

RESEARCH ARTICLE

Musculoskeletal Complaints in Occupational Therapist's Working in Pediatric Setup at Odisha

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Abstract

Occupational therapists are mostly exposed to physical factors at paediatric setups which can lead to an increased risk of musculoskeletal related discomforts. The patient handling tasks expose occupational therapists to excessive physically demanding tasks.

A prevalence study was conducted on twenty occupational therapists in various paediatric setups of Odisha. Ergonomic assessment checklist was implemented to assess various musculoskeletal discomforts.

In this study 70% therapists complained pain in back, 90% complained pain in neck, 45% complained pain in the wrist & 60% complained pain in the shoulder. Due to repetitive movement & increased workloads might lead to the risk of various physical strain related injuries among occupational therapists. Mostly occupational therapists, complain pain & discomfort around neck, shoulder, back & wrist.

The results of this study show there is a high prevalence of musculoskeletal discomforts in occupational therapist working in a paediatric set up in Odisha.

Keywords: Occupational therapy; musculoskeletal discomfort; ergonomics; pain

Introduction

Occupational therapist works to co-ordinate clients physical and mental abilities. Occupational therapist evaluates Activities of daily living, vision, balance, coordination, perceptual skills and cognition [1].

Occupational therapist working in pediatric setups works with children who have congenital condition, sensory issue, behavioral issues, hearing and vision challenges, trouble in speaking clearly and balance issues. Majorly the challenges in Occupational therapy can address fall in to seven category, cognitive skill issues, fine motor skill issues, gross motor skill issues, learning issues, self-care issues, sensory integration and sensory processing disorder, social skill issues.

Occupational therapist incorporate play in their session and use tools like craft kit, paint, board games, puzzles, modelling clay, swings, tumbling mats and given obstacle courses [2].

WHO refers musculoskeletal health as the performance of the locomotive system comprising intact muscles, bones, joints and adjacent connective tissues? Musculoskeletal impairments consist of different disease or condition that can affect the system and are characterized by impairments in the muscles, bones, joints and adjacent connective tissues leading to temporary or lifelong limitation in functioning and participation.

Musculoskeletal disorders (MSD) are injuries or disorders of the muscles, nerves, tendons, joints, cartilage, and spinal discs. Work-related musculoskeletal disorders (WMSD) are conditions in which:

1. The work environment and performance of work contribute significantly to the condition; and/or
2. The condition is made worse or persists longer due to work conditions

Work 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 position, or performing repetitive forceful tasks. This report identified positive evidence for relationships between work conditions and MSDs of the neck, shoulder, elbow, hand and wrist, and back.

The Bureau of Labor statistics of the Department of Labor defines MSDs as musculoskeletal system and connective tissue diseases and disorders when the event or exposure leading to the case is bodily reaction (e.g., bending, climbing, crawling, reaching, twisting), overexertion, or repetitive motion. MSDs do not include disorders caused by slips, trips, falls, or similar incidents. Examples of MSDs include:

- Sprains, strains, and tears
- Back pain
- Carpal tunnel syndrome
- Hernia

Musculoskeletal disorders are associated with high costs to employers such as absenteeism, lost productivity, and increased health care, disability, and worker's compensation costs. MSD cases are more severe than the average nonfatal injury or illness.

An occupational injury is defined as any personal injury, disease or death resulting from an occupational injury is therefore distinct from an occupational disease, which is a disease contracted as a result of an exposure over a period of time to risk factors arising from work activities [4].

Occupational therapist is risk of muscular skeleton disorder because of their nature of work. They use different patient handling techniques to restore the functions and independence of the client. They are continuously exposed to different awkward positions for prolonged period of time. Such activities include bending, lifting, twisting, turning, reaching to the heights.

Objectives

To find out the prevalence of musculoskeletal complain in occupational therapist working in paediatric setup at Odisha.

To Study the incidence rate of work-related musculoskeletal disorders in occupational therapist and to identify the risk factors.

Methodology

This is a cross-sectional study which was conducted to examine the rate of prevalence of work related musculoskeletal complains among occupational therapist working in paediatric set up. There were twenty participants out of which ten number of male and ten number of females selected randomly from different paediatric clinical setups. In this study, two questionnaires were administered.

Demographic characteristics of study population (N=20) are present in table number one. The study aims and procedure was explained to the participants and consent was taken from them. The inclusion criteria include

- 1 More than two years of work experience.
- 2 Must be an employee of paediatric clinical setup
- 3 No prior congenital or accidental physical disability

All the participants were instructed to fill the ergonomic assessment checklist and work-related musculoskeletal disorder questionnaire.

