Chapter – 3

OCCUPATIONAL HEALTH HAZARDS IN BPO EMPLOYEES

3.1 BPO- Introduction

The information technology (IT) services and IT enabled services (ITES) industries in India have become highly visible nodes of the global economy, attracting substantial attention from international media and business interests as a prime destination for outsourcing and off shoring. The faster growth of IT and BPO industries along with the good response of outsourcing from U.S., made India known globally as holding economic power. This industry put a step to increase the technology of India parallel to global high tech. and call centre agent as low cost (but high quality) technical workers who represent the main threat to American and European IT-related jobs in the current decade. Moreover, for many political, business tycoons and business controllers, observed and hold IT in India, and proved as a replica for India’s future economic growth and expansion, by following the strategies of liberalization and globalization.

The market size of the industry is expected to rise to USD 225 billion by 2020 considering India’s competitive position, growing demand for exports, Government policy support, and increasing global footprint.

BPO industries are highly localized and clustered in seven cities as of today. These are: Bangalore, Hyderabad, Chennai, Gurgaon/Noida/New Delhi, Kolkata, Mumbai and Pune. Infrastructure limits and scarcity of land has recently led to expansion to newer places like Ahmedabad, Bhubaneshwar, Chandigarh, Coimbatore, Jaipur, Kochi, Madurai, Mangalore, Mysore and Trivandrum.

However, there are some of significance observations, while much has been written about the history, growth and structure of India’s IT-BPO and ITes industry. In general, its impact is directly affecting the social and economic growth of India. Furthermore, there have been few studies supporting to social
and society, i.e. of work in these outsourcing industries, or of their most crucial resource, the work force. BPO has become the career option of choice for many young qualified force of India, as BPO showers high salaries compare to other sectors as well as an opportunity to live and work outside of India. A new talented workforce with the team of IT-Software engineers, BPO professionals, and many more who are working in IT-BPO, related job or occupation. They are the origin of new workforce in India who is well educated, highly paid, and very much comfortable with global economy either working in India or overseas. Holding the talent and knowledge of growth of industry. On the whole, work in this industry is distinctive in that it is not only catering to the overseas market, but is mostly acted as practically giving rise to new kinds of work environment, area of work, reducing the unemployment, quality of workforce globally or within the county. The projection of BPO as a desirable career choice and as a model industry has been absorbed by the large part of society, attracting and making target the youth of society, also producing social practices such as high dowry demands by the families of BPO grooms. Despite the high salaries that are characteristic of IT work, the negative features of long working hours and high stress levels have led to widely reported family and psychological problems among IT professionals and BPO workers. Given the constant media coverage of the industry and its workers, both positive and negative, an in-depth sociological study of these questions assumes significance.

The study also examines questions of identity and subjectivity, for instance the interlink ages between new professional and class identities and Conventional difference of specific region, language, caste even today affect the workforce of India. Not only this internal difference but also of global work culture on identity formation -- themes that shed light on the rapid cultural transformations that are taking place more broadly in urban India today. A significant question here is whether these differences of religious, inequalities in gender, caste, are being challenged or giving weight age by this globalised industry.

The findings of this study are relevant to the problem of the ‘digital divide’, which is deeper in the Indian context where even universal literacy remains elusive, and
where there are sharp inequalities in order to acquiring education, IT training, influencing by the caste and language. Therefore this context, the promotion of these hi-tech industries may exacerbate social and economic. The political debate about the BPO industry that has erupted periodically in Karnataka points to the salience of this question, as does the current debate on reservations in the private sector.

There is the issue of what kinds of changes in urban society are being initiated by the growth of this new global industry in India. A number of sociologists have argued that the advent of the information society and the growing hegemony of the professional and managerial classes in the advanced industrialized countries have exacerbated the divisions of class and caste class divisions, instead of improving more unified and democratic society actually should be. These situations if continued, then the question is arises that the social consequences of the rapid development of an ‘information economy’ in cities such as Mumbai?

BPOs employees experience the events that bring in stress. Stress is a kind of negative emotion that disturbs the normal functioning of a person by affecting his mental and physical health. Stress can waste employee’s vitality and diminish their personal energy resources. Stress can negatively influence persons’ attitude and feeling worst about himself. Stress can, result in actual physical and mental illness. This could give rise to the following types of legal complaints; personal injury, constructive dismissal, unfair dismissal, and disability discrimination. In addition to it, Medical Research has proved the cause of illness of BPO employees is as 90 percent due to heavy stress and anxiety. BPOs employees daily experience burnout due to repetitive nature of work and unending nightshifts.

The BPO services are ranked high for attrition due to health reasons, for sleeping disorders 83%, Voice loss 8.5%, other problems were ear problems (8.5%), digestive disorders (14.9%) and eye sight problems (10.6%). There is a universal consensus that BPO services and the nature of work is stressful. There is a need
to evolve strategies or module to cope up with their work related stressors and thereby protecting the life of intellectual capital, Indian economy and to retain the reputation of BPOs.

In the labour intensive BPO and ITES industries, in which the key resource is ‘people’, control over workers and the work process is central to prosperity. Therefore some steps are to be taken to balance these detached and virtual forms of production and services, and how are they similar to, and also somehow uncommon which are tresses out in the modern and developed countries’ industrialized economy? How has the rise of the BPO industry altered the urban class structure and the wider cultural milieu? How do BPO professionals relate to other segments of the middle class, and how are they located culturally and socially in the larger urban society of Mumbai? How does BPO work affect the personal, family, and social lives of workers? Are there changes in family formation, Spouse relations, and generation gap disputes? Relations? What new forms of sociality have appeared within this class of highly mobile professionals? Have IT workers developed a unique Work Culture, and subculture that sets them apart from other segments of the middle class? How do religious, caste, and regional identities intersect with new professional and middle class identities? The outcomes of this study have wider significance and implications for social policy in several areas. In the 21st century, the acceptance of new & modern information and communications technologies (ICTs) at higher rate is considered by many connoisseurs as a key strategy for India’s economic growth and upliftment. Along with this many valuable and effort able policies, strategies and programmes have been planned by the state, for the circulation and promotion of these modern technologies, and also development of IT, ITes, and BPO industries, by own. In brief, it is proved and stamped by the economist and other experts, that the main reason of current economic growth and employment rise in India is none other than, the great success of BPO and ITes sector. This regard for BPO is due to many good reasons, such as BPO industry has been acknowledge a fundamental position in India’s growth and
uprising schema, and also further it get highly supported by future policies proposals, as well as state-funds available for rise in education rate. Therefore it is must to appraise BPO sector and its contribution in the field of growth of employment, providing different kind of easy job and good quality of employment, along with helping in economic growth of the country.

