



RESEARCH ARTICLE

PREVALENCE OF MUSCULOSKELETAL DISORDERS (MSDS) AMONG UNORGANIZED WORKER WITH REFERENCE TO LUCKNOW CITY, UTTAR PRADESH

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ABSTRACT

The employment in informal sectors has been witnessed of the growing prominence of the labour market in present scenario in India, total contribution of the informal sector to the GDP of the country is more than half. The sector offers the employment opportunity to around 90 % of the total work force. The objective of the present study is to assess prevalence's of Musculoskeletal Disorders (MSDs) through the assessment of physical health and postural discomfort in several parts of the body workers working in to five different sectors, Chikankari, construction, Sanitary, Brick kilns, Bone craving in Lucknow city Uttar Pradesh. The result of the study reveals that the workers of all five sectors were reported pains at lower back, shoulder, upper arms on the other hand the pains at buttock and thighs were least reported by the workers. The intensity of Musculoskeletal Disorders (MSDs) in tension headache were Maximum (80%, 77%, 47%) among the workers of construction, sanitary, Brick kiln, sectors where as (93%) of ornamental workers and (73%) of Chikankari workers were reported highest problem of irritation in eyes.

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INTRODUCTION

Dominance of informal employment has key importance in the labour market state of affairs in India as the sector contributes around half of the GDP of the county, its dominance in the employment is such that more than 90% of the total workforce has been affianced in the informal economy. As per the latest estimation of a Sub-committee of the National Commission for Enterprises in the Unorganized Sector (NCEUS), the contribution of unorganized sector to GDP is about 50% (NCEUS 2008). This national level pattern of informal workers occupying around 90% of the workforce is more or less similar in the case of most of the prominent states in the country. Lucknow is full of employment opportunities in informal sectors as it is expanding the commercial activities which results in the progress of several related industries, as the construction industry providing job opportunity to large number of workforce. The construction industry is booming in the Lucknow, as the urbanizations increases. The city have major workforce engagements in LMRC(METRO) contractual laborers, several roads NHI projects at different location of the city, the city has also to expands capacity of providing basic

facilities to its population in terms of increasing numbers of Schools, Hospitals, Sanitization, Roads networks. Construction, Sanitary, Brick kilns, are the major informal employment opportunity in available at the city and a large workforce are engaged in these actives. "The Assessment of the physical health related disorders is an important issue as they have to work for the long hours in different body postures which may lead their body at the risk of Musculoskeletal Disorder. The term Musculoskeletal Disorders (MSDs) are refers to the injuries and disorders which affects directly the human body's movement or musculoskeletal system i.e. muscles, tendons, ligaments, nerves, discs, blood vessels. MSDs are developed through a continuous fatigue in the body or a part of the body it is important to that an individual's body or some part of the body receives signals of fatigue for a long time, and it is only the job on which he has to put his body for such type of risk on continuous bases for the long life".

Literature Review

The workers performing different activities has the different problem associated with the different body parts Singh & Kiran (2013) argues that the worker who work in construction site, Workshop and Brick kilns they have high risk of body

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pain compared to Chikankari worker and workshop, because they do high intensity of hard work like lifting heavy loads, risk of shock, they use hard material. **Tiwari, (2008)** find that the workers other than social atrocities were exposed to certain health problems by virtue of their occupation. These health hazards include exposure to harmful gases, such like Hydrogen sulfide etc. which causes the cardiovascular degeneration, musculoskeletal disorder related to the UBP and LBP are associated with age, disability, and working hours. The workers are exposed to smells of the different kinds of chemicals used in the jobs which create problems in their respiratory systems the symptoms including sore throat, cough, chest tightness, breathlessness, thirst, sweating.

Bharara et al. (2012) reveals that the incidences of abrasion of skin, falls, slips, trips, crushing and pinching of body parts, boils in hands and feet, burns, sprains, cuts and bleeding and eye injury/hurt being more frequent occurring injuries during work. Illness data of respondent's correlated affect of work on their health as most frequently reported illnesses were: weakness, cough/chest infection, urinary tract infection, sore throat, cervical pain, skin allergy, dehydration, back pain, generalized fatigue and heat stroke. **Qutubuddin et al. (2013)** in his study conducted on brick industries located in North Karnataka, India they investigate the self reported Work related Musculoskeletal Disorders (WRMSD) experienced by the workers during the raw brick making activities and analyze the causes of discomfort related to various postures adopted by the workers a detailed work related musculoskeletal pain/discomfort were analyzed in different activities using the revised Nordic Questionnaire the study reveals that Majority of the workers were feeling pain and discomfort in different body parts. It was also observed that the workers worked continuously in awkward postures during certain raw brick making activities. Consequently they may suffer from discomfort in different parts of the body. Postural analysis using RULA and REBA methods indicate that different parts of the body are vulnerable to injury and musculoskeletal disorders and require immediate ergonomics intervention.

