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Occupation Influenced Physical Illness Observed Among the Teachers of Thoothukudi Town.

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Abstract: This study was conducted to determine, the occupation induced physical illness such as pain found among the teachers of Thoothukudi Town. The relevant data were collected for this study by supplying a standardized questionnaire to teachers of all categories including both sexes. The result obtained showed that about 73.50% of teachers had neck and shoulder Pain, 69.49% had throat pain, 67.93% had general body pain, 66.59% had pain in joints of hands, 66.15% had low back pain, 62.81% had pain in joints of legs, 55.23% had knee pain and 43.88% had head ache. The obtained results showed that the teaching community of Thoothukudi is very much affected by the occupation influenced physical illness. Among the various illnesses observed the neck and shoulder pain, back pain and throat pain scored the top most position. This kind of physical disabilities found among the teachers might be due to their prolonged standing and repeated walking inside the class room and also repeated lifting of the hand during writing in the black board. The throat pain may be due to their strained shouted lecturing activity inside the class room especially in primary, secondary and middle level class rooms in which the teachers registered a high percentage of throat pain (14.1, 23.08 and 27.56 respectively).
Keywords: Teachers, Questionnaire, Back Pain, Neck and Shoulder Pain, Throat Pain.

INTRODUCTION

Occupational disorders occur commonly in industry and agriculture, as under recognized endemic disease and sporadic epidemics. But due to modernization, occupational hazards have shifted from factories and mines to hospitals and office buildings also. Work is essential in the lives of men and women; nonetheless, it can become a health hazard when it is carried out in an inappropriate way. Some groups of workers, due to occupational characteristics, are more exposed to work related musculoskeletal pain (MSP).[1] Teachers stand out among these groups. Sometimes, teaching is carried out under unfavorable circumstances, in which teachers mobilize their physical, cognitive, and affective capacity to reach teaching production objectives, over demanding or generating over effort of their psycho-physiologic functions.[2] If there is not enough time for recovery, the pain symptoms that account for the high levels of absenteeism due to health conditions in this group of workers are triggered or prompted. Thus, teaching leads to stress, with consequences to physical and mental health and with an impact on professional performance.[1,3] Social transformations, educational reforms and new teaching models have influenced current conditions of teaching, leading to changes in the profession. Therefore, teachers go from a stable and relatively safe status to a state of instability at work, subsequent to new, precarious and unregulated working modes.[2] In the past decade, different studies described the most prevalent health problems among teachers, in which musculoskeletal disorders, voice problems and psychiatric disorders stand out.[1,4-9] Musculoskeletal pain or painful feeling has

been mentioned in several studies among teachers as a relevant health problem, and conditions due to musculoskeletal system disorders are the main causes of absenteeism, reduced work ability and of professional diseases in this category.[10] Everyone, excluding individuals with congenital insensitivity, has already felt pain sometime in their lives.[11] Several socio-demographic, psychosocial, physical, and organizational factors are related to triggering, developing, and maintaining musculoskeletal pain[12] among workers. The present study was planned to identify the physical disorders of various categories of teachers working in Thoothukudi and the causative factors found behind the disorders.

MATERIALS AND METHODS

A cross sectional study was conducted among six levels of teachers of both sexes with different periods of experience of working in various Schools located in Thoothukudi area. Occupational health check-up camps were held in these Schools in cooperation with a Doctor and other clinical staff for the collection of relevant data. A standardized questionnaire was also supplied to the respondents to collect the other relevant information regarding this study. The questionnaires supplied to them at the time of the camp were collected after 3-5 days. The collected data were scrutinized, and presented in the form tables and graphs.

RESULTS AND DISCUSSION

The results of the study showed that about 67.93% of teachers had reported the presence of general body pain due to their routine teaching activity. The observed high percentage of general body pain among teachers might be influenced by several factors such as stress stimulated attitudes created by the students like misbehavior, disobedience, class room indiscipline, not accepting the authority and so on.[13-16] Among the different categories of teachers studied, the middle school (28.20%) and secondary school (23.61%) teachers were more affected by general body pain than the other teachers. This is because the students of this age group give much trouble to the teachers than others. The repeated troublesome behavior of the students resulted in stress that in turn resulted in painful body.[17,18] The categorization of pain observed among teachers showed the prevalence of different kinds of pain which are clearly depicted in Table.1.

