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### PREVALENCE OF MUSCULOSKELETAL DISORDERS AMONG BEAUTICIANS

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#### ABSTRACT

**Background:** Work related musculoskeletal disorders are the commonest cause for occupational health problems and accounts for large number of socioeconomic burden on the worker as well as the society. **Methods:** A cross-sectional interview based survey was conducted in 50 beauticians in the age group of 20 - 50 years. The data was collected using a validated semi-structured questionnaire. The questionnaire consisted of demographic details, work profile and musculoskeletal pain. The data was analyzed and graphical representation was done using Microsoft excel. **Results:** The study showed that the musculoskeletal problems are highest in back region followed by neck, wrist and hand and shoulder region. **Conclusion:** There is a prevalence of musculoskeletal pain in beauticians.

#### KEYWORDS

Musculoskeletal disorders and Occupational health problems.

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#### INTRODUCTION

Work is an important and integral segment of human life. A job is a piece of work done as a part of the everyday routine which comes at a certain price. Every occupation is associated with one or more health concerns and has an impact on the worker. Work related musculoskeletal disorders are the commonest cause for occupational health problems and accounts for large number of socioeconomic burden on the worker as well as the society. Work-related musculoskeletal disorders (WMSDs) are defined as injuries or disorders of the muscles,

nerves, tendons, joints, cartilage, and spinal discs associated with exposure to risk factors in the workplace. These conditions result in pain and functional impairment of musculoskeletal system of the body<sup>1,2</sup>. The common risk factors associated with work that are most frequently cited as causative factors for musculoskeletal disorders include rapid work pace, repetitive movement patterns, insufficient recovery time, heavy exertion, improper body mechanics, use of tools and awkward posture<sup>3</sup>.

Cosmetologists, beauticians, massage and beauty therapists are all classified under the category of the beauty industry. The beautician performs common tasks like facial cleansing, skin, nails and body hydrotherapy and care, acne treatment, make up, massage, face and body hair removal, manicure, pedicure, facial, hairdressing, threading, waxing, etc. on a daily basis<sup>4</sup>. Beauticians are exposed to various hazards in the workplace such as awkward posture, use of vibratory tools, repetitive movements and prolonged standing<sup>5</sup>. Therefore, the aim of this study was to find out the prevalence of musculoskeletal disorders in beauticians.

## METHODS

The cross-sectional interview based survey was conducted in 50 beauticians in Mumbai and its suburban areas in the age group of 20 – 50 years. The departmental research committee approved the study protocol and a written informed consent was obtained from all the subjects prior to initiation of the study. The data was collected using a validated semi-structured questionnaire.

The questionnaire consisted of the following items.

- Demographic details (age, sex, dominance)
- Work Profile (Workload)
- Musculoskeletal Pain in different body regions

The data was analyzed and graphical representation was done using Microsoft excel.

## RESULTS AND DISCUSSION

Out of the 50 beauticians, 45 were females and 5 were males. Our study shows that the 82% beauticians were suffering from musculoskeletal

discomforts. Back being the most affected region followed by neck, wrist/hand, shoulder and knee.

Work related musculoskeletal disorders (WRMSDs) occur when there is an imbalance between physical capabilities of the worker and physical requirements of the job. Damage to a worker's body leading to musculoskeletal discomfort can occur due to prolonged exposure to ergonomic risk factors. Beautician is a physically demanding occupation that takes a toll not only on the worker's body. In beauticians, the common risk factors include frequent repetition of movements, maintenance of awkward postures or unsupported positions or static postures for prolonged periods of time, sudden bending or twisting movements, use of vibratory tools, compressive forces from use of grasping sharp edges like tool handles and inadequate recovery time<sup>7</sup>. These risk factors lead to stress and strain on the low back which causes micro trauma leading to wear and tear of the intervertebral disc region causing low back pain<sup>7</sup>.

In the current study, neck pain was the second most prevalent region. Beauty therapists perform visually and physically demanding tasks which places the neck in static and awkward postures for prolonged periods. Repetitive adoption of a poor posture for a prolonged period of time has been associated with increased muscular strain and loading of the cervical vertebra<sup>8,9</sup>.

This study demonstrates wrist and hand wrist pain as the third most highly prevalent region. This is in accordance to the study by Tsigonia *et al.*<sup>4</sup> who attributed hand and wrist pain to exposure to physical risk factors. The beauty therapy occupation requires manual force, exertion, constant monotonous or repetitive use of the upper body and extremities in order to carry out treatments<sup>10</sup>. These forces have an impact on the muscles and tendons surrounding the wrist and hand leading to micro trauma, inflammation and pain. In our study, similar results were observed.

**Table No.1: General characteristics of study subjects**

Working Hours per day	4-6 hour: 6% 6-8 hours: 60% 8-10 hours: 30% >10hours: 4%
Physically Active	Yes: 28% No: 72%
Uncomfortable posture during work	Always: 12% Mostly: 18% Frequently: 32% Seldom: 20% Never: 18%
Presence of Musculoskeletal Pain	Yes: 82% No: 18%

**Table No.2: Musculoskeletal symptoms by body region**

S.No	Region	Affected Percentage
1	Neck	40%
2	Shoulder	12%
3	Elbow	2%
4	Wrist and Hand	18%
5	Back	60%
6	Hip	4%
7	Knee	12%
8	Ankle and Foot	4%

## CONCLUSION

It is concluded that there is a prevalence of musculoskeletal pain in beauticians. Back is the most affected region followed by neck, wrist and hand and shoulder region.

## ACKNOWLEDGEMENT

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## CONFLICT OF INTEREST

We declare that we have no conflict of interest.

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