation among the organizational behavior and available facilities with the overall wellbeing of the employees. Stress has been found significant among major percentage of employees which become basis for overweight and obesity in long run. Findings of this study will also help the policy makers, public and private organizations to revisit their organizational human resource policy and develop employee friendly organizational facilities which will further help in advancing the productivity. Since the Indian company has employee of diverse background therefore further study is also required to strengthen the findings and understand the new dimensions of organization and workforce behavior.

Keywords: *Obesity, Overweight, Organizational Behavior, Occupational Hazards, workplace Stress, Workload, Workplace Relationship, Public Health*

Worldwide, at least 2.8 million people die every year because of being overweight or obese. 13% of the world's adult population (11% of men and 15% of women) were obese in 2014.

¹Research Scholar, School of Management Studies, Sangam University, Rajasthan, India

² Research Guide, Associate Professor, Sangam University, Rajasthan, India

*Responding Author

Received: January 9, 2020; Revision Received: January 30, 2020; Accepted: February 10, 2020

Occupational hazards and obesity in India- a public health menaces

Lancet findings also say India is just behind the USA and China in global hazard list of top 10 nations with maximum number of obese people. They account for 38 million deaths in 2012, and the same number is expected to go 52 million by 2030.

Globalization has contributed significantly in economic growth of the country and introduction of new companies has created plenty of jobs where employees spending 60-70% of their time in offices. An Australian study shows that working adults spent up to one half of the workday sitting down suggesting occupational sitting is one of the key contributor to the total daily sitting time (Brown WJ, 2003). During the job hours, sitting for prolonged hours adversely affecting the body which is not wired to be shiftless. Lack of movement slows digestion process by reducing the amount of food that is converted to energy and thus promoting fat accumulation results into overweight and obesity which further leads to many non-communicable diseases like diabetes, cardiovascular disease, sleep apnea and arthritis.

Indian Council for Research on International Economic Relations says that although India's economic boom has brought rise in corporate profits and higher incomes for employees, which has also led to increase in workplace stress and lifestyle diseases. ASSOCHAM'S corporate employees' survey result says, 36%t of the sample population are suffering from obesity which is itself a risk factor for corporate employee working in sitting condition. Workers in office sit for 10 hours a day on average basis and spent these hours into the computer screens, making calls, writing proposals. And even at home there are significant hours spent, sitting in front of the TV or idle.

A private firm, Bajaj Allianz General Insurance Company conducted a survey with 1100 working professionals in the age group of 23-35 years in New Delhi, Mumbai, Kolkata, Chennai, Bengaluru, Pune, Hyderabad, Gurgaon and Goa. This study reported that, 45% of young professionals suffer from some kind of lifestyle disorder. The most widespread problem was chronic body pain (40%), obesity (20%). In the past two decades, research on workplace psychosocial risk factors has produced a range of theoretical and empirical research (Theorell, T., 2000). An extensive range of health end points, especially cardiovascular diseases have been associated with the psychosocial work environment.

Organizational behavior helps companies to design the strategies to create an enabling work environment specific to the situation. Study on organizational behavior examines people's beliefs and actions in order to improve the work environment and quality of work produced.

Research Problem

Journal of sports science published (Ross SE, 2016) a paper and said, currently no consensus exists across published literature reviews regarding the primary cause of the obesity and more research using advance measurement system is necessary. In context of organization behavior, there is also a gap in terms of studies, how corporate companies are creating enabling environment for their employees to adopt healthy habits, highlighted in a study (Jans MP, 2007), conducted in Netherlands where employees sit on average 7 hours in a day on and off the working place. On the other hand, in a systematic review, (Van Uffelen et al. 2010) found limited evidence on adverse association between occupational sitting and different health outcomes. Since Indian employee working in same company comes from very diverse background, proposed study was designed to understand how organizational behavior affecting the health of the employees. Most interventions target behaviors of individual or in grouping with selected variables like physical environment in the community but seldom involve modifications of the work environment in companies. Seeing the diverse workforce

Occupational hazards and obesity in India- a public health menaces

employed in multinational and national companies in India, research tried to find out if the identified risk factors are still prevalence in companies and contributing to overweight and obesity. Much researches have shown that stress can affect lifestyle choices and health behaviors such as food consumption and physical activity (Wardle J, Chida Y, Gibson EL, Whitaker KL, Steptoe A, 2011), leading to overweight and obesity. Although the relationship between work stress and weight gain is not fully understood (Caban AJ, Lee DJ, Fleming LE, Gomez-Marin O, LeBlanc W, Pitman T, 2005), there is a scope for future research to identify the sources of stress that may affect weight gain and the overall well-being of employees in stressful workplaces (Senol-Durak E, Durak M, Gencoz T, 2006).