Table 1. Shows the work wise distribution of various physical disorders observed among the teachers working in various schools of Thoothukudi area. Values in parenthesis indicate the percentage observations:

Sl.no	Nature of Teaching	General Body Pain	Head Ache	Neck and Shoulder Pain	Throat Pain	Low Back Pain	Pain in Joints of Hands z	Pain in Joints of Legs	Knee Pain
1	Primary N=77	44 (14.43)	11 (5.58)	55 (16.67)	44 (14.10)	39 (13.13)	52 (17.39)	47 (16.66)	61 (24.60)
2	Secondary N=92	72 (23.61)	41 (20.81)	51 (15.45)	72 (23.08)	61 (20.54)	59 (19.73)	73 (25.89)	56 (22.58)
3	Middle N=108	86 (28.20)	54 (27.41)	97 (29.39)	86 (27.56)	88 (29.63)	92 (30.77)	71 (25.18)	47 (18.95)
4	B.T N=68	31 (10.16)	39 (19.80)	58 (17.58)	50 (16.03)	52 (17.51)	44 (14.72)	29 (10.28)	31 (12.50)
5	P.G N=86	56 (18.36)	41 (20.81)	58 (17.58)	49 (15.71)	40 (13.47	36 (12.04)	52 (18.44)	41 (16.53)
6	Technical N=18	16 (5.24)	11 (5.58)	11 (3.33)	11 (3.53)	17 (57.24)	16 (5.35)	10 (3.55	12 (4.84)
Total N=449		305 (67.93)	197 (43.88)	330 (73.50)	312 (69.49)	297 (66.15)	299 (66.59)	282 (62.81)	248 (55.23)

Huge percentage (73.50) of teachers were affected by Neck and shoulder pain and it was followed by Throat pain (69.49), Pain in hands (66.59), Low back pain (66.15), Pain in joints of legs (62.81), Knee pain (55.23) and Head ache (43.88). Maximum throat affected teachers were from the middle grade (27.56%) and secondary grade (23.08%) and they are followed by BT grade (16.03%) PG grade (15.71%) and primary grade (14.10%). The least affected are the Technical grade teachers (3.53%). The other type of disorders observed also highly marked incase of the middle and secondary grade of teachers than other category (Table.1). As the age (25yrs to 40yrs and above) and experience (5yrs to 20yrs and above) of the teachers increased, the development and occurrence of disorders were also high. When the teachers crossed the age of 40 or 20yrs of experience, more than 70% of them are affected by any one of the disorders studied. The much affected disorders observed were Throat Pain, Neck and shoulder pain, and Pain in joint s of legs and hands (Fig 1&2).

Figure 1. Age wise distribution of various physical disorders observed among the teachers working in various schools of Thoothukudi area.

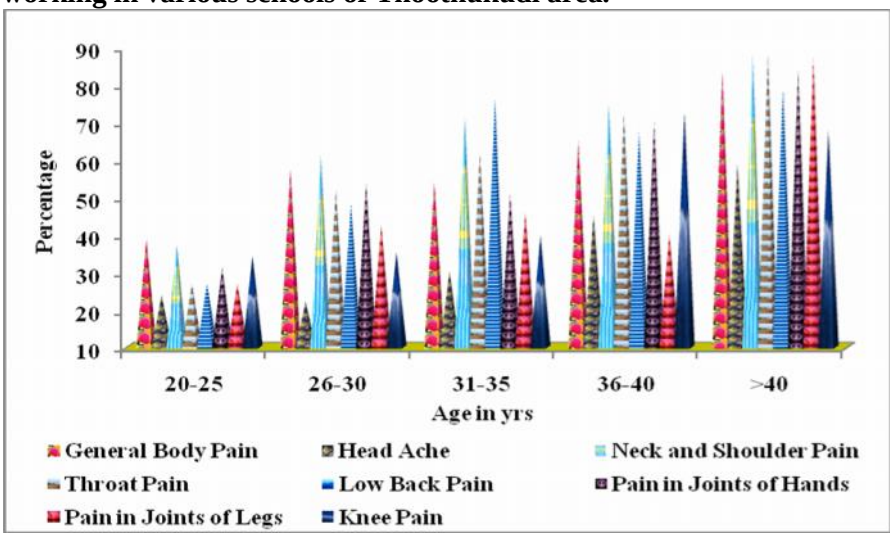
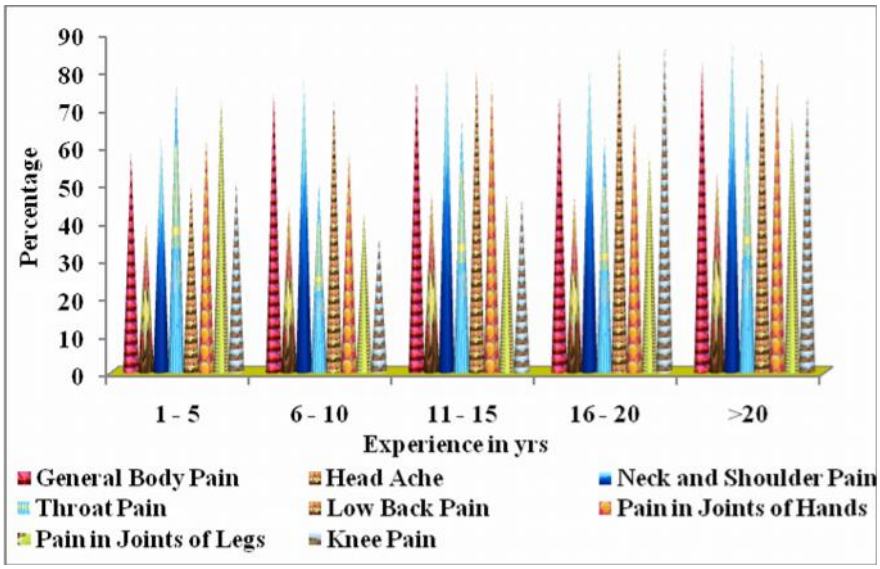