3.2. Women in BPO Industry

The Indian women today have ventured beyond the traditional roles of wife and mother and have sought employment and career outside their homes, and are actively participating in the economic and social development of the nation. Economic, social and political development during the recent decades has resulted in improvement in the position of women, especially in the area of education and labour force participation. In general, India’s culture and customs designed the specific job profile for Indian women, these may called as traditional jobs only fit for Indian women, such as Teaching, nursing or only household work etc.

However, today’s women walk with men in every field from home to professionalism. Today women had crossed all hurdles and prejudices are working in all sectors including the sectors traditionally received for men such as defense, engineering and even in night shifts for the Business Process Outsourcing (BPO) sector. A BPO is the delegation of one or more information technology intensive business process to an external provider that in turn administers and manages the selected process. Globally, as different processes of a business started being outsourced, the term Business Process Outsourcing (BPO) has gathered popularity among women. At present India has become known as the global back office and client service centre. Apart from heavy competition from other developed countries, the India still rank holding position and prime location for outsourcing activities, especially fruitful in daytime job activities. Therefore, this study also given attention towards women employees working in International BPOs in India because they have a solely night shift based work. This study scans that the women’s employees are more sufferer
than men employees working in BPO. The various health issues problems related to BPO profession and also social and psychological problems of in Mumbai.

The unusual working hours against the biological clock makes women employees suffer from a number of ailments. The cumulative effect of odd working hours and stressful working environment leads to voice problem (dry, itchy throat, hoarseness, cleaning of throat, cracking of voice, cough, cold, etc.), eye strain (itchiness, smarting, redness, tearing, dryness and pain due to lighting situations and uninterrupted use of computers for long hours), hearing problem due to holding headphones & continuous call ringing makes the ear painful, musculoskeletal pain, (such as neck-pain, back-pain, wrist-pain, shoulder-pain) also mental and psychological stress. In a study on the BPO employees in India, the health issue of BPO employees was raised. The study found out that the transnational BPO due the demanding work environment with long working hours, permanent night shifts, heavy work targets, communal separation, losing self individuality and health issues. The employment also leads to burnout stress syndrome characterized by never-ending fatigue, sleeplessness (insomnia) and total variation in the 24-hour biological rhythm, which affects sleep and the proper functioning of the heart.

In a study on BPO in Mumbai, the most surprising finding has taken place is that while joining BPO job women employees feel very proud and comfortable this wills continue till some time i.e. up to one year only. But sooner they started to suffer from various health issues more than the male employees. The women employees gradually found it difficult to go on working for nine hours continuously with rigorous work rules. This important factor is must to be brief while discussing health issues in BPO employees.

A study conducted by the Associated Chambers of Commerce and Industry of India (ASSOCHAM) among 272 women working in night shifts brought into light the numerous health problems faced by the women employees of intercontinental Call Centers. The major health problems faced by the women
employees were high blood pressure along with sleep mayhem/disorder. The other major health issues faced were respiratory illness, menstrual related health issues and indigestion problems. Women employees working in night shifts do not get sufficient hours of sleep as direct by medical science, due to spent their daytime time towards domestic household tasks. Lack of proper sleep during daytime creates many problems for women for performing their social responsibilities up to the mark of family and community. Generally during the day time it is the attitude of women to feel lethargic and lifeless. Specially, married women when children are small and demanding very much get very less sleep, and it is not possible to sleep during daytime. The naps during day cannot compensate night’s sleep. As the reason are differences in time, destruction in mind attacks due to disorder of natural systems made by nature.

Women who continue perform night shift or more than working hours i.e many time 10-12 hours in a day, this causes adverse effects on their mental & physical health. This category of women employees are unable to spend time socially and with family, friends and relatives and are thus completely cut-off from their families and social networks. Studies on the physical, psychological and medical effects of night work comes on a consensus that if night shift work regularly performed, causes harmful effects on the health, family life and social life of workers. Night shift workers face genetic, physiological problems, and emotional connected with disturbed periodic models of sleeping and awaken. The medical science has proved that when a human being is in awaking position the body of human being produces sort of chemicals and hormones reacts on mental activities of the body. Whereas body is in complete rest during the sleep hours, and produces of harmful chemicals are at lowest rate. But the frequent change in the job schedule, adversely affects the regularity of the body and the working conditions of body working. Ultimately this negatively affecting insufficient sleep hours, the output of the job, lack of concentration, work performance, social life and physical and mental. In short inability to manage work life balance.
In a study conducted on 533 employees of our BPO’s in India shown the rising habits of smoking among women BPO employees. Twenty percent, of the women, employees of Call Center are smokers and their between the age group of 20-25 years. The most drawbacks of women BPO employees is lack of knowledge concern to occupational hazards. Ill effects of smoking, Medical history of the women who suffered due to smoking i.e. high prevalence of respiratory symptoms, these are throat pain bronchitis, cough & cold, appetite problems. Gastric disorder. Most women start as young girls when they believe smoking is glamorous. Some women choose smoking as they think it to be a quick-fix solution to their stress problems. These young women BPO employees do not apprehend that because of habit smoking, they are victim of numerous reproductive health hazard such as birth of low weight baby, disorder in monthly periods and rise of cardio-vascular danger.