Norman et al. (2013) has studies the prevalence of different body discomfort among the workers of solid wastage management as they have to perform continuous strenuous activities involving pulling, pushing, lifting and carrying of heavy objects as well as bending to pick items or to sweep the ground for long hours, The workers have to face problems related to the neck, wrist and back pain these discomfort affect all age groups and often cause frequent disabilities and handicaps.

Gangwar & Kiran (2014) has conducted their studies on postural body discomfort among the sanitary workers works in Academic Institutions, Hospitals and Public places with respect to the sweeping, Mopping, Dustbin lifting removing Cobwebs activities in Lucknow city of Uttar Pradesh India, with the help of Nordic questionnaire (body discomfort scale) by kournika. and Body mapping technique they measures the body discomfort and finds that postural discomfort were significantly differs across the working place and related activities. For sweeping the respondents from public places shows higher mean pain in upper back, mid back pain, shoulder pain and buttocks pain in respect to other institution and with

mopping, Lifting dustbins, removing cobwebs the respondents from academic institutions shows higher mean postural body discomfort as they feel more pain in shoulder, neck, upper back and buttocks in comparisons to the other institutions.

Mudalige & Dharmathilake (2000) examined the major health problems faced by the sanitary workers engaged in Solid waste and drainage jobs. The problems of back pain and traumatic injuries, itchy rashes, chronic cough and shoulder pain were the most prevailing among both type of workers, they further argues that there was a lower prevalence of non-occupationally related diseases in the study group. Alcohol consumption was higher among the solid waste collectors than the drainage cleaners and the prevalence of smoking was higher among drainage cleaners than the solid waste collectors. Except for the difference in the occurrence of shoulder pain which was greater in sewage-drainage cleaners than other workers, the differences of symptoms and diseases among the three groups were not statistically significant.

Dharmalingam (1995) has studies the proneness to occupational injuries among brick workers in south India they argues that, most often they experienced cutting the foot while mixing the soil with spades foot injuries caused by falling bricks. There income is low and they are not paid any extra medical allowances or supportive medical benefits, even though they have to lose the working days and income due to these injuries.

Bagchi et al. (2014) has studies different postural discomfort and pain analysis in different parts of the body of the female workers, in west Bengal. They concluded that the brick moulders had more pain in the low back and parts of the legs because most of the time they sat continuously in the same awkward posture to mould the bricks. They suffered from more discomfort and pain in the head, neck, shoulder and trunk regions. Musculoskeletal pain was not felt by the workers before work or at work. 38.89 % of the female workers felt severe pain just after their whole day's work, i.e. in the evening. Others felt pain in their different body parts when they went to sleep at night or took rest. The percentage of pain was higher (90.48%) in the case of the female brick carriers.

Manoharan et al. (2012) has studies the problems of workers engaged in rimming and clay making process complained of back, leg, ankle, heel and foot pain from the long hours of standing, and concluded that workers in Clay and mould making process perceived pain in the upper extremities of the body (shoulder, upper back, elbow and wrist/hand) was significantly ($p < 0.05$) high as compared to the workers engaged in other processes. Perceived pain in the lower extremities of the body (thigh, knee and ankle/feet) regions was also ($p < 0.05$) significantly high for Clay and mould making workers as compared to workers engaged in other processes.

Ghosh et al. (2010) using the modified Nordic questionnaire he measures the different body postural discomfort among the gold smith workers in Karnataka district and concluded that MSDs were the major problem of the goldsmiths. The activities of the goldsmiths were also highly repetitive. Moreover, the questionnaire study revealed that most of the workers were

affected by occupational disorder like pain at neck (80%), shoulder (20%), wrist (45%), and low back (75%) and also eye problem like irritation (30%) and burning sensation (70%).

Bijetri & Sen (2014) examined the occupational profile, impact of work factor in terms of physiological, biomechanical, musculoskeletal and psychosocial discomforts prevalence among women workers in brick kilns engages in different jobs. They found that most of all falls under severe chronic energy deficiency; Major of them feels body pain, wrists, back, both knees, both thighs and both ankles due to the awkward postures adopted by them.

