

AN EMPIRICAL RESEARCH ON PREVALENCE OF DISABILITY & WORK RELATED FEAR IN MARBLE FACTORY WORKERS IN ABU ROAD

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ABSTRACT

Background: Work-related musculoskeletal disorders are a major concern of workers, union, employers and government. Organization in many industrialized countries due to the high prevalence and enormous cost associated with these disorders. Disability related to chronic low back pain is a large complex and multidimensional phenomenon. the aim of the study is to see the prevalence of back pain in marble factory workers.

Materials and Methods: Two questionnaire were used to check the prevalence of back pain and work related fear. The questionnaire gathered demographic data as well as information on occurrence of back pain complaints in the previous 3 months. Descriptive statistics, frequency, and Chi-square analyses were used.

Results: The response rate to the questionnaire was 78% (117/150). Of the 117 responders included in the study, the one-year prevalence of WMSDs was 62.3%. The frequency of WMSDs was not gender related nor it was related to age. WMSDs' impact on work was minor.

Conclusions: WMSDs among marble factory worker were common, with lower back affected most. Further research is needed to investigate the effect of risk factors as psychosocial load, and general health status on prevalence musculoskeletal disorders.

KEY WORDS: Work-related musculoskeletal disorders, Disability, Chronic Low Back Pain, WMSDs.

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INTRODUCTION

Work - related musculoskeletal disorders are a major concern of workers, union, employers and government. organization in many industrialized countries due to the high prevalence and enormous cost associated with these disorders [1].

Musculoskeletal disorders (MSD) represent one of the leading cause of occupational injury and

disability in the developed countries. The economic loss due to such disorders affects not only the individuals but also the organization and the society as whole [2,3].

Risk factors of WMSDs are known to include workplace activities such as heavy load lifting, repetitive tasks and awkward working postures [4], while demographic characteristics and psychosocial factors are also known to be important predictive variables [5-7].

Marble has been commonly used in the sculpturing of statues, the construction of building and monuments since the ancient times[8], workers are involved in long hours of standing work. In this industry awkward posture & repetitive movement are very common. the majority of activities are characterized by sitting posture with worker's head and trunk flexed. In this situation, high rate of WMSDs most commonly low back pain occurrence are expected, Disability related to chronic low back pain is a large complex and multidimensional phenomenon [9].

The prevalence of chronic low back pain ranges between 9% and 21% and many authors consider that this pain is responsible for most cases of disability and leave of absence from work [10-12].

Literatures has shown that factors unrelated to the disease itself can partially explain disability psychosocial and occupational factors like fear and difficulties in the work environment are considered possible determinants of disability [13,14].

MATERIALS AND METHODS

Data were collected at 6 marbles factories in aburoad between june 15th to oct 15. Low back pain patient with age group 30-55 years who fulfilled the criteria will be randomly taken for the study.

Inclusion criteria: Low back pain for at least 3 months age between 30-55 years and communication abilities,

Exclusion criteria: Presence of cancer and acute health condition that could alter the perception of pain related disability.

Data collection: During data collection, patients with low back pain were forwarded for assessment by the reseacher who explained about the study objectives, assessed participants, eligibility, and obtained their informed consent in case they accepted to participate. Participant answered the following research instruments.

Demographic identification form: Age, Sex & Gender.

Oswestry Disability Index (ODI): The oswestry disability index (oswestry low back pain

disability questionnaire)is a time tested outcome assessment tool that is used to measure a pt's impairment and quality of life. (i.e. how badly the pain has affected their life) the test is the "gold standard" of the low back functional out come tools.

It assessed disability & focused on the impact of pain on activities of daily living.

The score range from 0 (absence of disability) to 100 (max disability)The validation of the scale in portugues showed very good internal consistency (cronbach's α =0.87) and excellent reliability based on test-reset (0.99)

Tempa scale for kinesiophobia (TSK): One of the most used instrument to assess the fear of movement and pain avoidance. The scale consist of 17 items and the score ranges between 17 and 68.

RESULTS

Most study participants were between 30-35 years of age (30.7%) female (76%) and male (23%) shown the moderate disability.

The mean disability score measured by the ODIwas 12.05 (SD 5.7) & average score measured by ODI in male is 12.3 (SD 5.8).

