

## **CHAPTER I**

### **INTRODUCTION**

School is a prestigious institution in the society, which can be called a place of shaping the future citizens that can contribute productively in the Nation's economy (1). Early education in school is the key in creating the right environment for a child's educational success. Children learn habits and patterns that they will retain in later years and if teachers and parents could establish positive learning skills and social interaction skills early on, children will have the right tools to help them achieve success in the future (2). Among the greatest of all services that can be rendered by men to Almighty God, is the education and training of children, so that they can foster by grace in the way of salvation, growing like pearls of divine bounty in the shell of education and will be one day the jewel in the crown of abiding glory.

#### **The Role of Schools**

Every developed nation gives first priority to the schools for their total national development. The role of school in child development is vitally important. School provides a structured education and promotes a child's mental and psychological growth. The parents are the child's first teacher while teachers are their second parents. When kids begin their preschool or kindergarten education, children are in a way handed over to trained teachers and are ideally nourished and bestowed with support, and good teaching by these professionals (2).

The school helps the children in imbibing the overall social, cultural and educational values and exposes them with the outer world for their betterment. The importance of school education can be understood by the world wide efforts of government and non-government agencies for providing elementary education. 'Right of Education' is one of the fundamental rights of any citizen in India. The seeds of development could be sown through the education and hence the education is considered to be an important aspect for measuring the development of any nation.

The Right to Education Act in India also mentions that the school curriculum should ensure that the all-round(extensive) development of the children that could build their knowledge, potentiality, talent and the school environment should be child centered and such that make them free from fear, trauma and anxiety. **(GoI, 2021)**

### **School system in Gujarat**

The education department of the state pays special attention on the improvement of elementary education in Gujarat. The state government has launched the district primary education program for making primary education compulsory and free for all students up to standard - 8. It has also taken up several measures for checking the rate of dropout at schools in Gujarat (3). Gujarat state has more than 32,700 grant-aid primary schools run by municipal corporations. The school has divisions like Pre-primary section (Play section and kindergarten section), Primary section, secondary section, higher secondary section. Primary section includes students studying in standard 1 to standard 8. So the teachers teaching in the standard 1 to standard 8 were called Primary School Teachers.

In order to improve the enrolment numbers the government had taken initiatives like mid-day meal programmes, distribution of free books and no fees for primary education that is standard 1 to standard 8. These kinds of efforts attracts the parents to send their children to schools and the children also look forward to come to the school to get the free meal and free education for them.

### **Schools at Vadodara and Anand City**

Vadodara city has many schools; some of them are funded and run by municipal body, some by private body and few by both. The municipal (corporation) primary schools are distributed in wards for easy access of these schools by the children residing in different areas of the city. A pilot survey conducted by the researcher revealed that, 105 schools in Vadodara and 27 schools in Anand are run and funded by Municipal

Corporation of Vadodara and Anand respectively. The other schools in Vadodara and Anand are either privately owned and funded fully by the private organizations or some are partially funded by the government body. The total population of Vadodara city numbered 13,05,546 is spread over in 19 wards located in different areas of the Vadodara city. The total population of Anand city is 2,092,745 spread over in 13 wards located in different areas of Anand city.

### **Education in Primary Schools**

The Indian government lays emphasis to primary education up to the age of fourteen years referred to as Elementary Education in India. The 80% of all recognized schools at the Primary Stage are government run or supported, making it the largest provider of education in the Country (4). However, due to shortage of resources and lack of political will, this system suffers from massive gaps including high pupil to teacher ratios, shortage of infrastructure and poor levels of teacher training. Figures released by the Indian government in **2011** show that there were 5,816,673 primary school teachers in India.

Student teacher ratio in schools established in America, Europe and even some parts of Asia is less than 30 students per teacher. According to National University of Educational Planning and Administration (**2009-2010**) that, in India the student teacher ratio for primary education was about 40 students per teacher, which exceeds the standards. The increased value had raised concerns over the quality of education received in the country. There had been several efforts to enhance quality made by the government through launching of their various educational reform programmes focusing on the curriculum and in increasing the number of schools (5). There is an insignificant concern shown by the government school board in improving the work design, work station and the health of the teachers who were the main contributors in upgrading the quality of teaching and learning. Thus, the role of teacher becomes utmost vital.