This questionnaire is important to collect the data regarding the work-related injury in occupational therapist working in paediatric set ups.

Ergonomic Assessment Checklist

It is a tool used by the professionals to roll out the risk factors of ergonomics in different workplaces. It is designed to help workers and check the work factors at their working environments. It is used to access the routine movement and physical activities in the workplace if it causes injury. It is used to assess the economic safety of workplace.

WRMSDsQ

This is a questionnaire used to evaluate the work related musculoskeletal different countries problems. This questionnaire consists 20 questions which includes demographic data and discomfort and pain in different regions of the body like neck, shoulder, elbows, lumber, hip, knee or ankle.

All the statistical analysis were performed with the IBM SPSS 25 software. In order to examine the relationship between age, gender, height and weight one sample t-test was applied.

Result

Twenty-five Occupational therapist were included in the study from which five didn't complete the questionnaire. Out of remaining twenty occupational therapists, ten number of male and ten number of females. All of them are right-handed. None of them are having any smoking habits. The results shows that there is no significance relation between age, height, weight and gender. However, it shows high rate of incidents of musculoskeletal complains.

Table 1: Demographic characteristics of the study population (N=20)

	N	Minimum	Maximum	Mean	Std. Deviation
AGE	20	24	30	26.80	1.908
HEIGHT	20	4.11	5.80	5.40	0.36
WEIGHT	20	45	78	62.10	9.165
WORKING	20	48	48	48.00	.000
Experience	20	2.00	4.60	2.90	0.76

Table 2: Relationship between age, height, gender, weight and musculoskeletal disorders

Variables	
	p Value
GENDER	.000
AGE	.000
HEIGHT	.000
WEIGHT	.000

Table 3: Prevalence of disorder in different body parts

Variable	Yes (Number %)	No (Number %)
Neck	75	25
Shoulder	55	45
Elbow	25	75
Wrist	55	45
Dorsal region	30	70
Lumber region	65	35
One or both Hips	10	90
One or both Knee	35	65
One or both Ankle	70	30

(Do you have a problem seen during the past twelve months such as pain, discomfort and numbness in the extremity)

Therapist complain about neck pain (75%), shoulder (55%), elbow (25%) wrist (55%), dorsal region (30%) lumber region (65%) one or both Hip/thighs (10%) one or both the knee (35%) one or both the ankle (70%). Because of the inappropriate patient handling postures, bending, twisting, lifting, reaching to the heights aggravates muscle related injury. According to WHO health is not only having a disease-free body but having a great physical, social and mental comfort. Because of the work-related injuries, the work efficacy and there is a low rate of job satisfaction is seen.

In paediatric setups therapist are exposed to repetitive actions, awkward posture, lifting of heavy weights, reaching to the heights, bending and twisting activities while dealing with the paediatric age group patients. Due to this factor, it is seen a low-quality job and more sick leaves.

Discussion

Musculoskeletal disorder of work place includes the acute cumulative and chronic injuries or illness of the soft tissues which are caused by mechanical stress strain sprain vibration inflammation or irritation.⁵ This defines musculoskeletal complain as an ache, pain, numbness and discomfort which are more prevalent than disorders to muscle, tendon, intervertebral discs and nerves. Work related disorder are responsible for morbidity in many working populations. Apart from lowering the quality of works life and reducing the productivity WMSDs are most expensive form of work disability attributing to about 40% of all cost towards the treatment of work-related injuries. WMSDs are considered to be multifactorial that are caused due to interaction between various risk factors which result in conditions that vary across different occupation although health care profession are knows to be high risk of WMSDs.⁶

This study shows high risk of musculoskeletal complains in occupational therapist working in paediatric setup. Most of the therapist who are less than one year of experience, who are not part of study population also reported the symptoms of musculoskeletal disorder. Female therapist is more affected than the male because of repetitive action, inappropriate posture and working duration.⁷

Conclusion

The present study shows that the therapist reported that they are having musculoskeletal complains. This complains are common in occupational therapist working in paediatric set up. Most of them are having pain in their neck, shoulder, wrist, lumber region, and feet.

There is a high incident of musculoskeletal complains seen among the occupational therapist working in pediatric setups. So, we suggest, occupational therapist should use appropriate posture mechanism, posture correction and practice ergonomically handling technics while giving therapy.

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