

Prevalence and Coping Strategies of Work related Musculoskeletal Disorders among Food Delivery Men in Vadodara Region: A Cross-Sectional Survey

Akhilesh Yadav¹, Dr. Monali Soni (PT)²

¹PG Scholar, Musculoskeletal & Sports

²Assistant Professor (Masters in Rehabilitation)

Abstract: *Background:* Musculoskeletal problems have become more widespread in recent decades all across the world. Work environment and job performance are substantial contributors for the development or worsening of physical & mental illnesses. Several work-related characteristics like prolong overstretched & awkward posture, repetitive movements, poor weight lifting techniques, psychosocial stressors have been identified as risk factors for WMRDS. Musculoskeletal disorders contributed 3.4% and 1.7% towards the total disease burden in the developed and developing countries respectively. Although these disorders are not fatal, but there is chance of developing into serious injuries if ignored. As per current scenario food delivery men population might be at high risk to develop musculoskeletal disorder due to their pattern of working. Hence the need of the study is to find out the prevalence of the musculoskeletal problems & their coping strategies among food delivery men in Vadodara city. *Aim:* To study the prevalence and coping strategies of work-related musculoskeletal disorders among food delivery men. *Methodology:* 35 questions based Self-Administered Questionnaire is prepared for this study to find out prevalence and coping strategies adopted by delivery men to analysis their pain & discomfort developed by work related musculoskeletal disorders. In this study 120 were falling into the inclusion criteria and were given a Self-Administered Questionnaire containing 35 questions via in Person/Mail/WhatsApp across Vadodara City. Once they agreed to participate in the study an written informed consent was taken prior to study. *Result:* When asked for the hours of working it was ranged between 4-6 hours, 6-8 hours 8-10 hours, 10- 12 hours, >12 hours respectively for which the values were 22.5%, 23.3%, 28.3% ,25.8%, 0% respectively. This says that no worker used to work for more than 12 hours. The days per week the delivery boys use to work ranged between 4 Days, 5 Days, 6 Days, 7 Days respectively for which values are 19.16%, 21.6%, 27.5%, 30%. *Conclusion:* Most of the subjects reported pain in neck, upper and lower back region, due to constrained posture and long hour of driving along with that carrying heavy weight at the back and working continuously for 7 days without taking any break for more than 8 hours a day. Also travelling more than 200 km/day to reach the deliveries from the work station. Quite a lot of participants were using coping strategies like medicines, hot pack, light exercises but very few were aware about Physiotherapy, hence education related to Physiotherapy might help them overcome WRMSD and have a better work profile.

Keywords: Food Delivery Men, Work Related Musculoskeletal Disorders, Musculoskeletal Disorders

1. Introduction

Musculoskeletal problems have become more widespread in recent decades all across the world. Work environment and job performance are substantial contributors for the development or worsening of physical & mental illnesses. (Andersson G. B., 1999, Szymańska J.,2002). It has been observed that most of the food delivery men are using two wheelers for food delivery. Riding a two-wheeler is the particularly susceptible to the development of WRMSD in food delivery men. Riding a two-wheeler (Motorcycle) provides unnatural or constrained workstation (Karmegam, K., 2009) Continuous exposure to a single posture will cause discomfort in a human at any workstation. Riders on two wheels are subjected to a more static position with mobility restrictions for an extended period of time depending on the usage (Ramasamy, S,2017) Healthcare workers, especially those with a direct patient contact, are amongst professions with highest rate of WMDSs due to their job demands and positions maintained throughout the day. Salisk and Ozkandened WRMDs among physiotherapists as musculoskeletal injuries that results from a work-related event and several studies have documented that WRMDs, are frequently experienced by physiotherapists (Salik, Y., 2004) This only worsen their condition and can lead to severe consequences that could have been easily avoided.

