

**Assessment of Musculoskeletal Discomfort and  
Occupational Stress among Banking Employees in  
Assam**

**June- 2021**

**Porineeta Phukan**

**Assessment of Musculoskeletal Discomfort and  
Occupational Stress among Banking Employees in  
Assam**

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**By  
Porineeta Phukan**

**Department of Family and Community Resource Management  
Faculty of Family and Community Sciences  
The Maharaja Sayajirao University of Baroda  
Vadodara**

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An illustration of a modern bank interior. At the top, a large blue sign with the word "BANK" in yellow capital letters is centered. It is flanked by two smaller blue signs with white horizontal lines. Six spotlights hang from the ceiling, illuminating the scene. Below the signs, the word "INTRODUCTION" is written in bold black capital letters. In the foreground, three service counters are visible. Each counter has a teller in a blue suit and a customer. The customer on the left is a man in an orange shirt and green pants. The customer in the middle is a woman with blonde hair. The customer on the right is a woman in a pink shirt and blue pants. Each counter has a computer monitor and a small potted plant. The floor is a light brown color.

**BANK**

# **INTRODUCTION**

## **CHAPTER-I**

### **INTRODUCTION**

#### **1.1 Role of Banks**

In India, banking is the lifeline of the nation and its people. Banking has helped in developing the vital sectors of the economy and escorts a new dawn of progress on the Indian horizon (Moom et. al.,2015).

According to Vetrova (2017), Bank is a financial institution (organizations) which deals with debits and credits and thus bridges the gap between the savers and borrowers by means of specific types of activity which include: accepting deposits, lending money and creating money.

Bank accumulates idle money with public for extending credit to those in need. The money borrowed from bank is then invested in business, agriculture and other income generating opportunities, creating more income, assets and employment opportunities. Such activities have direct impact on the economic growth of the country. Apart from these basic functions, banks perform many other duties also to speed up economic development of the country [1].

Some of the major roles being performed by the banks of India are accepting savings from general public and others as deposits (Deposits), Lending money to meet financial needs of public (Loans), Transferring money from one place to another thereby facilitating money flow (Remittances), Credit creation and satisfaction [1].

They also act as trustees and keeping valuables in safe custody, Investments, Carrying out government business and collection of taxes, Distribution of financial products like insurance, mutual funds, tax saving products and NPS for investment purposes and financial security, Financial inclusion and Spreading banking system across the country saving public from clutches of money lenders [1].

Banks are basically human organisations; they need human expertise, time, and effort for achieving their objectives of maximizing profits and wealth through customer satisfaction. For providing better customer service, the employees should possess positive work attitudes, strong commitment, and high morale (Salim et.al 2019). So, it is necessary for the employees to function effectively for consumer satisfaction as well as economic development of the nation.

Health of the employees is the determining factor for workplace productivity. Good health motivates employees and also reduces absenteeism, increase engagement and improve productivity. Working in bank may be a profession that is associated with both physical as well as mental health (Kan and Yu, 2016). As technology applied in banking industry became more advanced, it had an impact on employees' health resulting in an increase in the number of occupational diseases.

The nature of job of banking employees is very tiresome as it involves long working hours, inappropriate reward system, and lack of job autonomy and role conflict. Moreover, there are a large number of customers in all kinds of banks in India (Dhankar, 2015). Banking employees need to pay intensive concentration at their work and they also need to hide negative emotions and answers various questions of the customers (kan and Yu, 2016). Working under such conditions for longer period of time may affect their mental health which leads to stress.

The growing automation and computerization process within bank implied changes in organization working conditions and relationships (Silva and Navarro, 2012). Bank employees work long hours and are frequently overworked. Spending long hours, primarily on computers, has made musculoskeletal problems into a main concern for banking staff.

### 1.1.1 Musculoskeletal Discomfort affecting Banking Employees

Advancement in technology especially the use of electronic data and appliances has affected both bank workers and their working environment. Modernization of offices has led to the inclusion of information technology devices in the place of work. More people are using visual display terminals such as computer and related equipments to complete their work (Sulaiman et.al., 2015). Electronic data are mainly displayed on visual display terminals, improper body posture and prolong sitting in front of these terminals can lead to many health hazards, including eye strain, muscle fatigue, and other musculoskeletal discomforts (Akrouf et.al.,2010).

Musculoskeletal Discomforts were recognized as having occupational etiologic factors as early as the beginning of the 18<sup>th</sup> century. The musculoskeletal discomfort refers to the pain in muscles, ligaments and tendons and sometimes the entire body ache. The pain can range from mild to severe enough to interfere with day-to-day life. It may start suddenly and be short-lived, which is called acute pain. Pain that last for more than 3 to 6 months is called chronic pain [2].Musculoskeletal discomforts affect all persons irrespective of age and sex, and are mostly prevalent across a wide range of occupations (Patel et al.,2019). Moreover, people who experience these discomforts suffer mentally and physically and are faced with the possibility of permanent, partial or total disability (Maligaya et.al., 2017). Experiencing these discomforts in different parts of the body for a longer period of time may lead to musculoskeletal disorder (Buckle and Devereux, 2002).

According to the National Institute for Occupational Safety and Health, Musculoskeletal disorder (MSD) is a damage that affects the musculoskeletal system of the human body, especially at bones, spiral discs, tendons, joints, ligaments, cartilage, nerves and blood vessels. Such injuries may result due to repetitive motions, forces, and vibrations on human body during executing certain job activities. Previous injuries, physical condition, heredity, pregnancy, lifestyle and poor diet are the factors that contribute to the

musculoskeletal symptoms (Korhan and Memon, 2019). Musculoskeletal disorders are prevalent and their impact is pervasive. They are the most common cause of severe long-term pain and physical disability, and they affect hundreds of millions of people around the world. They significantly affect the psychosocial status of affected people as well as their families and carriers (Baxi and Hande, 2017).

Musculoskeletal discomfort is an important public health problem in developed and developing countries. Working conditions are often presumed to play an important part in developing musculoskeletal discomforts. It is associated with working postures which included bending heavily with one's trunk, twisted posture for long periods, and making repetitive movements with the trunk. Apart from the working conditions, a wide range of risk factors such as age, gender, lifestyle of an individual, previous pain symptoms, psychosocial factors, socioeconomic variables, poor muscle flexibility and strength, physical activity and physical load have been associated with the development of musculoskeletal discomforts (Kanyenyeri et.al.,2017).

It has been reported that MSD is one of the main symptoms causing burnout in bank employees. According to Ortiz-Hernandez et.al.,(2003) computer users who spend many hours become vulnerable to developing musculoskeletal disorders like neck, shoulder and back pain as they spend prolonged sitting in front of computers with awkward postures and repeated movements while typing and using a mouse. Working with computer poses awkward postures that are continually and forcefully and this subsequent changing from normal sitting postures while using a computer has been noticed and influences development of musculoskeletal system pain, back and neck pains being more common (Kanyenyeri et.al.,2017).

In the banking sector, bankers' work involves the use of computer for data collection, processing and programming; hence the risk of developing musculoskeletal disorders inherent in computing industries (Maduagwu,2014). Bank Managers are responsible for planning and defining targets for local branches; monitoring achievements; making decisions and attending special



clients. These tasks are carried out using personal computers and telephone, in daily 8 to 10 hour shifts. The managers' work involves sitting for most of the time. Cashiers' tasks include dealing with deposits and withdrawals, receiving a wide range of payments and selling branch products for clients. These tasks are performed with the worker sitting through their 8 hour shifts involving intensive use of personal computers for typing data and the stamping of many documents (using heavy wooden stamps) (Baxi and Hande, 2017). The intensive computer work requires repetitive movements of the upper limbs, such as typing with the keyboard and handling the mouse, but also static muscle activity while keeping the arms and neck in a stable position. The computer work also overloads the neck, shoulder, and upper limb muscles and joints to maintain it into static position. Muscles and joints become stressed as their support structures are weakened. As the tissues are overloaded continuously, risk of ischemic cumulative injuries is increased (Ming et.al.,2004). Bank employees at different levels suffer chronic musculoskeletal injuries and deal with pain and continue to work without addressing proper postural and biomechanical consideration at work place (Kotwani et.al., 2019).

A number of factors have been associated with the development of MSDs including awkward posture, inappropriate manual handling, heavy lifting, strenuous task, repetitive actions and psychological stress. Demographic variables, workload and psychosocial factors are also known to play important roles in the development of MSD. Bank workers in operations section are involved in long periods of static work, awkward posture, prolong sitting and repetitive computer activities. Thus, these tasks may predispose them to MSDs ( Sulaiman et. al., 2015).

Despite technological advancement and mechanical modification of working place, the incidence of MSDs is ever increasing, which has an adverse impact on the individual and the society ( Sulaiman et al., 2015). The consequences of MSD were far reaching and lead to a negative economic impact, which includes an increased absence from work and lost productivity (Kanyenyeri et.al.,2017).

### 1.1.2 Occupational Stress faced by Baking Employees

Stress has become an inevitable part of human life in recent times and it makes life more challenging and innovative (Salim et.al.,2019). It comes in many forms and affects people of all ages and all walks of life (Sheopuri,2019). Stress up to moderate level is helpful for the motivation but stress above the moderate level affects the physical and mental wellbeing of the employees (Salim et.al.,2019).

According to World Health Organization (WHO 2020), Work related stress is the response people may have when presented with work demands and pressures that are not matched to their knowledge and abilities and which challenge their ability to cope. Stress occurs in a wide range of work circumstances but it is often made worse when employees feel they have a little support from supervisors and colleagues, as well as little control over work processes.

A healthy job is likely to be one where the pressures on employees are appropriate in relation to their abilities and resources, to the amount of control they have over their work, and to the support they receive from people who matter to them. As health is not merely the absence of disease but a positive state of physical, mental and social well-being”, a healthy working environment is one in which there is not only the absence of harmful conditions but also the presence of health-promoting actions [3].

Banking industry is the backbone of the country's economy and it has always played a key role in prevention the economic cataclysm. The banking sector in India has undergone tremendous changes with increased competition, increased levels of deregulation, which has facilitated the Indian Banking system and has placed enormous pressure and has created stress in the bank employees (Salim et. al.,2019).

An individual in his or her job in bank face stress as Jamshed et.al., (2011) suggested “The workplace is potentially an important source of stress for

bankers because of the amount of time they spent in their respective banks.” And that stress often decrease their performance. “Therefore occupation of individuals could be a major source of stress in the given circumstances. When individuals face stress due to various conditions of their occupation and fail to cope with stress, it results into burnout”. Basically in banking sector lack of administrative support from boss (manager), work overload & time. pressure, risky ness of job, poor relationship with customers & co-workers, and work family balance cause stress which in turns decrease employee performance (Bhat, 2013).

The psychosocial well-being of an employee is very crucial to have a productive work force. The productivity of the work force determines the success of an organization. In an age of highly dynamic and competitive world, bank employees are exposed to all kinds of stressors that can affect them in all aspects of life (Salim et.al.,2019). Absenteeism, avoiding responsibility, loss of productivity, increase of turnover (employee), memory loss, errors, over-reacting, getting irritated, and frustration are the outcomes of stress (Sheopuri, 2019).

A high level of occupational stress not only detrimentally influences the quality, productivity, and creativity of the employees but also the employee's health, well-being, and morale. Good mental health is needed to maintain a healthy lifestyle and depression plays a central role in influencing the quality of life (QOL) (Salim et.al., 2019).

The job nature of banking employees is very tedious as it involves the direct customer interaction in all levels. A large number of bankers are facing high level of stress because of their job and the reasons behind this stress include long working hours, heavy work load, improper reward system, lack of job autonomy, organizational culture, role conflict and the main reason is lack of management support to employees. The employees can notice a number of symptoms indicating high level stress among them. However if these symptoms are not noticed in early stage, they can cause serious health problems among employees such as depression, heart problems, diabetes

etc. Not only health but personal life of bank employees are also being affected because of high job stress, most employees are unable to spend time at home or with family (Azad, 2014).

Although many studies have dealt with MSDs and occupational stress among bank workers in other states of India and outside of the country, the exact nature and prevalence of this important health problem has not been studied before in Assam. This study was formulated to fill the gap of knowledge in this area.

## **JUSTIFICATION**

The banking sector plays a significant role in the economic growth of a country. It meets the credit needs of all segments of the society. An efficient banking system is required to have a smooth flow of trade, business and commerce. Banking employees play an important role in providing various services to the customers. Banking is the most crucial part of the financial sector, thus employees need to adhere to rigid schedule and dedicate a significant amount of time and energy to their work.

Rapid changes in technology and computerization process in the banking sector might not affect only employees but also their working environment. Poor work station design, continuous use of computer for the entire workday, prolong sitting, awkward posture and long periods of static work may affect the health of bank employees and predispose them to musculoskeletal problems.

Employees may be affected by the adoption of new technologies in the workplace, which may result in intensification of the workplace, task overload, faulty working, increased pressure and control over work, all of which may have an impact on their health. Employee health affects everything from workplace culture, absenteeism, performance and productivity, to workplace health and safety. People who are in good health are happier, more productive and less likely to have workplace accidents.

Employees both physical and mental health is equally important in workplace. Mentally healthy employees are more engaged, optimistic and aware at work, and they are more likely to contribute to the workplace mission. They are also more adaptable and capable of dealing with change and stress at work. Pressure at the workplace is unavoidable, and when it becomes excessive, it may lead to stress. If high stress levels are not managed properly for an extended period of time, even healthy employees with sound mental health may be at risk for developing mental health conditions. Bank employees frequently face a heavy workload, which may lead to stress. Also stress may

arise due to the conflict at workplace, lack of social support, task deadlines and emergency task. Stress may further damage an employees' health and his performance.

From the literature review it was found that Banking Employees has been associated with high risk of MSDs and Occupation Stress. Therefore, a dearth was felt for studies related to Musculoskeletal Discomforts and Occupational Stress faced by the Banking Employees in their workplace. This will help in reducing the musculoskeletal discomfort and Occupation Stress faced by them in their existing work environment.

During the review of literature the investigator has come across various studies conducted abroad such as “Musculoskeletal disorders among bank office workers in Kuwait” ( Akrouf et.al., 2010), “The Occupational Stress experienced by public and private bank employees in Quetta city, Pakistan” (Nadeem (2011), “Work stress and employee performance in banking sector evidence from district Faisalabad, Pakistan” (Muhammad et.al.,2011), “Managing bank employee stress in a South African bank” (Singh and Paruk,2012), “Prevalence of Musculoskeletal Symptoms among Visual Display Terminal Users in Baquba, Iraq” (Alazawi, 2012), “Daily visual display terminal use and musculoskeletal disorders among Iranian bank tellers” (Giahi et.al.,2013). “Occupational Stress and Turnover Intention: Implications for Nursing Management in Iran” Mosadeghrad (2013). “Musculoskeletal symptoms, and perceived fatigue and work characteristics in super market cashiers in Tartu, Estonia” (Sirge et.al.,2014), “Musculoskeletal symptoms among bank office workers in Kerman, Iran”( Mohammad, 2014), “ Job satisfaction and job burnout among Greek bank employees (Bellias et.al., 2014), “ Prevalence and associated occupational factors for low back pain among the bank employees in Dhaka city” ( Ali et.al.,2019),” Occupational stress among Banking employees at El Mansoura city” (Salim et.al., 2019), “ Work related musculoskeletal disorders associated factors among bank workers in Addis Ababa, Ethiopia : a cross sectional study” ( Dangne et.al.,2020)” and “The Impact of Occupational Stress on Job Burnout Among Bank Employees in Pakistan, With Psychological Capital as a

Mediator”(Khalid et. al., 2020).

Whereas, while reviewing the researches done in India, the studies were found which are conducted on “ A comparative study on occupational stress of nationalized and non nationalized bank employees in Madurai city, Tamil Nadu”(Swarnalatha and Gopalkrishnan, 2012), “ Work- related musculoskeletal health disorders among Information Technology Professionals in India: A Prevalence Study” Vijay, (2013). “Occupational Stress Among Bank Employees in Jammu and Kashmir” (Bhat, 2013), “Impact of Organizational Stress on Employee Morale: A study of Bank Officers in Uttar-Pradesh” (Sharma, 2014), “Occupational Stress - A Study With Reference To Selected Bank Employees in Chennai” (Mangeshwari et al., 2014), “ Occupational stress in banking sector in Haryana” (Dhankar, 2015), “Job Satisfaction and Occupational Stress among Public and Private Bank Employees in Ahmedabad” (Chothani, 2015), “ A comparative analysis of occupational stress among the employees working in public and private sector banks in Karaikal district of union territory of Puducherry” ( Edison et.al.,2015), “Prevalence of Musculoskeletal Disorder among Computer Bank Office Employees in Punjab ”(Moom et. al., 2015) ,“Musculoskeletal morbidity among construction workers in Chennai” (Redy et.al., 2016),“Prevalence of the musculoskeletal disorder among school teachers in Gujarat” (Vaghela and Parekh,2017), conducted a study on” Assessment of Ergonomic Risk Factor and Functional Status among Bank Workers of Loni” (Baxi and Hande, 2017), “ A profile of occupational stress in nurses in Maharastra” (Chaudhari et.al., 2018), “Occupational stress among public sector bank employees in Bhopal” (Sheopuri, 2019), , “Prevalence of Musculoskeletal Discomfort in Bank Employees in Navi Mumbai” ( Kotwani et.al., 2019) and “A Study of Musculoskeletal Disorders among Bank Workers Employed in and Around Arera Hills Bhopal”( Patel et al., 2019).

Related studies have been conducted in past in the Department of Family and Community Resource Management on “Ergonomic Assessment of Occupational health hazards faced by health care workers of selected hospitals” (Krishna, 2006), “Ergonomic Assessment of Workload in critical activities of Women Farmers involved in Organic farming” (Agarwal, 2004),

and “Work Posture Analysis and Musculoskeletal Problems experienced by the Students of Architecture Profession” (Datar, 2003).

However, many researches were found through review of literature focusing on work related Musculoskeletal Disorders and Occupational Stress conducted abroad and various parts of India. Prevalence of Musculoskeletal Discomforts and Occupational Stress among Banking Employees working in Assam was a less explored research area. Hence, the present locale of the study has been undertaken to conceptualize the study. The information, which will be collected by this study, can be used to focus on the need for primary prevention and thereby promoting health in the banking industry.

The study will provide feedback to the Banking Employees in consultation with expert of relevant field, as they can utilize the suggestions to reduce the extent of Musculoskeletal Discomforts and Occupational Stress. The findings of the present study will also be beneficial to the banking industry, commercial space designers, ergonomist and occupational health specialist as they get to know the factors which affecting Banking Employees mentally and physically. So, that they can provide effective applications of ergonomics in work system design to achieve a balance between worker characteristics and task demands. This can enhance worker productivity; provide worker safety, physical and mental well-being and job satisfaction. The present study will benefit other academic institutes offering courses on ergonomics and it is also useful for the documentation of the study.

The Department of Family and Community Resource Management, Faculty of Family and Community Sciences, The Maharaja Sayajirao University of Baroda, offers courses on “Ergonomics” at Under Graduate and Post Graduate level. Hence, the information gathered through the present research would widen the database and will help in strengthening the curriculum. Moreover, it will also help the students of Family and Community Resource Management Department to gain insight into the area of ergonomics on work-related Musculoskeletal Discomforts and Occupational Stress among Banking Employees. The results of the present study are expected to contribute



significantly to the field of Family and Community Resource Management as well as it will contribute for the society at large.

### **Statement of problem**

The present investigation is an attempt to assess the Musculoskeletal Discomfort and Occupational Stress experienced by the selected Banking Employees.

### **Objectives of the study**

1. To identify the Musculoskeletal Discomfort experienced by the selected employees working in bank in Assam.
2. To assess the Occupational Stress faced by the respondents.
3. To propose remedial measures for reducing Musculoskeletal Discomfort and Occupational Stress in consultation with expert of relevant field.

### **Delimitation**

1. The study is limited to the respondents who have a working experience of minimum one year in the nationalized or private banks.
2. The locale of the study is restricted to only the nationalized and private banks of three districts i.e Sivasagar , Jorhat and Guwahati of Assam, India.

### **Hypotheses**

1. There exists a relationship between the Musculoskeletal Discomfort experienced by the respondents during last 12 months with their Personal Variables [Age (in yrs.), Gender, Working Experience (in yrs.)] and their Situational Variable [Number of Working Hours].

An illustration of a modern bank lobby. In the background, a large blue sign with the word "BANK" in yellow capital letters is mounted on the wall. To its left and right are two smaller blue signs with white text and yellow accents. The ceiling features several white spotlights. In the foreground, three pairs of people are seated at long, light-colored desks. Each pair consists of a person in a blue business suit and a person in casual attire. They are all facing away from the viewer, working on computers. The desks are equipped with yellow chairs, small potted plants, and pen holders. The floor is a light gray with a subtle reflection of the people and desks.

**BANK**

# **REVIEW OF LITERATURE**

## **Chapter II**

### **Review of Literature**

A review of literature is a “comprehensive study and interpretation of literature that addresses a specific topic” (Aveyard, 2010). It enables the researcher to become acquainted with the studies conducted in the related area. It also serves as a guide to formulate a new research by considering its vital aspects which could be undertaken as it is with different locale or adding an unexplored element.

The major areas of related literature, survey, scholarly articles, books and other sources relevant to particular issues, area of research, or theory, providing a description, summary and critical evolution of each work are presented here. In order to make the review clear and understanding, the present chapter has been divided into two sections as follows:

#### **Section I: Theoretical orientation**

- 1.1. Musculoskeletal Discomfort experienced by Bank Employees**
- 1.2. Occupational Stress faced by Bank Employees**
- 1.3. Bank and its types and functions**
- 1.4. Bank Employees and their duties**

#### **Section II: Empirical studies**

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#### **Conclusion**

## **Section-I**

### **Theoretical orientation**

Theoretical Orientation is the section which describes about the theoretical content related to the topic of the study. These are discussed independently in the succeeding description.

#### **1.1 Musculoskeletal Discomfort experienced by Bank Employees**

Musculoskeletal discomfort is a serious problem that every human being will face at least once throughout their lifetime (Dagne,2020). Musculoskeletal discomfort can be related to the work activities and conditions, and they could significantly contribute to the development of Musculoskeletal Disorders. The World Health Organization recognizes conditions that resulted in pain and functional impairment that affect the neck, shoulders, elbow, forearms, wrists and hands as work related when the work activities and work conditions significantly contribute to the development of work-related musculoskeletal disorders (Korhan and Memon 2019).

Work related musculoskeletal disorders (WMSD) are conditions in which the work environment and performance of work contribute significantly to the condition and the condition is made worse or persists longer due to work conditions. Working conditions that may lead to WMSD include routine lifting of heavy objects, daily exposure to whole body vibration, routine overhead work, work with the neck in chronic flexion positions, or performing repetitive forceful tasks [4].

Musculoskeletal discomfort are typically characterized by pain (often persistent) and limitations in mobility, dexterity and functional ability, reducing people's ability to work and participate in social roles with associated impacts on mental wellbeing, and at a broader level impacts on the prosperity of communities. The most common and disabling musculoskeletal conditions are osteoarthritis, back and neck pain, fractures associated with bone fragility, injuries and systemic inflammatory conditions such as rheumatoid.

Musculoskeletal conditions are prevalent across the life-course and most commonly affect people from adolescence through to older age. Musculoskeletal conditions occur commonly with other non-communicable diseases in multi-morbidity health states. (WHO 2020).

Certain professions predispose individual to develop musculoskeletal discomforts. These professions are characterized by sitting for long times in one position. Long working hours combined with physical and psychosocial risk factors create an apt setting for these conditions. Banking is one such sector where working involves sitting for prolonged times. They are often subjected to high workload and end up working for more than 8 hours a day (Dixit et.al., 2020). The repeated use of computers puts stress and strain on muscles as well as on joints. Individual factors, prolonged awkward postures, poor workstation design, psycho-social atmosphere, job stress, lack of adequate leisure time and extra working hours may all contribute to the development of symptoms of musculoskeletal discomfort in banking employees. Musculoskeletal discomfort are associated with high cost to employees such as absenteeism, reduced productivity, and increased health care and disability.

## **1.2 Occupational Stress faced by Bank Employees**

Pressure at the work place is unavoidable due to the demands of the contemporary work environment. Pressure perceived as acceptable by an individual may even keep workers alert, motivated, able to work and learn, depending on the available resources and personal characteristics. However when that pressure becomes excessive or otherwise unmanageable it leads to stress. Occupational stress can be caused by poor work organizations (way of job design and work systems and the way of manage them), by poor work design (lack of control over work processes), poor management, unsatisfactory working conditions and lack of support from colleagues and supervisors (5).

The National Institute for Occupational Safety and Health (NIOSH) expresses

that occupational stress can be defined as the harmful physical and emotional responses that occur when the requirements of the job do not match the capabilities, resources, or needs of the workers. Occupational stress can lead to poor health and even injury [6].

Occupational stress affects directly organizational commitment as well as physiological, behavioral and psychological well being of individuals. It may create physiological problems such as, eating disorders, irritability, headaches, hair loss, loss of sex drive, serious physical illness, increased heartbeat and blood pressure, palpitations and chest discomfort, breathlessness and hyperventilating, muscle ache, sleeping problems, dryness of throat and mouth, sweaty palms, urinating frequently, diarrhea, indigestion, stomach ulcers, etc. It may show behavioral problems such as, impulsive behavior, eating more or less, easily distracted, speech problems, sleeping too much or too little, change in personality, irritable or aggressive, grinding of teeth, increasing smoking and use of drugs and alcohol, burnout, nervous habits, increased errors, absenteeism, lack of concentration, etc. It also display psychological symptoms such as, physical trauma, moodiness, anxiety, fear and tension, memory problems, depression, dissatisfactions, seeing only the negative, panicky, poor judgment, worries and catastrophic thoughts, sense of loneliness or isolation and overestimation of danger (Islam et.al., 2012).

According to the National Institute for Occupational Safety and Health (NIOSH 2016) ranking for occupational stress level, banking was listed among the most stressful occupations. It was documented that in these stressful occupations, the employees had insufficient control over the work, with employees feeling that they were trapped in jobs where they were regarded as quasi-machines rather than as people. Stress can manifest in employee's behavior in various forms such as depression, anxiety, burnout, headache, frustration, fatigue, aggression and loss of concentration (Mahalakshmi et.al.,2014).

## **1.2 Bank and its functions**

The banking industry handles finances in a country including cash and credit. Banks are the institutional bodies that accept deposits and grant credit to the entities and play a major role in maintain the economic stature of a country [7].

The bank usually takes a deposit from the public at a much lower rate called deposit rate and lends the money to the borrower at a higher interest rate called lending rate. The difference between the deposit and lending rate is called 'net interest spread', and the interest spread constitutes the banks income [8].

The process of modern banking in India began in the late 18<sup>th</sup> century. The oldest profit- oriented bank is the “ Bank of Calcutta” started in 1806 and is presently known as the ‘ State Bank of India’. Currently there are 34 banks in India, out of which 12 are public sector banks and 22 are private sector banks [9].

### **1.3.1. Types of Banks in India**

There are several types of banks in India that are broadly divided into 2 categories i.e. Scheduled Banks and Non – Scheduled Banks.