The teacher is a dynamic force of the school. A school without teacher is just like a body without the soul, a skeleton without flesh and blood, a shadow without substance. There is no greater need for the cause of education today than the need for strong mainly men and motherly women as teachers for the young. As social engineers, the teachers can socialize and humanize the young by their man-like qualities.

A Teacher cannot be defined in a single word. **Manu** had defined, A Teacher is the image of Brahma. **In an Indian prayer**, "The teacher is a Brahma, the creator, he is God Vishnu and he is God Maheshwar. He is entire universe, salutations to him." H.G. Wells had called Teacher, the real maker of history and Sir John Adams, called the teacher the maker of man.

"The true teacher is he who can immediately come down to the level of the student, transfer his soul to the student's soul and see through and understand through his mind. Such a teacher can really teach and none else."

-- Swami Vivekanand

"Every teacher and educationist of experience knows that even the best curriculum and the most perfect syllabus remains dead unless quickened in to life by the right method of teaching and the right kind of teachers."

-- Secondary Education Commission

A teacher's role may vary among different cultures and places. Teachers may provide instruction in literacy and numeracy, craftsmanship or vocational training, the arts, religion, civics, community roles, or life skills. A teacher who facilitates education for an individual may also be described as a personal tutor, or, largely historically, a governess.

## **Importance of Primary School Teacher**

Teachers pass on knowledge and values to children, prepare them for further education and for working life and are main contributors to good education. Teachers are one of the main pillars of a sound and progressive society. They bear the weight and responsibility of teaching and apart from parents are the main source of knowledge and values for children (6). Teachers serve as not only educators, but also mentors and role models, especially in the modern world, where values such as respect for elders, sharing, and cooperation among peers are not always taught in the home. Young students look to their teachers when determining how to interact as adults.

A student will become significantly more interested in learning if his or her teacher has invested in teaching the subject matter. If a teacher finds a way to engage his or her students in an interesting yet informative manner then the students certainly develop a thirst for learning and acquiring knowledge. A teacher that can get a student at a young age to realize the value in learning and a solid education is doing a great service not only to that child, but also to society in general (7).

Primary school teachers develop and foster the appropriate skills and social abilities to enable the optimum development of children, according to age, ability and aptitude (8). At this point of time when the role of teacher is so vital, the teacher cannot perform her duties perfectly well if she is suffering from health problem especially associated with Musculoskeletal pain. These are number of risk factors involved in the prevalence of Musculoskeletal pain that need to be identified.

The increasing workload of teachers and growing enrolment number of students in primary schools is asking for more trained professionals for teaching. Therefore, it has become important for the government, school authorities and the development agencies to conduct primary teachers training in India. The teachers training should be target specific for new teachers and also for the existing teachers. Such types of trainings are

required to lessen the burden of teaching among teachers and also for the physical, social and cognitive growth of the students.

### **Primary School Teacher's Activity during the Day**

A teacher is one who prepares the young kids students for a critical role of tomorrow. Teaching is a noble profession, a teacher has great status like parents picture protects the future of nation he prepares small children today for a big task tomorrow without a good teacher one shall never progress in his life. The teacher always makes learning like fun and always understands deeply the needs and issues of student in study and also anchorages and never threatens the students.

A good teacher is the one who cares of his students, an ideal teacher is the one who is experienced sincere committed and possesses vast knowledge about his subject. A model Teacher is good in listening, speaking, communicating and cooperating with the students. The primary school teacher teaches younger children standard 1 to standard 8. In some countries, the common term is elementary school rather than primary. The elementary or primary school program educates children to prepare them for the upper grades of high school. Primary school teachers typically create lesson plans for their grade level based on meeting government standards. Usually a primary school program places an emphasis on well-rounded activities such as reading, mathematics, language, arts and drawing, environment, physical education, craft and science (9).

The primary school teacher usually creates activities to help children learn to interact socially by being respectful of other students. Such activities may include having the children collaborate on projects in partners or groups so that they learn to work out different roles and responsibilities. Helping the young students master expected outcomes in all subjects is a main task of teachers in primary school. The teacher will evaluate each student's progress according to guidelines set by the school board (9).