Salwe et al. (2011) has assessed the prevalence of musculoskeletal pain and different body posture among the house keeping department of a hotel in Texas, and concluded that these problems were highest among the worker who worked with the back in the awkward postures 65% followed by employees who work with their arm and neck in the awkward posture respectively 64%. The employees who cleaned bathrooms had a prevalence of (64%) followed by those who mopped floor and carried/emptied garbage 63%. The prevalence of musculoskeletal pain in the participants who carried heavy loads, made beds, moved furniture & used the vacuum ranged blue 61% and 63%.

Srivastava & Kiran (2014) have investigated the prevalence of Work-related musculoskeletal disorders associated with different body parts especially the back, neck lower and upper limbs depending upon the physical movement characteristics, and the ergonomics and mechanical design of work task among the 120 taxi drivers having a driving experience of above 8 hours per day, in urban areas of the Lucknow district of Uttar Pradesh. Their study reveals that taxi drivers are passes significant work related musculoskeletal disorder among different body parts.

Quansah (2005) examined the prevalence of Musculoskeletal symptoms among the Sanitation workers of Fish processing factory in Ghana, they founds that musculoskeletal symptoms were widespread among sanitation workers of the fish industry, they were particularly prevalent in the low back, the shoulder, the upper back, the neck and the wrist, hand regions.

Krause et al. (2005) in his study they examined the prevalence of musculoskeletal problems, neck-pain, and its associations with physical workload and ergonomic problem among hotel in Las Vegas. their works has shows that hotel room cleaners are a high risk group for painful and disabling work related musculoskeletal disorders in relation of Rates of occupational injury far exceed national rates for hospitality workers and service workers in general, which indicate that there is huge requirements of ergonomic intervention for job specific physical workload, worksite injuries prevention. **Stambuli (2012)** through their study among the street sweepers in ILALA municipality they examine that street sweeping dust was the main associated factor to cough, phlegm, wheezing, nose irritating and wheezing outcomes, while age associated with cough and phlegm outcomes and duration of employment associated with cough outcomes among street sweepers, Respiratory health symptoms are associated with street sweeping dust.

Nemade (2014) studies the incidence of musculoskeletal disorders among Brick kiln workers working in Pune India and importance of health education of workers to reduce the incidence of musculoskeletal disorders. Descriptive analysis of data reveals that a total of 27% of the workers suffered low back pain 8% workers reported knee pain, 6% workers experienced shoulder pain 14% of the workers experienced neck pain and 10 % had hand and foot pain. Health education and training of workers helped to reduce the incidence of musculoskeletal disorders and during follow up visit after 3 months incidence of musculoskeletal disorders was reduced by 55% and 89% of the workers were following measures to reduce development of musculoskeletal disorders.

Data and Methodology

The present study was conducted on the workers working in unorganized sectors at Lucknow city, India. Unorganized sector in the present study comprised of construction, Chikankari, brick kilns, sanitary and ornament workers. The study adopted survey research design and a sample of 500 workers comprising of 100 workers each, from each sector were selected for the study. The present study adopts the Body Discomfort scale developed by Kournika, et al. (1987). The scale uses the measurement of pains in different body parts of the workers and assesses the health related issues. The data were analyzed with the help of simple percentage and frequency tools in MS-excel.

RESULTS AND DISCUSSION

The Table No-1 reveals the result of assessment of Postural discomforts among all 500 selected unorganized workers highlights the intensity of body pain in different body parts. Maximum (17%) of workers were feelings sever pain at neck, and lowest sever pains (1.8%) at thighs, it was observed that highest % of ornamental workers were felling highest sever pains at neck, shoulder, upper back, upper arms mid back, lower arms, lower back, buttocks, thighs in comparisons to the workers of construction, sanitary, brick kilns, Chikankari. Almost (47.2%) of workers were reported moderate pain at shoulder where as the least (9%) of the workers were reported moderate pain at buttocks. Construction workers have highest (54%) moderate pains at neck and shoulder, and least (7%) at buttocks. The Chikankari workers feels moderate pain at lower back (58%) and the least (20%) pain was observed at thighs, similarly majority (55%) of sanitary workers feels moderate pains at lower back and minimum (1%) at thighs. The brick kiln worker feeling the moderate pains at legs were highest as (35%) and lowest at buttock by 9%. 65% of ornamental workers reported moderate pain at legs and minimum (3%) of workers reported moderate pains at buttocks. The highest (35%) of workers were reported mild pains at upper arm whereas the lowest levels of mild pain were reported at legs by (23.2%) of the workers. 41% of construction workers feel highest mild pains at mid back and lowest (28%) of workers feel mild pain at legs. In case Chikankari workers, (32%) of workers feelings mild pains at Shoulder and lowest (15%) at legs. The maximum (43%) sanitary workers were feeling the mild intensity of pain at upper arms and lowest (24%) at buttocks.

