

ABSTRACT

The musculoskeletal disorder (MSD) is one of the most common occupational disorders observed across the globe by many researchers. It is more common in those professions that requires a person to be in one posture for long duration like bank professionals, front desk operators, corporate employees and also among the teachers. Musculoskeletal pain occurs due to damaged tissues in the body caused by the routine activities. Other major causes could be trauma in a body part such as postural strain, repetitive movements, overtime at work, prolonged sitting, muscle pull, twitching or burning of muscles, fatigue, disturbed sleep are the common symptoms of musculoskeletal pain and musculoskeletal disorder.

The researcher noticed problem of musculoskeletal pain among the working population all over the world while reviewing literatures. However, it was also highlighting 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 was high time to research the occurrence of musculoskeletal pain among school teachers. The researcher wanted to inquire whether the poorly designed existing work environment of the classroom makes the teacher experience health problems resulting in musculoskeletal pain 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 was conceptualized.

The present study was undertaken with the objectives to assess the existing Work Environment of the classroom of the selected Municipal Primary Schools of two cities of Gujarat state. 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. To conduct Postural Analysis of the Municipal Primary School Teachers while teaching in the classroom. To identify the Psychosocial Factors induced Musculoskeletal pain among the Municipal Primary School Teachers. To determine the prevalence of Musculoskeletal pain experienced by the Municipal Primary School Teachers. And to develop and execute an Ergonomic Intervention Programme for the Municipal Primary School Teachers and the School Authorities in suggesting Healthy Teacher Friendly Postures and Classroom Furniture Designs for the Teachers. The study was limited to the Municipal Primary School Teachers of Vadodara city and Anand city. The sample size included 372 teachers working in the Municipal Primary School of Vadodara and Anand city of Gujarat having minimum of two years of work experience and possessing normal health status without suffering from any chronic disease.

During the data collection phase, the COVID-19 Pandemic and lockdown situation occurred. With the permission from the Municipal Primary Education Office (Nagar Prathmic Shikshan Samiti) during COVID-19 Pandemic and lockdown situation, the researcher had adopted the online interview schedule method to collect the needed information. The Google form as the tool was developed by reviewing the literature pertaining to the objectives of the study. The interview schedule gathered information on demographic data. The interview schedule was utilized to collect the data on the perceived Musculoskeletal Pain of the respondents on three aspects of Psychosocial Factors (in general, at home and at workplace), the prevalence of musculoskeletal pain, postures adopted by the respondents at workplace. The observation sheet was also used to assess the existing work environment of the classrooms and the existing dimension of the furniture available in the classroom. One of the

objectives of the present research was the development of an Ergonomic Intervention Programme for the selected Municipal Primary School Teachers and the School Authorities in suggesting Healthy Teacher Friendly Postures and proposed Classroom Furniture Designs for the Teachers.

The data were analyzed based on descriptive statistics. The major finding of the study highlighted that a higher percentage of the respondents (78.76%) were found to be females. The data revealed that more than one-half of the respondents (52.2%) were living in nuclear family. 31.72 percent of the respondents were having their teaching experience ranging between 11 to 20 yrs in teaching in schools. And 59.41 percent of the respondents were spending at least 5 hours daily in teaching at their respective municipal primary school. The mean size of the classroom was 311.35 sq. ft.

Majority of the classrooms' ceiling were painted with white colour (91.94%). The higher percentage of the Municipal Primary School opted Kota stone (42.20%) for classroom flooring whereas Checker tiles were also found to be (35.20%) in the schools. All the existing furniture's were old and in bed shape. The classrooms were all in great need of renovation and maintenance. The comfort levels of the respondents were less with the height of the writing board as compared to its width. The respondents were not at all comfortable with the width and height of the back rest of the chair as well as the height of the arm rest of the chair. And they were not comfortable with the height, width and length of the writing table as well.

The respondents adopted harmful posture and very harmful posture on daily bases in the classroom while teaching. Work should be ceased and modification of the postures must be done immediately. The Anthropometric data of the respondents was utilized in designing proposed furniture designs for the

municipal primary school teachers. The data regarding the psychosocial factors induced Musculoskeletal pain highlighted majority of the respondents (75.0 %) were found to have reported psychosocial factors induced Musculoskeletal Pain to medium extent. The findings revealed that knees and lower back pain was found to be most prevalent musculoskeletal pain as perceived by the respondents was knee and lower back pain followed by upper back pain, neck pain and shoulder pain in past 12 months.

A significant relationship was found between in the musculoskeletal pain experienced by the respondents in past 12 months with their Psychosocial factors among the respondents. The results showed a significant relationship between the Musculoskeletal pain experienced by respondents in past 12 months with the problems faced by them while carrying out various activities. An Ergonomic Intervention Programme was conducted for the selected Municipal Primary School Teachers, Principals and the School Authorities in suggesting healthy Teacher Friendly Postures and the researcher had proposed new Classroom Furniture Designs for the Teachers teaching in the classrooms.

The research clearly indicates the need to educate the teachers regarding the healthy Teacher Friendly Postures for improvement of the Municipal Primary School Teachers' health. The attention of the Nagar Prathmic Shikshan Samiti should be drawn towards the renovation of school buildings as well as infrastructure development of the school.