#### **A. Scheduled Banks**

##### **1. Central Bank**

A chief bank that keeps a check on and synchronizes with all the other banks in a particular country is known as the Central Bank of the country. In India, the post of the Central Bank is that of the ‘Reserve Bank of India’ (RBI). The RBI is also known as the ‘government’s bank’ or the ‘banker’s bank’. The RBI is responsible for regulating and guiding other banks in the country. It emanates the currency of the country i.e the Indian Rupee. It executes and carries out financial and monetary strategies, approaches, and determining policies. The RBI overlooks the pecuniary system of the country by handling the finances. It is also responsible for foreign exchange. All of these

functions always take place under the supervision of the government of the country [9].

## **2. Cooperative Banks**

Such banks operate under the state government's act. The main objective of these banks is to ensure the social well – being of the public. This is done by offering loans that are open to concession based on user comfort [9].

## **B. Non- Scheduled Banks**

### **1. Commercial Banks**

Such banks operate under the Banking Companies Act of 1956. These are often run by either the government or any private firm. The major aim of such banks is to earn maximum profit by their commercial policies. The deposit amount by its users acts as a major resource of its reserve. Concessional interest fares are only offered when directed by the CBI. These are appropriate for operation in both urban and rural areas [9].

These further have 3 major types:

- **Public Sector Banks:** The denominating shareholder is either the government or the central bank of the country [9].
- **Private Sector Banks:** The denominating shareholder is either an individual, some private organization, or a selected group of individuals [9].
- **Foreign Banks:** Such banks have their head offices and main operating systems in a foreign country with their branches in India [9].



## **2. Regional Rural Banks**

Operating under the Regional Rural Bank Act of 1976, these banks started in 1975. These banks aim at the development of rural and agricultural areas with the help of concessional loan offerings. The establishment of 196 has taken place in between 1987 – 2005. The ownership of these banks belong 50 per-cent to the national government, 15 per-cent to the state government, and 35 per-cent to the commercial bank. 3 geographically consecutive districts cannot have the branches of the same Regional Rural Bank. From 2005 onwards, the merging of these banks took place then by the government due to which the number reduced to 86 [9].

## **3. Local Area Banks**

Operating under the Companies Act, 1956 these banks originated in the year 1996. These are commercially driven banks with the aim of earning profit. These are run by private firms. Currently, in India, there are 4 Local Area Banks located in the southern part of India [9].

## **4. Specialized Banks**

Banks which started for determined purposes are Specialized Banks. The 'Export and Import' (EXIM) Bank is a part of the specialized banks. Export and import finances take place and loans occur via these banks. Commercial and monetary responsibilities regarding rural artworks, handicrafts, villages, and agricultural development often take place by the 'National Bank for Agricultural & Rural Development' (NABARD). The Small Industries Development Bank of India (SIDBI) offers loans for small scale industries and also upgrades them in terms of technology and equipment. These are responsible for the economic and industrial development of the country [9].

## **5. Small Finance Banks**

Regulated and controlled by the national government of the country. Responsible for offering finances and loans to minor businesses and trades such as farming or the poor unorganized sector [9].

## **6. Payments Banks**

Payment Banks are the latest introduction to the banking format design took place by the RBI. The maximum deposit accepted in these banks is that of Rs. 100000. There is no facility of loan and credit cards. Net, online, mobile, ATM, and debit card banking can take place via [9].

### **1.3.2 Functions of Bank**

#### **A. General Functions**

**1. Receiving Deposits:** The first and foremost function of bank is to receive or collect deposits from the public in different forms of accounts e.g. current, savings, term deposits. No interest is charged in the current account, lower rate of interest is charged in the savings account and comparatively higher interest rates charged in fixed deposits. Thus, commercial bank builds up customer network [10].

**2. Accommodation of loans and advances:** Bank attaches much importance to providing loans and advances at a higher rates than the deposit rates and thus earns profits on it. Working capital is accommodated to the borrower for expansion and smooth running of business. In the similar manner, commercial bank extends financial accommodation for the development of agriculture and industry. Credit accommodation is provided to the entrepreneurs for reviving sick and old industries as per Govt. directives. Thus, commercial bank also extends welfare services to the people at large [10].

**3. Creation of Loan Deposits:** Bank not only receives deposits from public and accommodates loans to public but also creates loan deposits. For example: while disbursing loans as per sanction stipulation, the amount of loan is credited to the borrower's account. The borrower may not withdraw the full amount at a time. The residual amount i.e. balance left in the account creates loan deposits [10].

**4. Creation of medium of exchange:** Central Bank has got exclusive right to issue notes. On the other hand, Commercial Bank creates medium of exchange by issuing cheques. Like notes, cheque is transferrable being popularly used in the banking transactions [10].

**5. Contribution in foreign trade:** Bank plays a vital role in expediting foreign exchange and foreign trade business e.g. import, export etc. It contributes greatly in the economy through import finance and export finance and thus, earn foreign exchange for the country [10].

**6. Formation of capital:** Bank extends financial assistance for the formation of capital in the trade, commerce and industry in the country which expedites its economic development [10].

**7. Creation of Investment Environment:** Commercial Bank plays a significant role in creating investment environments in the country [10].

## **B. Public Utility Functions:**

**1. Remittance of Money:** Remittance of money to the public from one place to another is one of the functions of commercial bank. Remittance is effected in the form of demand draft , telegraphic transfer etc. through different branches and correspondents home and abroad [10].

**2. Help in trade and commerce:** Bank helps expand trade and commerce. In inland and foreign trade customers are allowed credit accommodation in the form of letter of credit , bill purchased and discounted [10].

**3. Safe custody of valuables:** Commercial Bank introduces „locker“ services to the customers for safe custody of valuables e.g. documents, shares, and securities [10].

**4. Help in Foreign Exchange business:** While opening letter of credit , commercial bank obtains credit report of the suppliers and thus help expedite import and export business [10].

**5. Act as a Referee:** Bank acts as a referee for and on behalf of the customers [10].

**6. Act as an Adviser:** Bank provides valuable advice to the customers on different products, business growth and development, feasibility of business and industry [10].

**7. Collect utility service bills:** As a social commitment, Bank collects utility service bills e.g. water, electricity, gas, telephone etc. from the public [10].

**8. Purchase and sale of prize bonds, sanchaya patra, shares etc:** Commercial Bank undertakes to purchase and sale of prize bonds, sanchaya patra, shares etc. as a part of social commitment [10].

**9. Help people travel abroad:** Commercial Bank helps customers in traveling abroad through issuance of travelers cheques, drafts, cash etc. in favour of the customers [10].

### **C. Agency Functions:**

Besides above stated functions, bank acts as a representative of the customers.

**1. Collection and payment:** Commercial Bank is engaged in collection and payment of cheque, bill of exchange, promissory notes, pension, dividends, subscription, insurance premium, interest etc. on behalf of the clients [10].

**2. Purchase and sale of shares and securities:** Commercial Bank is

entrusted with the responsibility of purchase and sale of shares and securities on behalf of the customers [10].

**3. Maintenance of secrecy:** Maintenance of secrecy is one of the most important functions of commercial bank [10].

**4. Act as a trustee:** Commercial Bank acts as a trustee on behalf of the customer [10].

**5. Economic Development and Welfare activities:** Commercial Bank contributes much for the welfare and economic development of the country [10].

#### **1.4 Bank employees and their duties**

Bank employees work as part of a team to provide customer service in their assigned roles. The size of a bank affects specific duties [11].

##### **1.4.1 Tellers**

Tellers provide direct service to customers by accepting deposits, cashing checks and exchanging currency. This bank employee's typical duties also include receiving check orders from customers and providing travelers' checks. Tellers need excellent math skills to ensure accuracy in handling money. They are required to tally their cash drawers at the beginning and end of the workday [11].

##### **1.4.2 Customer Service Representatives**

Customer service representatives assist customers in opening new bank accounts, modifying existing accounts, and completing paperwork for products such as Certificates of Deposit. Additional duties include answering questions about the bank's products and services and responding to customers' questions. Customer service representatives may also be responsible for answering phone calls, assisting callers or connecting them with the proper department [11].

### **1.4.3 Bookkeepers and Clerks**

Accounting, auditing and bookkeeping clerks maintain financial records for the bank by posting financial transactions using computer software. These clerks check records for accuracy, reconcile entries and balances and create reports from the data. For example, an accounting clerk may regularly produce balance sheets for management from the bank's financial data. In smaller banks, a bookkeeper may be responsible for all the financial institution's records. Larger banks may split the duties between accounting and auditing clerks [11].

### **1.4.4 Loan Officers**

Bank loan officers meet with applicants and help them complete loan applications. Loan officers answer questions about the different loan types the bank offers and explain contract provisions. Once the application is completed, loan officers verify the information and evaluate the applicant's potential to satisfy the loan terms. In some financial institutions, loan officers make the final decision on loan approval or denial. In others, loan officers make only a recommendation and a higher-level executive makes the final decision [11].

### **1.4.5 Financial Managers**

In the banking business, financial managers examine financial reports and prepare statements for upper management and owners. Financial managers often work in supervisory roles, managing other employees such as bookkeeping and accounting clerks. In addition, financial managers work closely with upper management, advising on ways to reduce costs and increase profits [11].

## **Section-II**

### **Empirical Studies**

The related research studies conducted in India and Abroad are reported in the present section:

#### **2.1 Studies conducted in India:**

##### **2.1.1 Musculoskeletal discomfort**

A cross sectional study was conducted by **Vijay, (2013)** on “ Work-related musculoskeletal health disorders among Information Technology Professionals in India: A Prevalence Study “. The study was conducted among 360 employees working in the private IT industries located at Chennai, Coimbatore, Bangalore and Hyderabad. The finding of the study showed that neck pain was the most commonly reported disorder, with low back pain, wrists and hand pain and the shoulder pain were the next frequently reported symptoms.

A case study was conducted by **Moom et.al.,(2015)** on “ Prevalence of Musculoskeletal Disorder among Computer Bank Office Employees in Punjab”. A sample of 60 respondents were selected for the study. The findings of the study showed a high prevalence of disorders in the low-back pain (40.4 per cent), upper back (39.5 per cent), neck (38.6 per cent), hand/wrist (36.8 per cent), and shoulder (15.2 per-cent). They also found that age, smoking/drinking habits, bad work postures, job insecurity, unhealthy working conditions also contribute to increase MSD in bank employees.

A cross sectional study was conducted by **Reddy et.al.,(2016)** on “Musculoskeletal morbidity among construction workers in Chennai”. The study was conducted among 308 constructions workers, majority were 21- 40 years. The purpose of the study was to investigate musculoskeletal morbidities among construction workers using

modified Nordisk Scale. From the findings, the three most common disorders discovered were low backache, shoulder pain and wrist pain. Total duration in the construction field, duration of work hours, and higher age had statistically significant impact on musculoskeletal morbidity among the workers.

**Baxi and Hande, (2017)** conducted a study on "Assessment of Ergonomic Risk Factor and Functional Status among Bank Workers of Loni". A sample of 46 respondents were selected for the study. The result of study concluded that the tasks performed by the bankers possess moderate risk of occurrence of musculoskeletal injury for both right side and left side of the neck. Risk was greater in managers requiring bending and twisting lower back to answer phone.

A study was conducted by **Vaghela and Parekh, (2017)** on "Prevalence of the musculoskeletal disorder among school teachers in Gujarat". The study was conducted among 314 teachers from various schools. Modified Nordic Questionnaire was used to investigate the study. The findings of the study revealed that female teachers were more affected with 72 per cent than male teachers with 28 per cent. The study showed high prevalence of musculoskeletal pain in the shoulder, knee and back.

**Patel et.al.,(2019)** conducted a study on "A Study of Musculoskeletal Disorders among Bank Workers Employed in and Around Arera Hills Bhopal". A sample of 272 bank employees were selected for the study. The result of the study revealed that lower back ( 65.25 per cent) and wrist/ hand (34.3 per-cent) associated MSD was more prevalent among the staffs, while ankles were least effected (6.5 per cent).

**Kotwani et.al.,(2019)** undertaken a research on "Prevalence of Musculoskeletal Discomfort in Bank Employees in Navi Mumbai". A sample of 100 bank employees were selected as a respondent for the study. The result of the study concluded that there is high prevalence of



musculoskeletal discomfort and the commonest site of pain being the neck region followed by upper back and lower back region. Maintaining awkward posture and performing over time work was also predisposed them to MSD. The researchers also found that employees was also suffering from work place stress which also contributed to their pain.

### **2.1.2 Occupational stress**

**Swarnalatha and Gopalkrishnan, (2012)** conducted a study on “A comparative study on occupational stress of nationalized and non-nationalized bank employees in Madurai city Tamil Nadu”. The study was conducted among 100 bank employees from nationalized and non-nationalized bank. The result of the study revealed that there was significant difference in the level of occupational stress between nationalized and non-nationalized bank employees. Occupational stress is found higher among Non-Nationalized employees compared to Nationalized employees. Among different occupational stress variables Role over load, Role authority Role conflict and Lack of Senior level Support contribute more to the occupational stress among Non-Nationalized employees compared to Nationalized employees.

A empirical study was conducted by **Bhat, (2013)** on “Occupational Stress Among Bank Employees in Jammu and Kashmir”. The study was designed to gauges the level of organizational stress present in the bank sector. The study mainly focuses on the antecedents of job stress that was work life balance, work overload, employee relationships at workplace, job control and job characteristics. The results demonstrated that job stress increases when employees perceive work life imbalance, less of job control, vague job characteristics, work overload and unfriendly relationships at work place.

**Mageswari and Prabhu (2014)** undertaken a research on “Occupational Stress - A Study With Reference To Selected Bank Employees in Chennai Region”. A sample of 216 respondents were selected for the study. The author had made attempt to identify the stress factors (stressors) and to examine the coping strategies among bank employees of different sectors. The findings of study revealed that the overall score of the stress is moderate in all the sectors. 'Experience' is a major contributory cause of difference in perception of stress when respondents are classified under different groups based on personal variables. It has the maximum discriminating power also. Employees with more experience expressed more stress compared to employees with less service. It may be due to increase in responsibility with an increase in the length of service (like 'experience', personal variables 'designation' and 'income' also influence the perception of stress).

A study was conducted by **Sharma, (2014)** on “Impact of Organizational Stress on Employee Morale: A study of Bank Officers in Uttar-Pradesh”. The study was conducted among 300 bank officers. The results of the study showed that that high stress had adverse effect on the employee morale. The researcher found that public bank officers had a lower stress than their counter parts in private banks, and that the stress level of middle-level officers was less than that among the entry- level officers in both the bank sectors.

**Raj and Julius (2015)** had undertaken a study on” A Comparative Analysis of Occupational Stress among the Employees Working in Public and Private Sector Banks in Karaikal District of Union Territory of Puducherry”. A sample of 632 respondents were selected for the study. The findings of the research indicating that the factor causing occupational stress to the employees working in both the banking sector. The job stressors affecting the bank employees included overload of work, role conflict, role ambiguity, performance pressure,

and job security and the other factors like working condition, lack of superior support and technological problem.

**Chothani, (2015)** conducted a study on “Job Satisfaction and Occupational Stress among Public and Private Bank Employees in Ahmedabad”. A sample of 100 respondents were selected for the study. The findings of the study reflected that Public Bank employees were more satisfied with their jobs and occupationally less stressed than the Private bank employees. Further Female bank employees were less satisfied and under higher level of occupational stress as compared to their Male bank employees counterparts. Whereas, there was a negative & significant co-relation between Job Satisfaction & Occupational stress of Bank employees.

**Dhankar, (2015)** carried a research “Occupational stress in banking sector in Haryana”. The study was conducted among 200 employees. From the findings, it was found that because of long working hours, high work load, role conflict and political pressure there was high degree of amongst the private and public sector bank employees.

A study was conducted by **Chaudhari et.al.,(2018)** on “A profile of occupational stress in nurses in Maharastra”. The study was conducted among 97 staff nurses using the Expanded Nursing Stress Scale. The study revealed that occupational stress was prevalent among nurses. It may be higher in nurses with lesser experience and it can be associated with somatic complaints. Conflicts with supervisors, patients, and their families were the main cause of occupational stress while the discrimination was least affected domain.

A study was conducted by Sheopuri, (2019) on “Occupational Stress Among Public Sector Banks Employees” in Bhopal”. A sample of 200 respondents were selected for the study. Findings of the study showed that the training and effectiveness boost the morale of the employees upgrade skills improve their performance and gives them

the opportunity to get lucrative jobs and excel in their jobs. The findings also showed that the training aimed at providing the trainee the opportunity of changing their behaviors and contributes to their effectiveness and upgrading their skills.

## **2.2 Studies conducted Aboard:**

### **2.2.1 Musculoskeletal discomfort**

**Akrouf et.al.,(2010)** carried a research on “Musculoskeletal disorders among 750 bank office workers in Kuwait”. A self administrated validated questionnaire was used that included the Nordic musculoskeletal questionnaire and 12- item general health questionnaire. The findings of the study revealed that of 750 employees, 80 per cent suffered at least 1 episode of MSD during the previous year and 42 per cent suffered at least 1 disabling episode. The most affected body parts were the neck (53.5 per cent), lower back (51.1 per cent), shoulders (49.2 per cent) and upper back (38.4 per cent).

A study was conducted by **Alazawi, (2012)** on “Prevalence of Musculoskeletal Symptoms among Visual Display Terminal Users in Baquba, Iraq”. A sample of 120 respondents were selected for the study. The result of study was that the neck, shoulder and lower back problem are the main problems among VDT workers. Both male and female VDT workers also suffered pain in neck, shoulder, low back, forearm, wrist, elbow and the different parts of the upper extremities. This study revealed that the female VDT workers suffer more discomfort feeling than male VDT workers. Prolonged period of work in an awkward posture mainly lead to discomfort feeling among the VDT workers. The 12 month prevalence of musculoskeletal complaints in various body parts were: neck (30.0 per-cent), back (28.3 per-cent), shoulder (18.3 per-cent), wrist (8.3 per-cent), forearm (6.6 per-cent)

elbow (5.8 per-cent) and (2.5 per-cent) fingers. It was found that there was a gradual increase in musculoskeletal complaints as the number of hours spent for working on computers daily increased.

**Giahi et.al.,(2013)** had undertaken a research on “Daily visual display terminal use and musculoskeletal disorders among 382 Iranian bank tellers”. The study revealed that 70.2 per-cent of participants reported the musculoskeletal problems within 12 past months in at least one of the body regions. The most prevalence was reported in the neck (37.4 per-cent) and low back (36.6 per-cent) regions, and the elbows (8.3 per-cent), and thighs (12.3 per-cent) were regions that reported with the least prevalence rate.

To assess the musculoskeletal symptoms, and perceived fatigue and work characteristics in super market cashiers of Tartu, Estonia a study was conducted by **Sirge et.al.,(2014)** among 67 female super market cashiers who were predominantly working in the sitting position. The results of the study concluded that in supermarket cashiers the highest prevalence rate of discomfort and pain was emerged in low back and neck, and they perceived rushing and monotony at work and physical and mental fatigue after the workday.

**Mohammadi, (2014)** conducted a study on “Musculoskeletal symptoms among bank office workers in Kerman, Iran”. A sample of 324 respondents were selected for the study. The major findings of the study concluded that the highest prevalence of symptoms were found for male and female upper back, female Hip/Buttocks and neck, and female lower back (62 per-cent). The highest prevalence of symptoms was found for female neck, upper back and lower back. Finding indicated that females have been experiencing more complaints than males. The prevalence of MSS among targeted population occurred in high rate.

**Ali et.al.,(2019)** investigated “Prevalence and associated occupational factors for low back pain among the bank employees in Dhaka City”. A sample of 593 respondents were selected for the study. The researchers found that the one-month prevalence for LBP was found 36.6 per-cent among the bank employees and the prevalence was high (63.3 per-cent) for the 51 to 59-year-old age-group. The occupational factors, including the length of employment (> 10 years) and long working hours, play a significant role in developing LBP among bank employees.

To assess the “Work-related musculoskeletal disorders and associated factors among bank workers in Addis Ababa, Ethiopia: a cross-sectional study” was conducted by **Dagne et.al.,(2020)**. A sample of 838 bank workers were selected for the study. From the findings of the study, the authors concluded that the magnitude of work-related musculoskeletal disorder among bank workers was high. Being female, awkward posture, no work time break, fixed position, type of chairs, and job stress are the factors significantly associated with WMSDs.

### **2.2.2 Occupational stress**

**Malik (2011)** conducted a study on “The occupational stress experienced by public and private bank employees in Quetta City, Pakistan”. The study was conducted among 200 bank employees from private and public banks. From the findings, it was found that occupational stress is higher among private bank employees as compared to public bank employees. In both sectors, the role overload, role authority, role conflict, and lack of senior level support were the major stressors.

**Muhammad et.al.,(2011)** undertook a research on “Work stress and employee performance in banking sector evidence from district Faisalabad, Pakistan”. In his study on branch level managers, operational managers, supervisors, and officers (credit officers, remittance officers, customer services officers and relationship officers)

of a bank stated that bankers are under a great deal of stress due to many antecedents of stress such as lack of administrative support, excessive work demand, problematic customer relations, coworker's relationship, family and work life balance, and risk involved in the job.

**Paruk and Singh (2012)** studied "Managing bank employee stress in a South African bank". The purpose of the study was to determine the overall stress levels of employees working within this environment based on demographics, length of service and qualification levels. The study was conducted among 40 respondents using self administered questionnaire and five point Likert scale. The research proves that the age of the respondents and the level of stress experienced by the respondents were related in terms of where they were in their life cycle. Different age groups felt the effects of stress differently and as stated in the literature this could be due to different pressures and responsibilities being placed on the individual within a particular age bracket and level in the organization.

**Mosadeghrad (2013)** conducted a study on Occupational Stress and Turnover Intention: Implications for Nursing Management in Iran. The purpose of the study was to explore the status of occupational stress among hospital nurses and examine the relationship between nurses' occupational stress and their intention to leave the hospital explored the status of occupational stress among hospital nurses. The study found that the major sources of stress among nurses were inadequate pay, inequality at work, too much work, staff shortage, lack of promotion, job insecurity and lack of management support.

**Belias and Koustelios (2014)** carried a research on "Job Satisfaction and Job Burnout Among Greek Bank Employees". The sample of the study consisted of 230 employees of Greek banks and credit institutions. The method which was preferred in the frame of the study was the quantitative research method. The tool used for the measurement of job satisfaction was the Employee Satisfaction

Inventory, ESI, created by Koustelios (1991) and for the measurement of job burnout was the Maslach Burnout Inventory, MBI, created by Maslach and Jackson (1986). The results of the study showed that the feelings of job satisfaction and job burnout experienced by Greek bank employees occur in quite high levels. Furthermore, there was quite a strong negative correlation between the two variables.

**Salim et. al., (2019)** had undertaken a research on “Occupational Stress among Banking Employees at El Mansoura City”. A sample of 568 banking employees were selected for the study. The result of the study concluded that there was statistical significance difference between national and private bank employees as regard the prevalence of health complaint. Age, gender, occupational degree and social relations at work showed statistical significant difference between national and private bank employees. About 22.8 per-cent of national banks employees showed high stress level, while only 12 per-cent of private banking employees showed high stress level.

A cross sectional study was conducted by **Khalid.et.al., (2020)** on “The Impact of Occupational Stress on Job Burnout Among Bank Employees in Pakistan, With Psychological Capital as a Mediator”. The purpose of the study was to highlight the influence of occupational stress on employees in the banking sector and recommends that bank managers should adopt appropriate measures to develop a productive and stress-free labor force, capable of overcoming current and future challenges. A sample of 1,778 bank employees were collected from various banks in different cities. The result of the study showed that there was a significant and positive relationship between extrinsic effort and over-commitment on the one hand, and emotional exhaustion and depersonalization on the other. The researchers was also found that reward was negatively associated with emotional exhaustion and depersonalization. However, reward had a positive association with personal accomplishment. There was a gender difference in the



mediating effect of psychological capital on stress at work and job burnout.

## **Conclusion**

The review of literature collected focused on introduction of musculoskeletal discomfort experienced by the bank employees, occupational stress faced by the bank employees, bank and its types and functions and bank employees and their duties. The review of literature also highlighted that various studies were conducted on Musculoskeletal Discomfort and Occupational Stress experienced by employees in various working environment i.e., Bank Employees, Computer Operators, IT Professionals, Nurses, Teachers, Supermarket Cashiers and Construction Workers. Based on the review of literature, it was clear that many studies on Prevalence of Musculoskeletal Discomfort and Occupational Stress among Banking Employees in abroad and various parts of India had been conducted. However, a dearth was found of studies carried out in Prevalence of Musculoskeletal Discomfort and Occupational Stress among Banking Employees working in Assam, India. The present research area was thought be the most significant and unexplored area. There is an imperative need to conduct a number of studies in Assam, India. Therefore, the researcher was interested in carrying out an investigation on the topic undertaken.

An illustration of a modern bank interior. At the top, a large blue sign with the word "BANK" in yellow capital letters is centered. It is flanked by two smaller blue signs with white horizontal lines. Six spotlights hang from the ceiling, illuminating the scene. Below the signs, the word "METHODOLOGY" is written in bold black capital letters. In the foreground, three service counters are visible. Each counter has a teller in a blue suit and a customer. The customer on the left is a man in an orange shirt and green pants. The customer in the middle is a woman with blonde hair. The customer on the right is a woman in a red top and blue pants. They are all sitting on yellow chairs. A potted plant is on the left side of the first counter. The floor is a light brown color.

**BANK**

# **METHODOLOGY**

## **CHAPTER-III**

### **METHODOLOGY**

Research methodology is a coherent group of methods that harmonize one another and that have the capability to fit to deliver data and findings that will reflect the research question and suits the researcher's purpose (Creswell and Creswell, 2018). The research design, variables under study, sample size and sampling procedure, tool for data collection and operational definitions of the terms used in the study are explained briefly in this chapter. The present investigation was undertaken to assess the musculoskeletal discomfort and occupational stress experienced by the banking employees. In order to achieve the aims of the present study, a detailed plan of work and sequential procedure was followed which is presented in this chapter under the following sub-headings:

#### **3.1 Research Design**

#### **3.2 Operational Definitions**

#### **3.3 Variables and Conceptual framework under study**

#### **3.4 Locale of Study**

#### **3.5 Unit of Inquiry**

#### **3.6 Sampling Size and Sampling Procedure**

#### **3.7 Selection, Development and Description of the tools**

#### **3.8 Data Collection**

#### **3.9 Data Analysis**

#### **3.10 Development of remedial measures for reducing Musculoskeletal Discomfort and Occupational Stress**

### **3.1 Research Design**

According to Creswell and Creswell (2018) research designs are plans and the procedures for research that span the decisions from broad assumptions to detailed methods of data collection and analysis. The research design for the present investigation was descriptive in nature. According to Kothari and Garg (2019), "Descriptive research studies are those studies which are concerned with describing the characteristics of a particular individual, or of a group". Descriptive design was thought to be most appropriate method to carry out the present research because it gathered the data on demographic details of the respondents and assessing the musculoskeletal discomfort and occupational stress experienced by the banking employees.

### **3.2 Operational Definition**

According to Ahuja (2011), "Operational definition of a concept or a variable assigns measuring to a construct by specifying the activities necessary to measure the construct or variable". The operational definitions thus considered under study are discussed as below:

**3.2.1 Bank:** For the present study, bank was operationally defined as financial institution that deal in monetary transactions. They are involved in both field activities such as customer visit, area mapping, survey, marketing and advertisement and table activities such as cash transactions, credit, disbursement, inquiry, internet banking, account opening, fixed deposit, mutual fund and loan.