LITERATURE REVIEW

Corporate employees are surviving in inflexible global competitive environment and maintain sedentary lifestyle to save their jobs and add pressure on their health. Due to increasing technological developments, work has become less physical and more mentally demanding, thereby often being more sedentary, most of the workforce sits throughout the day (Church TS, 2011). Optum's studied a sample size of 200,000 employees and found that prolonged sitting has adversely affecting the health of employees and nation's economy as well. Around 30 million people are overweight or obese in India and the direct and indirect cost of obesity-associated conditions in India is estimated to be nearly \$13 billion by 2025. Obesity which contributes to higher levels of cancer, heart disease and diabetes, and has been shown to limit substantially a person's ability to work. The stress can occur specifically when there is a battle between the employees and the demands at work places of the employees. Stress becomes suffering in such states when the employees has little control over this (Murphy L. R., (1995),. Stress at workplaces include depression, persistent anxiety, pessimism and resentment. The adverse impact of these symptoms in organizations are significant because these symptoms lead to disabling environment at workplace, low morale, interpersonal conflict, increased benefit expenses, decreased productivity, and increased absenteeism, (Colligns Thomas W. and Higgins Eileen M., 2005). Work stress is also known to aggravate risk of chronic conditions such as obesity (Au, Hauck, & Hollingsworth, 2013; Brunner, Chandola, & Marmot, 2007; Schulte et al., 2007), cardiovascular disease (Gilbert-Ouimet, Trudel, Brisson, Milot, & Vézina, 2014; Kivimaki et al., 2006), diabetes (Nyberg et al., 2014), anxiety, and depression (Griffin, Greiner, Stansfeld, & Marmot, 2007). Various studies highlighted, how stressful working conditions can impact food choices and dietary patterns of employee and it leads to limited leisure-time. When researcher reviewed the literature on workers relationship, it is found that trends in the modern workplace, such as decentralization and work teams, require more interaction, cooperation, and information transfer between co-workers (Griffin, M.A., Neal, A. and Parker, S. K., 2007) . As a result, the new working conditions require more horizontal trust between co-workers. Horizontal trust is also needed for knowledge acquisition and dissemination processes (Loon, Hoe S., 2007).

In a range of literatures, relationship between working environment and obesity has been defended and said physical working conditions are closely linked with employee's health and sedentary jobs may lead to a higher incidence of obesity (Pratt CA, Lemon SC, Fernandez ID, et al. 2007). Stretched working hours affect the health behaviors of employees and their families (Devine CM, Farrell TJ, Blake CE, et al.,2009) also. Workers exposed to long working hours or shift work, or who have multiple jobs, have little available time for family dinners and tend to consume calorie-rich fast foods which leads to increased risk of obesity for workers, (Allen TD, Shockley KM, Poteat LF., 2008). Job stress and stress responses are

Occupational hazards and obesity in India- a public health menaces

associated with high body mass index, as stress generated in low-control, high-demand work environments influences food choices and eating patterns, (Schulte PA, Wagner GR, Ostry A, et al.,2007). The workplace food environment affects the food choice of employee and workers are bound to consume according to availability and the nutritional quality of meals at work depends on the accessibility of healthy foods and workplace eating facilities, (Blanck HM, Yaroch AL, Atienza AA, et al., 2009).

In proposed study, to identify the study variables, research has gone through various literatures and identified three major variables highlighted below in Section (A,) need to be explored in context of Indian workforce and companies. The McKinsey Global Institute (MGI, 2014) has also studied 74 interventions to address obesity in 18 areas that has been discussed or piloted somewhere around the world has also highlighted that employees with particularly increased BMI can be less productive in the workplace due to the range of health problems that obesity can cause, including, for example, arthritis, fatigue, breathlessness, lack of concentration, and depression,(Eric A. Finkelstein et al., 2010). There is evidence available on relationship between obesity and absenteeism at workplace for health-related issues, including frequent medical checkups,(L. A. Tucker and G. M. Friedman, 2007). McKinsey Global Institute has also identified workplace wellness as one of the lever to counter obesity.

Overall If the organizational Behaviour is seen, there are several meta-analyses support that organizational commitment is positively related to performance (Mathieu & Zajac, 1990; Ricketta, 2002; Wright & Bonett, 2002) and organizational citizenship behavior (Organ & Ryan, 1995). Commitment has also been found to be negatively related to tardiness, absenteeism, and turnover (Harrison et al., 2006). In another study, N. J. Allen and Meyer, (1990), it was highlighted that employees with strong emotional commitment remains with the organization because they want to, but those with a strong endurance commitment stays because they need to, and those with strong normative commitment stay because they feel they should to.