The lack of insight into what is wrong with their body and how to deal with it does nothing to help. (Arunachalam, M., 2021) This study aimed to investigate the relationship between illness perceptions, coping strategies, and health related outcomes among people with MCCs. (Joseph, L., 2020) Evidence suggested that with the modification in work station, improving posture & work technique may have great positive effects on health-related quality of life in person with WRMSD. As per current scenario this (food delivery men) population might be at high risk to develop musculoskeletal disorder due to their pattern of working. Hence the need of the study is to find out the prevalence of the musculoskeletal problems & their coping strategies among food delivery men in Vadodara city

2. Materials and Methodology

Source of data: Head office of food agencies in Vadodara.
3.2 STUDY DESIGN: Cross sectional study.

Study Duration: Study will be conducted over a period of 10 to 12 months after obtaining ethical approval.

Study Population: Delivery men.

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Inclusion Criteria: 1. Male. 2. Age 18 -40 years. 3. Participants having minimum 1 months of work experience as food delivery boy.

Exclusion Criteria: 1. History of trauma or any major illness 2. Having known condition of Musculoskeletal, Neuromuscular or cardiovascular disease. 3. Participants who are not giving consent form.

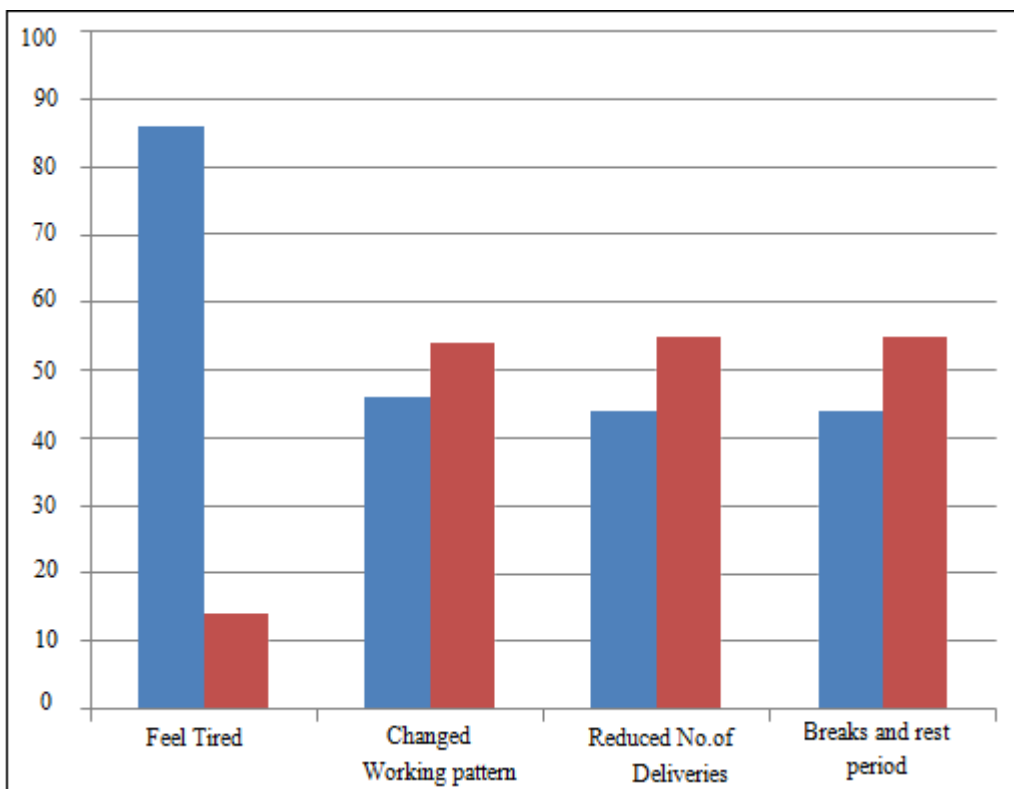
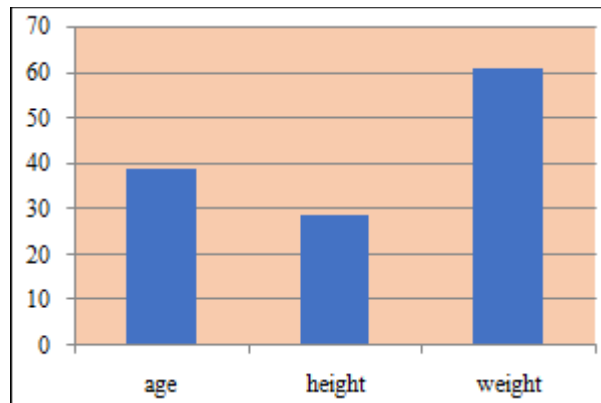
Proposed Sample Size: The Sample Size is calculated using G Power Software version 3.1.9.4 based on the previous study Conducted by Leonard joseph et.al. mean standard deviation observed was 53%. Keeping α error 0.05 (95 % confidence level). β error 0.2 (80% Power) Abstate prevalence of 10%. The Calculated sample size is 120.