**3.2.2 Banking employee:** For the present study, banking employee was operationally defined as employee who was responsible for most of the everyday operations at financial institutions namely supervisor, customer service representatives, public relation, accounting clerks, loan officers and financial managers.

**3.2.3 Musculoskeletal Discomfort experienced by the bank employees :** For the present study, musculoskeletal discomfort was operationally defined as discomforts experienced by banking employees such as

pain, ache in neck, shoulder, upper back, upper arm, lower back, wrist, hip, thigh, knee, lower leg and feet during the last 7 days and last 12 months and discomfort that prevented them in carrying out normal activities during 12 months. This was assessed through a pre-validated Nordic Musculoskeletal Discomfort Questionnaire (1987).

**3.2.4 Occupational Stress faced by the respondents:** For the present study, occupational stress was operationally defined as stress faced by the bank employees arising due to the general health of the respondents, health conditions, job satisfaction, mental demands, social support, work hazards, workload and responsibility and conflict at work. This was assessed through a NIOSH Generic Job Stress Questionnaire (1988).

- **General health:** General health were defined as a state of complete physical, mental, and social well-being among the respondents, rather than simply the absence of disease or infirmity.
- **Health conditions:** Health conditions for the present study was operationally defined as the conditions which include diabetes, asthma, high blood pressure, heart disease, arthritis, epilepsy, glaucoma, kidney or bladder trouble, lung or breathing problems, stroke, anemia, gall bladder, liver or pancreas trouble, thyroid trouble or goiter, insomnia, gastritis, stomach ulcer, alcoholism, emotional problems and back problems.
- **Job satisfaction:** Job satisfaction was defined as the level of contentment employees feel with their job.
- **Mental demands:** Mental demands were defined as emotional, psychological or mental pressures placed on the respondents.
- **Social support:** Social support was defined as a support at the workplace received by the respondent.

- **Work hazards:** Work hazards were described as something that could pose a physical or psychological threat to employees.
- **Workload and responsibility:** Workload was defined as number of tasks and obligations that employee must perform or complete within a certain period of time. Responsibility of an employee was defined as employees were responsible for ensuring that their actions did not harm or damage others morally, legally or mentally.
- **Conflict at work:** Conflict at work was defined as the state of disagreement or misunderstanding, resulting from the actual or perceived dissent of needs, beliefs, resources and relationship between the members of the organization.

### 3.3 Variables and Conceptual frame work under study

A variable refers to a characteristic or attribute of an individual or an organization that can be measured or observed and that varies among the people or organization being studied (Creswell and Creswell, 2018). There were two sets of variables for the present study viz. independent and dependent variables.

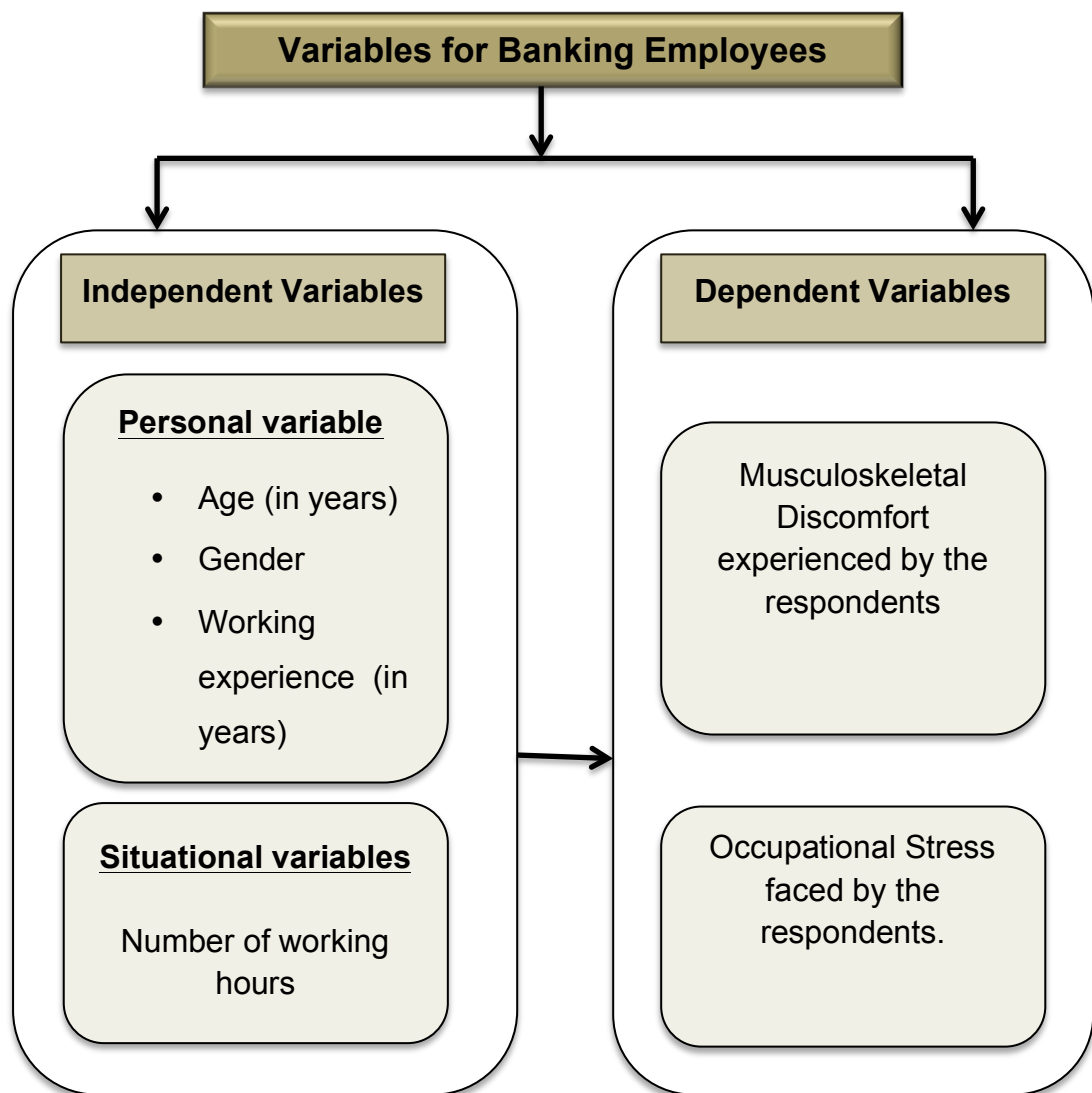
**3.3.1 Independent Variables of the respondents:** Independent variables are those which (probably) cause, influence, or affect outcomes. They are also called treatment, manipulated, antecedent, or predictor variables (Creswell and Creswell, 2018). For the present study the independent variables were categorized under two sub- heads:

- **Personal Variables of the respondents:** Personal Variables of the respondents included Age (in years), Gender and Working Experience (in years).
- **Situational Variables of the respondents:** Situational Variables include Number of Working Hours.

**3.3.2 Dependent Variables of the respondents:** Dependent variables are those that depend on the independent variables; they are the outcomes or results of the influence of the independent variables. Other names for dependent variables are criterion, outcome, and effect variables (Creswell and Creswell, 2018). For the present study dependent variables were:

- Musculoskeletal Discomfort and Occupational Stress experienced by the respondents.

**Hypothetical Relationship between Variables:** A schematic diagram showing hypothetical relationship between selected variables with its explanation is presented below.



**Figure 1: Schematic Framework to show Hypothetical Relationship among Variables under study**

## **Explanation of Schematic Framework**

It was conceptualized that musculoskeletal discomfort and occupational stress experienced by the bank employees were influenced by their personal variables of the banking employees such as Age (in years), Gender and Working Experience (in years) and situational variable namely Number of Working Hours.

### **3.4 Locale of Study**

The locale of the study was Assam state, India. Assam is situated in northeastern India. The state is divided into 34 districts. For the present study, three districts were selected namely Guwahati, Jorhat and Sivasagar. The sample for the present study was collected from different nationalized and private banks in the selected 3 districts.

### **3.5 Unit of Inquiry**

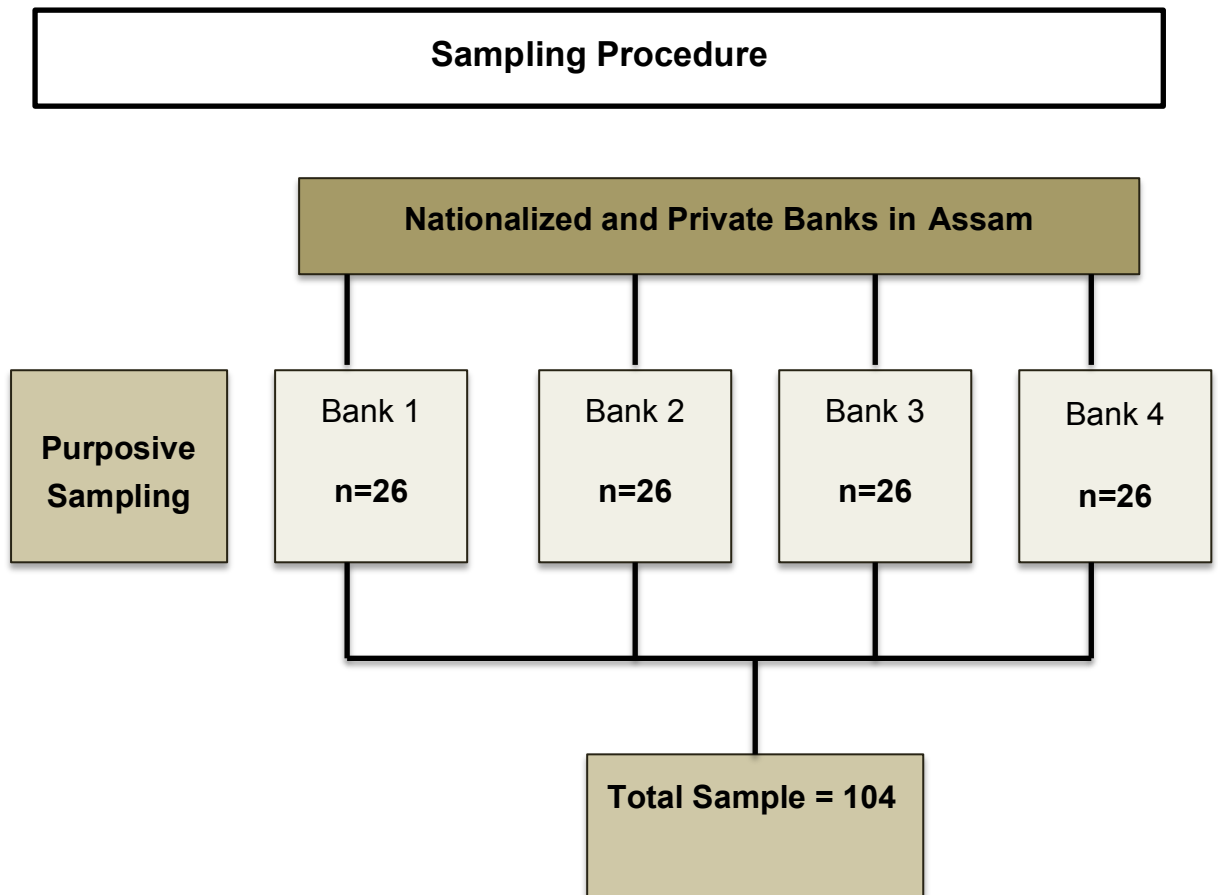
The unit of inquiry for the present study were the banking employees working in selected 3 districts of Assam namely Guwahati, Jorhat and Sivasagar.

### **3.6 Sampling Size and Sampling Procedure**

For the present study, purposive sampling technique was considered most suitable. According to Kothari and Garg (2019), Purposive sampling technique is a method of collecting samples involves selection of particular units of the universe for constituting a sample which represents the whole universe.

**For selection of the respondents:** The permission was sought for collecting data from banks. For this, managers of the banks were contacted, where permission was granted from 4 banks of selected cities. The data was collected from 104 respondents who were working as a employee in the bank for minimum 1 year in nationalized and private banks of three districts i.e Sivasagar, Jorhat and Guwahati of Assam state, India. Therefore, purposive sampling technique was used for the selection of respondents from the banks.





**Fig 2: Sampling size and Sampling procedure adopted for present study**

### **3.7 Selection, Development and Description of the tools**

For the present study, Questionnaire was used for collecting the data.

#### **3.7.1 Selection of the tool**

In the light of objectives framed for the present study, the questionnaire was developed. A questionnaire consists of a number of questions printed or typed in a definite order on a form or set of forms (Kothari and Garg, 2019). The questionnaire comprised of three sections were section-1 consisted of demographic profile of the respondents, section-2 included musculoskeletal discomfort experienced and section-3 involved occupational stress faced by the respondents. The questionnaire had been thought to be the best suited tool for collection of data since it was COVID-19 pandemic situation and the

researcher wanted to reach people which was not possible physically. The Questionnaire has following advantages:

1. It is low cost even when the universe is large and is widely spread geographically.
2. It is free from the bias of the researcher as the answers are in respondents' own words.
3. The respondents have adequate time to give well thought out answers.
4. It offers greater anonymity.
5. Large sample can be made use of thus, the results can be more dependable and reliable.

### **3.7.2 Development of the tool**

Based on the information collected through review of related literature and personal observation of the researcher, questionnaire was developed. Due consideration was given to include all questions that would elicit the information needed to attain the objectives to the study.

### **3.7.3 Description of the tool**

The various sections of the tools developed for the study is described in detail as follow:

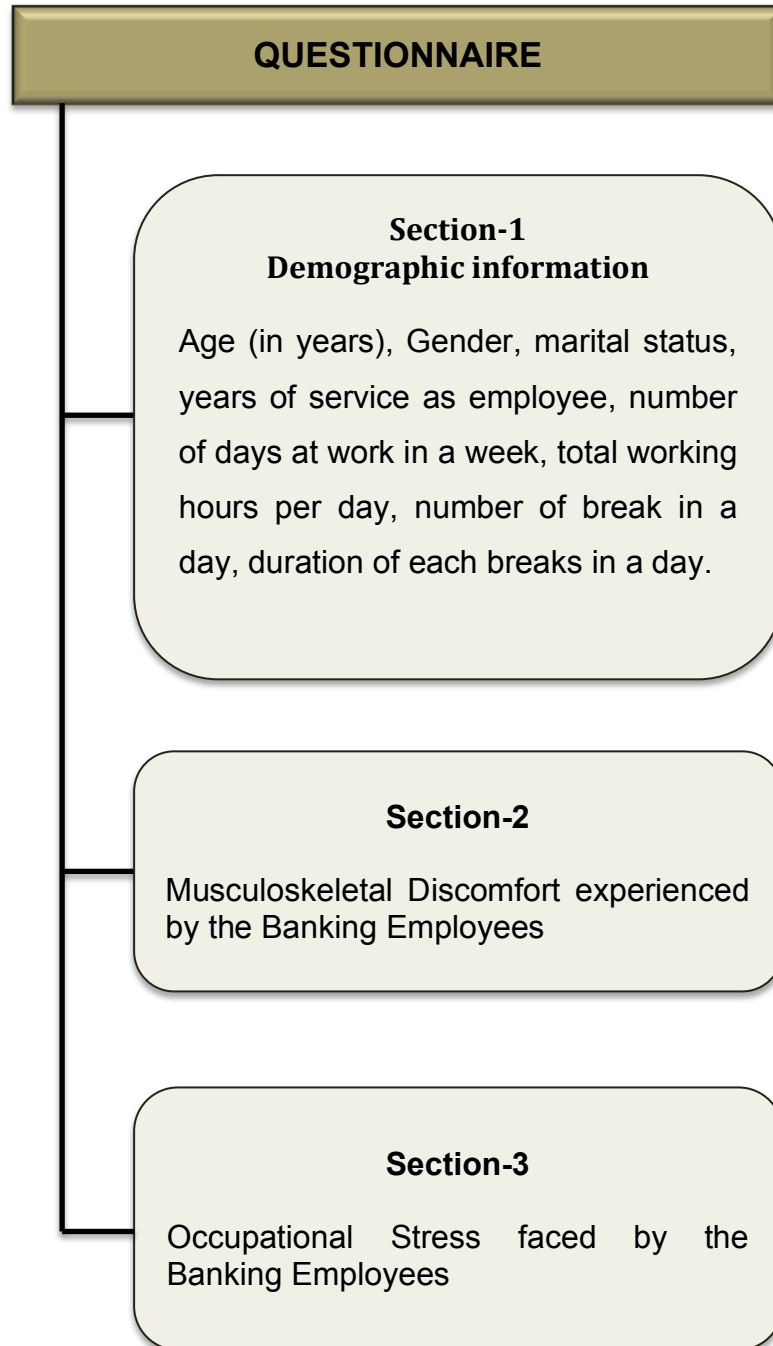
**3.7.3.1 Questionnaire for the respondents:** The questionnaire comprised of three sections which are described as below:

**Section-1:Demographic information:** This section contained questions regarding the personal and work related information of the respondents covering details on their age (in years), Gender, marital status, year of service as employee (in years), employment status, number of days at work (in a week), total working hours per day, overtime working hours (per week), number of break in a day, duration of each breaks in a day.

**Section-2: Musculoskeletal Discomfort experienced by the Banking Employees:** In this section, a standardized questionnaire namely "Nordic Questionnaire" was used to study the Musculoskeletal Discomforts

experienced by the Banking Employees while performing their tasks during last 12 months, last 7 days in different body parts viz. neck, shoulders, elbows, wrists, hands, upper back, lower back, hips, thighs, knees, ankles and feet. It also focused on finding out the discomforts that prevented the bank employees in carrying out daily activities during last 12 months in different body parts viz. neck, shoulder, upper back, upper arm, lower back, forearm, wrist, hip, thigh, knee, ankles and feet. The Nordic Questionnaire was developed from a project funded by the Nordic Council of Ministers. It was first published in 1987 by Kourinka et.al, 1987 in "Standardized Nordic Questionnaires for the analysis of musculoskeletal symptoms".

**Section-3: Occupational Stress faced by the Banking Employees:** In this section, a standardized questionnaire namely "NIOSH Generic Job Stress Questionnaire" was used to study the Occupational Stress faced by the Banking Employees. It included general job information, general health, health conditions, job satisfaction, mental demands, social support, work hazards, workload and responsibility and conflict at work. The NIOSH Generic Job Stress Questionnaire was available to use for public domain by Centre of Disease Control and Prevention, Government of USA. It was first published in 1988.



**Figure 3: Description of tool**

### **3.8 Data Collection**

The method utilized to collect data was survey method. A Google form questionnaire was created by keeping in mind to COVID-19 pandemic situation. Consent was taken from the bank managers at first followed by the consent from employees. Rapport building with the respondent was done via messages and emails by discussing the scenario and workload of the employees. The link of the same was distributed among the respondents. The respondents were briefed regarding the questionnaire in order to get complete information. In case of doubt in any construct, the doubts were cleared by the researcher and then the respondents were asked to fill in the incomplete information, if any.

### **3.9 Data Analysis**

The procedure used to analyse the data were categorization, coding, tabulation and statistical analysis.

#### **3.9.1 Categorization**

The following categories were made to enable researcher to analyse the data for further statistical application.

- I. Age of respondents (in years):** It referred to the age of the respondents at the time of data collection. The obtained range of the age of the respondents on the basis of equal intervals are as follows:
  1. 24–34years
  2. 35–45years
  3. 46–56 years
  
- II. Gender of respondents:** It referred to the gender of the respondents and was categorized as follows:
  1. Male
  2. Female

**III. Marital Status:** It referred to the present marital status of the respondents at the time of data collection and was categorized as follows:

1. Married
2. Unmarried

**IV. Years of service as employee:** It referred to the respondent's number of years of service as an employee (in years) and the range was obtained on the basis of equal intervals are as follows:

1. 1 – 12 years
2. 13 – 25 years
3. 25–38 years

**V. Job situation of the employee:** It referred to the respondents job situation at workplace and was categorized as follows:

1. Full-time permanent employee
2. Full-time temporary employee
3. Part-time permanent employee
4. Casual
5. Other

**VI. Number of days at work in a week:** It referred to the respondents number of days at work in a week as an employee and the range was obtained on the basis of equal intervals are as follows:

1. 5 days
2. 6 days

**VII. Total working hours per day:** It referred to the respondents total working hours per day at office and the range was obtained on the basis of equal intervals are as follows:

1. 5-6 hours
2. 7-8 hours
3. 9-10 hours

- VIII. Overtime working hours per week:** It referred to the respondents overtime working hours at office in an average week and the range was obtained on the basis of equal intervals are as follows:
1. 2-6 hours
  2. 7-12 hours
- IX. Number of breaks in a day:** It referred to the number of breaks respondents get in a day and the range was obtained on the basis of equal intervals are as follows:
1. 1 break
  2. 2 breaks
  3. 3 breaks
- X. Duration of each break in a day:** It referred to the duration of each break respondents get in a day and the range was obtained on the basis of equal intervals are as follows:
1. 1- 20 minutes
  2. 21-40 minutes
  3. 41-60 minutes
- XI. Musculoskeletal Discomfort experienced by the Banking Employees:** It referred to Musculoskeletal Discomforts experienced by the Banking Employees in different body parts while performing their task during last 12 months, during last 7 days and problem faced by the Banking Employees in carrying out their daily activities during last 12 months in different body parts viz. neck, shoulders, elbows, wrists, hands, upper back, lower back, hips, thighs, knees, ankles and feet (Table 1).

**Table 1: Categorization of Musculoskeletal Discomforts experienced by the selected Banking Employees.**

Musculoskeletal Discomforts experienced during last 12 months	Musculoskeletal Discomforts experienced during last 7 days	Musculoskeletal Discomforts that prevented the respondents from carrying out their normal activities during last 12 months
Upper Body	Upper Body	Upper Body
Lower Body	Lower Body	Lower Body

## **XII. Occupational Stress faced by the Banking Employee**

**3.9.2 Coding:** Coding refers to the process of assigning numerals or other symbols to answers so that responses can be put into a limited number of category or classes (Kothari and Garg, 2019). Scores were given to each response, then the information from each scale of the interview schedule and record sheet were transferred on excel sheet.

**3.9.3 Tabulation:** Tabulation is the process of summarizing raw data and displaying the same in compact form (i.e., in the form of statistical tables) for further analysis (Kothari and Garg, 2019). The data were transferred from coding sheet into tabular form to give a clear picture of findings. The data of the present research were tabulated to arrive at tables that were required for describing the data.

**3.9.4 Statistical Analysis:** The data were analyzed employing descriptive as well as relational statistics.

**Descriptive statistics:** The data were presented in frequencies, percentage, mean and standard deviation.

**Relational statistics:** Analysis of Variance (ANOVA) and t-test were applied to test the hypotheses postulated for the study (**Table 2**).



**Table 2: Relational statistics applied to test the hypotheses**

Test	Independent and dependent variables
(ANOVA) F-test	<b>Independent variables:</b> Age (in years), Working experience (in years) and Number of working hours (section I)  With <b>Dependent variable:</b> Musculoskeletal discomforts experienced by the respondents (Section II)
t-test	<b>Independent variables:</b> Gender (male or female) (section I)  With <b>Dependent variable:</b> Musculoskeletal discomforts experienced by the respondents (Section II)

### **3.10 Development of remedial measures for reducing musculoskeletal discomfort and occupational stress.**

Remedial measures for reducing Musculoskeletal Discomfort and Occupational Stress were developed based on the findings of the research. For developing the same articles and journals were reviewed. The remedial measures were developed with the consultation of the experts in the field of psychiatry and physiotherapy. The suggestions were also shared with the bank managers and bank employees but due to COVID-19 restrictions and lockdown the researcher could not visit the bank for its display.

An illustration of a modern bank interior. In the background, a large blue sign with the word "BANK" in yellow capital letters is centered on the wall. It is flanked by two smaller blue panels, each containing a yellow horizontal bar and several white horizontal lines. Six spotlights are mounted on the ceiling, illuminating the scene. In the foreground, three service counters are visible. Each counter has a teller in a blue suit and yellow tie. A customer is seated at each counter on a yellow chair. The customer on the left is a man in an orange shirt and green pants. The customer in the middle is a woman with blonde hair. The customer on the right is a woman in a pink top and blue pants. A potted plant is on the far left, and another smaller one is on the counter between the middle and right tellers. The floor is a light gray with reflections.

# **FINDINGS AND DISCUSSIONS**

## **CHAPTER-IV**

### **FINDINGS AND DISCUSSION**

The aim of the present study was to assess the Musculoskeletal Discomfort experienced and Occupational Stress faced by the banking employees of three different districts of Assam namely Guwahati, Jorhat and Sivasagar.

This chapter deals with presenting, interpreting and discussing the findings obtained through analysis of the data collected through questionnaire. The results are presented in the following sub sections:

Section 1: Demographic data of the respondents

- Personal Information
- Work related Information

Section 2: Musculoskeletal Discomfort experienced by the respondents as perceived by them

Section 3: Occupational Stress faced by the respondents

Section 4: Testing of the hypotheses

Section 5: Remedial measures for reducing Musculoskeletal Discomfort and Occupational Stress among Banking Employees.

## Section 1

### Demographic data of the Respondents

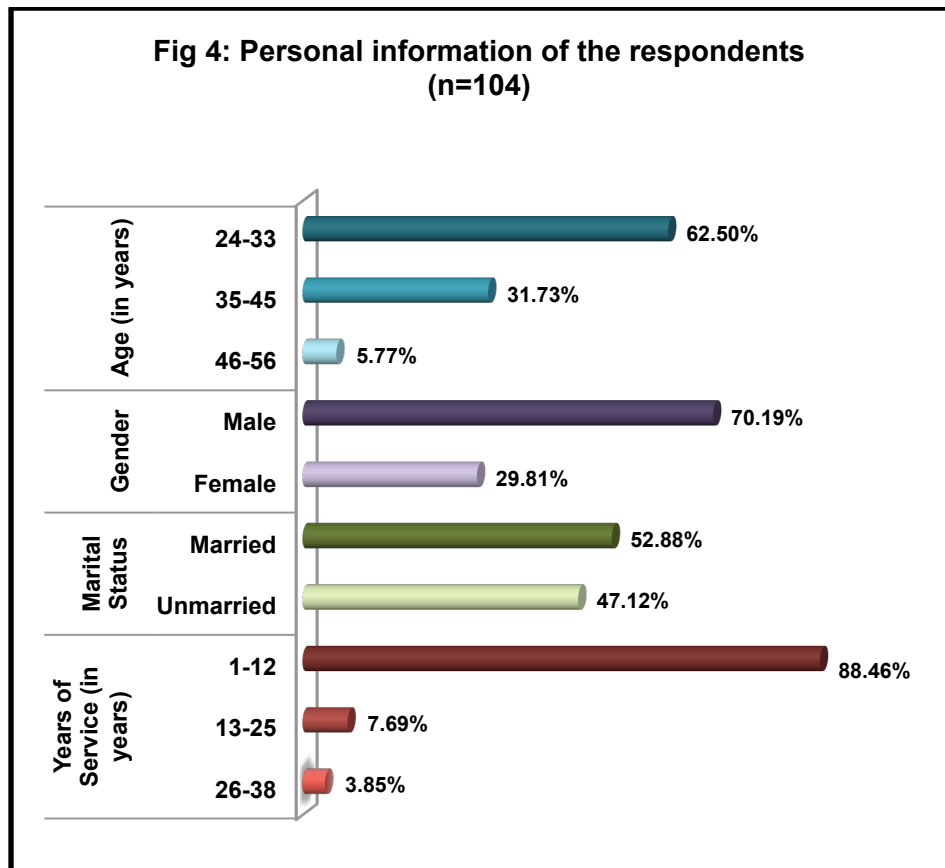
This section covers information with reference to the demographic data of the respondents. It includes the personal information and occupation related information of the respondents.