The mean disability score measured by ODI in female is 11.24 (SD -5.74)

62.39 of participants revealed scored compatible with moderate to severe disability. According to criteria adopted to characterize disability (ODI SCORE), 73 individual were classified as disabled. Hence the prevalence of disability corresponded to 62.3%.

Table 1: Showing ODI Scores In Class Interval.

ODI	F	F%
0-5	8	6.837607
5-Oct	36	30.76923
Oct-15	35	29.91453
15-20	23	19.65812
20-25	10	8.547009
25-30	5	4.273504
TOTAL	117	100

Table 2: Showing TSK in class interval.

TSK	F	F%
Oct-20	3	2.564103
20-30	56	47.86325
30-40	40	34.18803
40-50	18	15.38462
TOTAL	117	100

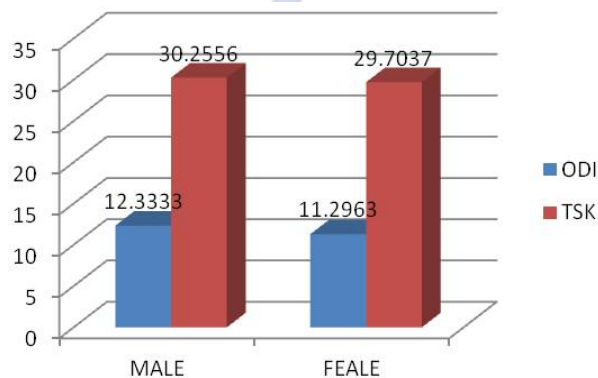
Table 3: Average in ODI and TSK.

	N	Minimum	Maximum	Mean	Std. Deviation
ODI	117	1	26	12.094	5.78342
TSK	117	10	46	30.1282	7.61638

Table 4: Average in male ODI and TSK.

MALE	N	Minimum	Maximum	Mean	Std. Deviation
ODI	90	1	26	12.3333	5.80585
TSK	90	10	46	30.2556	7.98251

Graph 1:



To identify the association of independent variables chi-square test was used.

Association between age and ODI and age and TSK shows chi value 638.99 and 640.021 with P value 0.340 and 0.98 respectively so it conclude that there is no significant association between age and ODI and TSK.

Table 5: Association age with ODI and TSK.

AGE	CHI-SQUARE VALUE	P-VALUE	RESULT
ODI	638.99	0.34	P>0.05 NOT SIG
TSK	640.021	0.989	P>0.05 NOT SIG

The study also shows there is no association between gender and ODI and TSK.

Table 6: Association Gender With ODI and TSK.

GENDER	CHI-SQUARE VALUE	P-VALUE	RESULT
ODI	24.107	0.513	P>0.05 NOT SIG
TSK	29.603	0.434	P>0.05 NOT SIG

p>0.05 .no association

DISCUSSION

WMSDs more common among marble factory workers however, the one year prevalence rate of WMSDs reported by participants in our study

was lower than most rates reported by marble factory workers around the world.

We found that 62.39% of participants workers complained of disability due to back pain & 97% of workers complained of work related fear.

This was less than the prevalence reported in the san parlo state. A possible explanation for this lower rate may be change of machinery in working place & with the more workers aids being available in the factory with the varied work related tasks (e.g. lifting ,transferring).

The variation found between the disability prevalence identified in this and other studies can be explained by the different definitions of disability. It should be highlighted, however that the highly disabling potential of chronic low back pain was confirmed.

Pain related disability affects different aspects of daily life & provokes mental suffering. Individual who face difficulties to accomplish daily activities and are unable to keep up their professional activities tend to take distance from social contact and avoid leisure activities , social isolation & avoidance of pain related activities can reduce self efficacy & increase the chance of developing depression and disability symptoms.

In this study 62.39% of participants experience Moderate disability, a low level when compared to studies that evaluated disability in workers with moderate to severe disability. Pain related fear showed an association with disability in different studies that assessed chronic low back pain patients. In the present research however fear showed there is no association with disability and pain related fear. The result shown may be because of there is moderate disability due to change in work environment and (change in machine) and increase in number of workers in work place. This causes decrease work load in present study also shows there is no association of gender with ODI & TSK.

Limitation:

Further research is needed to investigate the effect of risk factors as psychosocial load, and general health status on prevalence of musculoskeletal disorders & also the sample size should be increased for more generalized result.

Conflicts of interest: None

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