Table 1. Assessment of postural discomfort among workers in unorganized sector

Intensity of Pain	Intensity of Pain									
	Neck	Shoulder	Upper back	Upper arms	Mid back	Lower arms	Lower back	Buttocks	Thighs	Legs
	Severe									
Construction workers	8 (8.0)	11 (11.0)	3 (3.0)	2 (2.0)	0 (0.0)	3 (3.0)	9 (9.0)	0 (0.0)	0 (0.0)	7 (7.0)
Chikankari workers	20 (20.0)	12 (12.0)	17 (17.0)	11 (11.0)	10 (10.0)	12 (12.0)	8 (8.0)	2 (2.0)	3 (3.0)	25 (25.0)
Sanitary workers	9 (9.0)	13 (13.0)	2 (2.0)	2 (2.0)	2 (2.0)	3 (3.0)	2 (2.0)	0 (0.0)	0 (0.0)	8 (8.0)
Brick kiln workers	1 (1.0)	2 (2.0)	3 (3.0)	3 (3.0)	0 (0.0)	0 (0.0)	3 (3.0)	0 (0.0)	0 (0.0)	4 (4.0)
Ornamental workers	47 (47.0)	35 (35.0)	14 (14.0)	12 (12.0)	11 (11.0)	9 (9.0)	21 (21.0)	9 (9.0)	6 (6.0)	27 (27.0)
Total	85 (17.0)	73 (14.6)	39 (7.8)	30 (6.0)	23 (4.6)	27 (5.4)	43 (8.6)	11 (2.2)	9 (1.8)	71 (14.2)
	Moderate									
Construction workers	54 (54.0)	54 (54.0)	36 (36.0)	22 (22.0)	20 (20.0)	34 (34.0)	56 (56.0)	5 (5.0)	7 (7.0)	57 (57.0)
Chikankari workers	46 (46.0)	46 (46.0)	37 (37.0)	36 (36.0)	38 (38.0)	38 (38.0)	58 (58.0)	28 (28.0)	20 (20.0)	51 (51.0)
Sanitary workers	43 (43.0)	51 (51.0)	31 (31.0)	17 (17.0)	14 (14.0)	34 (34.0)	55 (55.0)	0 (0.0)	1 (1.0)	52 (52.0)
Brick kiln workers	25 (25.0)	22 (22.0)	19 (19.0)	15 (15.0)	24 (24.0)	20 (20.0)	36 (36.0)	9 (9.0)	13 (13.0)	35 (35.0)
Ornamental workers	51 (51.0)	63 (63.0)	50 (50.0)	47 (47.0)	42 (42.0)	59 (59.0)	70 (70.0)	3 (3.0)	6 (6.0)	65 (65.0)
Total	219 (43.8)	236 (47.2)	173 (34.6)	137 (27.4)	138 (27.6)	185 (37.0)	275 (55.0)	45 (9.0)	47 (9.4)	260 (52.0)
	Mild									
Construction workers	32 (32.0)	32 (32.0)	29 (29.0)	34 (34.0)	41 (41.0)	34 (34.0)	25 (25.0)	31 (31.0)	30 (30.0)	28 (28.0)
Chikankari workers	31 (31.0)	32 (32.0)	25 (25.0)	29 (29.0)	29 (29.0)	22 (22.0)	21 (21.0)	19 (19.0)	29 (29.0)	15 (15.0)
Sanitary workers	38 (38.0)	31 (31.0)	38 (38.0)	43 (43.0)	34 (34.0)	33 (33.0)	31 (31.0)	24 (24.0)	32 (32.0)	33 (33.0)
Brick kiln workers	57 (57.0)	58 (58.0)	31 (31.0)	32 (32.0)	30 (30.0)	40 (40.0)	42 (42.0)	17 (17.0)	12 (12.0)	34 (34.0)
Ornamental workers	2 (2.0)	2 (2.0)	32 (32.0)	37 (37.0)	37 (37.0)	28 (28.0)	5 (5.0)	38 (38.0)	39 (39.0)	6 (6.0)
Total	160 (32.0)	155 (31.0)	155 (31.0)	175 (35.0)	171 (34.2)	157 (31.4)	124 (24.8)	129 (25.8)	142 (28.4)	116 (23.2)
	No Pain									
Construction workers	6 (6.0)	3 (3.0)	32 (32.0)	42 (42.0)	39 (39.0)	29 (29.0)	10 (10.0)	64 (64.0)	63 (63.0)	8 (8.0)
Chikankari workers	3 (3.0)	10 (10.0)	21 (21.0)	24 (24.0)	23 (23.0)	28 (28.0)	13 (13.0)	51 (51.0)	48 (48.0)	9 (9.0)
Sanitary workers	10 (10.0)	5 (5.0)	29 (29.0)	38 (38.0)	50 (50.0)	30 (30.0)	12 (12.0)	76 (76.0)	67 (67.0)	7 (7.0)
Brick kiln workers	17 (17.0)	18 (18.0)	47 (47.0)	50 (50.0)	46 (46.0)	40 (40.0)	19 (19.0)	74 (74.0)	75 (75.0)	27 (27.0)
Ornamental workers	0 (0.0)	0 (0.0)	4 (4.0)	4 (4.0)	10 (10.0)	4 (4.0)	4 (4.0)	50 (50.0)	49 (49.0)	2 (2.0)
Total	36 (7.2)	36 (7.2)	133 (26.6)	158 (31.6)	168 (33.6)	131 (26.2)	58 (11.6)	315 (63.0)	302 (60.4)	53 (10.6)
Grand total	500 (100.0)	500 (100.0)	500 (100.0)	500 (100.0)	500 (100.0)	500 (100.0)	500 (100.0)	500 (100.0)	500 (100.0)	500 (100.0)

