

Musculoskeletal Disorders in School Teachers

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Abstract:-

➤ *Introduction:*

Disorders of musculoskeletal system includes symptoms like inflammation and degenerative changes which affects the lower back, cervical region and upper and lower extremities, which leads to occupational injuries due to rapid speed of work and repetitive movement patterns, inappropriate rest time in between working hours and body segments positioning.

➤ *Objective:*

This study aims at determining the prevalence of musculoskeletal disorders among school teachers. To find out who is more prone to musculoskeletal disorder in pre, primary and secondary school teachers.

➤ *Methodology:*

A Non-experimental, observational study was carried out in Sri Chaitanya Techno schools and Government high school, Andhra Pradesh. Inclusion and exclusion criteria were taken into consideration and then 60 subjects were selected, the subjects were divided into three groups as preschool, primary and secondary school teachers, according to their class hours and workload their susceptibility to getting musculoskeletal disorders were assessed. The musculoskeletal disorder was analyzed using Orebro questionnaire.

➤ *Result:*

In this study we gathered information of 60 teachers by using musculoskeletal questionnaire to rate their pain and number of working days they missed due to pain. The grade of pain according to their ages has been determined that 20-29 age group people are having severe pain and 30-39 are also suffering from severe pain and the pain is rated according to genders also that mostly females are prone to get these severe pain than males and to know about the association between days of work missed due to pain and finally to know about which group of school teachers are prone to get musculoskeletal disorders according to research mostly pre-school teachers are prone to these musculoskeletal pain among 20 samples 15 people are suffering from these pain and statically proved by using chi-square and the p value has been taken to see the results to know about how many are prone to these musculoskeletal pain

➤ *Conclusion:*

According to the research it has been explained that the preschool teachers are highly prone to musculoskeletal disorders because of their working conditions and non-neutral positions mostly among 20 samples 15 are prone to these MSD. And it can find out by using this valid tool in the English language. Although studies like this with more samples should be conducted.

Keywords:- Preschool, Primary and Secondary School Teachers, Musculoskeletal Disorders, Orebro Questionnaire.

I. INTRODUCTION

Disorders of musculoskeletal system includes symptoms like inflammation and degenerative changes which affects the lower back, cervical region and upper and lower extremities. Musculoskeletal disorders are the most common causes of occupational injuries as observed in the epidemiological and experimental studies have shown that the physical work features are recurrently cited as musculoskeletal risk factors including speedy work, repetitive movements¹, and awkward body positions, school teachers represent an occupational group among which there exists a high prevalence of msd which has various factors and the prevalence rate differs from body segment and site and location of pain¹. The teaching profession includes multiple tasking such as teaching and supervision of students [6]. Due to these tasks they have to be adopted various working postures like walking, sitting, kneeling, lifting, mainly prolonged [5] standing thus mostly teachers are prone to these musculoskeletal disorders mostly pain act as the major cause of these musculoskeletal disorders¹.

Studies have concluded that there is a prevalence of musculoskeletal (MSK) pain in school teachers². This MSK pain could be due to the workload, long hours of standing [8] etc. But, the range of MSK pain among pre-school, primary and secondary school teachers is varied since there is a difference in their workload and patterns of working [4]. This study has been formulated, in order to assess which group of teachers are prone to high grades of pain³.

➤ *Research Goal:*

To find out the susceptibility to musculoskeletal disorder in pre, primary and secondary school teacher's with an objective to determine the musculoskeletal disorders

II. METHODOLOGY

In this study 60 samples have been taken and with age differ from 20-45 years and 20 participants from each group of teachers has been required for this study. The sample has been taken from Sri Chaitanya Techno School and Government High School in Andhra Pradesh. The questionnaire version 2003 was used in English language for this study the language barrier was minimized for those who did not understand English well by translating the questionnaire by the same individual in a face to face interview and the questionnaire has been explained to the participants before the research and interpretation to be used for research before collecting of the samples the questionnaire is OREBRO MUSCULO SKELETAL PAIN QUESTIONNAIRE (OMPQ).¹³