The primary school teachers broadly perform various tasks every day. Teacher has to teach in all the areas of the primary curriculum. Keeping up to date with changes and developments in the structure of the curriculum is also their responsibility. Another task of teacher is of organising the classroom and learning resources and creating displays to encourage a positive learning environment. Planning, preparing and presenting lessons that cater for the needs of the class. Motivating students, maintaining discipline and preparing and marking work to facilitate positive student development is an important task of the teachers.

The teacher have to organize and taking part in school events, do outings and activities which take place at weekends too. They have to work with parents and School Boards to maximise their involvement in the school and the development of resources for the school. In addition to teaching in school the teachers have to do other assignments given by the government like census survey, counting of population helping in election duty, exam duty in board exams (10).

It is understood that a teacher play a vital role in overall personality development of the students. Teachers influence every aspect of the student's growth. They are the one who make the young population feel empowered and competent enough for future. Therefore, various scholars stressed upon the need of time to time teacher's training programmes at various levels. It ensures the quality of teaching and learning.

### **Work Environment in Schools**

A school can be considered as first formal institution for human beings. It has to be a place where one can learn the values, gain knowledge and proceed towards achieving higher goals in life. The teacher here plays an important role in the making the teaching-learning process interesting for the children. The school management usually focus on providing the best teaching-learning environment for their students. However, in this best school contest they sometimes neglect an important resource of the schools i.e. the Teachers.

The work environment for teachers should be such that provide them ease of working there and also the comfort. A study conducted on the correlation between teacher's job satisfaction and their work environment. It showed that the teachers were more satisfied with their job if the work environment was favourable to them and as per their need. Job satisfaction leads to the better outcome from employees (Hasanah and Supardi, **2020**). Thus, if the desired work environment is provided to teachers, better outcome can be expected from them. The better work environment includes facilities better physical arrangements, positive work culture, availability of teaching-learning tools, canteen or refreshment area, accessibility to open network and so on.

Another study conducted on school work environment, highlighted the importance of school work environment and its impact on teaching professionals. The scale used to measure the work environment included three dimensions viz. relationship dimensions i.e. involvement, peer group and supervisors support; personal growth dimension i.e. self sufficient behaviour, efficacy to complete the task, and capability to manage work pressure; and system related dimensions i.e. clarity, innovative approach, managerial control and also the physical comfort. The physical comfort means the comfort provided by the physical arrangement and surrounding of the school's work environment (Wu, **1998**).

The work environment is responsible for professional development of a teacher. Thus, it becomes important for the management to provide a better work environment at schools. The supportive work environment helps teachers to use their knowledge and skills in more effective manners. Therefore, the work environment plays an important role in fulfilling the objectives of school system and ultimately achieving the goal of sustainable development at large. The uncomfortable or unfavourable work environment may act as a barrier in teaching-learning process. It can cause musculoskeletal disorder among the teaching faculties and hamper the teaching process.

### **Musculoskeletal Disorders**



Musculoskeletal disorders (MSD) represent one of the most common and important occupational health problems in working populations, being responsible for a substantial impact on quality of life and incurring a major economic burden in compensation costs and lost wages (Samad, et. al, **2010**). Musculoskeletal disorders decrease productivity at work due to sick leave, absenteeism and early retirement and are also costly in terms of treatment and individual suffering. The National Occupational Research Agenda (NORA) in USA states that work-related musculoskeletal disorders (MSD) account for a major component of the cost of work-related illnesses in the United States. Recent estimates of the cost associated with musculoskeletal disorders range from \$13 to \$54 billion annually (Marras, et. al., **2009**).

Musculoskeletal disorders (MSDs) affect the body's muscles, joints, tendons, ligaments and nerves. Most work-related Musculoskeletal disorders (MSDs) develop over time and are caused either by the work itself or by the employees' working environment. Musculoskeletal disorders also occur in an individual's life outside work either through sport - tennis (elbow); music - guitar playing or a hobby-on-line tracing of a family tree. These external work events can be exacerbated by their daily profession. They can also result from fractures sustained in an accident. Typically, musculoskeletal disorders affect the back, neck, shoulders and upper limbs; less often they affect the lower limbs (Samad, et. al., **2010**).