**1.1 Personal Information:** This section contained information regarding age (in years), gender, marital status, years of service (in years) of the respondents.

**Table 1: Personal information of the respondents.**

n=104			
Sr. No.	Personal information of the respondents		
1.	Age (in years)	f	%
	24-34	65	62.5
	35-45	33	31.73
	46-56	6	5.77
Mean			32.88
SD			6.71
2.	Gender	f	%
	Male	73	70.19
	Female	31	29.81
3.	Marital Status	f	%
	Married	55	52.88
	Unmarried	49	47.12
4.	Years of Service (in years)	f	%
	1-12	92	88.46
	13-25	8	7.69
	26-38	4	3.85
Mean			6.29
SD			6.61

**1.1.1 Age (in years):** The age of the respondents ranged between 24 to above 56 years where mean age of the respondents was 32.88 years (**Table 1 and Fig. 4**). 62.5 per cent of the respondents belonged to age group of 24 to 34 years. Less than one-third (31.73 per cent) of the respondents belonged to age group of 35 to 45 years. Only 5.77 per cent of the respondents belonged to age group 46-56 years.



**1.1.2 Gender:** The data in **Table 1** and **Fig. 4** revealed that more than two-third (70.19 per cent) of the respondents were males and less than one-third (29.81 per cent) of the respondents were females.

**1.1.3 Marital status:** The findings on the marital status of the respondents **Table 1** and **Fig. 4** elicited that more than one-half (52.88 per cent) of the respondents were married and less than one-half (47.12 per cent) of the respondents were unmarried.

**1.1.4 Years of service in banking sector (in years):** The years of service of the respondents as banking employee ranged between 1 to 38 years with the mean of 6.29 years. It was found that majority of the respondents had 1 to 12 years of service in banking sector (88.46 per cent). Less than one-tenth (7.69 per cent) of the respondents were working as banking employee since 13 to 25 years. Very few (3.85 per cent) of the respondents were found to have 25 to 38 years of service in banking sector (**Table 1** and **Fig. 4**).

**1.2 Occupation related information:** This section deals with information related to job situation, number of days at work (in a week), total working hours per day, overtime working hours per week, number of breaks in a day and duration of each break in a day were collected.

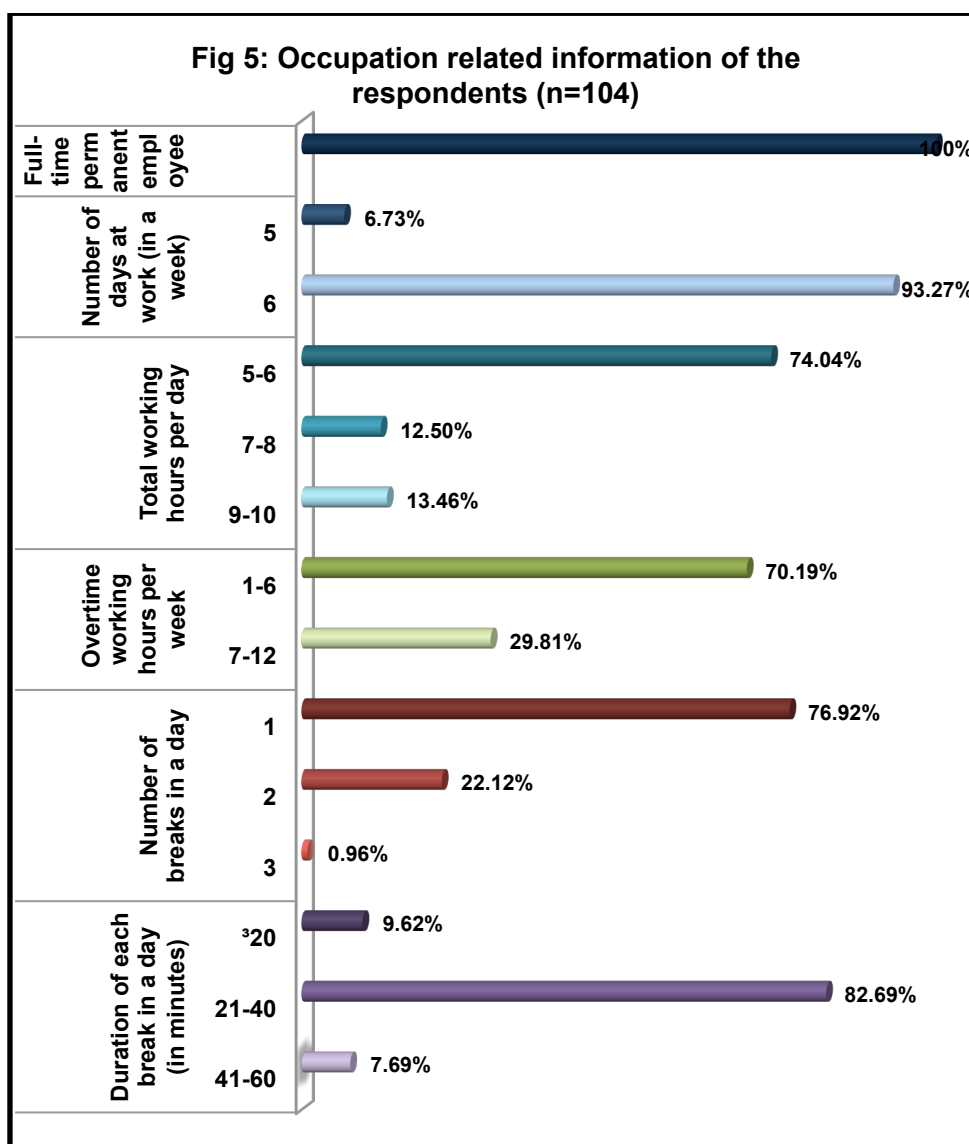
**Table 2: Occupation related information of Bank Employees**

(n=104)

Sr. No.	Occupation related information of the respondents		
1.	<b>Employment status</b>	<b>f</b>	<b>%</b>
	Full-time permanent employee	104	100
2.	<b>Number of days at work (in a week)</b>	<b>f</b>	<b>%</b>
	5	7	6.73
	6	97	93.27
<b>Mean</b>			5.93
<b>SD</b>			0.25
3.	<b>Total working hours per day</b>	<b>f</b>	<b>%</b>
	5-6	77	74.04
	7-8	13	12.5
	9-10	14	13.46
<b>Mean</b>			6.62
<b>SD</b>			1.27
4.	<b>Overtime working hours per week</b>	<b>f</b>	<b>%</b>
	1-6	73	70.19
	7-12	31	29.81
<b>Mean</b>			4.39
<b>SD</b>			3.51
5.	<b>Number of breaks in a day</b>	<b>f</b>	<b>%</b>
	1	80	76.92
	2	23	22.12
	3	1	0.96
<b>Mean</b>			1.24
<b>SD</b>			0.45
6.	<b>Duration of each break in a day (in minutes)</b>	<b>f</b>	<b>%</b>
	1-20	10	9.62
	21-40	86	82.69
	41-60	8	7.69
<b>Mean</b>			30.72
<b>SD</b>			8.36

**1.2.1 Employment status:** The data in **Table 2** and **Fig.5** elicited that all the respondents were full-time permanent employee in the bank. The enquiry was also made whether any of the staff was temporarily employed or was working part time basis but there was no response in Full-time temporary employee ,Part-time permanent employee, Casual and Other category.

**1.2.2 Number of days at work (in week):** The data in **Table 2** and **Fig.5** revealed that less than one-tenth (6.73 per cent) of the respondents had 5 working days in a week and majority (93.27 per cent) of the respondents had 6 working days in a week.



**1.2.3 Total working hours per day:** The data in **Table 2** and **Fig. 5** revealed that slightly less than three-fourth (74.03 per cent) of the respondents working hours were 5 to 6 hours per day. The data also highlighted that 12.5 per cent respondents worked for 7 to 8 hours per day. More than one-tenth (13.46 per cent) of the respondents were found to be having their working hours for 9 to 10 hours per day.

**1.2.4 Overtime working hours per week:** The data in **Table 2 and Fig. 5**

revealed that the minimum overtime working hour was 1 and maximum was 12. 70.19 per cent of the respondents worked overtime for 1-6 hours per week. 29.81 per cent of the respondents worked overtime for 7 to 12 hours per week.

**1.2.5 Number of breaks in a day:** The findings on the number of breaks

in days of the respondents (**Table 2 and Fig. 5**) elicited that more than three-fourth (76.92 per cent) of the respondents had one break in a day. Less than one-fourth (22.12 per cent) of the respondents had two breaks in a day and only one respondent had 3 breaks in a day.

**1.2.6 Duration of each break in a day:** The data in **Table 2 and Fig.5**

depicted that majority (82.69 per cent) of the respondents had 21 to 40 minutes break in a day. Slightly less than one-tenth (9.62) of the respondents had less than or equal to 20 minutes break in a day. Only 7.69 per cent of the respondents had 41-60 minutes break in a day.

Thus this section can be concluded that the mean age of the respondents was 32.88 years. Most of the respondents belonged to age group of 24 to 34 years. The data revealed that there were more number of male employees in the bank as compared to female employees. More than one-half of the respondents were married. It was found that majority of the respondents had 1 to 12 years of service in banking sector. The data elicited that all the respondents were full-time permanent employee. It was found that majority of the respondents had 6 working days in a week. The data also highlighted that most of the respondents working hours were 5 to 6 hours per day. The data also revealed that more than one half of the respondents worked overtime for less than equal to 4 hours per week. On analyzing the data, most of the respondents had one break in a day. The data also depicted that majority of the respondents had 21 to 40 minutes break in a day.



## Section 2

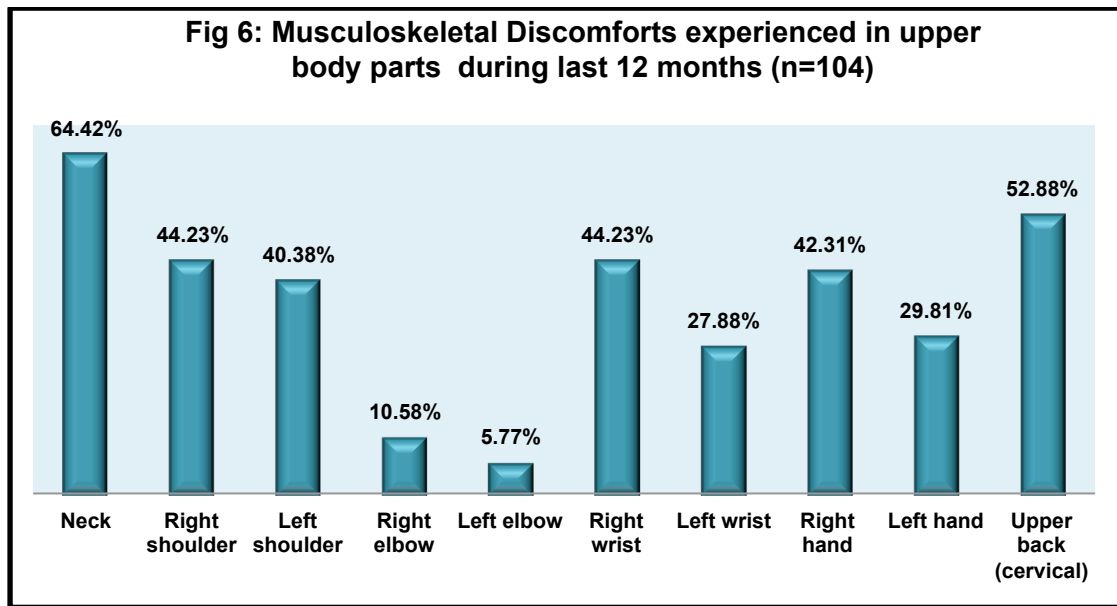
### **Musculoskeletal Discomfort experienced by the Bank Employees as perceived by them.**

In order to find out the musculoskeletal discomfort experienced by the bank employees, a standardized questionnaire i.e., Nordic Musculoskeletal questionnaire was used. The Nordic Musculoskeletal questionnaire includes questions relating to the neck, shoulder, upper back (cervical), elbows, low back (lumber), wrist/hands, hips, thighs, knees, ankles and feet. In this section respondents were asked if they have had faced musculoskeletal discomfort in the last 7 days and last 12 months. It was also enquired that if the discomfort had prevented them to carry out their normal activities i.e., job, house work, hobbies etc due to their discomforts during last 12 months. The body parts were presented here as upper body parts and lower body parts.

**Table 3: Musculoskeletal Discomforts experienced by the respondents in their upper body parts as perceived by them during the last 12 months and 7 days**

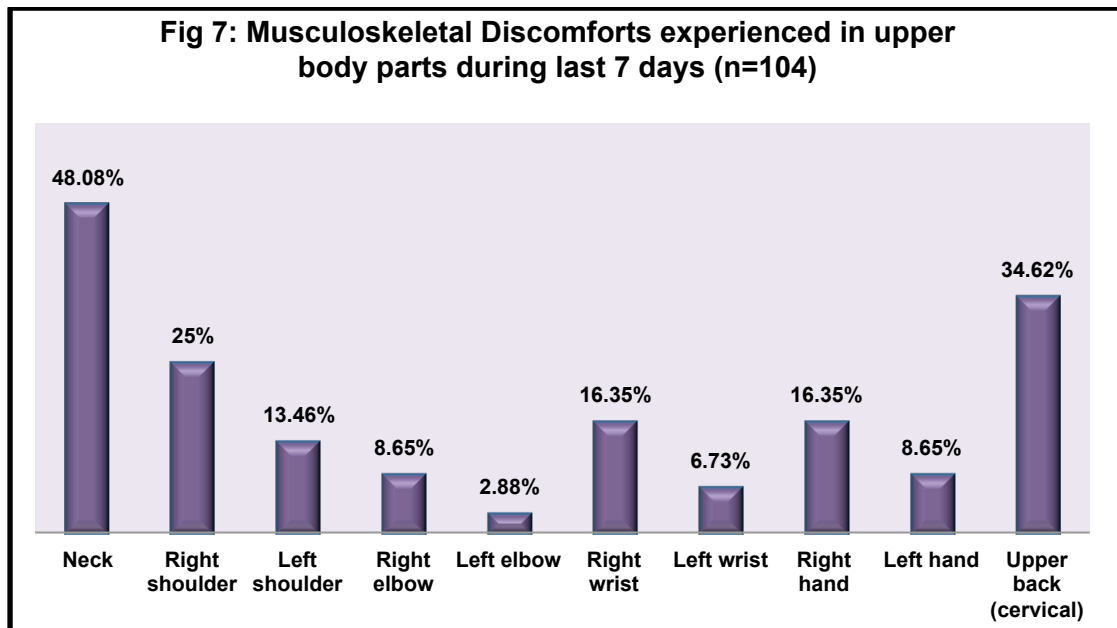
**n=104**

Sr. N o.	Upper Body parts	Musculoskeletal Discomforts during last 12 months				Musculoskeletal Discomforts during last 7 days			
		Yes		No		Yes		No	
		f	%	f	%	f	%	f	%
1.	Neck	67	64.42	37	35.58	50	48.08	54	51.92
2.	Right shoulder	46	44.23	58	55.77	26	25	78	75
	Left shoulder	42	40.38	62	59.62	14	13.46	90	86.54
3.	Right elbow	11	10.58	93	89.42	9	8.65	95	91.35
	Left elbow	6	5.77	98	94.23	3	2.88	101	97.12
4.	Right wrist	46	44.23	58	55.77	17	16.35	87	83.65
	Left wrist	29	27.88	75	72.12	7	6.73	97	93.27
5.	Right hand	44	42.31	60	57.69	17	16.35	87	83.65
	Left hand	31	29.81	73	70.19	9	8.65	95	91.35
6.	Upper back	55	52.88	49	47.12	36	34.62	68	65.38



## 2.1 Musculoskeletal Discomforts experienced in upper body parts during last 12 months.

The data in **Table 3** and **Fig. 6**, revealed that less than two-third (64.42 per cent) of the respondents experienced musculoskeletal discomfort in their neck during last 12 months. Musculoskeletal discomfort in the right shoulder was perceived by 44.23 per cent and 40.38 per cent of the respondents experienced in their left shoulder during last 12 months. Slightly more than one-tenth (10.58 per cent) of the respondents experienced musculoskeletal discomfort in their right elbow and very few (5.77 per cent) in their left elbow during last 12 months. 44.23 per cent of the respondents encountered musculoskeletal discomfort in their right wrist and 27.88 per cent in their left wrist during last 12 months. 42.31 per cent of the respondents experienced musculoskeletal discomfort in their right hand and less than one-third (29.81 per cent) experienced in their left hand during last 12 months. It was also found that more than one-half (52.88 per cent) of the respondents perceived musculoskeletal discomfort in their upper back during last 12 month.



## 2.2 Musculoskeletal Discomforts experienced in upper body parts during last 7 days.

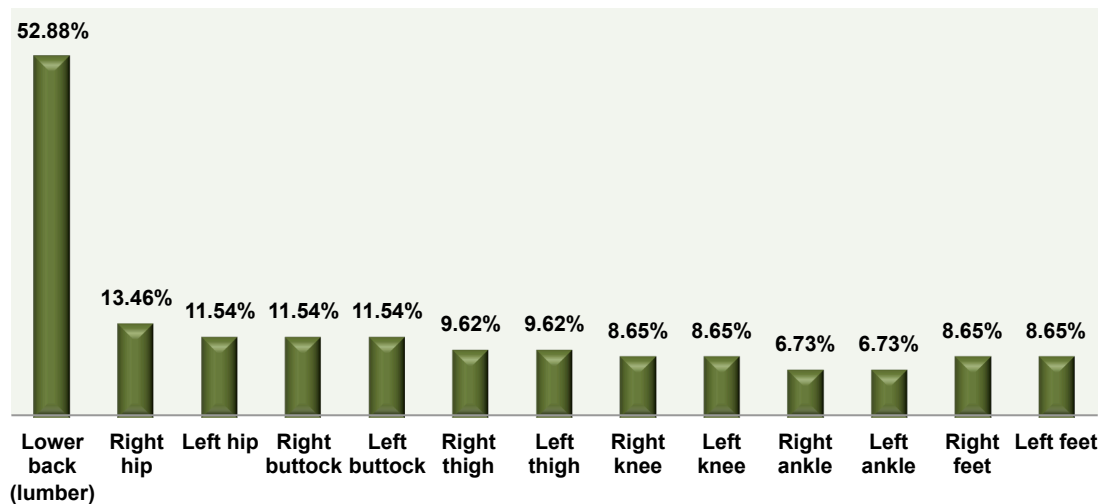
The data in **Table 3** and **Fig. 7**, revealed that less than one-half (48.08 per cent) of the respondents experienced musculoskeletal discomfort in their neck during last 7 days. 25 per cent of the respondents had encountered musculoskeletal discomfort in their right shoulder and more than one half (13.46 per cent) of the respondents experienced in their left shoulder during last 7 days. Slightly less than one-tenth (8.65 per cent) of the respondents experienced musculoskeletal discomfort in their right elbow and very few (2.88 per cent) in their left elbow during last 7 days. 16.35 per cent of the respondents encountered musculoskeletal discomfort in their right wrist and very few (6.73 per cent) in their left wrist during last 7 days. Musculoskeletal discomfort in right hand was experienced by 16.35 per cent of the respondents and less than one-tenth (8.65 per cent) of the respondents experienced musculoskeletal discomfort in their left hand during last 7 days. It was also found that more than one-third (34.62 per cent) of the respondents had musculoskeletal discomfort in upper back during last 7 days.

**Table 4: Musculoskeletal Discomforts experienced in their lower body during the last 12 months and 7 days**

**n=104**

Sr. No.	Lower Body parts	Musculoskeletal Discomforts during last 12 months				Musculoskeletal Discomforts during last 7 days			
		Yes		No		Yes		No	
		f	%	f	%	f	%	f	%
1.	Lower back	55	52.88	49	47.12	28	26.92	76	73.08
2.	Right hip	14	13.46	90	86.54	8	7.69	96	92.31
	Left hip	12	11.54	92	88.46	7	6.73	97	93.27
3.	Right buttock	12	11.54	92	88.46	9	8.65	95	91.35
	Left buttock	12	11.54	92	88.46	7	6.73	97	93.27
4.	Right thigh	10	9.62	94	90.38	6	5.77	98	94.23
	Left thigh	10	9.62	94	90.38	5	4.81	99	95.19
5.	Right knee	9	8.65	95	91.35	3	2.88	101	97.12
	Left knee	9	8.65	95	91.35	4	3.85	100	96.15
6.	Right ankle	7	6.73	97	93.27	3	2.88	101	97.12
	Left ankle	7	6.73	97	93.27	2	1.92	102	98.08
7.	Right feet	9	8.65	95	91.35	7	6.73	97	93.27
	Left feet	9	8.65	95	91.35	5	4.81	99	95.19

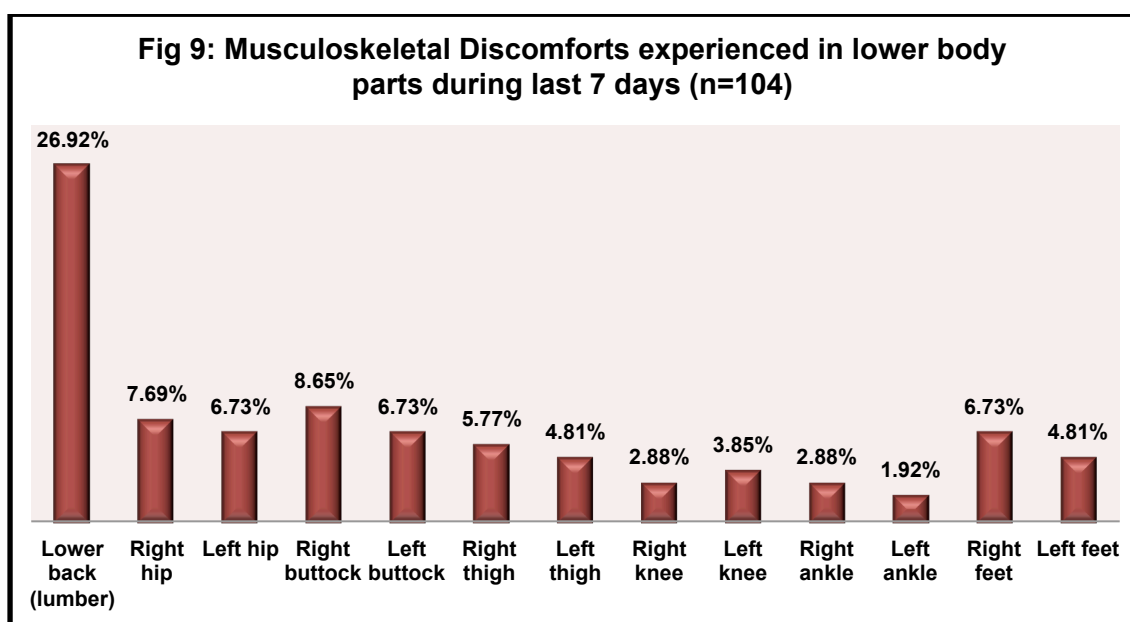
**Fig 8: Musculoskeletal Discomforts experienced in lower body parts during last 12 months (n=104)**



### 2.3 Musculoskeletal Discomforts experienced in lower body parts during last 12 months.

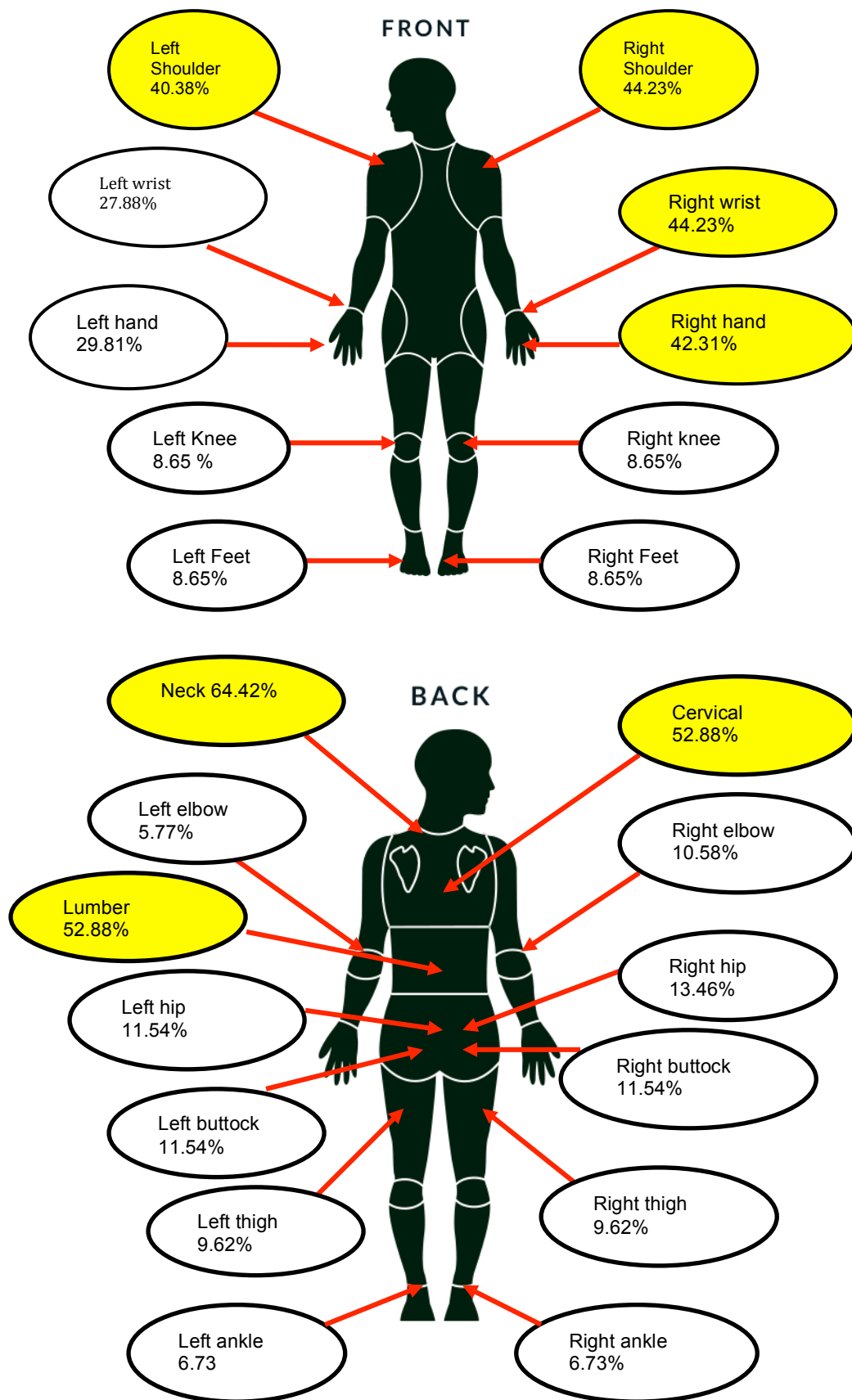
Table 4 and Fig. 8, revealed that more than one-half (52.88 per cent) of the respondents experienced musculoskeletal discomfort in their lower back during last 12 months. Musculoskeletal discomfort in the right hip experienced by 13.47 per cent of the respondents and 11.54 per cent of the respondents

experienced in their left hip during last 12 months. 11.54 percent of the respondents experienced musculoskeletal discomfort in both right and left buttock a during last 12 months. Slightly less than one-tenth (9.62 per cent) of the respondents encountered musculoskeletal discomfort in both right and left knee during last 12 months. Very few (6.73 per cent) of the respondents experienced musculoskeletal discomfort in both right and left ankle during last 12 months. It was also found that less than one-tenth (8.65 per cent) of the respondents had musculoskeletal discomfort in both right and left feet during last 12 months.