The study experience that for women night shift are not safe and not in a proper way of professionalism. Therefore, in order to make the night shift safe and accepted by the women, the BPO industry has to follow corporate strategies such as use of shuttle vans with male guards to transport women to and fro home and office in the duty of the night. Male security personnel are from the registered security organizations. The duty of security is to present, till all the women passengers be safely reached at home / center. This reflects the ways in which both the industry and its female employees negotiate a presence in public ball. The changes in women’s mobility brought out by the transnational BPO employment reflects a two way result that is one it provides women an earnings, to walk outside the household in ways not experienced by previous generations, but simultaneously it is generating family and other social issues.

3.3 Work Environment and Challenges in BPO centers
Employment in BPO industry on one hand is attractive and highly growing at the same time it also generates serious health problems that affect the long term welfare of the employees. It causes stress at the two levels, one is at
the physical level and other is at intellectual. The BPO-professionals are also facing occupation-induced infertility problems. It may be because of continuous use of Lap-Top or stress that BPO-professionals are experiencing. Present study focuses on symptoms, causes and preventive measures of following occupational hazards and disorders among BPO-professionals.

The scenario of business process outsourcing (BPO) industry has always colorful due to suitability from government, appreciation from the media, liking & enthusiasm from college students & graduates and dedication from middle management professionals. It, certainly, seems too good to be true. Now look at the inside picture of life in a BPO.

Meenakshi Sharma, specialist in a leading ITeS company, however, addresses the bigger issues. “Night shift impacts personal life a lot. Working women already face many challenges but night shift can be fatal for your married life.” Deepak Bharadwaj, senior technical support associate, Dell International Services, agrees, “I hardly spend time with family and friends.” Outsourcing companies pay extra attention to the work-life balance of employees; however, in the end it is also an individual imperative to maintain that balance in one’s life.

The high pay package of the transnational BPOs also bring along with it high work pressure, targeted work, attrition and stress. The work in BPO Centre is extremely hassled, deeply scrutinized and type of monotonous work which is reutilized. Some Call Quotas are fixed for inbound services and outbound services, as much as 500 calls a night in many companies. Above all, BPO- Call Centre agents are not allowed to their actual nationality and their true names; they use a fake name as per their client country. This is being an Indian in the day time and westerners in the evening. It results high rate of personal problems among the BPO employees due to the heavy load of work along with dual personality.
At work there is a strict time and action command with limited time for making and answering call of customers, limited breaks and no interaction with other colloquies and employees. Not only call quotas, but to observe the activities of these calls there is the close track cameras affixed everywhere. The BPO Centre work becomes more challenging, especially for women employees. This is because of the dual load of job and family. Employment in the BPO Centre revolutionizes the role of the women in a many ways. It forced women employees to role differently due to physically away from the social and family life for long working hours. They are unable to manage the time spent with family even though they are at home during the day. The changeable working hours are creates attrition and unpleasant home atmosphere. Especially married women are experience this much than the unmarried females the night shift disorders the normal sleep-wakefulness rotation, this adversely affects in eating schedule and social and family life routine. The series of health issues attacks such as throat-voice infection, eye strain, audio problem, sever pain in shoulder, waist, neck and insomnia, etc.

3.4 Positive Aspects of BPO Employment

Today, BPO has reached such a state where BPO industry is the biggest employer with lakhs of highly qualified and intellectual personnel looking out their living by gainfully getting employment in this sector. India is no exception. In fact, today, India, with its vast network of high-quality computer education centers and high competence in communication in English language, provides trained personnel for the rest of the world. India thus is at the crest.

The huge employment potential in BPO sector and the interest it evokes among young and talented aspirants is both an opportunity and threat to those who are seeking employment and also to those who are already offers employed. On one hand it affords tremendous opportunity to the cream of
the society to get employment in full. The job is exciting to the young, carving for achievement. It gives them opportunity to interact with the international communities and joy of travel world-wide. Thus there is a feeling of world citizens among these people. It is achievement with commensurate remuneration too. The trained BPO-professionals get salaries and perquisites that are about the best in any industry.

The BPO Centre employment given opportunity to the women in getting knowledge in new working skills which helped them to reshape their work pattern, personal lives and even holding spaces in the public. The women Call Centre employees learn a number of new skills and some even become more assertive as persons. The BPO companies helped women to earn large and become the backbone for their family. Apart from earning BPO women employees learnt many techniques, skills such as communication, product knowledge, software skill, self attitude skill etc, on the top they become self dependent and earned the feeling of self confidence to deal with domestic and international clients whom the BPO company serve and the society at mass. Many women employees developed as a career oriented in the BPO sector. This thrust of career and high pay package serves as a channel for authorization them & feel of become ‘Entrepreneur’. The high-tech working knowledge, pay package at the BPO environment, is indication as a means of freedom and respect for women. These successful and high-tech knowledgeable women are becoming asset for the country in the ranges of reshaping their attitudes as, spouse, parent, some of them becoming self financing for their higher education. In short BPO employees are treating their employment as a gift of god to them, in today’s technology world.

Versatility is one of the key factors in order to work in -BPO industry. Before the authorization of night shift job was only restricted to male sector of the society, due to negative response or favor from the families of women employees, and also from modern society itself (Patel, 2006). But the employment in BPO
industry given the legislative right to women to be away from the house at night time without any gender differentiation. Whereas, it was not accepted previously.

3.5 Problems Faced by BPO Executives

1. Abuse from international clients is forced the number of BPO workers to exit from the job.

2. BPO employees face anger, insolence from the clients and also many times harassment from unexpected sales calls, which creates racism between the employees.

3. BPO employees always live in the high stress & pressure to complete the targeted job. Stress full job in the night shift. Many companies threading of salary deduction or many times termination from job due to non-completion of targeted and are under extreme pressure to meet productivity targets.

4. The BPO workers are having only 30 minutes breakfast / lunch break and one small tea break of 10-15 minutes, and records of these breaks are strictly maintained.