Table 2. Assessment of general health profile of workers in unorganized sector

Health problems	Construction workers (N = 100)	Chikankari workers (N = 100)	Sanitary workers (N = 100)	Brick kiln workers (N = 100)	Ornamental workers (N = 100)	Total (N = 500)
Respiratory						
Wheezing	16 (16.0)	17 (17.0)	14 (14.0)	11 (11.0)	3 (3.0)	61 (12.2)
Wheezing +breathlessness	5 (5.0)	11 (11.0)	2 (2.0)	0 (0.0)	2 (2.0)	20 (4)
Tightness in chest	0 (0.0)	0 (0.0)	1 (1.0)	0 (0.0)	3 (3.0)	4 (0.8)
Asthma	1 (1.0)	1 (1.0)	0 (0.0)	0 (0.0)	0 (0.0)	2 (0.4)
Headache						
General headache	15 (15.0)	32 (32.0)	9 (9.0)	6 (6.0)	17 (17.0)	79 (15.8)
Migraine	6 (6.0)	2 (2.0)	0 (0.0)	0 (0.0)	22 (22.0)	30 (6)
Tension headache	80 (80.0)	56 (56.0)	77 (77.0)	47 (47.0)	89 (89.0)	349 (69.8)
Vision related problems						
Problem in concentrating	0 (0.0)	21 (21.0)	1 (1.0)	1 (1.0)	11 (11.0)	34 (6.8)
Problem seeing nearer objects	19 (19.0)	29 (29.0)	15 (15.0)	20 (20.0)	46 (46.0)	129 (25.8)
Problems seeing far objects	20 (20.0)	36 (36.0)	13 (13.0)	24 (24.0)	48 (48.0)	141 (28.2)
Blurred vision	0 (0.0)	1 (1.0)	0 (0.0)	0 (0.0)	8 (8.0)	9 (1.8)
Running eyes	2 (2.0)	7 (7.0)	1 (1.0)	1 (1.0)	17 (17.0)	28 (5.6)
Irritation in eyes	2 (2.0)	73 (73.0)	10 (10.0)	3 (3.0)	93 (93.0)	181 (36.2)
Skin related problems						
skin symptoms in last month's	3 (3.0)	0 (0.0)	0 (0.0)	0 (0.0)	0 (0.0)	3 (0.6)
Rashes	17 (17.0)	7 (7.0)	5 (5.0)	16 (16.0)	21 (21.0)	66 (13.2)
Lesions	22 (22.0)	0 (0.0)	0 (0.0)	5 (5.0)	30 (30.0)	57 (11.4)
Infection	37 (37.0)	3 (3.0)	5 (5.0)	23 (23.0)	59 (59.0)	127 (25.4)
Scalp	53 (53.0)	2 (2.0)	2 (2.0)	31 (31.0)	37 (37.0)	125 (25)
Other health related problems						
Nausea ,vomiting	0 (0.0)	1 (1.0)	0 (0.0)	0 (0.0)	5 (5.0)	6 (1.2)
Stomach ache/ ulcers	10 (10.0)	7 (7.0)	2 (2.0)	7 (7.0)	15 (15.0)	41 (8.2)
Pain in joints	61 (61.0)	54 (54.0)	51 (51.0)	37 (37.0)	78 (78.0)	281 (56.2)
Anemia	2 (2.0)	3 (3.0)	1 (1.0)	0 (0.0)	23 (23.0)	29 (5.8)
Any other	0 (0.0)	0 (0.0)	0 (0.0)	0 (0.0)	0 (0.0)	0 (0.0)