Research conducted in Norway had found that, "School teachers represent an occupational group among which there appears to be a high prevalence of MSD" (Erick and Smith,**2011**).A study conducted in China had confirmed that, "Hong Kong teachers showed a higher prevalence for neck, shoulder and low back pain. And added that the sample of Hong Kong teachers showed significantly higher prevalence in all musculoskeletal complaints" (Chong and Chan,**2010**).

In terms of physical symptoms it was found that nursery school teachers of Turkey, China, Australia, Brazil, Sweden, USA, Germany, Estonia, Japan, Malaysia, Philippines, France and Greece were more likely to be involved

in tasks which involve sustained periods of kneeling, stooping, squatting or bending which meant that they were more likely to suffer from lower back pain (Bentley, **2012**). There were nearly 4,000 osteopaths on the UK register who carried out over seven million treatments in the year **2010** making musculoskeletal disorder a common illness for the whole mass (10).

### **Musculoskeletal Pain and School Teachers**

Musculoskeletal pain may occur due to damaged tissues in the body caused by the routine activities. Other major causes could be trauma in a body part such as fracture, accidents, sprains or postural strain, repetitive movements, overtime at work, prolonged sitting and so on. Hence, these changes in body movement or body posture might cause spinal alignment problem (DerSarkissian, **2021**). Muscle pull, twitching or burning of muscles, fatigue, disturbed sleep are the common symptoms of musculoskeletal pain and so of musculoskeletal disorder.

This is one of the most common occupational disorders observed across the globe by many researchers. The MSD is more common in those professions that require a person to be in one posture for longer duration like bank professionals, front desk operators, corporate employees and also among the teachers.

Teachers have to work for a minimum of five hours a day from Monday to Friday and three and a half hours on Saturday in primary municipal corporation school of Vadodara city. If the strength of students is more, the schools run in two shifts, one in the morning from 7 am to 12:30 pm and other in the afternoon from 12pm to 5:30 pm every day. Some schools have more than one recess then they have a small refreshment break of 15 minutes. If school is providing mid-day meal to all the students then they are having recess time duration of 45 minutes. These recess time varies according to school timings. The teachers have to come 15 minutes early and leave 30 minutes after the school hours.

In a single day a teacher has to perform activities (tasks) like teach specific subject to children, check the note-books of students, maintain class discipline, write on the black board, dictate notes to students and take attendance. It was found that in many schools non-adjustable furniture were used which made it more difficult to match the students as well as teachers (who can be in all sizes) leading to poor posture and negative physical health effects that had long term implications on their musculoskeletal growth and health in their future (Szeto,**2003**).

Teachers have a full working day; they spend 32 to 34 hours per week, as found through the pilot study conducted by the researcher on selected municipal primary schools of Vadodara. Grandjean and Hunting (**1997**) reported that, sometimes, while doing such tasks they feel pain in different body parts. One of the common and frequently occurring illness resulting from abnormal posture over a period of time are Musculoskeletal problems, such as low back pain, pain in the neck/ shoulder, arm, pain in joints, bones and muscles. It is often noticed in many working situations (in schools) that teachers are forced to assume bad working postures due to poor design of workplace (classroom) and tools (furniture and equipment).

The school teachers of Turkey, China, Australia, Brazil, Sweden, USA, Germany, Estonia, Japan, Malaysia, Philippines, France and Greece, have demonstrated relative to other occupational groups, a high prevalence of MSD with prevalence rates of between 40 per cent and 95 per cent (Erick and Smith, **2012**). During the course of their work, teachers may be subjected to conditions that cause physical health problems. The work of a teacher does not only involve teaching students, but also preparing lessons, assessing students' work and being involved in the extracurricular activities such as sports. Teachers also participate in different school committees. These may cause teachers to suffer adverse mental and physical health issues due to the variety of job functions (Chong and Chan **2010**).

It had been found that Nursery school teachers, also perform a wide

variety of tasks combining basic health childcare and teaching duties, and those that require sustained mechanical load and constant trunk flexion. Nursery school teachers have been found to have elevated prevalence of neck, shoulder, arm and low back disorders and lower-extremity MSP due to activities which require sustained periods of kneeling, stooping, squatting or bending (Pillastrini, et. al., **2009**).