5. BPO Canters has culture of 24 X 7 works. Therefore employees are rarely getting the leaves for their personal issues.

6. The minimum age of employment in the BPO centers is between 18-20 years, and eligibility criteria is command on English speaking, software knowledge in computer field. This attracts many undergraduate, middle class ration of society take employment in BPO sector. As high salaries attracts them at very young age, and they treat this job as meanwhile halt for few years. This leave behind them qualified employees, and make them non-eligible for any higher skilled job in their future career as they remained less qualified.

7. High rate of instability among the employees of BPO, due to high rate of attrition. As HR department is not seriously following the HR policy related to ‘Career Advancement Programmers’ for all the employees equally.
8. Most BPO employees work from dusk to dawn and hence their personal & social life is reaching at the negligible stage. This makes them emotionally inferior, as the slowly ignorant from their social & family circle.

9. Many of the BPO employers are unhappy with their employees due to less productivity as per employer’s satisfaction. These results the unhealthy relations between employer and employee. At time highly paid employees has been terminated, this give rise to ‘Cyber Crime’.

10. Work environment of BPO under strict productivity observation and employees working under surveillance region. Continuous pressures of work make employees frustrated. As the result employees digest the feel of BOSS (i.e. Burnt out Stress Syndrome) and sufferings spoil their physical as well as mental health.

11. Most of the young employees of BPO are very high passionate, even though they are financially well sufficient, but then also working for over time in order to full fill their high level of luxuries and payment of high rate of loan taken for passionate purchases, by them. This ultimately affects on their health at young age independent but at the same time materialistic in their outlook.

12. Employees of, most of the voce based BPO companies, lost their originality due to rules and regulation of the job. Employees are taught the regional language and some customs of client’s country, they have been given fake identification of that county where they never gone, whom they serve. The BPO employees, are forced to work under such fake identification and control, and also adopting this subordination as a division of their duty.

14. Work-life balance becomes the challenge for BPO employees, especially for women employees. The job stress creates the disturbance in family-life, as they get very less & peaceful time to spend with spouse and children and friends, due to odd working hours of job.

15. The attraction of higher salary & incentives in BPO’s also gets dark, when, these young employees realize, that they are only fit for receptionist job or merely computer operator. They are unqualified for high-tech jobs due to
less qualification. They found themselves as ‘Cyber collies’ in later age of job. As BPO job does not provide any development in skill up jobs. Many times the burr of ringing voice in BPO-Call centers, adversely affects the health of employees and his future prosperity in the job.

The BPO industry has gained much downbeat comment within the media. All channels of Media featured the BPO industry as ‘electronic sweatshops’. BPO jobs are measured to be ‘low- attribute’ and heavily monotonous type of work. All this is at some extend removed the impression of BPO as the ‘knowledge employees’ as known for this, the coming millennium.

From all above challenges, it is proved that a redesigned theory is required to remove the hurdles of BPO employees’ faces during the work. Also survive the BPO in long run

3.6 Occupational Health Hazards and Disorders

Definition- Occupational hazards are health illness that arises because of low job profile, lack of comfortable atmosphere of occupation, occupational stress, job characteristics and occupation connected work pressure.

This is observed that the professions or employment or occupations which are already deal with stressful job even also destructible job, then the professionals who employed in such type of occupation, will surely face more occupational illness and hazards. This will react on professionals as the job is most complicated and physically stressful profession. BPO is most liked profession and also considered as most white collared profession as a work on IT grounds. It is myth in the brain of society that BPO is free from occupational health disorders and hazards. But BPO profession is not under the mercy of occupational health hazards and disorders. The health issues and stressful job is very painful and unendurable by employees of BPO.

To compete with modern & advances, technology and outsource development, BPO-Professionals have to run with it. BPO employees in India, are the world's major contribute to of the outsourcing market, earned around double the wages.
of same-age workers in other sectors of the nation’s economy, according to the recent report the foremost harsh disorder among employees e working in Mumbai (Indian) BPO is the sleeping disorder, which is main cause to all other problems. This is not only the problem of new joined employees but the senior most mangers are also not escaped from it. The cause is to finish the target at allotted time. Which make them to sit for long working hours? Outsourcing professionals are spending long hours to do traumatic mental work sitting in front of a computer. Even being an essential instrument in every aspect, computer has steered job related diseases. Increase in the number of BPO Professionals working with computer coincides with an increase of work-related health disorders. The pressure of task and hectic schedules are putting the health of outsourcing professionals in danger. If such problems are ignored, it can invite a number of health and occupational health problems and even disability; Computer Related Injuries (CRI), Digestive System Related Problems costly health problems and lost productivity. Some time one might have to quit his profession. Therefore Alerts for health & Safety has to be worked out. UNITES Pro (Union for Information Technology & Enabled Services Professionals) is on the path of doing well being for BPO employees.

In adding up to inclination to health problems from suffered by BPO employees due to maximum use of computer have to compact with work organization. BPO workers face heavy workloads backed by performance targets combined with tight rules and actions, all compulsory via electronic monitoring, and psychosocial factors such as lowliness feelings of not being capable to meet up presentation quotas, anxiety due to continuous electronic monitoring of performance, also night work to overlap with regular working hours. This system makes the guilt in social and domestic life and safety concerns, sexual problems, infertility. Sometimes the depression cases results the quit off from job. This all is because of over pressured day and night work, in materialism of money and Status in little time. BPO-professionals due to their long hours job, sometimes more than ten hours, unable to live the enough life and spent sufficient time with families and
friends. This ignorance of family sometimes results in heated arguments from family and many cases high quarrels between spouses which many times end with divorce. The BPO-professionals are also facing occupation-induced infertility problems. It may be because of continuous use of Lap-Top or stress that BPO-professionals are experiencing. This section focuses on symptoms, causes and preventive measures of following occupational hazards and disorders among BPO professionals.

- Computer Related Injuries
- Stress Problems
- Infertility

### 3.6.1 Computer Related Injuries (CRI)

Computer related injuries are physical injuries or health disorders which appear due to rampant and excessive use of keyboard, mouse and monitor. The poor practice of ergonomic may lead to CRI. Following are the related problems.