Sampling Method: Convenient sampling

Material to be used: 1. Consent form 2. Questionnaire 3. Pen

3. Result

The present included 120 participants which included food delivery boy. The baseline data was recorded and descriptive statistics was done with the use of excel. The mean age was 32.04 years of all the data. The mean height and weight were 5.68' and 60.99 kg respectively



Graph Shows the how many participants made changes/adaptations in order to overcome the work-related MSD

The next questions involved the screening for the musculoskeletal disorders which started with pain and discomfort in any body parts for which the responses were for various body parts like neck, upper and lower back pain, shoulder pain with 32.5%, 62.5%, 5.8%, 17.5% respectively.

Shows the responses of the participants towards pain, coping strategies and correlation of addiction with pain Due to pain the breaks during the whole day were increased in 44.16% participants and didn't change in 55.8% participants. Because of pain they had a thought to change the job which was agreed by 43.3% participants and was not agreed by 56.6% participants. When the 45.8% participants asked

about increase in addiction due to pain agreed with increase in addiction and 54.1% was not agreeing for the same. Any exercises they do to reduce this in which the responses were under the headings of sometimes, always, more often for which the following percentage were the response from the participants 29.16%, 37.5% and 33.3% respectively.

4. Discussion

The study was done with the aim to find out the prevalence and coping strategies of work-related musculoskeletal disorders among food delivery men. The study included 120 participants and was given consent for the same. The self-

administered questionnaire was given to the participants in their understanding language which was Hindi, Gujarati and English respectively. The questionnaire was filled by the participants themselves. The baseline data was recorded which included age, gender, height and weight respectively. The data was recorded in excel sheet and the analysis was done in Microsoft excel which included descriptive analysis. There were overall 35 questions which included various categories of questions Thus, over all their working capacity has reduced gradually as they are suffering from this type of pain since many years and now is having chronic pain under tolerance level. The pain intensity was assessed by NPRS on the scale of 10 in which 73% said that between 0-5 is the pain intensity which says that the pain is still under the tolerance level. This study was supported by previous studies that traffic police officers were exposed to prolonged riding routinely which cause high tendency in developing muscle discomfort and MSD compared to workers not exposed to this condition. The delivery men suffered from pain which was the main concern then decided to leave the jobs because of compromised musculoskeletal system. They feel tired at the end of the day. Approximately 33% of participants were using coping strategies like medicines, hot pack, light exercises but very few were aware about Physiotherapy, hence education related to Physiotherapy might help them overcome WRMSD and have a better work profile.

5. Conclusion

The prevalence and coping techniques in MSD among food delivery men is studied here. Most of the subjects reported pain in neck, upper and lower back region, due to constrained posture and long hour of driving along with that carrying heavy weight at the back and working continuously for 7 days without taking any break for more than 8 hours a day. Also travelling more than 200 km/day to reach the deliveries from the work station. They were also having various addictions which also a risk factor for MSD. They used general medicines and home remedies for the pain but very less consulted a doctor or physiotherapist to overcome the pain. Very few used to do exercise to relieve pain. Quite a lot of participants were using coping strategies like medicines, hot pack, light exercises but very few were aware about Physiotherapy, hence education related to Physiotherapy might help them overcome WRMSD and have a better work profile.