Section A. Questionnaire Variables

- a) Socio Demographic Data
- b) Psychosocial and Occupational Hazards at work place
- c) Health Determinants

Objectives Of the study

1. To measure risk factors among working adults associated with Obesity in Indian multinational companies.
2. To measure the occupational hazards in Indian multinational companies causing health problems.

RESEARCH METHODOLOGY

An exploratory study was designed where respondents were recruited through two stage sampling method. A sample frame of 400 corporate employees identified through set inclusion criteria given below in section (B). In second stage of sampling, 200 sample units were selected randomly from the sampling frame of 400 Units. After minimizing the data of 20 respondents shared invalid responses, sets of 180 samples were evaluated through Descriptive statistical tool. These 200 sample units were part of multinational companies and mostly working in range of executive level to senior management level. A questionnaires based on 3 points Likert scale was designed using standard WHO questionnaire of the Global

Occupational hazards and obesity in India- a public health menaces

Physical Activity Questionnaire (GPAQ, WHO) as reference. The questions were piloted to see if the same can be used as part of Ph.D. questionnaire in large scale study. Another standard questionnaires (Giovanna Turconito, et.al, 2008) were also used to measure the level of knowledge, practice of the organization and workforces.

Section B: Inclusion Criteria for first stage sampling

- a) Respondent working in corporate sectors
- b) Respondent having sitting job profile
- c) Respondent in age group of more than 20 years

Findings of the Study

Socio demographic data

Out of total 180 respondents, 69% were male participants while 31% were female. Around 47% of the participants, researcher received in random selection were in age group of 31-40 years. Total 20% of the respondents were not married and has 0-5 years of work experience. All the participates were working in multinational companies related to IT/ITs, Consulting Firms, Management firms and International NGOs. Around 54% participants were post graduate and has done MBA, PGDBM, M.Tech and other master's degrees. Out of total respondents, when asked about the working cities, around 62% were working in metro cities.

Table 1: Demographic Distribution

| Demographic Characteristics (N = 180) | | No. | % |
|--|-------------------------|------------|----------|
| Gender | | | |
| | Male | 124 | 69% |
| | Female | 56 | 31% |
| Age | | | |
| | 20-30 Years | 69 | 38% |
| | 31- 40 Years | 85 | 47% |
| | More than 45 Years | 26 | 15% |
| Marital Status | | | |
| | Married | 145 | 80% |
| | Not Married | 35 | 20% |
| Education Level | | | |
| | Graduate (10+2+3/4) | 72 | 40% |
| | Post Graduate (Masters) | 97 | 54% |
| | M.Phil./Ph.D. | 11 | 06% |
| Work Experience (Years) | | | |
| | 0-5 Years | 65 | 36% |
| | 5- 10 Years | 73 | 40% |
| | More than 10 Years | 42 | 24% |
| Working Cities | | | |
| | Metro City | 112 | 62% |
| | Non-Metro City | 68 | 38% |

Psychosocial and Occupational Hazards at workplace

Work-related stress has the potential to negatively affect an individual's psychological and physical health, as well as an organization's effectiveness. Therefore, it is recognized world-wide as a major challenge to workers' health and the health of their organizations. In this study, researchers explored the four variables named work scheduling, workload and ergonomic facilities. Apart from this researcher also explored the context in which work

Occupational hazards and obesity in India- a public health menaces

occurs like the relationship and interactions with management, supervisors and sub ordinates or clients called as workplace relationships. Researcher has explored the respondents on 3-point Likert scale on selected variables identified from the WHO report (Leka S., 2003) and reached to following conclusions.

Table 2: % response calculation on 3 points Likert scale, Work Scheduling, Workload, Ergonomic Facilities.

| Area of enquiry (N = 180) | Satisfied | Neutral | Dissatisfied |
|--|-----------|---------|--------------|
| | % | % | % |
| Do you feel convenient working for shift-based job? | 43 | 9 | 48 |
| Are you satisfied with the shift-based jobs? | 57 | 11 | 32 |
| Are you satisfied with equal or more than 2 hours extra working in office? | 63 | 8 | 29 |
| Do you feel stressed when not delivering the work on deadline to supervisor? | 73 | 4 | 23 |
| How you rate the ergonomic facility at your work space (Chair, Leg Space and Table arrangement)? | 62 | 10 | 28 |
| How you rate the cafeteria facility in your office space? | 6 | 13 | 81 |
| How you rate the Yoga/Indoor game/Gym facility in your office space? | 1 | 14 | 85 |
| How you rate company's health and safety policy and program implemented as per plan.? | 8 | 14 | 78 |

Work Scheduling

67% respondents reported, working in shift works. Organization has rotation policy and employee agreeing to the slots, adhere to the plan. However, organizations have flexibility to shift the employee in different slots after mutual consent. Out of 67% respondents working in shifts, 43% reported convenient for the employee while 48% says, not convenient. On Likert scale 57% were satisfied with the shifts jobs while 32% were dissatisfied. 11% of the respondents have chosen neutral response.