#### 3.6.1.1 Musculoskeletal Disorder (MSD)

Professionals whose job engages overuse & concentrated use of computer keyboard have accounted occurrences of pain in **Neck, knees, arms and wrists. This type of imbalance and disorder in health** has been classified as Regional Musculoskeletal Disorder (R-MSD), Collective Trauma Disorder (CTD), and Repetitive Strain Injury (RSI). All these are catch-all terms that refer to a variety of soft-tissue illness in the upper appendage such as rheumatism tendonitis and tenosynovitis, further they are not specifically diagnosed by medical science. Any type of job or movement that continuous hold a fixed position over long hours of time can result into musculoskeletal disorder. Low conditions of job, inferior workplace design are cause of MSD. This also be called as work realed musculoskeletal disorder (WRMSDs)

Characteristically, MSDs have an effect on the back, neck, shoulders and neck. Rarely, it affects the lower limbs. It’s symptoms of ill health are series of discomfort in muscles, starting with minor aches, which turns into serious medical conditions which needs leaves and immediate medical assistance.
In chronic conditions, medical treatment is not satisfactory, therefore recovery is impossible – this may result into everlasting disability and loss of employment.

**Symptoms:**
The symptom of MSD is discomforts in body muscles, disorder and continuous pain in neck (Cervical Spondylitis), shoulder, wrist, arm and hand.

**Treatment:**
MSDs is a whole reason for various types of body aches and continuous pain. This is only accepted by the professionals after proper diagnosis by medical treatment. Generally professionals or who all suffer from MSDs are getting treatment from their family doctors for these disorders, and they mostly suggest for physiotherapists or acupressure treatment and in many cases it results satisfactory. But at the time cases go beyond the control of general physician, and they put the case to the muscular specialist i.e. orthopedics or rheumatology.

**Prevention-**
Regrettably, MSDs are an increasing health issue in software industries. This affects not only health of the employee, but also it is major loss of income which employee earn in high package of salaries. Apart from that it is the loss of government as they have to start the social security policies as well as provision of funds for health care. Much harm due to MSDs or WRMSDs can be taken care in advance or reduced at much extent by following latest ergonomics guide, and also by observing safety law. The continuous use of computer in a same position and direction for long hours causes discomfort. The little movement in intervals is the good precaution to prevent from MSDs, and fatigue. A key to reduce and preventing such WRMSDs discomfort is to modify the workstation and i.e. comfortable furniture and accessories for employees’ Such as easy chair,
soft keyboard, adjustable monitor, will make the comfortable positions for the employee.

3.6.1.2 Repetitive Strain Injuries (RSI)

RSI itself define its own meaning by its pronunciation. The occurrences of health problem due to repetitive nature of physical work. The repetitive movements of organs of body continuously in same position causes the sever health problems, such as damage to back bone, muscles of same posture, nervic pain, and other soft liquid tissue. Muscles and waistband get flow of blood through vessels which are transitory between the muscle strings. A damaged muscle clutch of these blood serving vessels and ultimately they crumpled and carry slow down flow of blood of A tense muscle clutch on these vessels and they collapse, slowing the flow of blood. Blood flow restraint starts when the muscle take use of their 5% of full power, and is blocked totally at 50% of full power.

This procedure of blood flow controls the muscles and save energy in the body. At time when blood flow finished its working in the body; & stopped, at that time body muscles are full of energy and freshness. This helps to deal with any king of tension and also prevents the MSDs. But as soon as muscles becomes empty from energy i.e. taken full use of energy, the muscle turns to an unhealthy and incapable to give energy to body. However, muscles exhaust this energy very quickly and then it starts to produce an acid within the muscles. These formatted acid cause aches and fatigue in the nerves and muscles. The feeling of this muscular pain is same as, when weight lifter lifts weights at the gym

The damage muscle results the muscle pain and also destroy the other near muscles of body, this is due to immobilized reaction. This is a usual reaction to damage, and is good where stimulating is needed for sensitive damages like a broken muscle. When there is overuse of same organ of body take place, it automatically generates the pain cycle. Slowly this mild pain converts into sever and indigestible pain. This pain also moves from one muscle to another. Over a period of time muscles become very sensitive
and even not bear a single tiredness or minor pain. This resultant low productivity in human body. Employee reduces its productivity many time lose his job.

**picture 3.1** shown the clear picture of RSI. The one and only mechanisms which generates the RSI symptoms is repetitive use of same muscles and in same direction. Many times an insufficient blood supply to nerves also become the reason of numbness and scratchy. If superior nerves passing via muscles are clutched, then excessive numbness and scratchy occurs. Therefore it is said, that muscle nervousness is the root causes of RSI.

Muscle strain

Ache/Pain

Lack of transmission

produces of metabolites

**Picture 3.1: Mechanism behind development of RSI**

**Symptoms:**
The symptoms of RSI incorporate stiffness, uneasiness, and hardness, flaming in the arms. Wrist, hand and fingers, and elbows. Scratching chilliness and lack of sensation in the hands. Also employee feels back ache, shoulder and neck pain many time cervical pain

**Treatment:**
Remember there is CTRL key on the key board. Similarly control your continuous work. Consult with doctor immediately when you feel that health problem is because of RSI. As precaution is better than any illness. Not to
disregard the pain. It is proved that early step of safety save the accident. The prescription of doctor may include different advice, some of which are:
If possible stop to do the repetitive nature of work or job which results in RSI symptoms. This may reduce your income but continue till life time. Better to aware your employer of RSI symptoms due to nature of job you feel. As many times change of department, task or change of job is the only medicine of RSI.

- A course of Narvic tablets or anti-biotech
- A recommendation to a physiotherapist who guide the sitting posture and how to make stronger the muscles of maximum use or overuse in the job.
- Some professional find yoga, relaxation practices, regular gym, swimming, comfortable techniques to deal with RSI symptoms. Chiropractors and osteopaths are few therapies which are liked by some of the professionals working in BPO.
- Many times a steroid injection is inject at the specific place of inflammation area.