The ÖMPQ is a self-administered tool to be completed by the subject in a peaceful environment on his/her own without any assistance. Explanation on how to administer the questionnaire is provided before hand¹³: "Information from this questionnaire helps us understand your problem better, and it especially helps us evaluate the possible long-term consequences your pain may have. It is important that you read each question carefully and answer it as best you can¹³. There are no right or wrong answers. Please answer every question. If you have difficulty, select the answer that best describes your situation". Where ever doubt or a request for more information is needed, motivational option "answer as best you can" is provided. The questionnaire item may can be read aloud but should not be rephrased. All questions are compulsory to answer, as unanswered question will lead to reduction in validity. Scoring is done as per instructions: For question 5, number of pain sites are counted and is multiplied by two – this result obtained is the score (a maximum score of 10 is allowed). For questions 6 and 7, the number bracketed after the ticked box is considered as the score¹³. For questions 8, 9, 10, 11, 13, 14, 15, 18, 19 and 20 the number that has been ticked or circled is the score. For questions 12, 16, 17, 21, 22, 23, 24 and 25 the score is calculated by subtracting 10 from the number that has been circled. Then the score obtained is written in the shaded area beside each item. The scores for questions 5 to 25 is then added and the total ÖMPQ score is obtained.

- *Procedure*: 60 subjects were selected according to the inclusion and exclusion criteria and 20 participants each were selected from pre-school, primary and secondary school. All the participants were given an OREBRO MUSCULOSKELETAL PAIN
- *Questionnaire (2003)*¹³ is used in English language for this study the language barrier was minimized for those who did not understand English well by translating the questionnaire by the same individual in a face to face interview, to rate their musculoskeletal discomfort and the severity of pain was assessed separately and the results were obtained according to groups.

III. DATA ANALYSIS

➤ *The Grade of Pain*

In this we can see the severity of pain between related to their age the people with age difference from 20-29 eleven are having severe pain and six are having mild pain and the age group from 30-39 eleven are suffering from severe pain and fifteen are suffering with mild pain above 40 nine people are suffering from severe pain and 8 people are suffering with mild pain

➤ *The Difference of Pain Between Groups of Teacher:*

In this according to a group of teachers the pain has been explained. among of 20 samples 15 preschool teachers are suffering from severe pain and 5 are suffering from mild pain and in primary school teachers 11 are suffering from mild pain and 9 are suffering with severe pain and in secondary school teachers 13 are suffering from mild pain and 7 are of severe pain

IV. RESULTS

In this study we gathered information of 60 teachers by using musculoskeletal questionnaire to rate their pain and number of working days they missed due to pain the grade of pain according to their ages has been determined that 20-29 age group people are having severe pain and 30-39 are also suffering from severe pain and the pain is rated according to genders also that mostly [8] females are prone to get these severe pain than males and to know about the association between days of work missed due to pain and finally to know about which group of school teachers are prone to get musculoskeletal disorders. According to research mostly pre-school teachers are prone to these musculoskeletal pain [10] among 20 samples 15 people are suffering from these pain and statically proved by using chi-square and the p value has been taken to see the results to know about how many are prone to these musculoskeletal pain

V. LIMITATIONS AND RECOMMENDATIONS

The study was limited to a particular population of people more sample has to be taken and particular area pain can also be assessed to know the best results. This study can be done with more population for the best results and the study setting can be changed for better improvements

VI. DISCUSSION

Musculoskeletal disorders are mostly seen in school teachers due to their work load and awkward body postures[5]. mostly in school teachers are of different groups preschool, primary and secondary school teachers[1], according to work load and teaching classes these are divided into groups according to variety of tasks they performed which includes teaching and supervision as well as feeding and hygienic care[9]. mostly preschool teachers are adapted to many awkward positions to teach the children as they deal with nursery to first class children they have taken care about their teaching along with

feeding to small kids[11]. they maintain prolonged bending positions, bending, long standing and lifting the kids will affect them[1] and less work regarding the student maintenance more academic work will be there the class hours [4] will be deferred and secondary school teachers deal with students from 7 to 10 class they will be having long working hours and the working duration will be more so because of these conditions the school teachers are prone to get musculoskeletal disorders[12]

VII. CONCLUSION

According to the research it has been explained that the preschool teachers are highly prone to musculoskeletal disorders because of their working conditions and non-neutral positions mostly among 20 samples 15 are prone to these msds. And it can find out by using this valid tool in the English language. Although studies like this with more samples should be conducted.

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