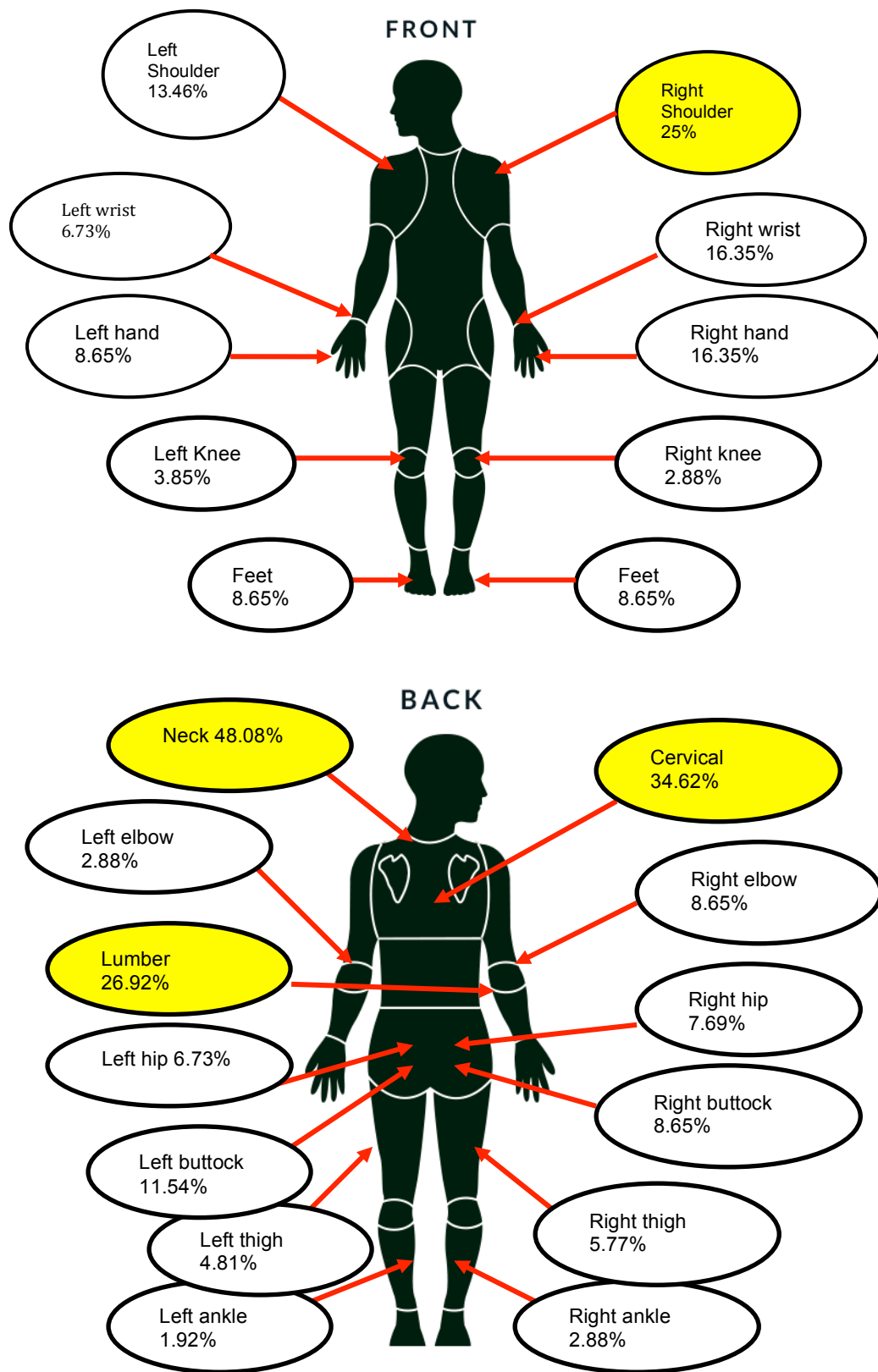


#### 2.4 Musculoskeletal Discomforts experienced in lower body parts during last 7 days.

**Table 4 and Fig. 9**, revealed that more than one-fourth (26.92 per cent) of the respondents experienced musculoskeletal discomfort in their lower back during last 7 days.



**Figure 10: Musculoskeletal Discomforts experienced in upper and lower body parts during last 12 months**



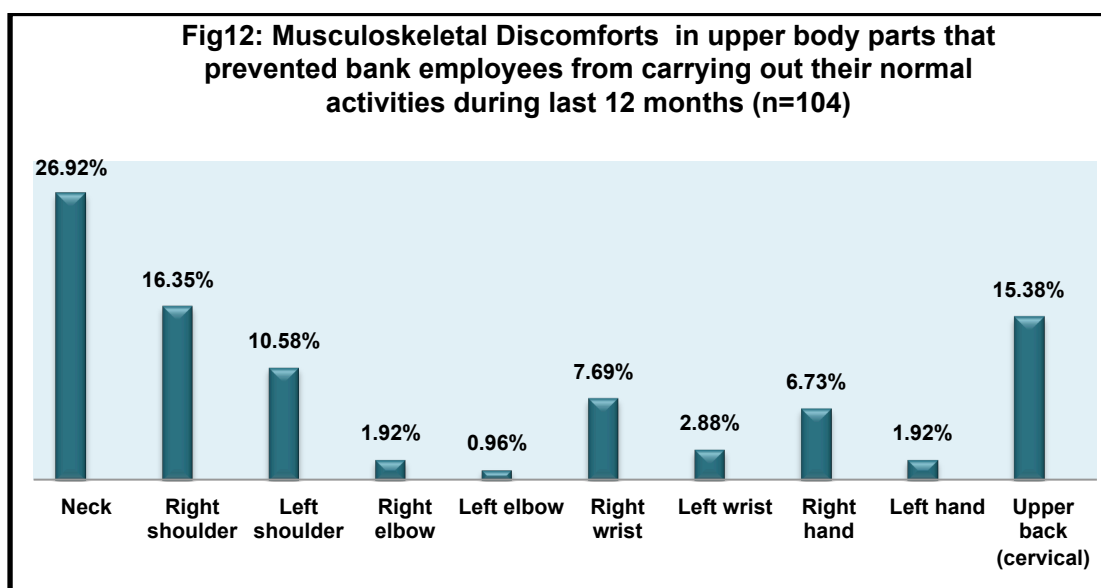
**Figure 11: Musculoskeletal Discomforts experienced in upper and lower body parts during last 7 days**

Thus it can be concluded that musculoskeletal discomforts experienced by the banking employees during last 12 months were chronic pain. Majority of the respondents perceived discomfort in their neck, shoulders, upper and lower back, right hand and right wrist during last 12 months. The pain experienced by respondents in neck, upper back, lower back and right shoulder during last 7 days were temporary pain. This may be due to the exhaustion and more working hours.

**Table 5: Musculoskeletal Discomforts in upper body parts that prevented the bank employees from carrying out their normal activities during last 12 months.**

**n=104**

Sr. No.	Upper Body parts	Yes		No	
		f	%	f	%
1.	Neck	28	26.92	76	73.08
2.	Right shoulder	17	16.35	87	83.65
	Left shoulder	11	10.58	93	89.42
3.	Right elbow	2	1.92	102	98.08
	Left elbow	1	0.96	103	99.04
4.	Right wrist	8	7.69	96	92.31
	Left wrist	3	2.88	101	97.12
5.	Right hand	7	6.73	97	93.27
	Left hand	2	1.92	102	98.08
6.	Upper back (cervical)	16	15.38	88	84.62





## 2.5 Musculoskeletal Discomforts experienced in upper body parts that prevented bank employees from carrying out their normal activities during last 12 months.

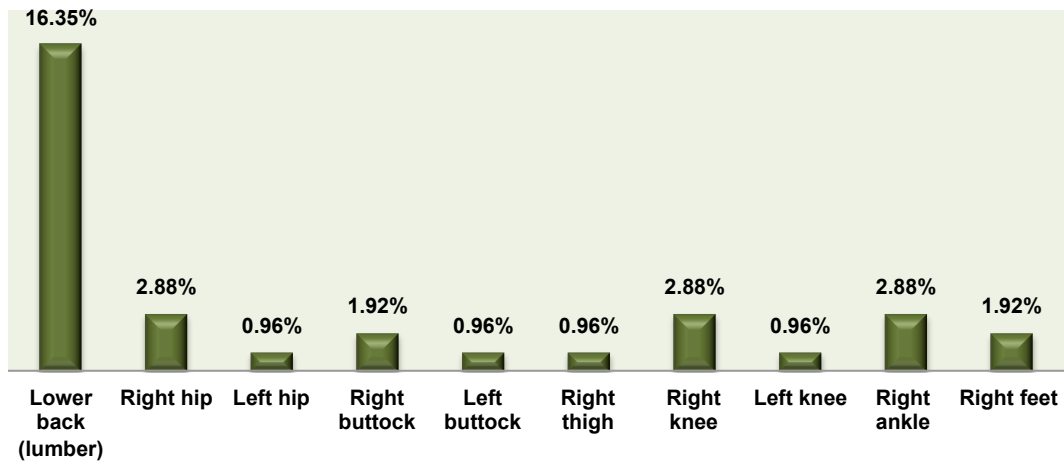
It was revealed that more than one-fourth (26.2 per cent) of the respondents were prevented from carrying out their normal activities (job, housework, hobbies) because of neck pain during last 12 months. 16.35 percent of the respondents opined that due to musculoskeletal discomforts in their right shoulder they were prevented from carrying out their normal activities (job, housework, hobbies) during last 12 months. More than one-tenth (15.38 per cent) of the respondents experienced musculoskeletal discomforts in their right shoulder during 12 months which prevented them from carrying out their normal activities (job, housework, hobbies) (**Table 5 and Fig. 12**).

**Table 6: Musculoskeletal Discomforts in lower body parts that prevented bank employees from carrying out their normal activities during last 12 month**

**n=104**

Sr. No.	Lower Body parts	Yes		No	
		f	%	f	%
1.	Lower back (lumber)	17	16.35	87	83.65
2.	Right hip	3	2.88	101	97.12
	Left hip	1	0.96	103	99.04
3.	Right buttock	2	1.92	102	98.08
	Left buttock	1	0.96	103	99.04
4.	Right thigh	1	0.96	103	99.04
	Left thigh	0	0.00	104	100
5.	Right knee	3	2.88	101	97.12
	Left knee	1	0.96	103	99.04
6.	Right ankle	3	2.88	101	97.12
	Left ankle	0	0.00	104	100
7.	Right feet	2	1.92	102	98.08
	Left feet	0	0.00	104	100

**Fig 13: Musculoskeletal Discomforts in lower body parts that prevented bank employees from carrying out their normal activities during last 12 months (n=104)**



## 2.6 Musculoskeletal Discomforts in lower body parts that prevented bank employees from carrying out their normal activities during last 12 months.

It was revealed that due to musculoskeletal discomfort experienced in lower back (lumber) less than one-fifth (16.35 per cent) of the respondents were prevented from carrying out their normal activities (job, housework, hobbies) during last 12 months (**Table 6 and Fig. 13**).

Thus it can be concluded that majority of the respondents reported discomforts in neck, upper back, lower back and right shoulder which prevented them from carrying out their normal activities (job, housework, hobbies) during last 12 months.

## **Section 3**

### **Occupational Stress faced by the Bank Employee**

The present section throws light on the Occupational Stress faced by the bank employees. In order to find out the Occupational Stress faced by the respondents, a standard questionnaire i.e., NIOSH Generic Job Stress Questionnaire was used. The NIOSH Generic Job Stress Questionnaire include factors such as perceived general health, health conditions, job satisfaction, mental demands, social support, work hazards, workload and responsibility and conflict at work.

**3.1 Perceived General Health:** Perceived General Health contained items that are not necessarily related to severe physical illness but are things that people experienced in their day to day lives (NIOSH 1988). It had 5 point continuum for the responses “Never”, “Occasionally”, “Sometimes “,”Fairly Often” and “Very Often” which were scored 5 through 1 respectively.

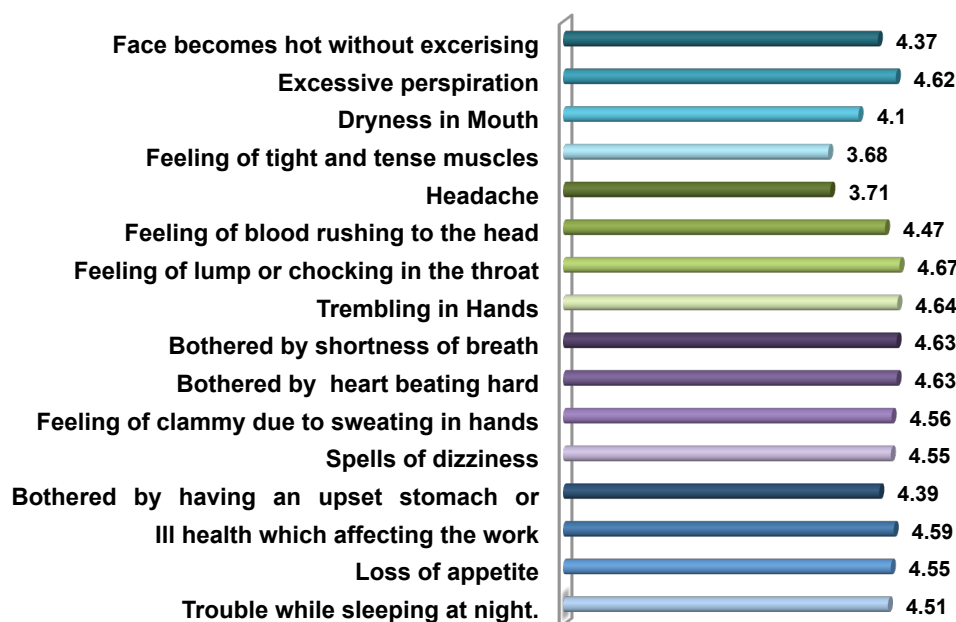
In **Table 7 and Fig. 14**, the data revealed that majority of the respondents never felt of lump or choked in the throat (83.65 per cent), never experienced trembling in hands (82.69 per cent) never bothered by shortness of breath (82.69) and never bothered by heart beating hard (79.81 per cent). More than one-third (35.58 per cent) of the respondents occasionally felt dryness in mouth. 32.69 per cent of the respondents occasionally had headache. 39.42 per cent of the respondents experienced their muscles felt tight and tense sometimes. Less than one-tenth (7.69 per cent) of the respondents experienced headache fairly often. Very few (4.81 per cent) of the respondents experienced dryness in mouth very often. The mean weighted scores were found high for feeling of lump or choking in the throat (4.67), trembling in hands (4.64), bothered by shortness of breath (4.63) and bothered by heart beating hard (4.63).

**Table 7: Perceived General Health of the respondents.**

**n=104**

[illegible]

**Fig 14: Weighted mean scores for Perceived General Health of the Respondents**



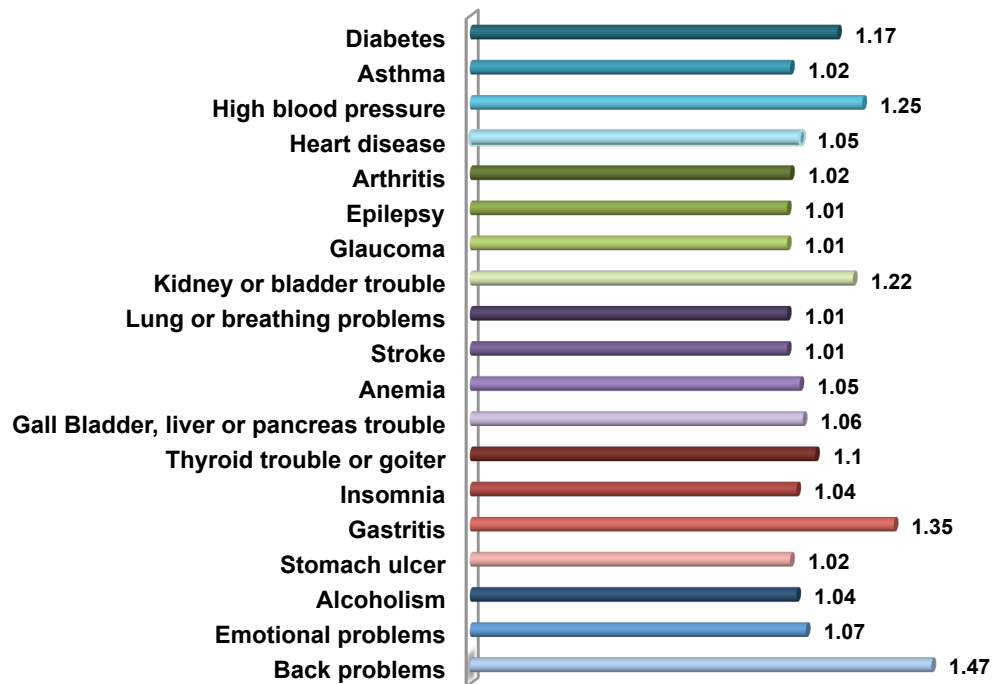
**3.2 Health Conditions:** Health Conditions referred to whether a doctor has treated the respondent's for any disease or mention having any disease within the past 12 months. It includes diabetes, asthma, high blood pressure, heart disease, arthritis, epilepsy, glaucoma, kidney or bladder trouble, lung or breathing problems, stroke, anemia, gall bladder, liver or pancreas trouble, thyroid trouble or goiter, insomnia, gastritis, stomach ulcer, alcoholism, emotional problems and back problems (NIOSH 1988). It had 2 point continuum for the responses "Suffering" and "Not Suffering" which were scored 2 through 1 respectively.

The data in **Table 8 and Fig. 15**, revealed that less than one-half (47.12 per cent) of the respondents suffered from back problems. More than one-third (34.62 per cent) of the respondents suffered from gastritis. The data also depicted that one-fourth (25 per cent) of the respondents suffered from high blood pressure and 22.12 per cent of the respondents suffered from kidney or bladder trouble. The mean weighted score were found high for health conditions such as back problems (1.47), gastritis (1.35), high blood pressure (1.25) and kidney or bladder trouble (1.22).

**Table 8: Health conditions of the respondents.**

Sr. No.	Health Conditions	Suffering		Not Suffering		Weighted mean out of 2
		f	%	f	%	
1.	Diabetes	18	17.31	86	82.69	1.17
2.	Asthma	2	1.92	102	98.08	1.02
3.	High blood pressure	26	25	78	75	1.25
4.	Heart disease	5	4.81	99	95.19	1.05
5.	Arthritis	2	1.92	102	98.08	1.02
6.	Epilepsy	-	-	104	100	1.01
7.	Glaucoma	-	-	104	100	1.01
8.	Kidney or bladder trouble	23	22.12	81	77.88	1.22
9.	Lung or breathing problems	1	0.96	103	99.04	1.01
10.	Stroke	-	-	104	100	1.01
11.	Anemia	5	4.81	99	95.19	1.05
12.	Gall Bladder, liver or pancreas trouble	6	5.77	98	94.23	1.06
13.	Thyroid trouble or goiter	10	9.62	94	90.38	1.10
14.	Insomnia	4	3.85	100	96.15	1.04
15.	Gastritis	36	34.62	68	65.38	1.35
16.	Stomach ulcer	2	1.92	102	98.08	1.02
17.	Alcoholism	4	3.85	100	96.15	1.04
18.	Emotional problems	7	6.73	97	93.27	1.07
19.	Back problems	49	47.12	55	52.88	1.47
Total						1.10

**Fig 15: Weighted mean scores for Health Conditions of the Respondents**

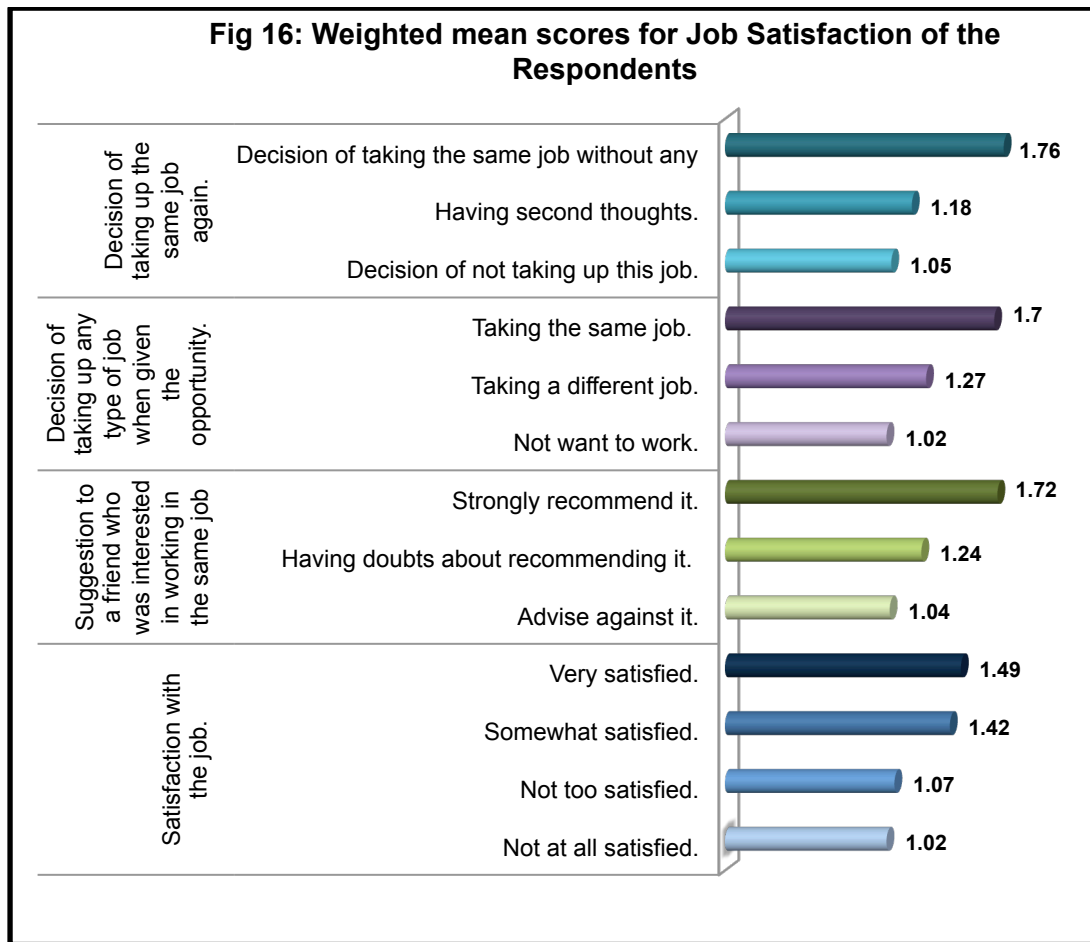


**3.3 Job Satisfaction:** Job Satisfaction referred to the feeling of an individual regarding his or her job (NIOSH 1988). It had 2 point continuum for the responses “Agree” and “Disagree” which were scored 2 through 1 respectively.

**Table 9: Job satisfaction of the respondents.**

						n=104
Sr.No	Statements regarding Job satisfaction	Agree		Disagree		Weighted mean out of 2
		f	%	f	%	
A.	<b><i>Decision of taking up the same job again.</i></b>					
	Decision of taking the same job without any hesitation.	79	75.96	25	24.03	1.76
	Having second thoughts.	19	18.27	85	81.73	1.18
	Decision of not taking up this job.	6	5.77	98	94.23	1.05
B.	<b><i>Decision of taking up any type of job when given the opportunity.</i></b>					
	Taking the same job.	73	70.19	31	29.81	1.70
	Taking a different job.	28	26.92	76	73.07	1.27
	Not want to work.	3	2.88	101	97.12	1.02
C.	<b><i>Suggestion to a friend who was interested in working in the same job</i></b>					
	Strongly recommend it.	75	72.12	29	27.88	1.72
	Having doubts about recommending it.	25	24.04	79	75.96	1.24
	Advise against it.	4	3.85	100	96.15	1.04
D.	<b><i>Satisfaction with the job.</i></b>					
	Very satisfied.	51	49.04	53	50.96	1.49
	Somewhat satisfied.	44	42.31	60	57.69	1.42
	Not too satisfied.	7	6.73	97	93.26	1.07
	Not at all satisfied.	2	1.92	102	98.07	1.02
<b>Total</b>						<b>1.30</b>

The data in **Table 9** and **Fig.16**, revealed that slightly more than three-fourth (75.96 per cent) of the respondents opined that they would like to take the same job without any hesitation. 72.12 per cent of the respondents agreed that they would take the same job if given to choose any job opportunity. On being asked whether they would suggest same job to a friend, 72.12 per cent of the respondents agreed they would strongly recommend it. 49.04 per cent of the respondents were highly satisfied with their job. The mean weighted score were found high for decision of taking the same job without any hesitation (1.76), taking the same job again (1.70), strongly recommend others to take the same job as them (1.72) and very satisfied with the job (1.49).



**3.4 Mental Demands:** Mental demands contained items that referred to the respondent's degree of agreement or disagreement regarding their job (NIOSH 1988). It had 4 point continuum for the responses "Strongly Agree", "Slightly Agree", "Slightly Disagree" and " Strongly Disagree" which were score 4 to1. Reverse scoring was done for statement 1,2 and 3.

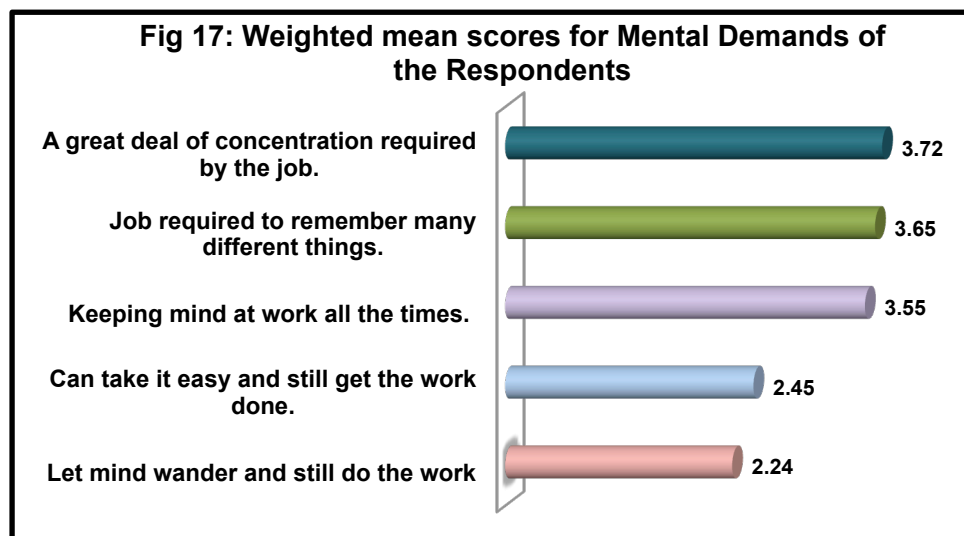
The data in **Table 10 and Fig.17**, revealed that majority (80.78 per cent) of the respondents opined that their job required a great deal of concentration. Less than three-fourth (73.08 per cent) of the respondents opined that they had to remember many different things related to their job. Slightly more than two-third (66.35 per cent) of the respondents opined that they had to keep their mind at work all the times. The mean weighted score were found high for job required a great deal of concentration (3.72), job required to remember many different things (3.65) and keeping mind at work all the times (3.55).