A research conducted on hand-wrist pain in 2007 found that, the force but not repetition and position were related to hand-wrist pain and possible tendonitis in the baseline analyses showing an exposure-response pattern. Increasing levels of force were associated with prevalent and incident hand-wrist pain and possible extensor tendonitis. Despite this, the impact of Musculoskeletal Pain specifically within the teaching profession has not been given sufficient attention (Thomsen, et. al, **2007**).

The present study aimed at studying the work environment of Municipal Primary School and the musculoskeletal pain faced by their teaching faculties. The independent variables selected for the study were gender, teaching experience and psychosocial factors induced musculoskeletal pain.

### **Musculoskeletal Pain and Gender of the School Teachers**

The Musculoskeletal pain might differ according the gender of the municipal school teachers. A research on musculoskeletal pain had confirmed that the prevalence of musculoskeletal pain and degree of functional disability of muscles may differ according to the gender (Queme and Jankowski, **2019**). The present sample consisted of both male and female teachers. Hence, it would be insightful to know whether the musculoskeletal pain among them differ according to their gender or not. Gender of the teacher was another variable selected for the present study.

## **Musculoskeletal Pain and Teaching Experience of the School Teachers**

Teaching experience may also affect the musculoskeletal pain among the municipal school teachers of selected cities of Gujarat. Teaching experience might provide a way out to the problems faced by teachers in their initial teaching period and hence reduce the chances of musculoskeletal pain. Therefore, the experienced teachers might face less musculoskeletal pain in comparison to the less experienced teachers. On the other hand, the less experienced teacher would be from younger age group and they might use new skills and new technologies for teaching that can provide ease in teaching-learning process. Thus, Teaching Experience of the Municipal Primary School Teacher (in years) was selected as variable for the present study.

## **Psychosocial factors induce Musculoskeletal Pain and School Teachers**

The psychosocial factors mean those social factors that affect the physical and psychological factors in the body viz. social support, loneliness, marital status, social status, social integration or social disruption. Further, it can be said that the social process might affect the psychological state of the human beings (Upton J. **2013**). The sample of the study comes from different demographic background and might be affected from various psychosocial factors. Thus, it would be interesting to know whether these psychosocial factors affect the musculoskeletal pain among the teachers or not.

A study conducted in Hong Kong found that, "The academic staff in colleges makes frequent use of computers and their daily work involve repetitive movement such as reading, writing and prolonged static posture" (Chiu and Ku, **2002**). Academic staffs are also required to read for significant amounts of time. Researches had indicated that subjects with neck pain spent more time in reading (Lau, Sham and Wong, **1996**). The nature of university academic works is also stressful. This is supported by

the SW190 Survey in Britain which found that, teachers, professionals, and other educational and welfare workers were found to be significantly above average in the rates of self-reported stress, depression, and anxiety as stated by Health and Safety Executives, (Health and Safety Statistics, London**1996-1997**).

The stressful working conditions due to large classes, lack of educational resources, and limited reward for their work was the likely cause of the high prevalence rates of self-reported musculoskeletal disorders (MSD) among teachers of Turkey, China, Australia, Brazil, Sweden, USA, Germany, Estonia, Japan, Malaysia, Philippines, France and Greece(Bentley, **2012**). The educated intelligent population of the country are exposed to these occupational hazards from the first day of the work and from the young age from school. This will gradually transform into a major health concern in India soon. Hence, there is a need to find out the reasons for the problem and workout suitable solutions (Neeraja, **2010**).

According to a research conducted in 2017, Lower Back Pain (LBP) and Neck and Shoulder Pain (NSP) in high school teachers were correlated with psychological distress and work-related psychosocial characteristics. Psychosocial factors have also been associated with Musculoskeletal Pain (MSP) among school teachers and the current review suggests that psychosocial factors such as high workload/demands, high perceived stress level, low social support, low job control, low job satisfaction and monotonous work are mostly associated with Musculoskeletal Pain (MSP) among school teachers of United Kingdom (Zamri E.et.al.,2017). According to data from the Health and Safety Executive, over 175 million working days were lost to the UK economy due to sick leave with one in eight patients diagnosed with Musculoskeletal pain (MSP) symptoms such as neck, back and shoulder pain costing the UK economy between £103-129 billion (12).