Workload and Work Pressure

Employee stays for more than stipulated working hours in office. While exploring 76% reported that they spent equal or more than 2 extra working hours in office at least 3 days in a week. On Likert Scale, out of those who spent extra hours in office, 63% where satisfied and 29% dissatisfied. Only 8 % of them chosen neutral response. On exploration, it came out that organization offers incentives and perks for extra working hours. Respondents have also highlighted that introducing new work practices and technology without sufficient orientation is also one of the core reason of work pressure. For the delivery of work on deadlines, 73% respondents feel stressed. While asking what else causes you to get stressed at work, responses were very asymmetrical. Workload, Time pressures and deadlines, unplanned work, Lack of job security, Unable to satisfy all stakeholders at work were among the key reasons of stress.

Ergonomic Facilities

Inappropriately adjusted office chairs and tables lead to back ache and neck pain and long term sitting in similar fashion causes permanent back or disc damage. Globally every 10th sick leave applied is attributed to Lumbago. In India, researcher explored the ergonomic facilities at work and asked the satisfaction level. Around 62% respondents were satisfied with the infrastructure available for the employee. Those who were dissatisfied explained that the organizations have no standard sitting arrangements in terms of no optimal height of chair and desk and small Partitions with no Leg space adversely affecting the health. On exploration it is also found that 81% of the dissatisfied respondents expressed disappointment over the cafeteria within office. After exploration it has come that the cafeteria only offers tea/coffee, snacks and burger, patties, samosa etc. There is no provision of healthy food in cafeteria. While asking on the facilities like yoga/indoor games within the office premises, 85% reported No. Among 15%, it was noticed that the organization has given the liberty to walk around as per choice or have space to play indoor games.

Workplace Relationships

It is essential to create and sustain an organizational climate that optimizes overall growth and enables harmonious employee relations. This in turn will promote and sustain industrial growth by improving workforce productivity and generate revenue for the company and customer satisfaction as well. Trust is important in business environments because reinforces and strengthens intra-organizational and inter-organizational relationships (Svensson, G., 2005). In this century of globalization, working conditions require more horizontal trust between co-workers. Horizontal trust is also needed for knowledge acquisition and dissemination processes (Loon, Hoe S., 2007). Existing studies showed that employees feel vulnerable because they must rely on their managers for work assignments, performance evaluations, and promotions (Knoll, D. L. and Gill, H., 2011). Recent studies also showed that managers feel vulnerable because they must rely on their employees to complete work tasks (Dirks, K. T. and Ferrin, D. L., 2002). Managers share responsibility for incomplete work tasks. Incomplete work tasks affect the managers' performance evaluations, pay, and reputations (Schoorman, F. D., Mayer, R. C. and Davis, J. H., 2007). Here the role of Organizational behaviors plays a significant role in prompting the cohesive behaviors among employees. When researcher explored on workplace relationships in this research, findings suggest that majority (around 50%) of the respondents were not satisfied with the environment of workplace relationship. Average 43% of the workforce were dissatisfied with the supervisors- sub ordinate relationship and management role. However, 64% reported that they have very cordial relations among coworkers. Only 27% respondents said that company organizes any team/social building programmes in office or outside.

Table 3: % response calculation on 3 points Likert scale, Workplace Relationship

| Area of enquiry (N = 180) | Satisfied % | Neutral % | Dissatisfied % |
|--|--------------------|------------------|-----------------------|
| I am satisfied with the amount of resources given for job completion | 38 | 17 | 45 |
| Organization offers new opportunity to improve new skills | 47 | 12 | 41 |
| My management is fair and reasonable. | 21 | 35 | 44 |
| I get feedback consistently at work for improvement | 32 | 10 | 58 |

Occupational hazards and obesity in India- a public health menaces

| Area of enquiry (N = 180) | Satisfied % | Neutral % | Dissatisfied % |
|---|----------------|--------------|-------------------|
| Co-Workers respect each other's opinions and values. | 64 | 11 | 25 |
| I get a sense of satisfaction from the work I do. | 26 | 29 | 55 |
| I get substantial support from the manager in completion of work. | 37 | 21 | 42 |
| Organization have efficient performance appraisal system | 25 | 14 | 61 |
| Organization circulates Health tips communication for employee | 8 | 10 | 82 |
| Organization arranges team/social building initiatives time to time | 27 | 19 | 54 |

Organization also requires stringent communication system to inform and educate the employee on various aspects formally and informally other than the technical training programmes. Researcher tried to understand in this study whether companies have a communication system (email/messaging/call/others) to educate the employee. 82% respondents reported there is no communication, employee receives on health and safety aspects. Only 39% of the respondents said the company has visuals in the office to highlight the health and safety among the employee. Only 8% employee reported that receive weekly/daily email on health and safety related topics through internal email. On exploration, 89% respondents said the company has health and safety policy, but adherence is limited. On Likert scale, 78% of the respondents expressed dissatisfaction in company's health and safety program implementation plan.