**Prevention:**
Symptoms repeatedly relieve with the above measures. It is therefore suggested to redesign your job activities, to prevent repetitive attack of RSI.
Suggested as:

- If your job is monotonous nature before the monitor of a computer, then be sure about your chair seat, quality of keyboard, mouse, etc, And see that the position of all these in the acceptable way of body and with the least hurt to your wrist hands and fingers.
- Be sure of your sitting posture, when you do the desk job.
- Take sufficient breaks when the nature of job or target is repetitive type, to avoid stiffness in the body.
- Is your employer/ HR department is attentive to improve the working environment in which you work? 20.5.2014
3.6.1.3 Carpel Tunnel Syndrome (CTS)

Carpal tunnel syndrome is the type of RSI. Occurrence of CTS is very frequent in the data entry operators. It is a type of injury or dislocation, affects the human body, when the median nerve which run between forearm and palm of hand & run down the arm up to fingers, and is pressed repetitively at the wrist. This situation results numbness, regular burning, scratching, and itching in the palm of the hand and the fingers, particularly its worst effect is on middle m index figure and also on the thumb. It can run down the arm to the fingers. Repetitive and continuous stretch and stress on palm and wrist caused unbearable pain & disorder. There is very much little space in the carpal tunnel, between the median nerve which help the fingers to bend or fold inner side of the hand and the nerve which goes in the inner side of wrist. The nerve that passes through the carpal tunnel and fingers towards the wrist bones from three sides and muscles on the fourth. There is also very little space in the carpal tunnel and bones of wrist on all. At the time when the tendons start burning it gives pressure on slanting nerve, this is shown in fig. 3.2, as a demonstration way. The most frequent effect of CTS is the swelling in the tendons or other swelling narrows and squeezing the median nerve, due to continuous movement of finger and wrist. This movement, stroke the tendons besides the walls of CTS. Many times the muscle of hand and wrist lost its control due to pain in the wrist, palm of hand numbness and tingling. In some situations nerves of hand lost the feel of cold or hot sensation. CTS is reasoned by short but continuous, repetitive movement, of hand and palm nerve. The examples of work causes CTS are assembling line work- knitting, typing and working with vibrating tools for long hours end. The absence of intervals and rest in between these type motions works exasperates and inflames and strained flexor tendon flexor tendons.

CTS are seen commonly in data entry operators, who maximum use computer keyboard. Their arms are called as ‘MOUSE ARM’. Suggestions to reduce the CTS are, such as minimize the use of computer, casual activities,
and design the workstation as per ergonomic guidance. Treatment may include avoidance of the contributory activity, ergonomically designed workstation, anti-burning medicines or tablets, brace use, and surgical procedure. The pain can pull out all the way up to the neck & shoulder and turn into exceptionally severe. People may have a genetic tendency to this trouble and people are more sensitive and victim of CTS are who already suffering from diabetes, thyroid diseases and rheumatoid arthritis.

**The Carpal Tunnel**

![The Carpal Tunnel](image)

**Symptoms** – Following are some main symptoms of CTS:

- Tightness, hardness, discomfort, stiffness, burning, inflaming in the palm of both hands, wrists, fingers, elbow or forearms,
• Scratchy, coldness, or numbness and tingling in the palms and hands.
• Loss of strength and coordination between fingers and hand, sometimes clumsiness in the hands Pain that wakes you up at night.
• Like to or preferring rest to hands, shake out the hand or shoulder, need of massage or hot massage to wrist, hand & arms
• Chronic pain in the neck, shoulders, forearm and upper back, as these are directly linked with using the computer.
• Sometimes hand losses the grip to hold a small object. Hand lost its sensation power to tell hot or cold. The muscle under thumb may destroy and make the thumb useless.

Treatment:
Control the CTS at first lever by using correct data entry technique and correct working posture, the correct and perfect tools setup, well designed workstation and good and reasonable work habits are initially very much important. Suggestion by many upcoming researches is that, the best position or layout of monitor (VSD) is farther and lower
The prescription for data entry operator is very simple that is a wrist stretching exercises and the use ergonomic mitten and give rest to wrist immediately. If pain or symptoms are not chronic or severe, then CTS can be treated by immediate give rest to wrist and hand at least for two weeks and the activities which are worse for CTS. Apply warm squeeze, wrist splint, apply cool pack to reduce hand or wrist swelling, anti-inflammatory drugs and steroid injections. If the symptoms of CTS continuous for last six months then the fast and correct remedy is surgery. The surgery involves the cut of carpal ligament which pressurize the wrist and hand tissues. The surgery is of two types, Open release surgery and Endoscopic surgery.

Prevention:
For BPO Professionals best prevention for attack of CTS is have a break use of CTRL button in work also Breaks in regular intervals will be most fruitful.
Professionals are advised to wear fingerless gloves to keep hand and wrist warm and more flexible. Redesigns the work task, use the ergonomic ideas for job conditions. Adopt the theory of Right person for Right Job. These precautions’ may reduce the percentage of CTS.

3.6.1.4 Computer Vision Syndrome (CVS)

Computer Vision Syndrome is the composite of eye and vision harms associated to work near to eye ball; this is felt most during continuous use of computer. Computer vision syndrome (CVS) is observed most in people who use computers continuously for more than two hours per day. The most familiar causes of CVS are Poor lighting, insufficient viewing distance, and inappropriately designed workstation, lack of contrast; glare and reflection.

**Symptoms:**

Symptoms of CVS are mostly found in professionals or peoples who mainly use or work on computer for long hours. The prolonged use of computer results into vision discomfort. The common symptoms of CVS are eyestrain, headaches, faint vision, dry eyes, neck and shoulder pain, fatigue, infected color perception, double vision etc. These symptoms are due to glare on the computer screen, low brightness of lighting wrong viewing distances, improper seating posture, uncorrected vision problems, a mixture of these symptoms caused CVS. These coats predispose situations, Hyperopic vision problem, binocular focal problem, and all these deficiencies become the root of CVS.

