



Prevalence of common Musculo-skeletal problems and its effects on Quality of life among female workers in selected garments sectors, Bangalore. A Study protocol

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Abstract

Background: Musculoskeletal problem stands as one of the major occupational health problem in India, which is also estimated that the working employees in garment factories account for about 60% have common complain of musculoskeletal problems, due to the nature of the work prolong standing, highly repetitive work, heavy lifting, working with the hands lifted to shoulder height or higher, and working with the back twisted or bent forward and physical exposures, Which shows to predict impaired work ability, musculoskeletal disorders enhances long term sickness absentia. In views of this, the researcher wants to study the prevalence of common musculoskeletal problems and their quality of life among female garment workers.

Objectives

- To identify the prevalence of common musculoskeletal problems among female workers in garment sectors

- To find the effects of common musculo-skeletal problems on their quality of life.

Methods: The Cross sectional descriptive research design was selected to identify the prevalence of common musculo skeletal problems. 384 Female garment workers between the age group of 20-60 yrs who fulfills the selection criteria were selected as sample by simple random sampling technique. After obtaining formal permission from the respective garment factories and written consent from the female garment workers, and the tool was administered. Descriptive and inferential statistics will be used to analyze the data.

Conclusion: The female garment factory workers are involved in dual activity in workforce and at home. Majority of the women neglect their health, which leads to major health problems. It is also evident from studies conducted in various parts of the country that health problems are more prevalent among female garment workers and accounts for 78.89 % of musculo skeletal disorder. Therefore this study aims at investigating the

prevalence of musculo-skeletal problems and its effect on quality of life among female garment factory.

Keywords: Female workers, Garment factory, Musculo Skeletal problems, Quality of life.

Introduction

Work plays a vital role in the lives of the people and its working pattern and type of work has also been known to influence human health. It is not only the means of earning a living and of maintaining self-esteem but also a source of constant work related health problems effects the quality of life in human health^[1]

Musculoskeletal disorders are among the most important occupational health problems in both developed and developing countries. These disorders affect the quality of life of most people during their lifetime^[2]. According to World Health Organization, over 1000 million people worldwide are employed in small-scale industries. Workers with high physical work demands are exposed to the elevated risk of impaired work ability, musculoskeletal disorders, cardiovascular diseases, are all-causes mortality, long term sickness absence and early retirement from the labour of work. Specifically, people who are prolonged standing, highly repetitive work, heavy lifting, working with the hands lifted to shoulder height or higher, and working with the back twisted or bent forward and physical exposures, have been shown to predict impaired work ability, musculoskeletal disorders enhances long term sickness absence^[3].

Many studies have consistently found high prevalence of musculoskeletal symptoms in the garment and textile industry, with the neck, shoulder, and back regions mostly affected^[4]. Roughly 78.4% of all occupational accidents occur in the garment industry, with one out of 20 occupational accidents being fatal and 99% of occupational accidents resulting in temporary disablement, and fainting is a common type of accident, which is caused by

panic, the hot, stuffy, and dusty environment, lack of a ventilation system, and overtime work^[4].

As of today, India stands the world's second largest populated country with 1.26 billion in 2014 were people employed in textile and cotton industries were 8 million in 2013. The Apparel Export Promotion Council [AEPC] estimated that in value terms, the size of the Indian textile market was Rs. 1692952 million in 2007 recording a growth of 8.81%. The readymade garment industry is providing employment to more than 3 million people and the majority is from low socio-economic status covering both men and women^[5].

The Bangalore city is one of the centers of production of garment sectors, and it estimates around 1200 small, medium and big sized garments factories functioning in and around Bangalore. A review of garments industries revealed that it is one of the largest manufacturing sectors in India and it accounts for 20% of India's industrial output and 37% of India's export. It also has more than one hundred readymade garment factories, with nearly five hundred thousand workers working in these factories. Of which 80% are women, and are first-generation migrants from rural Karnataka (6). Although men and women work together, but still there is considerable gender difference in the nature and condition of their employment. Both in the formal and informal sectors and small-scale industries working women face less favorable conditions(6). The most common phenomenon is that the majority of female workers suffer from back pain, neck pain, musculoskeletal pain, neural problems, and problems in body muscles, joints, ligaments and bones^[7]. A study conducted in Dhaka city assessed the prevalence of musculoskeletal disorders among the Bangladeshi garment workers. A statistically significant difference was found among both genders [74.6% in men and 51.65% among women, P = 0.005]. The prevalence of

musculoskeletal disorders was 57.6% in the age group of 15-30 years and 83.3% in the age group of 30-35 years [P = 0.036], and 74.7% of worker were married and 25.3% were not married [P = 0.017]. The mean working hour was 12.51 [\pm 1.50] hours and with regard to posture, for the majority of the respondents, machine height was normal while for the majority of the respondents, seat was not adjustable^[3].

With the evidence of the above statistics and studies the investigators felt the need to study the prevalence of common musculoskeletal problems and its effects on Quality of life among female workers in selected garments sectors.

Aims & Objectives

- To determine the prevalence of common musculoskeletal problems among female workers in selected garment sectors, Bangalore.
- To find the effects of common musculoskeletal problems on their quality of life.
- To find the association between the common musculoskeletal problems and selected socio-demographic variables.

Hypotheses

- H₁ -There is a statistically significant relationship between the common musculoskeletal problems and their Quality of life.
- H₂- There is a statistically significant association between common musculoskeletal problems and selected socio-demographic variables of female garment workers.