Health determinants

In this section, researcher has identified a set of variables to explore with the respondents, how this is affecting the health of the employee directly or indirectly.

Disease or signs of disease

Researcher has also explored if the respondent has developed any ailment or related signs during the professional working period. On multiple response option (Table-1), 32% reported about eye problems, 57% about overweight/obesity, 81% says about any form of stress. 75% reported gastric problem while less than 30% respondent reported about cervical and arthritis problem. Researcher has also collected data on smoking and drinking habits and 42% of the respondents found smoking everyday frequently while 22% said occasionally. Almost similar percentage 26% were among non-smokers. Around drinking habits, only 17% expressed that they drink frequently (At least once in a month), while 52% reported that they drink occasionally, and 31% respondents were among non-consumer. On exploration with frequent smoker and drinker, it has come out that work stress is one of the key reason, takes towards the addiction which is further becoming risk factors for obesity and other disease.

Table 4: % calculation of disease or signs of disease respondent suffered during employment

| Types of problem respondent reported | % of respondents (N=180) |
|--------------------------------------|--------------------------|
| Cervical problem | 29% |
| Arthritis | 21% |
| Overweight/Obesity | 57% |
| Eye related ailment | 32% |
| Wrist problem | 22% |
| Gastric problem | 75% |
| Any form stress | 81% |
| Heart disease/Blood pressure | 49% |

For stressed employees (81%), researcher explored with them and highlighted the findings in sequence ranking in Table-5. Once employee get stressed at work, majority of them start taking frequent tea, cigarette or any other food items to relieve the stress. Around 49% reported that they withdraw to put extra efforts. Absenteeism and job insecurity were also the consequences of stress. Increasingly, evidence suggests overweight and obesity risk may be related to high demand, low-control work environments and extended work hours. High-stressed employees often report poor eating habits, low level of physical activity, smoking/alcohol use and weight gain, (Winick C, Rothacker DQ, Norman RL 2002).

Question: When you get stressed at workplace, what affects you more?

Table 5: % calculation of disease or signs of disease respondent suffered during employment

| Index | Sequence Ranking (N=180) |
|--|--------------------------|
| Increased Tea, Cigarette or food consumption | 52% |
| Limited engagement at work | 49% |
| Increased absenteeism | 37% |
| Leaving the job | 12% |
| Argument with Supervisors | 6% |
| Premature retirement plan | 12% |

Dietary habits

The study analyzed the data on dietary habits of employee and found that during the week days, 86% of them consumes only one complete meal in form of dinner. Out of total respondents, 71% rely on the office cafeteria, local dhaba or restaurants for lunch or dinner during working hours. Out of these eaters, 81% said they eat some snacks, Paratha or some stuffed items. 81% respondent reported that the office cafeteria does not carry the health friendly diets. There is only option of tea/coffee or chips, chowmin, petties or burgers. Respondents who reported stress

Physical Activity

Researcher has also explored, how professionals are getting time to do physical activities and out of total respondents, 72% reported that they do not exercise even for half an hour in a months' time. Only 12% reported, doing half an hour moderate to intense physical activity five times a week. Around 16% of the respondents said they do exercise occasionally sometime indoor and outdoor. Asking about the average 5 minutes break every 2 hours (such as standing up or stretching or taking a short walk) at work, 38% respondents said yes while

Occupational hazards and obesity in India- a public health menaces

35% says no break on every 2 hours. 27% respondents said they take break as and when feel required. On exploration, around 41% of the respondents shared that they do not get time to go to any facility like gym, park due to work pressure, as they work during night or early morning also through laptops. These 41% were mostly mid or senior management professionals.