Figure2. Experience wise distribution of various physical disorders observed among the teachers working in various schools of Thoothukudi area.



The common high occurrence of throat pain among the secondary, middle and primary school teachers may be due to their shouting activity inside the class room. Shouting is unavoidable in the classrooms of Indian conditions resulted in heavy vocal loading and pain.[19-21] Class rooms in India are overcrowded, and also classes in rural areas consists of more aged students due to late education. Managing and teaching such crowded students needs shouting during maintaining discipline and also during verbal communication resulted in throat pain. Teachers face intensive verbal communication, prolonged standing, high volume of workload may aggravate the high incidence of cancer, vehicular accidents and heart diseases among teachers.[20-22] United Nations Educational, Scientific, and Cultural Organization (UNESCO) and International Labor Organization (ILO) recommend not to surpassing 25 students per class.[23] This scenario directly influences the quality of teaching, leading to worse learning conditions for students and health hazards to teachers.

Teachers involved to a considerable physical load, established by the educator remaining in the orthostatic position during up to 95% of activities, with varied levels of flexion of the backbone resulted in several types of physical inability.[24] Physical exertions during teaching, prolonged standing in an inappropriate way for several hours inside the class room resulted in back pain and musculoskeletal pain among teachers.[25] Standing up is not the only factor contributing to MSP, but other situations such as carrying material to school or to the classroom, installation of equipment/teaching resources, walking inside and outside the school may further aggravate the occurrence of pain. Lifting of hands and head during writing in the black board may be the causative factor for neck and shoulder pain and also pain in hands and joints of hands. Poor posture of teachers either during seating or standing this includes twisting such as turning from the board to the class and back again.[26, 27, 28] Indian class rooms are not modernized, even today the teachers are using black board and chalk. Using black board for several hours create an inappropriate posture to teachers resulted in such pain.[6]

Posture with flexion of the head is an important factor associated with MSP in the neck and upper limbs. The lack of chairs and tables their size and shape which are not appropriate for teachers develop positions unfavorable to the musculoskeletal system. Inappropriate chairs make teachers sit without back support, with excessive flexion of knees and hips and flexion of the trunk to write and read texts on the table or even for student roll call, and without support for upper limbs resulted in the development of different kinds of physical illness.[29] Teachers face a high amount of stress during teaching and handling of young students. The level of stress increased when encountering students with emotional and behavioural problems.[30] The increased level of stress among a quarter of teachers may resulted in anxiety or depression during their later part of life (Experienced) and many of them claimed to have suicidal tendencies.[31]

In order to avoid the occurrence of such kind of physical disabilities among teachers, sufficient infrastructure should be launched inside the class rooms, and it should be modernized. Traditional method of teaching should be switched over to modern method of teaching. Counseling and refreshment to both teachers and students at frequent intervals may improve the condition to a greater extent.

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