58% of the brick kiln workers were feelings highest mild intensity of pains at shoulder. Highest (39%) of ornamental workers were reported mild pains at thighs and least (2%) of workers were feelings mild pains at neck and shoulder. 63%,

60.4% of workers feel no pains at buttocks and thighs respectively, whereas least (7.2%) of worker reported no pains at neck and shoulder. Maximum (76%), (64%), (51%), (50%) of sanitary, constructions, chikankari, ornamental workers were

feeling no pains at buttocks, whereas (75%) of the brick kilns workers were reported no pains at thighs. Overall it was observed that buttocks and thigh were the two body parts where maximum percentage of workers of all the five sectors were feelings no pains. Results of the body discomfort analysis supports the findings of the study conducted by the **Ghosh et al. (2010)** the goldsmith ornamental workers were affected by occupational disorder like pain at neck (80%), shoulder (20%), wrist (45%), and low back (75%) and also eye problem like irritation (30%) and burning sensation (70%). **Tiwari and Gangopadhyay (2011)** argues that construction worker belongs to the unorganized sectors are victims of headache, backache, joint pains, skin diseases, lung disorders. **Nemade, (2014)** 27% of the brick kilns workers suffered low back pain (8%) workers reported knee pain, (6%) workers experienced shoulder pain (14%) of the workers experienced neck pain and (10%) had hand and foot pain. **Chaudhuri et al. (2012)** it showed that pain/discomfort was mainly at the low back (90%), neck (72%) and wrist (62%). 72% of workers had a pain of >20 in the pain scale of the pain detect tool & 80% of workers were not satisfied with treatments with analgesics/antipyretics.

The above table No-2 reports the general health problems of workers related to the respiratory, headache, vision, skin, others. Maximum (70%) of the workers were suffering from tension headache, whereas problem of asthma were reported by the minimum (0.4%) of the workers. It was also observed that the problems of pains in joint, irritation in eyes were reported by maximum (56.2%), (36.2%) of the workers respectively. On the other hand the problem of wheezing, wheezing breathlessness, tightness in chest, asthma, migraine, concentrating, seeing far objects, running eyes, blurred vision, were reported by from least (0.4%) to maximum (10%) of the workers. Maximum (80%), (77%), (47%) of the construction sanitary, brick kiln workers were suffering from tension headache whereas (93%) of ornamental workers and (73%) of Chikankari workers were reported highest problem of irritation in eyes. The results of the study supports to the study of **(Stambuli, 2012)** examined the health problems among the street sweepers in ILALA municipality they examine that street sweeping dust was the main associated factor to cough, phlegm, wheezing, nose irritating and wheezing outcomes, while age associated with cough and phlegm outcomes and duration of employment associated with cough outcomes among street sweepers, Respiratory health symptoms are associated with street sweeping dust.

Conclusion

The workers of all the sectors under research were at high level of risk of Musculoskeletal Disorders (MSDs), as they have to work hard, and be in several awkward postures in order to complete task, due to the work posture for long duration, which hampers the correct posture and leads to suffer from pain. Pains in the body parts for the longer time, took the form of permanent disorder in the parts of the body of the workers. The prevalence of the Musculoskeletal Disorders (MSDs) were not similar among all the workers, as the workers have to works make different posture depends of work it should varies and observed that the workers belongs to the Construction, Sanitary, Brick kilns were reported higher pains in the upper

part of the body where as the workers of the Chikankari and bone craving have to work almost sitting posture and they reported major pains in the buttock and thighs. The intensity of Musculoskeletal Disorders (MSDs) observed among the majority of the workers were tension headache as it is Maximum (80%, 77%, 47%) among the workers of construction, sanitary, Brick kiln, sectors where as (93%) of ornamental workers and 73% of Chikankari workers were reported highest problem of irritation in eyes.

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