DISCUSSION

In addition to the direct adverse effect, obesity also generates indirect costs for employers by increasing workers' compensation claims and related lost workdays (Osbye, Dement, and Krause 2007), absenteeism (Finkelstein, Fiebelkorn, and Wang 2005; Ricci and Chee 2005), presenteeism (Ricci and Chee 2005), and disability in people aged fifty to sixty-nine (Sturm, Ringel, and Andreyeva 2004). In this study it was also reported that travelling to work is problem for majority of the employee. Most employers do not routinely measure presenteeism (a self-reported measure of diminished on-the-job work performance due to health or life problems), although acceptance of it as a concept is growing (Hemp 2004). Even without counting the cost of presenteeism, however, productivity costs attributable to obesity are significant. Indeed, analysts believe that the indirect costs of obesity may be greater than the direct medical costs (Wolf and Colditz 1998). This study has also come up with findings that facilities like yoga/indoor games within the office premises were not available as reported by 85% of the respondents.

When we see this research, work stress and workload are the key variables causing a range of problem for the employees. According to the U.S. National Institute for Occupational Safety and Health, job stress is defined as “the harmful physical and emotional responses that occur when the requirements of a job do not match the capabilities, resources, or needs of the worker.” Such stressors can affect both physical and mental health through the acceptance and practice of unfavorable lifestyle behaviors consequently increasing the risk for weight gain and obesity (Fernandez ID, Su H, Winters PC, Liang H,2010). Much research has shown that stress can affect lifestyle choices and health behaviors such as food consumption and physical activity (Wardle J, Chida Y, Gibson EL, Whitaker KL, Steptoe A,2011), leading to overweight and obesity. While doing literature review, researcher has found a literature highlighting the relationship between work stress and weight gain is not fully understood (Caban AJ, Lee DJ, Fleming LE, Gomez-Marin O, LeBlanc W, Pitman T, 2005) and scope for future research to explore the sources of stress that may affect weight gain and the overall well-being of employees in stressful workplaces (Senol-Durak E, Durak M, Gencoz T, 2006). In this study, researcher has created some evidences to support the fact that more than 80% of the employees were suffering from some types of stress and it became reason for multiple health problems in addition to eating and physical habits. Other findings were also available on limited mobility at workplace, due to strict security and HR policy in corporates, employees are often required to remain sedentary for long periods of time, with no opportunity to leave the facility to participate in any physical activity (Yamada Y, Ishizaki M, Truritani I, 2002) and sedentary lifestyle is also one of the obesity contributor. There this research significantly supports the fact the organizational behavior created occupational hazards which becomes the risk factors for causing obesity and further obesity become risk factors for multiple non communicable diseases.

Implications of the Study

Since India has diverse categories of workforce in various multinational companies and currently has limited research on the organizational behavior and its significant relation with the rise in obesity, this research aims to educate not only health practitioners but

Occupational hazards and obesity in India- a public health menaces

organizations as well whose having interest in improving the organizational behavior and the health of their workforce to increase work productivity. By doing the study, researcher has come up with the various factors related to the employees and organization which is adversely affecting the health of the employee and organization as well.

To motivate the employee, companies may use the findings to develop healthy and employee friendly organizational space, enabling environment and employee wellness programme. Employers many times lack the awareness, understanding, and experience that are required to design, implement, and evaluate a health promotion program within the workplace (Goetzl, 2001). This research has filled those gaps by providing key areas of improvement which can be used as general well ness programme however variables of this study can also be used to assess the employee satisfaction level about facility of the organization.

Providing good food facility in cafeteria, short breaks, good ergonomic facilities and low stressed working condition within the workplace can work wonder for increasing the productivity of the company. A healthy employee hardly uses health benefits provided by the company in terms of insurance and Medclaim, thus company can get benefitted though reduced health expenditure in terms of health insurance, less absenteeism and low productivity due to illness. At the same time, employees would get benefits of enabling working environment with no work stress, opportunity to innovate at work and support equally in the progress of the organization.

Way Forward

During the literature review, Research scholar has identified occupational hazards at workplaces in terms of workload, work stresses are among the risk factors for Obesity and in this study, a detailed research has been conducted with the diverse set of employees. Findings of this study supports the variables related to workplace occupation hazards cause overweight and obesity and further it leads to a range of non-communicable diseases. Among the range of risk factors causing obesity, stress triggered through numerous factors are more hazardous which can be reduced though systematic approach. Study created evidences that there is significant association between organizational Behaviour and employee health.

REFERENCES

- Allen TD, Shockley KM, Poteat LF. (2008), Workplace factors associated with family dinner behaviors. *J Vocat Behav*; 73: 336–342.
- Allen, N. J., & Meyer, J. P. (1990), The measurement and antecedents of affective, continuance and normative commitment to the organization. *Journal of Occupational and Organizational Psychology*, 63: 1-18.
- Benavides FG, B. J. (2002). Psychosocial risk factors at the workplace: is there enough evidence to establish reference values? . *Journal of Epidemiology & Community Health*, 244-245
- Biswas, A. O. (2015). Sedentary time and its association with risk for disease incidence, mortality, and hospitalization in adults: a systematic review and meta-analysis. *Ann. Intern. Med.*, 123–132.
- Blanck HM, Yaroch AL, Atienza AA, et al., (2009), Factors influencing lunchtime food choices among working Americans. *Health Educ Behav*; 36: 289–301.
- Brown WJ, Miller YD, Miller R. (2003). Sitting time and work patterns as indicators of overweight and obesity in Australian adults. *International Journal of obesity Related Metabolic Disorder* , 1340–1346.
- Butland, B. e. (2007). *Obesities: Future Choices*. Foresight, Government Office for Science.