**Table 10: Mental demands of the respondents.**

**n=104**

Sr. No.	Statements related to Mental Demands	Strongly Agree		Slightly Agree		Slightly Disagree		Strongly Disagree		Weighted mean out of 4
		f	%	f	%	f	%	f	%	
1.	A great deal of concentration required by the job.	84	80.78	13	12.5	5	4.81	2	1.92	3.72
2.	Job required to remember many different things.	76	73.08	22	21.15	4	3.85	2	1.92	3.65
3.	Keeping mind at work all the times.	69	66.35	25	24.04	8	7.69	2	1.92	3.55
4.	Can take it easy and still get the work done.	23	22.12	32	30.77	18	17.31	31	29.81	2.45
5.	Let mind wander and still do the work	21	20.19	25	24.04	16	15.38	42	40.38	2.24
<b>Total</b>										<b>3.12</b>

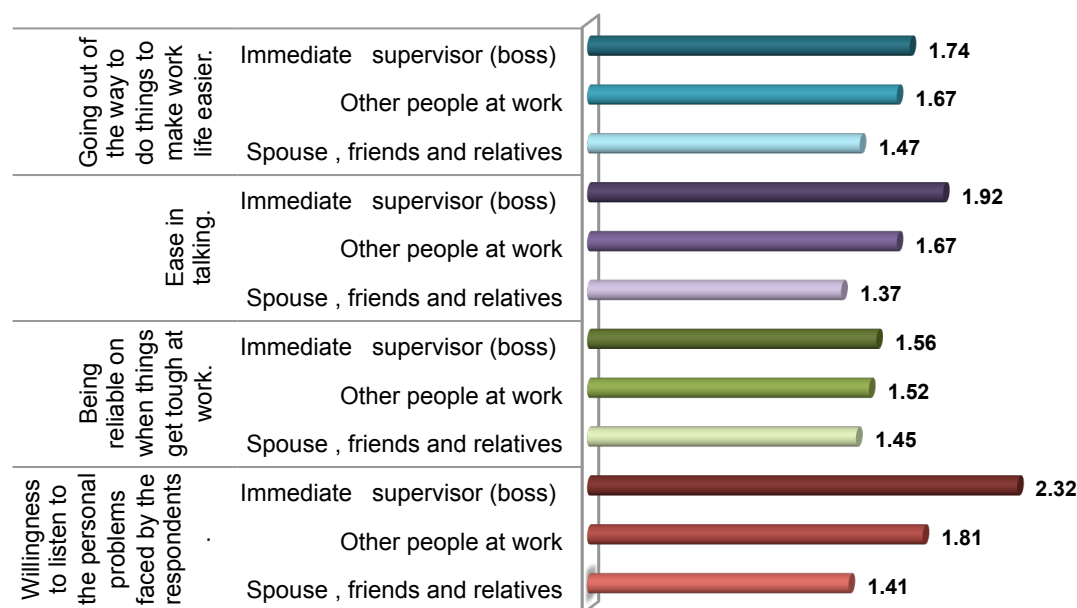


**3.5 Social Support:** Social support referred to the support received by the respondent's from their immediate supervisor (boss), colleagues, and spouse, friends and relatives regarding their work (NIOSH 1988). It had 5 point continuum for the responses "Very", "Somewhat", "A little", "Not at all" and "Don't have such any person" which were scored 1 through 5 respectively.

**n=104**

Sr.No.	Statements related to Social Support	Very Often		Sometimes		Rarely		Not at all		Weighted mean out of 5
		f	%	f	%	f	%	f	%	
A.	Going out of the way to do things to make work life easier.									
	Immediate supervisor (boss)	43	41.35	45	43.27	16	15.38	-	-	1.74
	Other people at work	51	49.04	38	36.54	13	12.5	2	1.92	1.67
	Spouse , friends and relatives	71	68.27	19	18.27	12	11.54	2	1.92	1.47
B.	Ease in talking.									
	Immediate supervisor (boss)	32	30.77	48	46.15	24	23.08	-	-	1.92
	Other people at work	53	50.96	33	31.73	17	16.35	1	0.96	1.67
	Spouse, friends and relatives	77	74.04	17	16.35	9	8.65	1	0.96	1.37
C.	Being reliable on when things get tough at work.									
	Immediate supervisor (boss)	59	56.73	33	31.73	11	10.58	1	0.96	1.56
	Other people at work	54	51.92	20	19.23	20	19.23	1	0.96	1.52
	Spouse , friends and relatives	71	68.27	20	19.23	12	11.54	1	0.96	1.45
D.	Willingness to listen to the personal problems faced by the respondents.									
	Immediate supervisor (boss)	17	16.35	43	41.35	38	36.54	6	5.77	2.32
	Other people at work	47	45.19	34	32.69	19	18.27	4	3.85	1.81
	Spouse , friends and relatives	73	70.19	21	20.19	8	7.69	2	1.92	1.41
Total									1.65	

**Fig 18: Weighted mean scores for Social Support recieved by the Respondents**



The data in **Table 11 and Fig.18**, revealed that more than two-third (68.27 per cent) of the respondents opined their spouse, friends and relatives go out of their way to do things to make your work life easier for them “very often”. Slightly less than one-half (49.04 per cent) of the respondents opined that their colleagues and other people at work go out of their way to do things to make your work life easier for them “very often”. The data also depicted that more than three-fourth (74.04 per cent) of the respondents “very often” could talk to their spouse, friends and relatives. Slightly more than one-half (50.96 per cent) of the respondents found that they could talk to other people at work “very often”. More than two-third (68.27 per cent) of the respondents opined they “very often” relied on their spouse, friends and relatives when things get tough at work and 56.73 per cent of the respondents opined that they “very often” relied on their immediate supervisor when things get tough at work. 70.19 per cent of the respondents felt their spouse, friends and relatives were willing to listen to your personal problems “very often”. There was no response in “Don’t have any such person” depicted that the respondents had someone or the other for their social support. The mean

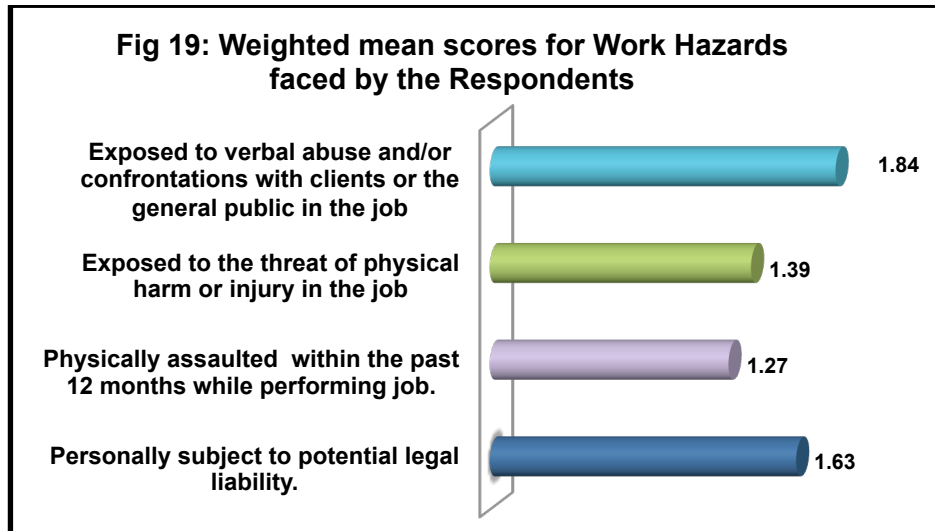
weighted score were found high for employee can relied on their immediate supervisor when things get tough at work (2.32).

**3.6 Work Hazards:** Work hazard referred to an injury resulting from the work one does or from the environment in which one works such as verbal abused, threat of physical harm or injury, physical assault at workplace and job personally subject to potential legal liability (NIOSH 1988). It had 5 point continuum for the responses “Never”, “Occasionally”, “Sometimes”, “Fairly Often” and “Very Often” which were scored 1 through 5 respectively.

**Table 12: Work hazards faced by the respondents.**

Sr.No	Statements related to Work hazards	Never		Occasional ly		Sometimes		Fairly often		Very often		Weigh ted mea n out of 5
		f	%	f	%	f	%	f	%	f	%	
1.	Exposed to verbal abuse and/or confrontations with clients or the general public in the job	50	48.08	27	25.96	23	22.11	2	1.92	2	1.92	1.84
2.	Exposed to the threat of physical harm or injury in the job	75	72.12	18	17.31	10	9.62	1	0.96	-	-	1.39
3.	Physically assaulted within the past 12 months while performing job.	89	85.58	3	2.88	11	10.58	1	0.96	-	-	1.27
4.	Personally subject to potential legal liability.	62	59.62	25	24.04	13	12.5	2	1.92	2	1.92	1.63
<b>Total</b>											<b>1.53</b>	

The data in **Table 12 and Fig 19**, revealed that majority of the respondents “never” experienced physical assault while performing their job (85.58 per cent). 25.96 per cent of the respondents were “occasionally” exposed to verbal abuse and/or confrontations with clients or the general public in the job. The mean weighted score were found high for exposed to verbal abuse and/or confrontations with clients or the general public in the job (1.84)



**3.7 Workload and Responsibility:** Workload and Responsibility contained items that concerned with various aspect of work activities. Workload referred to the physical and mental exertion required from an employee to complete the assigned task. Responsibility of an employee was to make sure that their actions do not cause any harm or injury to others and must take responsibility for the future of others, morale of others and welfare and lives of others (NIOSH 1988). It had 5 point continuum for the responses “Hardly any”, “A little”, “Sometimes”, “A lot” and “A great deal”. Reverse scoring used in the statement 1, 2,5 and 7.

The data in **Table 13 and Fig 20**, revealed that more than one-third (37.5 per cent) of the respondents “hardly” experienced slowdown in workload. Less than one-half (46.15 per cent) of the respondents “ sometimes” had time to think and contemplate the workload and responsibilities. More than one-half (54.81 per cent) of the respondents “sometimes” had time to do all their work and 48.08 per cent of the respondents “sometimes” had lulls between heavy workload periods. The data also depicted that more than one-third (36.54 per cent) of the respondents had “a lot” of workload. 39.42 per cent of the respondents opined that “a lot” of quantity of work was expected from them by others. 38.46 per cent of the respondents had “a lot” of projects, assignments or task to do. The mean weighted score were found high for quantity of work others expect from the respondents (3.81), responsibility for the future of

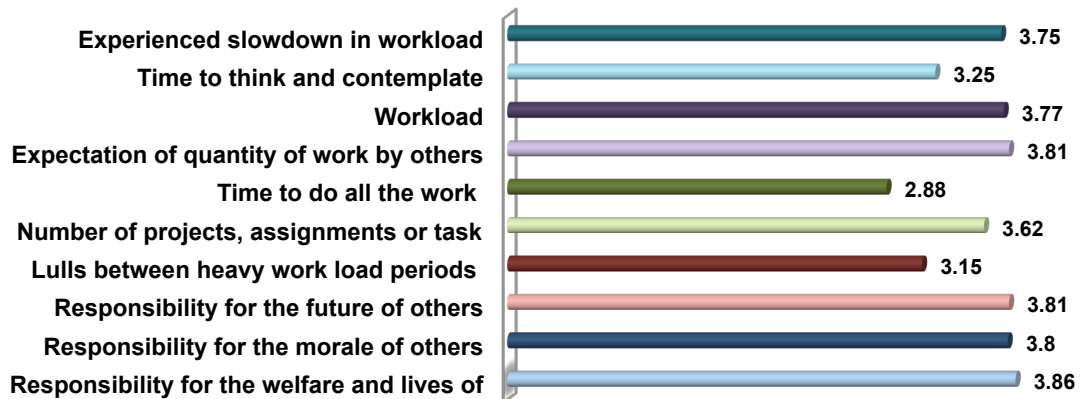
others (3.81), responsibility for the morale of others (3.80) and responsibility for the welfare and lives of others (3.86).

**Table 13: Workload and Responsibility of the respondents.**

Sr. No.	Statements regarding Workload and responsibility	Hardly any		A little		Sometimes		A lot		A great deal		Weighted mean out of 5
		f	%	f	%	f	%	f	%	f	%	
1.	Experienced slowdown in workload	39	37.5	20	19.23	28	26.92	14	13.46	3	2.88	3.75
2.	Time to think and contemplate	8	7.69	30	28.85	48	46.15	16	15.38	2	1.92	3.25
3.	Workload	4	3.85	8	7.69	25	24.04	38	36.54	29	27.88	3.77
4.	Expectation of quantity of work by others	3	2.88	7	6.73	25	24.04	41	39.42	28	26.92	3.81
5.	Time to do all the work	4	3.85	14	13.46	57	54.81	24	23.08	5	4.81	2.88
6.	Number of projects, assignments or task	4	3.85	6	5.77	35	33.65	40	38.46	19	18.27	3.62
7.	Lulls between heavy work load periods	5	4.81	28	26.92	50	48.08	20	19.23	1	0.96	3.15
8.	Responsibility for the future of others	3	2.88	9	8.65	27	25.96	31	29.81	34	32.69	3.81
9.	Responsibility for the morale of others	3	2.88	10	9.62	26	25.00	31	29.81	34	32.69	3.80
10.	Responsibility for the welfare and lives of others	4	3.85	16	15.38	28	26.92	29	27.88	33	31.73	3.86
<b>Total</b>												<b>3.36</b>

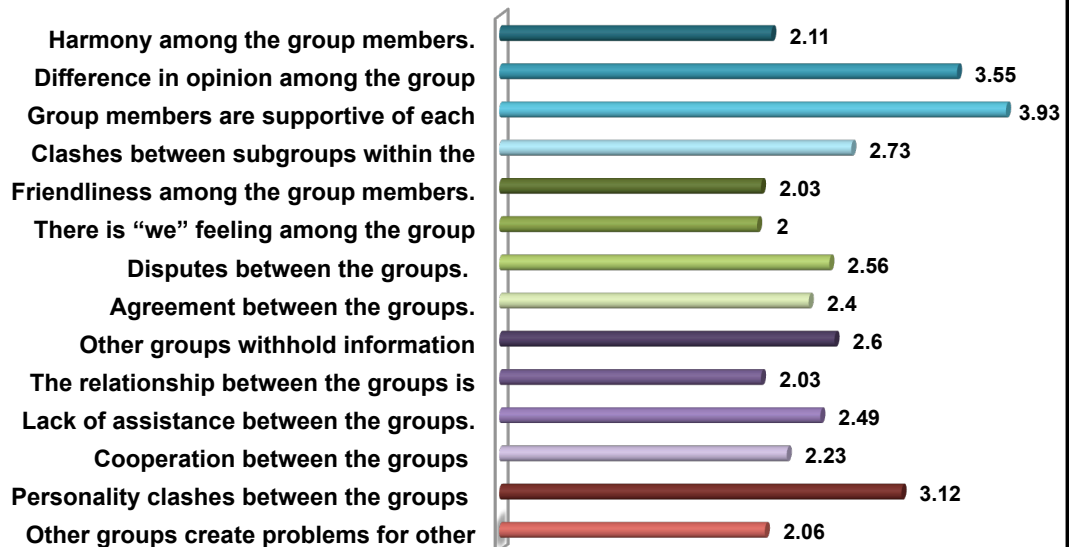
n=104

**Fig 20: Weighted mean scores for Workload and Responsibility of the Respondents**



**3.8 Conflict at work:** Conflict at work caused due to actual or perceived opposition of needs, values and interest between people working together. The items which were included in Conflict at work were divided into two groups: Intragroup conflict and Intergroup conflict (NIOSH 1988). It had 5 point continuum for the responses “Strongly Disagree”, “Moderately Disagree”, “Neither Agree nor Disagree”, “Moderately Agree” and “Strongly Agree” which were scored 5 through 1 respectively. Reverse scoring used in the statement 1, 5,7,8,10,12 and14.

**Fig 21: Weighted mean scores for Conflict at work experienced by the Respondents**



**Table 14: Conflict at work experienced by the respondents.**

**n=104**

[illegible]



The data in **Table 15 and Fig 21**, revealed that more than one-third (36.54 per cent) of the respondents “strongly agreed” that there was harmony among the members of the group. 41.35 per cent of respondents “moderately agreed” that there was difference in opinion among the group members. Regarding the friendliness among the group members 44.23 per cent of the respondents strongly agreed. 46.15 per cent of the respondents strongly agreed that there was “we” among the group members. There were 44.23 per cent of the respondents who were “neutral” regarding their opinion on personality clashes between the groups. The mean weighted score were found high for difference in opinion among the group members (3.55), and group members are supportive of each other’s ideas (3.93) and personality clashes between the groups (3.12).

The overall comparison cannot be done of weighted mean scores as all the aspects had varied continuums. Thus the section concluded that majority of the respondents never felt of lump or choked in the throat, never experienced trembling in hands, never bothered by shortness of breath and never bothered by heart beating hard. While it was found that respondents occasionally felt dryness in mouth and sometimes their muscles felt tight and tense. The data highlighted that compared to the other health conditions more number of people suffered from back problems. It was observed that most of the respondents decided to take the same job without any hesitation. On being asked whether they would suggest same job to a friend, most of the respondents agreed they would strongly recommend it. The data elicited that majority of the respondents opined that their job required a great deal of concentration and most of them opined that they had to remember many different things related to their job. The data showed that most of the respondents opined that it was easy to talk to their spouse, friends and relatives and perceived that their spouse, friends and relatives were willing to listen to your personal problems as compared to their immediate supervisor and colleagues. The data also revealed that majority of the respondents never experienced physical assault while performing their job while it was found that some of the of respondents occasionally exposed to verbal abuse and/ or

confrontations with clients or the general public in the job. The data elicited that most of respondents sometimes had time to do all their work and had lulls between heavy workload periods. The data also depicted that they had a lot of workload and more quantity of work was expected from them by others. The data showed that banking employees had a lot of projects, assignments or task to do. It was observed that most of the of respondents moderately felt that there was difference in opinion among the group members and strongly agreed that there was friendliness and “we” feeling among the group members. Most of the respondent were “neutral” regarding their opinion on personality clashes between the groups.

## Section 4

### Testing of Hypotheses

The present section covered in detail the findings derived from the statistical analysis of the hypothesis of the research. The relational statistic applied to the test the hypothesis were Analysis of the Variance (ANOVA) and t-test.

**HO<sub>1</sub>: There exists no variation in Musculoskeletal Discomforts in Banking Employees with their Personal Variables [Age (in yrs.), Working Experience (in yrs.)] and their Situational Variable [Number of Working Hours].**

Analysis of Variance (ANOVA) was computed to show the variation in Musculoskeletal Discomforts in Banking Employees with their Personal Variables [Age (in yrs.), Working Experience (in yrs.) and their Situational Variable [ Number of Working Hours].

**Table 16: Analysis of Variance (ANOVA) showing differences in assessing musculoskeletal discomfort in banking employees in relation to their age, working experience and their working hours.**

Sr. No.	Selected Variables	Source of variable	Sum of Squares	df	Mean Squares	F- values	Sig.
1.	Age (in yrs.)	Between groups	25.052	2	12.526	.463	N.S*
		Within groups	2731.102	101	27.041		
2.	Working Experience (in years)	Between groups	.563	2	.282	.010	N.S*
		Within groups	2755.590	101	27.289		
3.	Number of Working Hours	Between groups	142.853	2	71.427	2.761	N.S*
		Within groups	2613.301	101	25.874		

**Notes: df = Degree of Freedom, N.S= Not Significant**

The statistical findings of the study (Table 16) highlighted that, the computed F-value for Personal Variables [Age (in yrs.), Working Experience (in yrs.)

and their Situational Variable [ Number of Working Hours] was found to be not significant.

Thus, it can be concluded that Musculoskeletal Discomforts experienced by the respondents does not vary with the Personal Variables [Age (in yrs.), Working Experience (in yrs.) and their Situational Variable [Number of Working Hours]. Hence the null hypothesis was accepted.

**HO<sub>1</sub>: There exists no variation in Musculoskeletal Discomforts in Banking Employees with their to their Personal Variables (Gender)**

The t-test was computed to show the variation in Musculoskeletal Discomforts in Banking Employees with their Personal Variables (Gender).

**Table 17: t-test showing differences in musculoskeletal discomfort in banking employees in relation to their Gender**

Gender	Mean score	't' value	df	Sig.
Male	28.18	- 0.390	102	N.S
Female	28.61			

**Notes: df = Degree of Freedom, N.S= Not Significant**

The statistical findings of the study (Table 17) highlighted that, the computed t–value for Personal Variable (Gender) was found to be not significant. Thus, it can be concluded that Musculoskeletal Discomfort experienced by the respondents does not vary with Gender. Hence the null hypothesis was accepted.

## **Section 5**

### **Remedial measures for reducing Musculoskeletal Discomforts and Occupational Stress among Banking Employees.**

#### **4.1 Remedial measures for reducing Musculoskeletal Discomforts among Banking Employees**

Banking sector plays a substantial role in the economy of a country. Bank employees are responsible for working long hours, keeping a static posture, working behind the counter, using a computer, holding mouse, and typing on a keyboard cause micro trauma to the body structures, resulting in musculoskeletal discomfort. Musculoskeletal discomfort are the most common cause of severe long term pain and physical disability, affecting hundreds of millions of people worldwide. The result of the study revealed that most affected areas were neck, upper back, lower back, right and left shoulder and right wrist. Therefore, there is a need to suggest some remedial measures for reducing Musculoskeletal Discomfort which will help them to increase their productivity and reduces absenteeism.

#### **I. Ergonomics tips for reducing Musculoskeletal Discomforts**

##### **I. To avoid unfavorable working postures**

- Bring body close to the position where the object must be handled, or where force application is performed.
- Avoid strong lateral bending or twisting of the trunk. Approach the working area and body close enough to enable carrying out the task within reach.
- Change posture often to activate different muscles alternately while carrying out tasks; consider alternating between standing and sitting postures.

##### **II. To avoid monotonous repetitive tasks**

- Avoid continuous loading of the same muscles for longer periods of time.

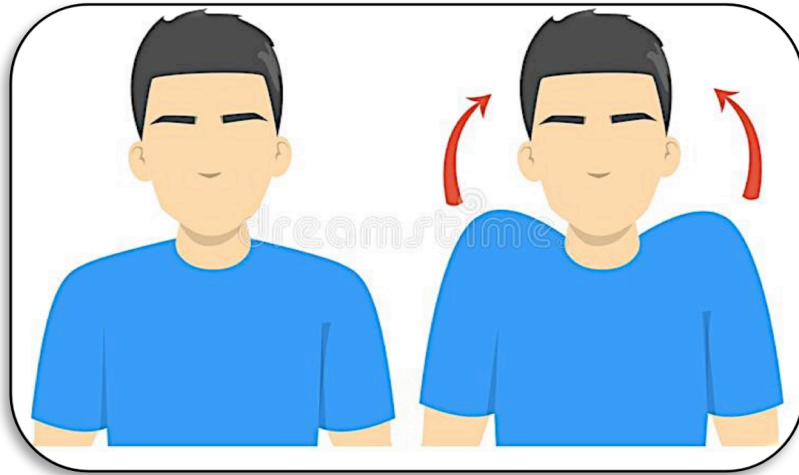
- Strive for changes in motion in order to avoid identical muscular activation patterns. For strongly monotonous work changes in the execution of movements may be limited.
  - Change body posture frequently in order to reduce static loading
  - Use rest pauses.
- III. Workstation should have adjustable work surface, a key-board tray, a keyboard and input device (mouse) at the same level and frequently used item within reach.
  - IV. To avoid discomforts use a chair with adequate lumbar support, sufficient depth and width to accommodate the user, a seat front with a waterfall edge, and adequate thigh and knee clearance.
  - V. The top edge of the monitor should lie at eye level or slightly below and is placed at a distance from the user so that the user does not have to bend or extend the neck/head to see and read the monitor (approximately at an arm's length from the user).
  - VI. To avoid musculoskeletal discomforts employee must be working in recommended posture. Changing position frequently and stretch between tasks helps in improving blood circulation and lessens fatigue.
  - VII. To reduce muscle pain and swelling use cold or hot compresses at the affected areas.
  - VIII. To ease pain. use nonsteroidal anti-inflammatory drugs it helps in reducing both pain and inflammation. They are also available as gels, sprays, or creams for topical application. To alleviate pain, muscle relaxants is also useful.
  - IX. If pain persist for long time for more than a week than consult a physician or physiotherapist.

- X. Recommended exercise for muscle stretching (should be done at least once daily).