**Treatment:**

Perfect ergonomic practices are simple solution to CVS. The monitor of the One of the most common defects found in the set-up of workstation is that the monitor of the computer is fixed at a very high level compare to the vision/height level of the professional. The level of computer screen must be 15 to 20 degrees below eye level i.e. approximately 4 to 5 inches as from the mid center of monitor screen and 20 to 29 inches from the level of eyes. If the screen of monitor is at very high level, then this cause to irritated-dry eyes. It gives less frequency to blink eyes, as to reach up to high level of
screen employee has to constantly keep his eyes wide open. A monitor /screen which is too high is also cause headaches, pain in neck, shoulder and upper back because of the head is continuous tied up at one direction to see constantly. Keep yourself hydrated, because insufficient water intake also worsens irritated- dry eyes.

**Prevention:**

The basic precaution to avoid CVS is adopting ergonomics suggestion for body positioning while using the computer. This includes some of the tips that how to use or work on computer in correct posture. These are, good lighting, comfortable computer chair, spot of the computer monitor, place of reference books, data entry materials etc in correct location. Above and all is to have breaks of 5 -10 minutes after continuous use of computer for one hour. This all can prevent CVS at large extent:

**Picture.3.3 shows** the correct level of screen of computer as per ergonomic facilities & suggestions, to reduce CVS.

Be habitual of yoga will be quite helpful. Advised to wear particular glasses which are designed as occupational lenses, for specially work on computer, this also may reduce eyestrain and fatigue, and improve the work output productivity. Of course along with ergonomics facility one has not to forget to increase drinking water intake, breaks at regular intervals, some little eye exercises, eye blinking are the giving pause to continuous work automatically. The correct poster while working in front of the computer screen itself reduces occupational health hazards due to computer job. This perfect workstation is success only with the awareness of employee and employee in BPO companies. As in BPO companies no employee seat is to be seen without computer, in fact BPO companies are the more computer technology holed sector compare to IT.
Picture 3.3, shows the correct postures in front of computers, which is the key of safety and good health among the employees of BPO companies.

![Ergonomic Workstation](image)

**Picture. 3.3. Ergonomic workstation**
Source: Google Wikipedia – CVS

### 3.6.2 Stress Problems

Today’s world is called the Anxiety World, but we live in the century which is known as The Century of Stress. Stress is defined by various scholars, researchers from long ago. The Oxford Dictionary has given the simple definition of the term Stress is a The word 'stress' is defined by the Oxford Dictionary as a situation of matters expecting excess demand by pressing energy of physical organs of body as well mental energy. Stress is circumstances which suddenly put a normal person in tension, and affects
his physical as well mental health. In medical terms ‘stress’ is known as a perturbation of the body’s homeostasis.

The word stress itself has been used for centuries and comes from Latin word 'stringere' meaning to represent tense. Stress is commonly pronounced in every day communication by exposing the tiredness, pressure of life’s day to day needs and somehow a way to cope up with problems of work and life. This word generates negative feelings and feel of depression in the society. Stress is a specific condition, an incident, or we can say characteristics in the society and in the atmosphere, which results the loss of individual’s potation disturb the routine life and decrease of self confidence.

“Not anything gives a person so much gains one after another so as to keeps him always cool and relaxed under every circumstance.”

—Thomas J

Stress, arise in two different ways i.e. either sudden or constant, and induce a dangerous physical and mental disorder. Immediate or sudden disorders are such as faint and body-shaky attacks, anxiety hits, attacks of worries &tension, sleeplessness, depression, nervousness and most of all cramps in muscle. These all problems can turn into sever health problem. These problems also attacks on human being’s immunity system, cardiovascular system and nervous systems and throw individuals to consistent addictions, which are well come to stress. The most common addiction generates stress is today’s Cyber craze and internet thrust addiction or internet addiction is one kind of such addictions.

3.6.2.1 Work Stress

Stress initially was caused by personal and social life. But this Cyber world started the new generation of stress is called ‘Work Stress’ in today’s modern lifestyles. Over the last century the nature and working style of work has adopted extreme changes and still changes are coming at cyclone speed. These sudden changes have grabbed all most all professions; BPO is not an exception. Quite today stress in BPOs is an expected factor.
Work stress creates a threat to mental-physical health. Job related stress in the life of perfect, and well-organized workers, automatically, affects the total health of organization. Work stress is an unceasing disease caused by situations in the workplace that affect negatively on individual’s performance and also overall on his physical and mental tissues. Any single stress of an individual either mental or physical invites the range of job stress. In some cases, personal life stress is more which disable the work stress. Need of consultation from a psychiatric is must, to authenticate the causes and degree of job related stress, in chronic level stress cases.

Andy Ellis- oxford, Ruskin College - UK, has shown that Stress at work and employee’s performance is inter-linked in a chart of their project “Stress at Work”. In the early age of profession the main key of enhancement of individual’s performance is Job Stress. ‘I become success or I performed best due to heavy work pressure’. But if these conditions of work pressure are being continued in today’s tech-life, and body is continued to rev up, then the hiked performance come on declines stage and employees health starts to fall, and become the victim of work stress. Professionals become the victim of BOSS (Burn out stress situation)

**Causes of work stress**

Following are the different reasons of work stress like:

- Increasing demand from employees for high performance
- Feeling of Job insecurity
- Adoption of High-Technology
- Workplace culture
- Personal and family troubles

**Symptoms:**

The symptoms of work/job stress are not common in all persons/employees; It is depend on the situation at that time, and the patience level of employee to bear the stress and also the force of stress itself to imbalance
Apart from this some of the typical symptoms of work stress can be-

- Sleeplessness (insomnia)
- Loss of intellectual concentration
- Nervousness (anxiety)
- Tension/Stress
- Employee absenteeism/leave
- Depression
- Development of anger and abuses in the nature
- Rising level extreme anger and frustration
- Family and social conflict
- Physical illnesses, as per medical science such as heart disease, headaches, stomach problems, back aches and migraine,

**Treatment:**

Suggesting exact medical treatment to reduce job/work stress is not the area of this research. Though some suggestions has been shown for minimizing work-related stress.