Occupational hazards and obesity in India- a public health menaces

- Caban AJ, Lee DJ, Fleming LE, Gomez-Marin O, LeBlanc W, Pitman T (2005) Obesity in US workers: The National Health Interview Survey, 1986 to 2002. *Am J Public Health* 94: 1614-1622.
- Church TS, T. D.-L. (2011). Trends over 5 decades in U.S. occupation-related physical activity and their associations with obesity. *PloS*.
- Colligns Thomas W. and Higgins Eileen M., (2005), "Workplace Stress: Etiology and Consequences", *Journal of Workplace Behavioural Health*, Vol.: 21(2), Pp.: 1-10. 5.
- Costa G., 1996, "The Impact of Shift and Night Work on Health", *Applied Ergonomics*, 27(1), Pp.: 9-16
- Devine CM, Farrell TJ, Blake CE, et al.(2009), Work conditions and the food choice coping strategies of employed parents. *J Nutr Educ Behav*; 41: 365–370
- Dirks, K. T. and Ferrin, D. L., (2002), "Trust in leadership: meta-analytic findings and implications for research and practice," *Journal of Applied Psychology*, Vol. 87, No. 4, pp. 611-628
- Eric A. Finkelstein et al.,(2010),The costs of obesity in the workplace, *Journal of Occupational and Environmental Medicine*, volume 52, number.
- Fernandez ID, Su H, Winters PC, Liang H (2010) Association of workplace chronic and acute stressors with employee weight status: data from worksites in turmoil. *J Occup Environ Med* 1: S34-S41.
- Finkelstein, E.A., I.C. Fiebelkorn, and G. Wang, (2005). The Costs of Obesity among Full-Time Employees. *American Journal of Health Promotion* 20(1):45–51.
- Griffin, M.A., Neal, A. and Parker, S. K., (2007), "A new model of work role performance: positive behavior in uncertain and interdependent contexts," *Academy of Management Journal*, Vol. 52, No. 2, pp. 327-347.
- Harrison, D. A., Newman, D. A., & Roth, P. L. (2006), How important are job attitudes? Meta-analytic comparisons of integrative behavioral outcomes and time sequences. *Academy of Management Journal*, 49: 305-325.
- Heinen, L., & Darling, H. (2009). Addressing obesity in the workplace: the role of employers. *The Milbank quarterly*, 87(1), 101–122. doi:10.1111/j.1468-0009.2009.00549.x
- Hemp, P. (2004). Presenteeism: at Work—But Out of It. *Harvard Business Review* 82:49–58.
- Jans MP, P. K. (2007). Sedentary behavior in Dutch workers: differences between occupations and business sectors. *American Journal of Preventive Medicine*, 450–454.
- Knoll, D. L. and Gill, H., (2011), "Antecedents of trust in supervisors, subordinates, and peers," *Journal of Managerial Psychology*, Vol. 26, No. 4, pp. 313-330.
- L. A. Tucker and G. M. Friedman, (2007) "Obesity and absenteeism: An epidemiologic study of 10,825 employed adults," *American Journal of Health Promotion*, volume 12, number 3, January–February 1998; J. Cawley, J. A. Rizzo, and K. Haas, "Occupation-specific absenteeism costs associated with obesity and morbid obesity," *Journal of Occupational and Environmental Medicine*, volume 49, number 12.
- Leka, S., & Cox, T., (2008). *The European Framework for Psychosocial Risk Management*. Nottingham: World Health Organization, I-WHO publications.
- Leka, S., Griffiths, A., & Cox, T. (2003). *Work Organization and Stress*. Geneva: World Health Organization.
- Loon, Hoe S., (2007), "Is interpersonal trust a necessary condition for organisational learning?" *Journal of Organisational Transformation and Social Change*, Vol. 4, No. 2, pp. 149-156.
- Mathieu, J. E., & Zajac, D. M. (1990), A review and meta-analysis of the antecedents, correlates, and consequences of organizational commitment. *Psychological Bulletin*, 108: 171-194.
- McCraty R, Atkinson M, Lipsenthal L, Arguelles L (2009) New hope for correctional officers: an innovative program for reducing stress and health risks. *Appl Psychophysiol Biofeedback* 34: 251-272.