## **Justification of the Study**

Teacher's job is not an easy one. They have to spend long hours for imparting quality education to the students. The task of teaching however becomes more difficult especially for the primary school teachers when carried in a traditional work environment in the municipal primary schools as compared to the private modern schools that possess all the modern facilities to carry out the teaching in the classroom.

The work environment of the primary school teachers is their classroom. The teacher is forced to adjust in their existing work environment while teaching. The poorly designed work environment of the classroom might have a direct impact on the productivity of the teacher resulting in their poor health and quality of teaching. At the same time the teacher might also experience discomfort in the posture adopted by them while teaching, leading to several musculoskeletal pain. If this situation is prolonged for longer span of time, it might have its serious consequences for the teacher as an employee and as well as for the students too. The poor output by the teacher due to the poor quality of teaching affected by their poor health will lead to poor perception and understanding by the students. A healthy and intelligent population contributes significantly in the economy of the nation. There is an urgent need to intervene through the research in tackling the health and psychosocial problems of the municipal primary school teachers so as to increase their productivity and thereby the quality of teaching to produce productive human resource at micro level. Thus, the present research is conceptualized.

The researcher wanted to inquire whether the poorly designed work environment makes the teacher experience health problems resulting in musculoskeletal disorders and poor posture while carrying her teaching activities or not, whether the psychosocial factors have an impact on musculoskeletal disorders experienced by them or not, were some of the queries that will be answered by the findings of the present research. Thus, the present research is conceptualized.

The review of literature had highlighted that many studies were undertaken on musculoskeletal pain for various professionals and others on population in general (Sim,et, al., **2006** and Lau, et, al., **1996**), Hospital Nurses (Josephson and Vingard, 1998, and Lagerström, et, al., **1998**), Teachers in schools and primary school teachers (Yue,et, al.,**2012**, Wong, et. al., **2009**, Chiu and Lam, **2007**, Erick and Smith, **2011** and Samad, et, al., **2010**), Nursery children (Erick and Smith, **2011**), Primary school children (Chan and Chong, **2010** and Geldhof and Cardon, **2007**), Academic staff in Institutes (Chiu, et. al. , **2002**), School personnel (Tsuboi, et. al., **2001**), Designing students (Chauhan, **2010**, Datar and Gandotra, **2010**), Garment makers (Vandyck and Fianu, **2012**), Construction workers (Holmstorm,et, al. , **1992**), Secretaries (Kamwendo,et, al., **1991**), Software Professionals (Neeraja, **2010**), Youth computer user (Szeto, **2003**) and Office workers (Janwantanakul, et, al., **2009**) .

Few studies conducted outside India focus more on the musculoskeletal pain related to specific body parts like neck, shoulder, low back, hand wrist and, knee (Yue, **2012**, Sim,et, al., **2006**, Thomsen,et, al., **2007**, Chiu and Lam, **2007**, Erick and Smith,et, al., **2014**, Bandpei,et, al., **2014**,Anuar,et, al., **2016**, Mingng,et, al., **2019**, Zamri,et, al., **2017**, Tai,et, al., **2019** andTsuboi,et, al., **2001**).The literature reviewed further highlighted that some studies were also carried on the impact of workplace risk factors among the teachers (Samad, et, al., **2010**, Wong, **2009** and Sim, et, al., **2006**). The researcher come across very few studies conducted in India on the musculoskeletal pain among the primary school teachers. This became the assertion of planning to undertake the present study.

Researches on School teachers of Turkey, China, Australia, Brazil, Sweden, USA, Germany, Estonia, Japan, Malaysia, Philippines, France and Greece have demonstrated the existence of musculoskeletal problem in teaching occupation. It was assumed that the prevalence of musculoskeletal pain among primary school teachers might differ



depending on the activities performed by them in different locale. Thus, the researcher became interested to undertake the present study.

The aforementioned reviews gave an insight to the problem of musculoskeletal pain among the working population all over the world. However, this also highlighted the research gap that existed in the Indian context. Especially the musculoskeletal pain among school teachers in India had not researched so far. Thus, it indicates the high time to research the occurrence of MSD among school teachers.

The findings of the study would be useful for the school authorities to become aware of the impact of poor design furniture of the classrooms and the resulting effect of it on the teachers and students guiding them to make the required changes. The findings will also be useful for the teachers in taking precautionary measures while carrying out their duties with a purpose to reduce or prevent the musculoskeletal pain and postural discomfort experienced by them.