**a. Shoulder Shrugs**

**Step 1:** Raise shoulder towards ears.

**Step 2:** Hold and relax downward to a normal position

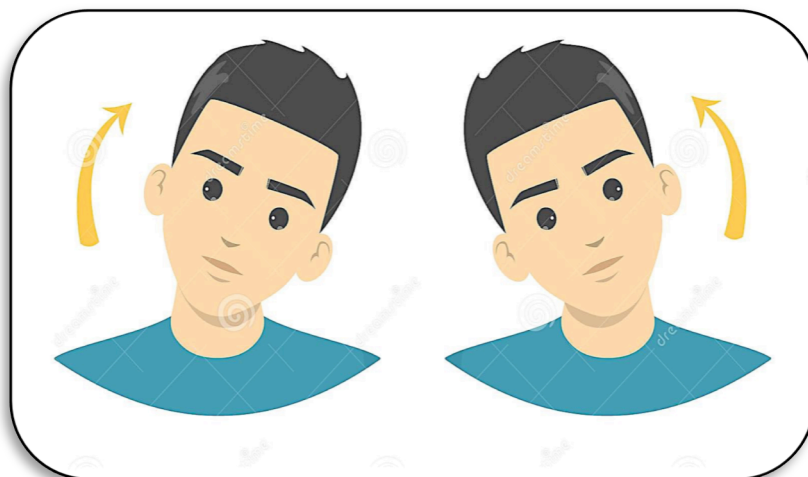


**Figure 16: Shoulder Shrugs**

**b. Neck Tilts**

**Step 1:** Keep shoulders relaxed and arms hanging loosely.

**Step 2:** Tilt head sideways, first to one side, then the other. Hold 5 seconds each side.



**Figure 17: Neck Tilts**

**c. Wrist/Forearm Stretch**

**Step 1:** Place hands palm to palm.

**Step 2:** Rotate palms around until they face downward keeping elbow even. Hold 5-8 seconds.

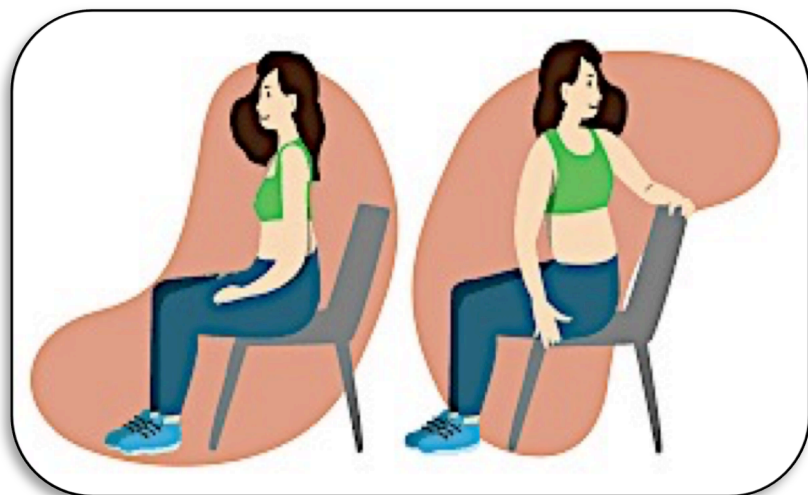


**Figure 18: Wrist/Forearm Stretch**

**d. Back and Hip Stretch**

**Step 1:** Bend left leg over right leg and look over left shoulder.

**Step 2:** Place right hand on left thigh and apply pressure. Repeat for right side.



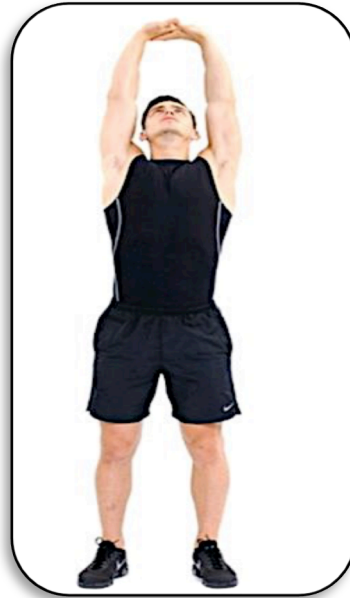
**Figure 19: Back and Hip Stretch**



**e. Upper Body Stretch**

**Step 1:** Interlace fingers, turn palms upward and straighten arms above head.

**Step 2:** Elongate arms to stretch through upper sides of your rib cage. Hold 10-15 seconds. Breathe deeply.



**Figure 20: Upper Body Stretch**

**f. Hamstring Stretch**

**Step 1:** Sit and hold onto upper left leg just above and behind the knee.

**Step 2:** Gently pull bent knee toward chest. Hold 15-20 seconds. Repeat on right leg.

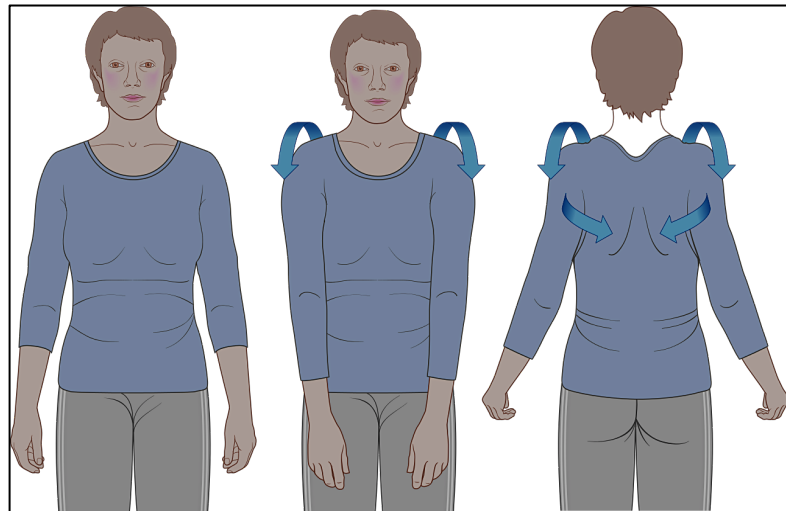


**Figure 21: Hamstring Stretch**

**g. Upper Back Stretch**

**Step 1:** Interlace fingers behind head with elbows out.

**Step 2:** Pull shoulder blades together. Hold 5 seconds, then relax.



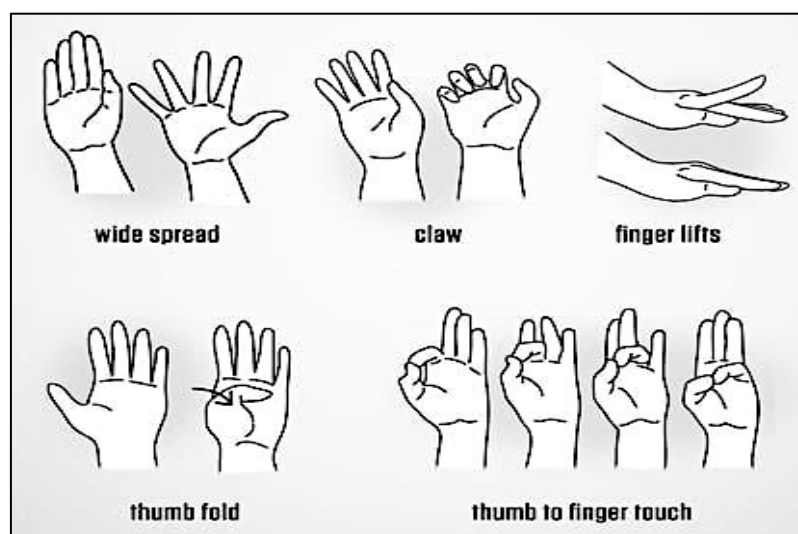
**Figure 22: Upper Back Stretch**

**h. Hand/Finger Stretch**

**Step 1:** Separate and straighten fingers. Hold 10 seconds.

**Step 2:** Bend fingers at knuckle and hold 10 seconds.

**Step 3:** Separate and Straighten again.

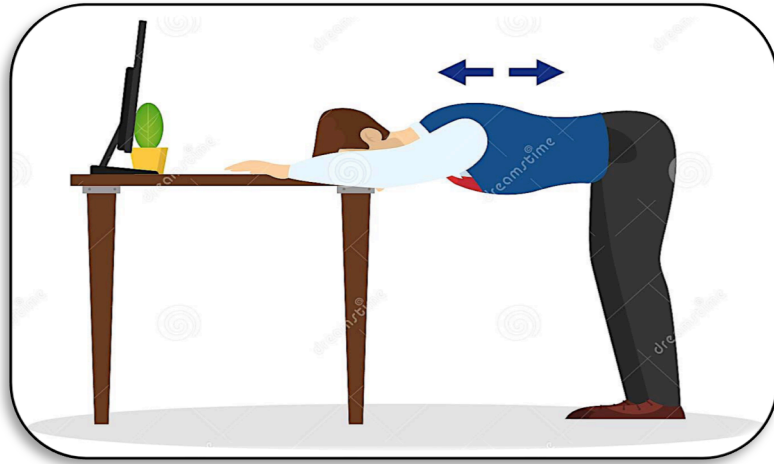


**Figure 23: Hand/Finger Stretch**

i. **Back Stretch**

**Step 1:** Lean Forward. Keep head down and neck relaxed. Hold 10-20 seconds.

**Step 2:** Use hands to push yourself back and up.



**Figure 24: Back Stretch**

j. **Side Stretch**

**Step 1:** Stand tall with feet together.

**Step 2:** Hold left hand with right hand. Gently pull your elbow behind your head to feel stretch in shoulder or back of upper arm. Hold 10 seconds. Don't overstretch or hold breath. Repeat on right side.



**Figure 25: Side Stretch**

**k. Seated spinal rotation**

**Step 1:** While seated, cross arms over the chest.

**Step 2:** Grab the shoulders.

**Step 3:** Rotate the upper body from the waist, turning gently from left to right as far as feels comfortable.



**Figure 26: Seated spinal rotation**

**l. Sitting back extensions**

**Step 1:** Sit straight with feet together.

**Step 2:** Put the palms of the hands into the small of back.

**Step 3:** Lean back over the hands, feeling lower back stretch out.



**Figure 27: Sitting back extensions**

## 11. General tips to reduce back pain



- Keep chair close to the desk.
- Adjust the height of the chair and make sure that the feet is firmly placed on the floor or foot rest.
- The top of the computer screen should be at the eye level and about an arms-length away.
- Hips should be above the knee level.
- Sit right back in the seat, so the whole back is supported with back rest.
- The natural curve of the lower back should fit against the curve of the back rest.
- The back rest should be slightly reclined (10–15 degrees).
- Relax shoulders, and keep the elbows at 90 degrees, just above the desk.

#### **4.2 Remedial measures for coping with Occupational Stress among Banking Employees**

Poor working conditions, high workload, involuntary overtime, inflexible working hours, excessive demands, very frequent changes or monotony are all factors that might contribute to occupational stress. In banking industry, there is lack of administrative support from boss (Manager) as well work overload and lack of time. Workplace pressure, strained relationships with customers & co-workers, and work family balance cause stress which in turns decrease employee performance. From the present study it was found that the employees faced occupational stress while working. Therefore, there is a need to suggest some remedial measures for coping with Occupational Stress which can help them to increase their productivity and efficiency at work.

#### **II. Tips for coping with Occupational Stress**

American Psychological Association (APA) (2018), National Institute for Occupational Safety and Health (NIOSH) (2013) and Harvard Medical School (2019) provided practical recommendations to help Banking Employees to coping with Occupational Stress in their workplaces.

1. To reduce occupational stress, employee should maintain a journal and record their thoughts, feelings, and information regarding their workplace.
2. To cope up with occupational stress employee should do exercise and yoga or indulged in any form of physical activity.
3. To deal with occupational stress, employee should build healthy sleep habits by limiting caffeine intake late in the day and minimizing stimulating activities, such as computer and television use, at night.
4. To reduce the potential for work-life conflict and the stress, employees should establish some work-life boundaries for themselves by making a

rule not to check email from home in the evening, or not answering the phone during dinner.

5. To deal with stress at workplace, employee should start having an open conversation with the supervisor and colleagues and share their thoughts with them.
6. To reduce the effects of occupational stress on employee due to lack of proper planning and poor communication
  - Roles and responsibility of the employee should be cleared.
  - Establish compatible work schedules
  - Involves employee in decision making
  - Daily briefing is necessary to keep all the employee updated on developing issues
  - Communication of work expectations should be comprehensible, consistent with the job description and complete.
  - Commitments made to staff should be clear and kept.
  - Praise, motivate and inspire employees for good work
7. Role Analysis Technique (RAT) is helpful to minimize the effects of occupational stress. It helps both the manager and the employee in several ways:
  - It helps to analyze the requirements and expectations from the job.
  - Breaking-down the job into various components clarifies the role of the job for the entire system.
8. To cope up with occupational stress, employee should be involved in relaxation training. Several techniques are used in relaxation training.
  - **First method is called Differential Relaxation.** In differential relaxation, the employee is instructed to engage in a daily task and only use the muscles that are necessary for carrying out the task.

- **The second method is called mini-practice.** This consist of a brief relaxation procedure in which the employee takes a deep breath, and then while slowly exhaling focuses on sensation of relaxation flowing downward from the muscles of the face to those of the neck, shoulders, trunk, and legs.

9. To cope up occupational stress, stress management program are helpful for both bank managers and employees.

- **Supervisor Training:** Managers are trained to give better performance appraisals, to listen to employees" problems more effectively, and to communicate job assignments and instructions more clearly.
- **Employee Assistance Program:** These include counseling employees who seek assistance on how to deal with alcohol and drug abuse, handling conflicts at the work place, dealing with marital and other family problems.
- **Career Counseling:** Career Counseling helps the employee to obtain professional advice regarding career that would help the individual to achieve personal goals. It also makes the employees aware of what additional educational qualifications or specialized technical training.

10. To minimize occupational stress, employee should reappraise negative thoughts. Plan a trip with friends and family and listen to soothing music. It is also suggested to consult with the therapist for better result if occupational stress continues for a long time.

11. Employee should take aromatherapy to reduce occupational stress. Aromatherapy is a holistic healing treatment that uses aromatic essential oils to promote health and well-being. One can practice aromatherapy by choosing a essential oil of their choice. Several ways to give yourself aromatherapy:



- It can be used in a bath or diffuser.
- Take bowl of water and put less than a drop of essential oil in it. Soak a towel and then use it to wipe of the exposed parts of the body before going to sleep.

12. To avoid occupational stress and restore a sense of balancing times, employee should practice time management. Simple steps to follow:

**Step 1:** Enhance awareness of current patterns of time use.

**Step 2:** Set priorities accordingly.

13. To minimize the ill effects of occupational stress, employee should practice meditation regularly. The employee should practice meditation by following these steps:

**Step 1:** Sit or lie down on the floor and close eyes.

**Step 2:** Breathe deeply in a rhythmic pattern

**Step 3:** While breathing deeply, turn focus on each breath.

**Step 4:** Start with five minutes of meditation on first day and build daily by an additional five minutes until one can comfortably meditation for 20 minutes each day.

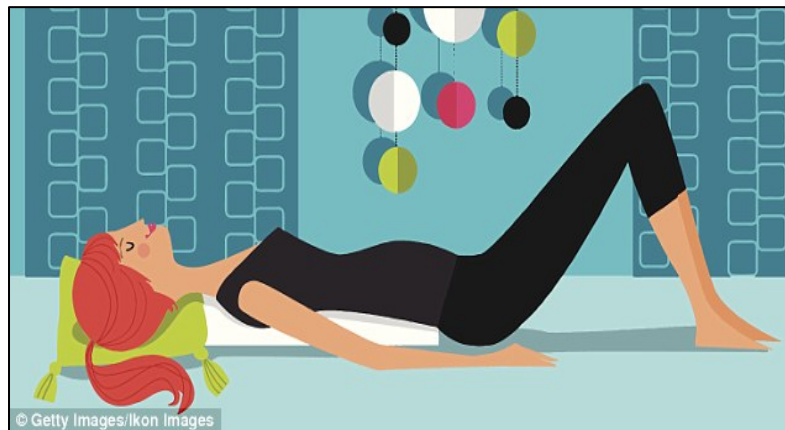


**Fig. 27: Meditation**

14. To avoid occupational stress, employee should practice mindfulness.

One can cultivate mindfulness skills through

- **Body scan meditation:** Lie on back with the legs extended and arms at sides, palms facing up. Focus the attention slowly and deliberately on each part of the body, in order, from toe to head or head to toe. Be aware of any sensations, emotions or thoughts associated with each part of the body.



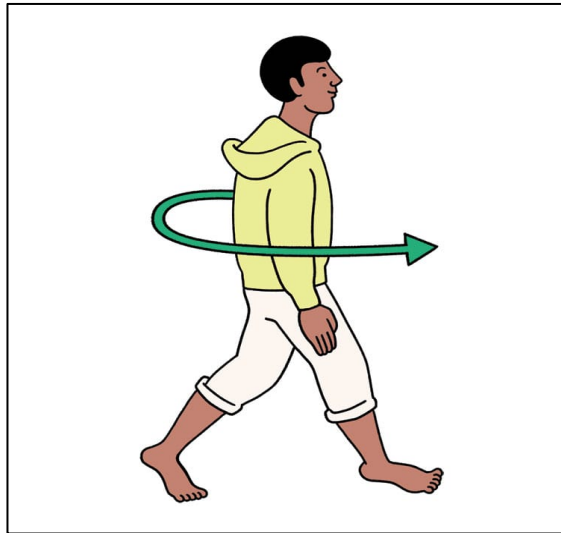
**Figure 28: Body scan meditation**

- **Sitting meditation:** Sit comfortably with back straight, feet flat on the floor and hands in lap. Breathing through nose, focus on the breath moving in and out of the body. If physical sensations or thoughts interrupt meditation, note the experience and then return focus to breath.



**Figure 28: Sitting meditation**

- **Walking meditation:** Find a quiet place 10 to 20 feet in length, and begin to walk slowly. Focus on the experience of walking, being aware of the sensations of standing and the subtle movements that keep balance. Once reach the end of your path, turn and continue walking, maintaining awareness of the sensations.



**Figure 28: Walking meditation**

An illustration of a modern bank branch. In the background, a large blue sign with the word "BANK" in yellow capital letters is centered. It is flanked by two smaller blue signs with white horizontal lines. The scene is lit by several white spotlights hanging from the ceiling. In the foreground, there are three service counters. Behind each counter, a bank employee in a blue suit and yellow tie is visible. In front of each counter, a customer is seated on a yellow chair. The customer on the left is a man in an orange shirt and green pants. The customer in the middle is a woman with blonde hair. The customer on the right is a woman in a pink top and blue pants. A tall green plant is on the far left, and a small potted plant is on the counter between the middle and right counters. The floor is a light gray.

**BANK**

**SUMMARY  
CONCLUSIONS AND  
RECOMMENDATIONS**

## **CHAPTER-V**

### **SUMMARY, CONCLUSION AND RECOMMENDATIONS**

Banking industry serves as the backbone of the country's economy. It mobilizes deposits and provides credit to various sector across the country and supervises and administers exchange control and banking regulations and administers the government's monetary policy. Employees who are involved in banking sector play a vital role in operating the bank smoothly. They worked as a financial managers, loan managers, customer service representative, tellers and bookkeepers and clerks. Bank employees are expected to work long hours everyday. They are also subjected to repetitive tasks and awkward postures, which may result in musculoskeletal discomforts in their body parts and, if left untreated for an extended period of time, can lead to musculoskeletal disorders. Musculoskeletal disorders are common, and their effects are widespread. They impact hundreds of millions of people around the world and are the most common cause of severe long-term pain and physical disability. This may consequently increase absenteeism and cause low productivity. Banking profession is associated with both physical as well as psychological health. Bank employees are often subjected to high workload. The nature of job is also very tiresome as it involves long working hours, inappropriate reward system, and lack of job autonomy and role conflict may all contribute to stress in the employees. Stress arising at work has detrimental effect on the behavior of people, which ultimately results in personal and organizational inefficiency. Hence, the present study was undertaken to assess the musculoskeletal discomforts and occupational stress experienced by the banking employees. These were assessed through a standard questionnaire. And also suggesting remedial measures for reducing the effect of musculoskeletal discomforts and occupational stress among the banking employees.

Studies found while collecting review of literature focusing on work related Musculoskeletal Disorder and Occupational Stress conducted abroad and

various parts of India. However, a dearth was found of studies carried out in Prevalence of Musculoskeletal Discomfort and Occupational Stress among Banking Employees working in Assam. The present research area was thought be the most significant and unexplored area.

Courses such as “Ergonomics” are among the thrust areas of the field of Family and Community Resource Management. Hence, the information gathered through the present research would widen the database and will help in strengthening the curriculum. Moreover, it will also help the students to gain insight into the area of ergonomics on work-related musculoskeletal disorders and occupational stress among banking employees.

### **Statement of problem**

The present investigation is an attempt to assess the Musculoskeletal Discomfort and Occupational Stress experienced by the selected Banking Employees.

### **Objectives of the study**

1. To identify the Musculoskeletal Discomfort experienced by the selected employees working in bank in Assam.
2. To assess the Occupational Stress faced by the respondents.
3. To propose remedial measures for reducing Musculoskeletal Discomfort and Occupational Stress in consultation with expert of relevant field.

### **Delimitation**

1. The study is limited to the respondents who have a working experience of minimum one year in the nationalized or private banks.

2. The locale of the study is restricted to only the nationalized and private banks of three districts i.e Sivasagar , Jorhat and Guwahati of Assam, India.

## **Hypotheses**

2. There exists a relationship between the Musculoskeletal Discomfort experienced by the respondents during last 12 months with their personal variables [age (in yrs.), gender, working experience (in yrs.)] and their situational variable [number of working hours].

## **Methodology**

The research design for the present investigation was descriptive in nature. The samples for the present study was selected from four different bank of selected three districts of Assam namely Sivasagar, Jorhat and Guwahati. After taking an informed consent from the bank managers, the data were collected from 104 respondents who were working as a bank employees for minimum 1 year in nationalized and private banks of selected three districts of Assam, India. Therefore, purposive sampling technique was used for the selection of respondents from the banks. For the present study, online questionnaire was used as a tool for data collection.

The questionnaire comprised of three sections. Apart from demographic information, it includes of two sections “Musculoskeletal Discomfort experienced by the Bank Employee” and “Occupational Stress faced by the Bank Employee” In section “Musculoskeletal Discomfort experienced by the Bank Employee” a standardized questionnaire namely “Nordic Questionnaire” was used to find out the musculoskeletal discomforts experienced by the bank employees while performing their tasks during last 12 months, last 7 days. It was also focused on finding out the musculoskeletal discomforts that prevented the bank employees in carrying out their daily activities during last 12 months. This were asked for different body parts viz. neck, shoulder, elbow, wrists, hands, upper back, lower back, hips, buttocks, thighs, knees, ankles and feet. In section “Occupational Stress faced by the Bank Employee” a standardized questionnaire namely “NIOSH Generic Job Stress

Questionnaire” was used to find out the occupational stress faced by the bank employees. It included general job information, general health, health conditions, job satisfaction, mental demands, social support, work hazards, workload and responsibility and conflict at work. The data were analyzed by applying descriptive (frequencies, percentages, means and standard deviations) as well as relational statistics (Analysis of Variance (ANOVA) and t-test).

## **Major Findings**

The major findings of the study are presented here.

**Section-1: Demographic Information:** The age of the respondents ranged between 24 to above 44 years where mean age of the respondents was 32.88 years. 58.65 per cent of the respondents belonged to age group of 24 to 33 years. More than two-third (70.19 per cent) of the respondents were males. More than one-half (52.88 per cent) of the respondents were married. It was found that majority of the respondents had 1 to 12 years of service in banking sector (88.46 per cent). The data elicited that all the respondents were full-time permanent employee. It was found that majority of the respondents had 6 working days in a week (93.27 per cent). The data also highlighted that slightly less than three-fourth (74.03 per cent) of the respondents working hours were 5 to 6 hours per day. The data also revealed that more than one-half (52.88 per cent) of the respondents worked overtime for 2 to 4 hours per week. On analyzing the data, it was observed that slightly greater than three-fourth (76.92 per cent) of the respondents had one break in a day. The data also depicted that majority of the respondents had 21 to 40 minutes break in a day (82.69 per cent).

**Section-2: Musculoskeletal Discomfort experienced by the Bank Employee:** It was found that less than two-third (64.42 per cent) of the respondents experienced musculoskeletal discomfort in their neck, more than one-half (52.88 per cent) of the respondents perceived musculoskeletal discomfort in upper back, more than one-half (52.88 per cent) of the respondents experienced musculoskeletal discomfort in their lower back and it



was observed that 44.23 per cent of the respondents experienced musculoskeletal discomforts in their right shoulder and right wrist and 42.31 per cent of respondents experienced musculoskeletal discomfort in their right hand during last 12 month. The data also depicted 40.38 per cent respondent perceived musculoskeletal discomforts in their left shoulder.

The data revealed that less than one-half (48.08 per cent) of the respondents experienced musculoskeletal discomfort in their neck and the data also revealed that more than one-third of the respondents experienced musculoskeletal discomfort in their upper back and one-fourth (26.92 per cent) of the respondents experienced musculoskeletal discomfort in their lower back during last 7 days.

Further, it was revealed that 26.92 per cent of the respondents experienced discomfort in their neck, less than one-tenth (16.35 per cent) of the respondents experienced musculoskeletal discomforts in their right shoulder and lower back and 15.38 per cent of the respondents experienced musculoskeletal discomforts in their upper back during last 12 months which prevented them from carrying out their normal activities (job, housework, hobbies).

**Section-3: Occupational Stress faced by the Bank Employee:** It was found that majority of the respondents never felt of lump or choked in the throat (83.65), never experienced trembling in hands (82.69), never bothered by shortness of breath (82.69) and never bothered by heart beating hard (79.81 per cent). More than one-third 35.58 per cent of the respondents occasionally felt dryness in mouth and 39.42 per cent of the respondents experienced their muscles felt tight and tense sometimes. The data highlighted that less than one-half (47.12 per cent) of the respondents suffered from back problems. It was observed that slightly more than three-fourth (75.96 per cent) of the respondents decided to take the same job without any hesitation. 72.12 per cent of the respondents strongly recommended the same job to their friend. The data elicited that majority of the respondents opined that their job required a great deal of concentration (80.78 per cent). Less than three-fourth (73.08) per cent of the respondents opined that they had to remember many things

related to their job. The data depicted that less than three-fourth (74.04 per cent) of the respondents opined that it was easy talk to their spouse, friends and relatives and 70.19 per cent of the respondents felt their spouse, friends and relatives were willing to listen to your personal problems and 70.19 per cent of the respondents opined that their spouse, friends and relatives were willing to listen to their personal problems. The data also revealed that majority of the respondents never experienced physical assault while performing their job (85.58 per cent). It was found that 25.96 per cent of respondents occasionally exposed to verbal abuse and/ or confrontations with clients or the general public in the job. The data revealed that more than one-third (37.5 per cent) of the respondents hardly experienced slowdown in workload. Less than one-half (46.15 per cent) of the respondents sometimes had time to think and contemplate the workload and responsibilities. More than one-half (54.81 per cent) of the respondents “sometimes” had time to do all their work and 48.08 per cent of the respondents “sometimes” had lulls between heavy workload periods. The data also depicted that more than two-third (36.54 per cent) of the respondents had a lot of workload. 39.42 per cent)of the respondents opined that a lot of quantity of work was expected from them by others. 38.46 per cent of the respondents had “a lot” of projects, assignments or task to do. It was observed that 46.15 per cent of the respondents strongly agreed that there was “we” feeling among the group members and 44.23 per cent of the respondents “strongly agreed” that there were friendliness among the group members. 44.23 per cent of respondents were “neutral” regarding their opinion on personality clashes between the groups. 41.35 per cent of the respondents strongly agreed that there was difference in opinion of the group members.

#### **Section-4: Statistical findings**

The statistical findings revealed that there existed no significant relationship between the musculoskeletal discomfort experienced by banking employees during last 12 months in relation to their age (in years), gender, working experience (in years) and number of working hours.

**Section-5: Remedial measures for reducing Musculoskeletal Discomfort and Occupational Stress among Banking Employees:** The investigator developed remedial measures in consultation with the experts in the field of psychiatry and physiotherapy. To avoid Musculoskeletal Discomfort, a steps by steps description of different types of muscle stretching exercises were mentioned along with do's and don't to the respondents. To deal with Occupation Stress, various meditation, mindfulness and training methods were mentioned for the respondents. The suggestions were also shared with the bank managers and employees via mail.

### **Conclusions**

A study was conducted among the banking employees of selected three districts of Assam namely Sivasagar, Jorhat and Guwahati in order to investigate the Musculoskeletal Discomfort and Occupational Stress. It was found that the mean age of the respondents were 32.88 years. Most of the respondents were belonged to the age group of 24 to 34 years. The population of the male employees were more as compared to female employees. More than one-half of the respondents were married. It was found that majority of the respondents had 1 to 12 years of service in banking sector. The data elicited that all the respondents were full-time permanent employee. On analyzing the data, it was found that the musculoskeletal discomforts experienced by the banking employees during last 12 months were chronic pain. Majority of the respondents perceived discomfort in their neck, shoulders, upper and lower back, right hand and right wrist during last 12 months. Further, the respondents reported discomforts in neck, upper back, lower back and right shoulder which prevented them from carrying out their normal activities (job, housework, hobbies) during last 12 months.