Materials and Methods

A Cross Sectional Descriptive research design was adopted to assess the prevalence of common musculoskeletal problems and its effects on quality of life among female workers working in small and medium

sized garment sectors. The female garment factory workers were enrolled from 6 garment factories in various geographical areas such as Yeshwanthpur, Srirampuram and Goraguntepalya. The formal permission was obtained from the respective authorities. The enrollment of the subjects is shown in the figure-1.

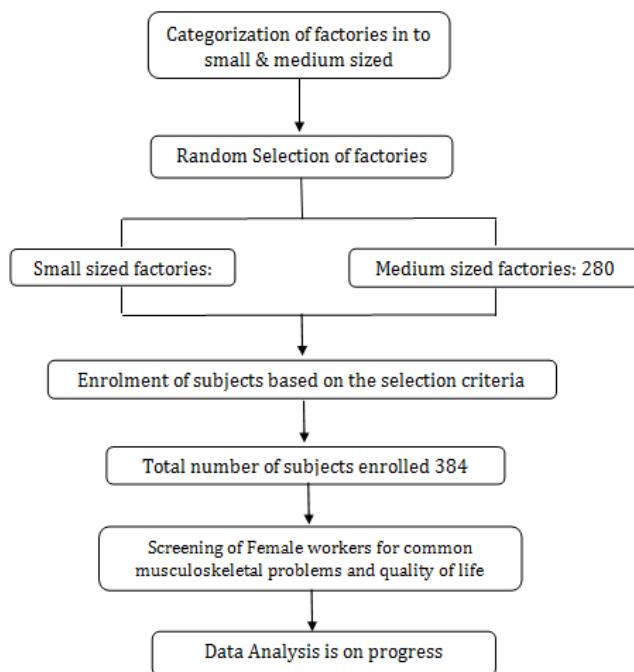


Figure 1. Schematic representation of the enrolment of the study subject

The size of the sample was calculated based on the previous study, which was conducted in Bangalore Peenya, among women employees in garment industries, the finding revealed that the prevalence of musculoskeletal problems among the female workers working in the garment sectors to be 60%, with an absolute precision of 5% and 95% confidence level. It is estimated to be 384 numbers of workers needed for the study. Hence using simple random sampling technique, 384 subjects were enrolled for the study.

After a brief introduction about the purpose of the study, written consent was obtained from the subjects who fulfills the selection criteria. Which includes the female workers who are between the age group of 20-60 years, and

willing to participate, the exclusion criteria were the female workers who are not available at the time of study and undergoing any medical treatment. The female garment workers who enrolled were involved in the daily activities such as tailoring, sewing, designing, cutting, ironing and finishing.

After the extensive review of literature and discussion with the occupational health safety specialist and physiotherapist the tools was constructed by the researchers. The tool includes socio-demographic profile to obtain the baseline data, musculoskeletal symptom survey questionnaire to assess the presence of common musculoskeletal problems and SF 36V2 [standardized] to assess the quality of life. It was checked to ensure its validity and tools were administered.

The obtained data will be entered into Excel spread sheet and analyzed through use of common statistical program [SPSS 20.0 version]. This study was approved by the ethics committee of M.S Ramaiah Medical College and Hospital, Bangalore. [Reg.No,:ECR/215/Inst/Ker/2013].

Discussion

A large population of workers examined were women. Distribution of males in the workforce was more in jobs that were mechanical or tailoring /sewing in nature. This is consistent with the findings that the industry has a women dominated workforce. Majority of these workers were employed in the industry for five years or less, again consistent with the findings that there is a constant turnover of the workforce in the industry. The study says that Karnataka is a major apparel sourcing destination for the global market and after information technology, the garment sector leads the pack of ex-port-oriented units, which with its 38 units contributes to 28% of the total turnover amount to Rs.1, 015 crores ^[8].

Physical, mental and social wellbeing of health is very essential for a workers personal life; as well worker's health is also very important for the productivity of an industry. Since Labor Standard is linked with international trade these days, more attention should be paid towards their quality of life. As musculoskeletal problems are most prevalent and costly work-related health problem in the working population, majority of the studies have documented that the musculoskeletal problem is one of the most common health problems among the garment industries. Studies have revealed that the most common site of musculoskeletal problem was back and shoulder pain in which a study conducted in two textile factories in Turkey revealed that the one-year prevalence of self-reported pain including lower back, upper back and neck among 35 to 45 year-old Swedish residents was 69.5% for women and 63.2% for men. It was stated that, in physically strenuous tasks, women had a higher risk of this problem than the men^[9].

Henceforth based on the studies. It is clearly evident that the women's working in the garment sectors have a risk of developing musculoskeletal problems. Therefore this study will help the other researcher to plan appropriate intervention for common musculoskeletal problems based on the study result among garment workers.

Conclusion

The present study probed into the prevalence of musculoskeletal problems among garment factory workers in Bangalore there details of demographic and assessment of musculoskeletal problems were obtained the report findings reveals that the causes of the musculoskeletal problem is because of continuous sitting, bending and twisting at the waist, abnormal posture and movements during work and continuous standing.

From the review, it is clear that the garment factory workers also work for long hours. Anxiety, depression

and somatic illness are also associated with the musculoskeletal problem. Nutrition also plays an important role in the workers life. The improper diet leads to malnutrition which leads to health related problems.

Thus it is paramount to understand that the musculoskeletal problem witnesses not only the effect of workers quality of life, but also results in continued reduced productivity of the work. Which ultimately has an impact on profits, and therefore on the revenue.

Henceforth there is a need for more enlightenment programs/education to possibly reduce the menace of Musculoskeletal Problems among the workers. So the researcher recommended an education program to create awareness among the workers on prevention and coping strategies of work related musculoskeletal problems, since it is not because to reduce the occurrence of musculoskeletal problem among them but also to promote efficiency in their work productivity.

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