The findings of the study would be used to prepare the guideline for designing the infrastructure and physical facilities in the schools in Indian setting. It will also help in reducing the problems faced by teachers while teaching due to the work in the school. Along with this, it will also help in creating a favourable environment for learning. Hence, the present study will serve multiple advantages to the stakeholders in academic sector. Furthermore, the study will be justified in a manner to create a comprehensive work atmosphere for teachers that will aid them to fulfil their work responsibility efficiently and gain good outcomes.

In the past department of Family and Community Resource Management had implemented various outreach programmes at schools of Vadodara District. The present study would viewed as the contributory efforts to understand the existing occupational health related problems faced by those school teachers and also for up scaling the school infrastructures by formulating the ergonomic based guidelines for them.

The Department of Family and Community Resource Management, Faculty of Family and Community Sciences, The Maharaja Sayajirao University of Baroda, offers courses on “Advance Ergonomics” and “Ergonomic” at Master’s level. Hence, the information gathered through the present research would widen the data base and help in strengthening the curriculum. Different research studies had been carried out in the department under the umbrella of ergonomics but none of the study focused on the musculoskeletal pain related problems among municipal primary school teachers. Hence, the result of the study would also be helpful for the students of the department and researchers to understand the prevalence of musculoskeletal pain among school teachers of Vadodara and aid in designing and implementation of outreach programmes to control the same.

Moreover, it would also help the students of Family and Community Resource Management to gain insight into the area of ergonomics related to psychosocial health problems caused by the work environment, work-related discomforts caused by repetitive tasks, existing furniture and awkward postures of the teachers in the school. The results of the present study are expected to contribute significantly to the field of Family and Community Resource Management as well as it would contribute for the society at large. In light of the above discussion, the present study became the need of the hour in Department of Family and Community Resource Management.

### **Statement of Problem**

The present research aims to assess the Perceived Comfort Level Regarding Existing Facility in the Classroom, Postural Analysis, the identification of Psychosocial Factors induced Musculoskeletal Pain and Prevalence of the Musculoskeletal Pain experienced by the Municipal Primary School Teachers of Selected Two Cities of Gujarat State.

## **Objectives of the Study**

1. To assess the existing Work Environment of the classroom of the selected Municipal Primary Schools of two cities of Gujarat state.
2. To find out the perceived comfort level of the Municipal Primary School Teachers regarding the Existing Facility in the Classroom while carrying out the related activities in their profession.
3. To conduct Postural Analysis of the Municipal Primary School Teachers while teaching in the classrooms.
4. To identify the Psychosocial Factors induced Musculoskeletal Pain among the Municipal Primary School Teachers.
5. To determine the prevalence of Musculoskeletal Pain experienced by the Municipal Primary School Teachers.
6. To develop and execute an Ergonomic Intervention Programme for the Municipal Primary School Teachers and the School Authorities in suggesting healthy
  - a. Teacher Friendly Postures,
  - b. Classroom Furniture Designs for the Teachers.

## **Hypotheses of the Study**

1. The Musculoskeletal pain experienced by the respondents in past 12 months will vary with their personal variable (Gender, years of experience in teaching).
2. There exists a relationship between the Musculoskeletal pain experienced by the respondents in past 12 months with their personal variables (Body Mass Index, Teaching Experience in years and Monthly Personal Income), family variables (Family Type, Family Size and Monthly Family Income), Psychosocial Factors and the problems faced by the respondents while carrying out various activities.

### **Delimitations of the Study**

- (1) The study was limited to the Municipal Primary School Teachers of Vadodara city and Anand city.
- (2) The study was limited to the classrooms of the Municipal primary schools of Vadodara city and Anand city. (The standard 1 to 8 had similar classroom design for all the primary school classes).
- (3) The study was limited to the teachers employed as teachers for a minimum duration of 2 years in the Municipal primary schools.
- (4) The selection of the respondents was limited to the normal healthy teachers not suffering from any chronic illness (either by birth or otherwise).
- (5) The Ergonomic Intervention Programme was limited to the selected Municipal Primary School Teachers and the Senior Management Personnel in the profession in the schools only.