- ‘Accept all’ or ‘Adapt as it is’ strategy is quite beneficial for minimizing stress.
- Employee or an individual has to protect his right of rest at work intervals, and how much time he gets after his work or during his work he has to use refresh button of his body and get himself re-energize and re-motivate.
- Employee / an individual should use or spend quality time with his family and friends. This can be boosting of emotional and moral support.
- Use of alcohol, smoking and other addicted liquids, are strictly prohibited at the attack of stress.
- An individual musts increase positive attitudes towards stressful movements in life. Give up negative qualities such as fear, anger and revengeful feeling, which actually cause of stress. Try to replace
these negative approach or attitude into to mind relaxation and adoption of strategies for personal growth. These are meditation or reshape to their lifestyles..

- In case of chronic stress employee or an individual has to consult a physician immediately..

- By using team work policy and team work appreciation, use of ‘OUR’ instead of ‘I’ Should reduce workplace stress

- If we adapt that 'managing stress is ultimately means improving our personality'. This will replace the work threats into work opportunities. Employee has to improve his communication skill and appreciate the learning from other’s knowledge and experiences.

- Should be ready to accept any kind of emotional, physical and financial change, at work or personal life.

3.6.2.2 Infertility Problems

As per the National Infertility Association (NIA) infertility is a medical stipulation of the reproductive system that's consequences is the incapability to conceive or carry a pregnancy for long time after the marriage, more than 8 months. When a couple has had an unprotected regular sex for a year and not able to conceive, then it is the situation to diagnose for fertility or sometimes women get pregnancy, but result in unlived birth. Infertility is not restricted up to any one i.e. factors of either man or women are the reasons for the infertility. Cause of infertility is found 30-40% of the time in the women. Similarly 30-40% of the time causes of infertility is found in male partner. Not only this in some cases both male & female partners are play role in infertility cause in them. Some cases the diagnosis of infertility cause is not known or traceable.

**Common causes for women**

- Damaged or weakened ovulation due to deficiency or some illness, birth deficiency or in others production of some kind of anomalous hormone.
• Sometimes fallopian tubes in women stop working due to some infection or scratched tissues.
• The quality and number of eggs which are produces in the women ovaries.
• Incivility of the uterus to hold the egg (embryo). This is because of scratched tissues appears due to infection of the uterus walls.
• Endometriosis, i.e. tissues are grow outside the uterus of women is also called abdominal-pelvic motion.

More of those in times, women suffered infertility due to sexual dysfunction. This happened due to heavy work stress, dispute between couples or misunderstanding due to profession priority.

**Common cause for men-**
Male infertility defines that inability of the male to impregnate the female due to deficiency in male tissues.

This also due to following causes
• Count of fertile sperm at less ratio
• Poor sperm movement at high percentage.
• Abnormally shaped sperm not fit for pregnancy
• Alcohol consumption at high level
• Quick realizes of ejaculation
• wound on the testicles

Many of that in times, male suffered infertility due to sexual dysfunction. This happened due to heavy work stress, dispute between couples or misunderstanding due to profession priority.

Sometimes there's a genetic reason for infertility among the couples that could be carried out to children.
3.7 Why infertility is occupation-induced hazard of BPO Professionals?

Today, in India, BPO professional is the majority desired people. This attraction towards BPO profession is because of charming salaries, capability to enjoy and hold the maximum comforts of life, and opportunities of international touring on work visa, high standard of living, reaching at good financial position at an early age etc. But in fact this attraction and quick and high achievement lacks the charm of his/her personal life, as personal life is affected by his/her terrific busy professional life.

Most of the BPO professionals – male or female in the age group of 20-35, work for long hours to achieve targets. This lead them towards stress i.e. work stress. Not only stress but he/she starts to become victim of several work dieses such as obesity, irregular sleep, lethargy - this all results in sensitive problems as frustration and emotional problems. Due to heavy pressure and stress at the workplace, youngster postponed their planning for family at young age, then they find at later age very difficult to conceive in natural way or lost their capacity of sex generating.

BPO professionals are always under high stress and pressure of routine heavy job duties, threat of performance appraisal, and retention of job and employment insecurity, fear of performance appraisal. Many time hight attitudes for switching the job frequently for more prosperity and position affect the sexual life of couples. As changing job and adjust again and again in new one creates stress as well as tiredness untimely no interest in other things of life . Many times both, husband and wife may be a BPO Professional. Both of them career oriented and under heavy pressure of work targets. This makes the things worst, as they do not get even time to see at home each other for weeks. They are not getting time to spend together because of different or contrast work schedule. In this situation the sexual life is in the vein. They often miss the sexual life at young age and fertility time which medically falls between 28th day of women’s menstrual cycle and peak time of 16th day menstrual period. This period is very fertile
period of conceive or get pregnant. Couples loose this positive possibility of conceive. Many times BPO professional have to work in night shifts to complete the work task. This situation creates the most misunderstand between the couples and become the cause of detach from sexual life. Apart from this due to the greed of high career in BPO professional avoid or delay the childbearing immediately after the marriage up to long period. Sometimes this also results in infertility among professionals.

These BPO professionals are work edict; they have practice of using laptops for their work task. High use of laptop gives high risk, of infertility, this more affects on male partner. Using laptop regularly, the position of keeping laptop on laps is results high risk to men’s private parts. The heat generates from laptop directly affected the organs of man, it results in to less production of sperm in later course. Many cases this high speed heat damage the fertility organs of man. The high temperature of laptop on lab creates scrotum's temperature, which affects the man's genitals.

Because of all frequent and observed reasons, proved that infertility is more common in BPO professionals and no question to say it Occupation induced disease or infertility.