After analyzing the overall data on the occupational stress, it elicited that majority of the respondents never felt of lump or choked in the throat, never

experienced trembling in hands, never bothered by shortness of breath and never bothered by heart beating hard. While it was found that respondents occasionally felt dryness in mouth and sometimes their muscles felt tight and tense. The data highlighted that compared to the other health conditions more number of people suffered from back problems. It was observed that most of the respondents decided to take the same job without any hesitation. On being asked whether they would suggest same job to a friend, most of the respondents agreed they would strongly recommend it. Majority of the respondents opined that it was easy talk to their spouse, friends and relatives than to their colleagues and immediate supervisor. The data also revealed that respondents felt their spouse, friends and relatives were more willing to listen to their personal problems. The data revealed that majority of the respondents never experienced physical assault while performing their job. While it was found that respondents occasionally exposed to verbal abuse and/ or confrontations with clients or the general public in the job. The data depicted that respondents sometimes had time to do all their work and had lulls between heavy workload periods. The data elicited that respondents had a lot of workload and a lot of quantity of work was expected from them by others. The data showed that banking employees had a lot of projects, assignments or task to do. It was observed that most of the of respondents moderately felt that there was difference in opinion among the group members and strongly agreed that there was friendliness and “we” feeling among the group members. Most of the respondent were “neutral” regarding their opinion on personality clashes between the groups.

### **Recommendations for the future studies**

1. An investigator in other cities of Assam or different states in India can undertake similar type of research to assess the musculoskeletal discomfort and occupational stress among the banking employees.
2. A similar study can be conducted on a larger sample size to minimize bias and encourage generalization of findings, objective assessment of

participants should be considered to minimize feedback bias and obtain accurate data.

3. A similar kind of study can also be carried between the individuals of different age group.
4. A systematic comparative study can be conducted between public and private bank employees.
5. A systematic comparative study can be conducted between work technique and musculoskeletal disorder prevalent among the banking employees.
6. A study could be carried out to investigate if there is a connection between musculoskeletal discomfort and occupational stress among the banking employees.
7. A study can be carried out to investigate the risk of musculoskeletal discomfort and occupational stress in other categories of workers.
8. A study can be conducted on work place modifications to improve employees productivity and efficiency.

### **Implications of the study**

The findings of the present study had the following implications:

#### **For the field of Family and Community Resource Management**

The field of Family and Community Resource Management has “Ergonomics” as subjects offered to the students at Under Graduate, Post Graduate and Doctoral level. The findings of the study also assist students in gaining an understanding of the impact of ergonomics on Musculoskeletal Discomforts and Occupational Stress among banking employees.

### **For the Commercial Space Designers**

The findings of the present study would act as a feedback to commercial space designers to know the health problem faced by the bank employees at their workplace. Poor working environment may have an impact on people's health at work, but it's also related to sick building syndrome. The commercial space designers can consider such problems related to workers and work environment while designing the interiors.

### **For the Government**

The findings of the present study revealed that the banking employees experienced musculoskeletal discomforts and also faced occupational stress while working at the bank. Therefore, further researches would be encouraged by the government across the nation to obtain the expected results which are quintessential for developing national as well as local database. The government can also develop guidelines and policies to reduce such as musculoskeletal discomforts and occupational stress of the workers. This will be immense banking industry, designers, ergonomist, supervisors, managers or occupational health care professionals as they are aware of the factors that affect bank employees psychologically and physically.

### **For the bank employees**

The findings of the study revealed that bank employees experienced musculoskeletal discomforts mainly in their neck, shoulders, wrists, hands, upper back and lower back. The data also highlighted some factors that affect the employees' mental health which lead to stress. Hence, the bank employees can reduce their musculoskeletal discomforts and occupational stress by adopting the suggested ergonomic tips.

### **For libraries and documentation centers**

The findings of the present research would be a ready reference for documentation on the related subject.

An illustration of a modern bank lobby. At the top, a large blue sign with the word "BANK" in yellow capital letters is centered. It is flanked by two smaller blue signs with white horizontal lines. Six spotlights hang from the ceiling, illuminating the scene. Below the sign, the word "BIBLIOGRAPHY" is written in bold black capital letters. In the foreground, three service counters are visible. Each counter has a teller in a blue suit and a customer. The customer on the left is a man in an orange shirt and green pants. The customer in the middle is a woman with blonde hair in a blue suit. The customer on the right is a woman with long brown hair in a pink shirt and blue pants. They are all sitting on yellow chairs. A potted plant is on the left, and a small plant is on the middle counter. The floor is light gray with reflections.

**BANK**

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- <https://www.health.harvard.edu/blog/how-to-handle-stress-at-work-2019041716436>. Retrieved on 25 March, 2021.
- <https://youtu.be/vvDc3vuEfWk>. Retrieved on 25 March, 2021.

An illustration of a modern bank interior. At the top, a large blue sign with the word "BANK" in yellow capital letters is centered. It is flanked by two smaller blue signs, each featuring a yellow horizontal bar and several white horizontal lines. The scene is lit by six spotlights hanging from the ceiling. Below the signs, the word "APPENDICES" is written in a large, bold, black serif font. The bottom half of the image shows a service counter with three tellers in blue uniforms and yellow ties. They are interacting with three customers: a man in an orange shirt and green pants, a woman in a blue suit, and a woman in a pink top and blue pants. The tellers are seated behind the counter, and the customers are seated in yellow chairs in front of them. A potted plant is visible on the left side of the counter.

**BANK**

## **APPENDICES**

## APPENDIX – I

### Assessment of Musculoskeletal Discomfort and Occupational Stress among Banking Employees in Assam

#### Google Form Questionnaire

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#### Section I

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#### Demographic Information of the respondents

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##### A) Personal Information

1. Name of the respondent :
2. Age (in years) :
3. Gender Male \_\_\_\_\_ Female \_\_\_\_\_
4. Marital status Married \_\_\_\_\_ Unmarried \_\_\_\_\_
5. Years of service as employee :

##### B) Occupation related Information

1. Select the most appropriate description of your JOB SITUATION:
  1. Full-time permanent employee ☐
  2. Full-time temporary employee ☐
  3. Part-time permanent employee ☐
  4. Casual ☐
  5. Other ☐
2. Number of days at work in a week:
3. Total working hours per day :
4. How many hours overtime do you work in your job per week?
5. Number of break in a day :
6. Duration of each breaks in a day:

## Section II

### Extent of Discomfort Experienced by the Bank Employees

Please answer by using the tick boxes ☒

-one tick for each question

**Please note that this part of the questionnaire should be answered, even if you have never had trouble in any parts of your body.**

Have you at any time during the last 12 months had trouble (such as ache, pain, discomfort, numbness) in:	Have you had trouble during the last 7 days:	During the last 12 months have you been prevented from carrying out normal activities (eg. Job, housework, hobbies) because of this trouble:
<b>1 Neck</b> No Yes 1 <input type="checkbox"/> 2 <input type="checkbox"/>	<b>2 Neck</b> No Yes 1 <input type="checkbox"/> 2 <input type="checkbox"/>	<b>3 Neck</b> No Yes 1 <input type="checkbox"/> 2 <input type="checkbox"/>
<b>4 Shoulders</b> No Yes 1 <input type="checkbox"/> 2 <input type="checkbox"/> in the right shoulder  3 <input type="checkbox"/> in the left shoulder  4 <input type="checkbox"/> in both shoulders	<b>5 Shoulders</b> No Yes 1 <input type="checkbox"/> 2 <input type="checkbox"/> in the right shoulder  3 <input type="checkbox"/> in the left shoulder  4 <input type="checkbox"/> in both shoulders	<b>6 Shoulders (both/either)</b> No Yes 1 <input type="checkbox"/> 2 <input type="checkbox"/>
Have you at any time during the last 12 months had trouble (such as ache, pain, discomfort, numbness) in:	Have you had trouble during the last 7 days:	During the last 12 months have you been prevented from carrying out normal activities (eg. Job, housework, hobbies) because of this trouble:
<b>7 Elbows</b> No Yes 1 <input type="checkbox"/> 2 <input type="checkbox"/> in the right elbow  3 <input type="checkbox"/> in the left elbow  4 <input type="checkbox"/> in both elbows	<b>8 Elbows</b> No Yes 1 <input type="checkbox"/> 2 <input type="checkbox"/> in the right elbow  3 <input type="checkbox"/> in the left elbow  4 <input type="checkbox"/> in both elbows	<b>9 Elbows (both/either)</b> No Yes 1 <input type="checkbox"/> 2 <input type="checkbox"/>
<b>10 Wrists</b> No Yes 1 <input type="checkbox"/> 2 <input type="checkbox"/> in the right wrist/hand  3 <input type="checkbox"/> in the left wrist/hand  4 <input type="checkbox"/> in both wrists/hands	<b>11 Wrists</b> No Yes 1 <input type="checkbox"/> 2 <input type="checkbox"/> in the right wrist/hand  3 <input type="checkbox"/> in the left wrist/hand  4 <input type="checkbox"/> in both wrists/hands	<b>12 Wrists</b> No Yes 1 <input type="checkbox"/> 2 <input type="checkbox"/>

Have you at any time during the <b>last 12 months</b> had <b>trouble</b> (such as ache, pain, discomfort, numbness) in:	Have you had <b>trouble</b> during the <b>last 7 days</b> :	During the <b>last 12 months</b> have you been <b>prevented</b> from carrying out normal activities (eg. Job, housework, hobbies) because of this trouble:
<b>13 Hands</b> No Yes 1 <input type="checkbox"/> 2 <input type="checkbox"/> in the right wrist/hand 3 <input type="checkbox"/> in the left wrist/hand 4 <input type="checkbox"/> in both wrists/hands	<b>14 Hands</b> No Yes 1 <input type="checkbox"/> 2 <input type="checkbox"/> in the right wrist/hand 3 <input type="checkbox"/> in the left wrist/hand 4 <input type="checkbox"/> in both wrists/hands	<b>15 Hands</b> No Yes 1 <input type="checkbox"/> 2 <input type="checkbox"/>
<b>16 Upper back (Cervical)</b> No Yes 1 <input type="checkbox"/> 2 <input type="checkbox"/>	<b>17 Upper back (Cervical)</b> No Yes 1 <input type="checkbox"/> 2 <input type="checkbox"/>	<b>18 Upper back (Cervical)</b> No Yes 1 <input type="checkbox"/> 2 <input type="checkbox"/>
<b>19 Lower back (small of the back) Lumber</b> No Yes 1 <input type="checkbox"/> 2 <input type="checkbox"/>	<b>20 Lower back (Lumber)</b> No Yes 1 <input type="checkbox"/> 2 <input type="checkbox"/>	<b>21 Lower back (Lumber)</b> No Yes 1 <input type="checkbox"/> 2 <input type="checkbox"/>
<b>22 One or both hips/buttocks</b> No Yes 1 <input type="checkbox"/> 2 <input type="checkbox"/>	<b>23 Hips/buttocks</b> No Yes 1 <input type="checkbox"/> 2 <input type="checkbox"/>	<b>24 Hips/buttocks</b> No Yes 1 <input type="checkbox"/> 2 <input type="checkbox"/>
Have you at any time during the <b>last 12 months</b> had <b>trouble</b> (such as ache, pain, discomfort, numbness) in:	Have you had <b>trouble</b> during the <b>last 7 days</b> :	During the <b>last 12 months</b> have you been <b>prevented</b> from carrying out normal activities (eg. Job, housework, hobbies) because of this trouble:
<b>25 One or both thighs</b> No Yes 2 <input type="checkbox"/> 2 <input type="checkbox"/>	<b>26 Thighs</b> No Yes 1 <input type="checkbox"/> 2 <input type="checkbox"/>	<b>27 Thighs</b> No Yes 1 <input type="checkbox"/> 2 <input type="checkbox"/>
<b>28 One or both knees</b> No Yes 1 <input type="checkbox"/> 2 <input type="checkbox"/>	<b>29 Knees</b> No Yes 1 <input type="checkbox"/> 2 <input type="checkbox"/>	<b>30 Knees</b> No Yes 1 <input type="checkbox"/> 2 <input type="checkbox"/>
<b>31 One or both Ankles</b> No Yes 1 <input type="checkbox"/> 2 <input type="checkbox"/>	<b>32 Ankles</b> No Yes 1 <input type="checkbox"/> 2 <input type="checkbox"/>	<b>33 Ankles</b> No Yes 1 <input type="checkbox"/> 2 <input type="checkbox"/>
<b>34 One or both feet</b> No Yes 1 <input type="checkbox"/> 2 <input type="checkbox"/>	<b>35 Feet</b> No Yes 1 <input type="checkbox"/> 2 <input type="checkbox"/>	<b>36 Feet</b> No Yes 1 <input type="checkbox"/> 2 <input type="checkbox"/>

---

**Section II**  
**Extent of Occupational Stress faced by Bank Employees**

---

**GENERAL HEALTH**

Please enter a number in the space provided at the end of each statement.

Statement	Never	Occasionally	Sometimes	Fairly often	Very often
1. Your face became hot when you were not in a hot room or exercising.					
2. You perspired excessively when you were not in a hot room or exercising					
3. Your mouth became dry					
4. Your muscles felt tight and tense					
5. You were bothered by a headache					
6. You felt as if the blood were rushing to your head					
7. You felt as if the blood were rushing to your head					
8. You felt lump in your throat or a choked-up feeling					
9. Your hands trembled enough to bother you					
10. You were bothered by shortness of breath when you were not working					



hard or exercising					
11. You were bothered by your heart beating hard					
12. Your hands sweated so that you felt damp and clammy					
13. You had spells of dizziness					
14. You were bothered by having an upset stomach or stomach ache					
15. You were in ill health which affected your work					
16. You had loss of appetite					
17. You had trouble sleeping at night.					

## HEALTH CONDITIONS

Within the past twelve months, has a doctor ever treated you for, or told you that you had any of the following: Please enter 1 for No or 2 for Yes.

Health problem	No	Yes
1. Diabetes		
2. Asthama		
3. High blood pressure		
4. Heart disease		
5. Arthritis		
6. Epilepsy		
7. Glaucoma		
8. Kidney or bladder trouble		
9. Lung or breathing problems		

10. Stroke		
11. Anemia		
12. Gall Bladder, liver, or pancreas trouble		
13. Thyroid trouble or goiter		
14. Insomnia		
15. Gastritis		
16. Stomach ulcer		
17. Alcoholism		
18. Emotional problems		
19. Back problems		

## JOB SATISFACTION

1. Knowing what you know now, if you had to decide all over again whether to take the type of job you now have, what would you decide?

1 I would decide without hesitation to take the same job. ☐

2 I would have some second thoughts. ☐

3 I would decide definitely NOT to take this type of job. ☐

❖ If you were free right now to go into any type of job you wanted, what would your choice be?

1 I would take the same job. ☐

2 I would take a different job. ☐

3 I would not want to work. ☐

❖ If a friend of yours told you he/she was interested in working in a job like yours, what would you tell him/her?

1 I would strongly recommend it. ☐

2 I would have doubts about recommending it. ☐

3 I would advise against it. ☐

❖ All in all, how satisfied would you say you are with your job?

1 I am very satisfied. ☐

2 I am somewhat satisfied.

☐

3 I am not too satisfied.

☐

4 I am not at all satisfied.

☐

### MENTAL DEMANDS

Please indicate the degree to which you agree or disagree with the following statements about your job. Please enter the number in the space provided at the end of each statement.

Statement	Strongly Agree	Slightly Agree	Slightly Disagree	Strongly Disagree
1. My job requires a great deal of concentration.				
2. My job requires me to remember many different things.				
3. I must keep my mind on my work at all times.				
4. I can take it easy and still get my work done.				
5. I can let my mind wander and still do the work				

### SOCIAL SUPPORT

Statements	Very much	Somewhat	A little	Not at all	Don't have any such person
<b>A. How much do each of these people go out of their way to do things to make your work life easier for you?</b>					
1. Your immediate supervisor (boss)					
2. Other people at work					
3. Your spouse, friends and relatives					
<b>B. How easy is it to talk with each of the following people?</b>					
1. Your immediate supervisor (boss)					

supervisor (boss)					
2. Other people at work					
3. Your spouse, friends and relatives					
<b>C. How much can each of these people be relied on when things get tough at work?</b>					
1. Your immediate supervisor (boss)					
2. Other people at work					
3. Your spouse, friends and relatives					
<b>D. How much is each of the following willing to listen to your personal problems?</b>					
1. Your Immediate supervisor (boss)					
7. Other people at work					
8. Your spouse, friends and relatives					

## WORK HAZARDS

Please answer each of the following questions as they apply to you.

Statement	Never	Occasionally	Sometimes	Fairly often	Very often
1. How often does your job expose you to verbal abuse and/or confrontations with clients or the general public?					
2. How often does your job expose you to the threat of physical harm or injury?					
3. How often have					

you been physically assaulted within the past 12 months while performing your job?					
4. How often does your job personally subject you to potential legal liability?					

### WORKLOAD AND RESPONSIBILITY

The next few items are concerned with various aspects of your work activities. Please indicate how much of each aspect you have on your job by writing a number in the box provided.

Statement	Hardly any	A little	Some	A lot	A great deal
1. How much slowdown in the workload do you experience?					
2. How much time do you have to think and contemplate?					
3. How much work load do you have ?					
4. What quantity of work do others expect you to do?					
5. How much time do you have to do all your work?					
6. How many projects, assignments, or tasks do you have?					
7. How many lulls between heavy work load periods do you have?					
8. How much responsibility do you have for the future of others?					
9. How much responsibility do you have for the morale of others?					
10. How much responsibility do you have					

for the welfare and lives of others?					
--------------------------------------	--	--	--	--	--

## CONFLICT AT WORK

Please answer the following questions about your work situation.

Statement	Strongly Disagree	Moderately Disagree	Neither Agree nor Disagree	Moderately Agree	Strongly Agree
1. There is harmony among my group.					
2. There is difference in opinion among the members of my group.					
3. The members of my group are supportive of each other's ideas.					
4. There are clashes between subgroups within my group.					
5. There is friendliness among the members of my group.					
6. There is "we" feeling among members of my group.					
7. There are disputes between my group and other groups.					
8. There is agreement between my group and other groups.					
9. Other groups withhold information necessary for the attainment of our					

group tasks.					
10.The relationship between my group and other groups is harmonious in attaining the overall organizational goals.					
11.There is lack of assistance between my group and other groups.					
12.There is cooperation between my group and other groups.					
13.The personality clashes between my group and other groups.					
14. Other groups create problems for my group.					

## Appendix –II

### Consent Form



Estd. 1949

NAAC Accredited "A" Grade

**DEPARTMENT OF FAMILY AND COMMUNITY RESOURCE MANAGEMENT**  
**FACULTY OF FAMILY & COMMUNITY SCIENCES**  
**THE MAHARAJ SAYAJIRAO UNIVERSITY OF BARODA**  
**VADODARA**

#### **INFORMED CONSENT FORM** **(For Bank Mangers)**

The Department of Family and Community Resource Management, Faculty of Family and Community Sciences, The Maharaja Sayajirao University of Baroda, Vadodara, supports the practice of protection of human participants in research. The following will provide you with information about the experiment that will help you decide whether or not you wish to give consent to your employees to participate. If you agree, please be aware that you and your employees are free to withdraw at any point throughout the duration of the research without any penalty. In this study, your employees will be asked about their background information (Name, Age, Gender, Occupation etc.), presence of any musculoskeletal discomfort and factors that may cause occupational stress.

All information provided by your employees will remain confidential and will not be associated with your or your employee's name. If for any reason during this study you do not feel comfortable, you may leave the study.

Participation in this study will require approximately 15-20 minutes. The Remedial Measures will be shared with you after completion of the study. If you have any further questions concerning this research, please feel free to contact us through Phone or email. (Ms. Porineeta Phukan, +91 84028 29096 [phukanporineeta@gmail.com](mailto:phukanporineeta@gmail.com) ).

Please indicate with your signature on the space below that you understand what participation in the study involves and agree to give consent to your employees to participate. Participation of your employees is strictly voluntary. All information will be kept confidential and your or your employee's name will not be associated with any research findings.

Name & Signature of Bank Manager  
Date: 23-12-2020

Ms. Porineeta Phukan  
Researcher  
M.Sc. (F.C.Sc.)  
Department of FCRM  
FFCSc, MSU

#### **Supervisors:**

Prof. Neerja Jaiswal  
Ms. Vashima Veerkumar  
+91 95588 09389  
Ms. Neha Rathore  
+91 85868 24649  
Department of FCRM, FFCSc, MSU.





Estd. 1949

NAAC Accredited "A" Grade

**DEPARTMENT OF FAMILY AND COMMUNITY RESOURCE MANAGEMENT**  
**FACULTY OF FAMILY & COMMUNITY SCIENCES**  
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Deep Baruah.  
Name & Signature of Bank Manager  
Bank name, Branch: SBI, Sivasagar Bazar Branch  
State: Assam  
Date: 24-12-2020

Ms. Porineeta Phukan  
Researcher  
M.Sc. (F.C.Sc.)  
Department of FCRM  
FFCSc, MSU

**Supervisors:**

Prof. Neerja Jaiswal  
Ms. Vashima Veerkumar  
+91 95588 09389  
Ms. Neha Rathore  
+91 85868 24649  
Department of FCRM, FFCSc, MSU.



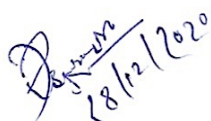
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**DEPARTMENT OF FAMILY AND COMMUNITY RESOURCE MANAGEMENT**  
FACULTY OF FAMILY & COMMUNITY SCIENCES  
THE MAHARAJ SAYAJIRAO UNIVERSITY OF BARODA  
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Please indicate with your signature on the space below that you understand what participation in the study involves and agree to give consent to your employees to participate. Participation of your employees is strictly voluntary. All information will be kept confidential and your or your employee's name will not be associated with any research findings.

  
28/12/2020

Rishi Saroj  
Name & Signature of Bank Manager  
Bank name, Branch: SBI, RBO Jorhat.  
State: Assam  
Date: 28-12-2020



Ms. Porineeta Phukan  
Researcher  
M.Sc. (F.C.Sc.)  
Department of FCRM  
FFCSc, MSU

**Supervisors:**  
Prof. Neerja Jaiswal  
Ms. Vashima Veerkumar  
+91 95588 09389  
Ms. Neha Rathore  
+91 85868 24649  
Department of FCRM, FFCSc, MSU.



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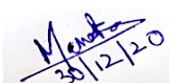
**DEPARTMENT OF FAMILY AND COMMUNITY RESOURCE MANAGEMENT**  
**FACULTY OF FAMILY & COMMUNITY SCIENCES**  
**THE MAHARAJ SAYAJIRAO UNIVERSITY OF BARODA**  
**VADODARA**

**INFORMED CONSENT FORM**  
**(For Bank Managers)**

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Please indicate with your signature on the space below that you understand what participation in the study involves and agree to give consent to your employees to participate. Participation of your employees is strictly voluntary. All information will be kept confidential and your or your employee's name will not be associated with any research findings.

  
30/12/20

Manash Das  
Name & Signature of Bank Manager  
Bank name, Branch: HDFC.  
State: Assam  
Date: 30-12-2020



Ms. Porineeta Phukan  
Researcher  
M.Sc. (F.C.Sc.)  
Department of FCRM  
FFCSc, MSU

**Supervisors:**

Prof. Neerja Jaiswal  
Ms. Vashima Veerkumar  
+91 95588 09389  
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Department of FCRM, FFCSc, MSU.

An illustration of a modern bank lobby. At the top, a large blue sign with the word "BANK" in yellow capital letters is centered. It is flanked by two smaller blue signs with white horizontal lines. Six spotlights hang from the ceiling, illuminating the scene. Below the signs, the word "ABSTRACT" is written in bold black capital letters. In the foreground, three service counters are visible. Each counter has a teller in a blue suit and a customer. The customer on the left is a man in an orange shirt and green pants. The customer in the middle is a woman with blonde hair. The customer on the right is a woman in a pink shirt and blue pants. The counters are blue with yellow horizontal stripes. There are potted plants on the left and right sides of the counters. The floor is a light brown color.

**BANK**

# **ABSTRACT**

## **ABSTRACT**

Banking sector act as spine for nation's economy. Employees play a vital role in operating the bank & aim for consumer satisfaction as well as economic development of the nation. Health of the employees is the determining factor for workplace productivity. Advancement in technology has introduced the use of visual display terminals in majority of the banking operations which has affected both bank workers and their working environment. Long periods of static work, awkward posture, prolonged sitting and repetitive computer activities may cause musculoskeletal discomforts in employees. Working in the bank may be a profession that is associated with both physical as well as mental health. Factors such as poor health condition and heavy workload, lack of job satisfaction and mental pressure, lack of social support and role conflict at work may lead to stress in the employee. Thus, a study was undertaken to identify the Musculoskeletal Discomfort and Occupational Stress among Banking Employees working in Assam. The research design for the present study was descriptive in nature. The samples for the present study was selected from four different bank of selected three districts of Assam namely Sivasagar, Jorhat and Guwahati. The data were collected from 104 respondents who were working as a bank employees for minimum 1 year in nationalized and private banks of three districts of Assam, India through purposive sampling technique. Online questionnaire was used as a tool for data collection which had three sections. The first section comprised of background information of the employees. The second section covered Standardized Nordic Musculoskeletal Disorder Questionnaire (NMQ) and the third section includes a standardized questionnaire namely "NIOSH Generic Job Stress Questionnaire" to find out the occupational stress among the banking employees. The data were analyzed by applying descriptive (frequencies, percentages, means and standard deviations) as well as relational statistics (Analysis of Variance (ANOVA) and t-test). The findings revealed that mean age of the respondents was 32.88 years. More than two-third of the respondents were males having 1 to 12 years of service in banking sector. Majority of the respondents perceived discomfort in their neck (64.42 per cent), right shoulder (44.23 per cent), left shoulder (40.38 per cent). upper

back (52.88 per cent), lower back (52.88 per cent) during last 12 months. It was also unveiled that discomfort in right wrist was perceived by 44.23 per cent of the respondents during last 12 months. Moreover, it was found that majority of the respondents never felt of lump or choked in the throat (83.65), never experienced trembling in hands (82.69), never bothered by shortness of breath (82.69) and never bothered by heart beating hard (79.81 per cent). But occasionally felt dryness in mouth and their muscles felt tight and tense sometimes. 74.04 per cent of the respondents opined that it was easy talk to their spouse, friends and relatives than to their colleagues and immediate supervisor. Majority of the respondents never experienced physical assault while performing their job (85.58 per cent) but occasionally exposed to verbal abuse and/ or confrontations with clients or the general public in the job. The data depicted that respondents had a lot of workload, a lot of quantity of work was expected from them by others and had a lot of projects, assignments or task to do. 46.15 per cent strongly agreed that there was “we” feeling among the group members and 44.23 per cent of the respondents “strongly agreed” that there were friendliness among the group members. 44.23 per cent of respondents were “neutral” regarding their opinion on personality clashes between the groups. 41.35 per cent of the respondents strongly agreed that there was difference in opinion of the group. The findings of the study will be helpful for the banking sector and designing the workplace as per the employees for better productivity and efficiency. On the basis of conducted study, remedial measures will also be suggested to banking employees for reducing musculoskeletal discomfort.