Occupational hazards and obesity in India- a public health menaces

- Miller R, B. W. (2004). Steps and Sitting in a Working Population. *International Journal of Behavioural Medicine* , 219–224.
- Murphy L. R., (1995), “Occupational Stress Management: Current Status and Future Directions”, *Trends in Organizational Behaviour*, 2, Pp.: 1-14.
- Organ, D. W., & Ryan, K., (1995), A meta-analytic review of attitudinal and dispositional predictors of organizational citizenship behavior. *Personnel Psychology*, 48: 775-802.
- Osbye, T., J.M. Dement, and K.M. Krause, (2007). Results from the Duke Health and Safety System. *Archives of Internal Medicine* 167(8):766– 73
- Patrick D. Dunlop, et al., (2004), *Workplace Deviance*, *Journal of Organizational Behavior*
- Pratt CA, Lemon SC, Fernandez ID, et al., (2007) Design characteristics of worksite environmental interventions for obesity prevention. *Obesity (Silver Spring)*; 15: 2171–2180
- Ricci, J.A., and E. Chee. (2005). Lost Productive Time Associated with Excess Weight in the U.S. Workforce. *Journal of Occupational and Environmental Medicine* 47(12):1227–34.
- Ricketta, M.(2000),. Attitudinal organizational commitment and job performance: A meta-analysis. *Journal of Organizational Behavior*, 23: 257-266.
- Schoorman, F. D., Mayer, R. C. and Davis, J. H., (2007), “An integrative model of organizational trust: Past, present, and future,” *Academy of Management Review*, Vol. 32, No. 2, pp. 344-354.
- Schulte PA, Wagner GR, Ostry A, et al., (2007), Work, obesity, and occupational safety and health. *Am J Public Health*; 97: 428–436.
- Senol-Durak E, Durak M, Gencoz T (2006) Development of work stress scale for correctional officers. *J Occup Rehabil* 16: 157-168.
- Sturm, R., J.S. Ringel, and T. Andreyeva, (2004). Increasing Obesity Rates and Disability Trends. *Health Affairs* 23(2):199–205.
- Svensson, G., (2005), “Mutual and interactive trust in business dyads: Condition and process. *European Business Review*, Vol. 17, No. 5, pp. 411-427.
- Theorell T. Working conditions and health. In: Berkman L, K. I. (2000). *Social Epidemiology*. Oxford: Oxford University Press.
- Van Uffelen JG, W. J. (2010). Occupational sitting and health risks: A systematic review. *American Journal of Preventive Medicine*, 379–388.
- Wardle J, Chida Y, Gibson EL, Whitaker KL, Steptoe A (2011) Stress and adiposity: a meta-analysis of longitudinal studies. *Obesity (Silver Spring)* 19: 771-778.
- Wells, C. V. and Kipnis, D., (2001), “Trust, dependency, and control in the contemporary organization,” *Journal of Business and Psychology*, Vol. 15, No. 4, pp. 593-603.
- Winick C, Rothacker DQ, Norman RL (2002), Four worksite weight loss programs with high-stress occupations using a meal replacement product. *Occup Med* 52: 25-30.
- Wright, T. A., & Bonett, D. G. (2007), Job satisfaction and psychological well-being as non-additive predictors of workplace turnover. *Journal of Management*, 33: 141-160.
- Yamada Y, Ishizaki M, Truritani I (2002) Prevention of Weight Gain and Obesity in Occupational Populations: A New Target of Health Promotion Servicers at Worksites. *Journal of Occupational Health* 44: 373-384.
- Turconi G, Guarcello M, Maccarini L, Cignoli F, Setti S, Bazzano & Roggi C (2008) Eating Habits and Behaviors, Physical Activity, Nutritional and Food Safety Knowledge and Beliefs in an Adolescent Italian Population, *Journal of the American College of Nutrition*, 27:1, 31-43.

Occupational hazards and obesity in India- a public health menaces

Acknowledgements

This study is subset of Ph.D. work and I have tried to test the questionnaire and create evidences on certain variables related to workplace having implication on weight gain and for this I targeted workforce of various multi-national companies. I would like to thank all the respondents who supported in data collection work. I also want to thank my parents, siblings and wife for providing motivation support thoroughly. Last but not least I also thank my Ph.D. guide for timely guidance.

Conflict of Interest

The author declared no conflict of interests.

How to cite this article: Mohammad. E & Gupta. V. (2020). Occupational hazards and obesity in India- a public health menaces. *International Journal of Indian Psychology*, 8(1), 96-109. DIP:18.01.012/20200801, DOI:10.25215/0801.012