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FREQUENCY OF PAIN IN ELBOW, WRIST AND HAND AMONG FARMERS DURING HARVESTING

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Abstract:

Background: *Prolonged sitting during harvesting may lead of development of bad posture, repetitive injury in upper limb including elbow, wrist and hand. Gross to fine motor activities have to be incorporated during harvesting such as cutting, planting, threshing, scooping, uprooting and many other similar activities. These put ligaments, bones, tendons, muscles, joints and even surrounding neurovascular bundle at high risk.*

Objective: *To determine frequency of pain in elbow, wrist and hand among farmers during harvesting.*

Methods: *It was cross sectional study conducted in Rajanpur completed in 6 months. Total 131 farmers were selected through sample of convenience. The farmers were screened according to eligibility criteria. The farmers having degenerative changes were excluded. The data was collected through questionnaire and analyzed in SPSS 20.0. Frequency distribution was analyzed and mean and standard deviation was calculated for quantitative data.*

Results: *The results showed that that 8.4% patients were having elbow pain, 14.5 wrist pain, 16.8% having hand pain, 12.2% had been having elbow pain, 9.9% had been having wrist and forearm pain, 6.9% have been having forearm pain, 18.3% were having hand and wrist pain, 2.3% were having wrist and elbow ache, 2.3% were having elbow and hand ache, 8.4%have been having wrist, forearm and elbow ache.*

Conclusion: *The findings concluded that there is high frequency of musculoskeletal pain disorders among farmers. The most farmers reported that multi-joints were involved, however solely reported joint was elbow followed by wrist and hand.*

Key Words: *Prevalence, Harvesting, Farmers, Musculoskeletal Pain, Vibration syndrome, Disability*

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INTRODUCTION:

Muscular problems have an effect on the musculoskeletal structure inclusive of bones ligaments, blood vessels, tendons, muscle groups and so on. These conditions can result from repeated activities, bending positions due to extended standing and sitting[1]. Work-related musculoskeletal problems have top risks in farming than other occupations. Harvesting is commonly observed, both male farmers and female farmers, as a strong outside work. A range of studies have labeled farming as an hazardous occupation. Farming movements are mainly to difficult positions which include: kneeling, binding, crawling, warped to one side and leaning [2], exhausting or repetitive motions thrilling heavyweight that could have an outcome on now annoying physical pressures and harms. Since the environment of filed work and agriculturalists are at precise danger of growing muscular issues.

Musculoskeletal conditions may want to consequence in frustrations, ache, impairment, harm, illness, stumpy outstanding of life expectancy and reduced the performance [3].Farming is a physically hard career.[4]. Muscular complaints exist alike upper limb issues, osteoarthritis, upper, accidents, disarticulations, splits, and anxieties[5]. in harvesting season, a lot of patients seek health care for complaints of pain, and injuries. [5]. The prevalence of pain and disorders among farmers of India was 60% and that of knee was 39% [6]. The prevalence of elbow and wrist pain amongst harvesting in Eastern Azerbaijan was 45% and 30% respectively [7]. The occurrence of musculoskeletal conditions surrounded with the benefit of farmers of South Korea, Kangwon province changed into 90.6% [8]. [9]. This study was primary focused on figuring out frequency of musculoskeletal disorders related to elbow, wrist and hand in formers. Although, there may be present broad of pain disorders but these regions are directly involved in a repetitive use for farming task. Even in current age of technology, most of machines are operated that involves upper limb.[10]. The idea was to suggest ergonomic care in case of marked musculoskeletal changes.

METHODS:

The cross-sectional study was conducted including the data of 131 farmers who were surveyed through non-probability convenient sampling from Rajanpur via a standardized questionnaire. The farmers including both male and females of any age particularly having maximum experience in farming and also with no degenerative changes were included in the study. The farmers who were also doing jobs besides farming and also farmers having any diagnosed psychiatric illness, congenital deformities or deformities due to fractures, malignancies, osteoarthritis, trauma/injury and diabetes were excluded from the study.

Result was extracted using IBM Data Analysis Software SPSS version-20 to determine the frequency of hand, wrist and elbow pain in farmers. Mean and standard deviation was calculated used for quantitative variables. Frequency and percentage were calculated for categorical variables. P-value of < 0.05 was considered significant.

RESULTS:

According to the results, the imply age of the sufferers became 33. 48±10.Sixty-two years the minimum age changed into 20 years and most have been 60 years. There become extensive association between Gender and pain period. There had been 14.5% sufferers in which dominant hand become left and among 85.5% dominant hand become changed into right. There have been 61.8% males and 38.2% woman. There had been 8.4% sufferers consuming elbow pain, 14.5% were consuming wrist ache,16.8% had been consuming hand ache, 12.2% have been consuming hand, wrist, forearm and elbow pain, in elbow, 9.9% have been consuming forearm and wrist pain, 6.9% were consuming hand, wrist, forearm pain, 18.3% had been consuming hand and wrist pain ache, 2.3% were consuming wrist and elbow pain, 2.3% have been consuming hand and elbow pain, 8.4% have been consuming wrist, forearm and elbow pain.

There were 66.4% sufferers without a pain in elbow all over their work, 6.1% had been consuming fewer elbow ache, 11.5% were consuming unchanged elbow pain, 16.0% have been consuming poorer elbow ache throughout running hours. 67.2% sufferers without an elbow pain after their shift, 18.3% were having much less elbow pain, 12.2% had been having identical elbow ache, 2.3% had been consuming poorer elbow ache.

There have been 70.2% sufferers wherein elbow pain didn't intrude with work, 26.0% having a few interferences, 3.8% needed to take day off because of ache. There become sizable association between after your shift ache and take break day due to pain. There had been 15.3% having some interference 74.0% sufferers in which elbow ache didn't interfere with sleep, 10.7% it interferes with sleep. There become massive relationship between ache and interference the ache in work at some stage in due to the fact p-value changed into sizeable.. There have been 33.6% patients in which wrist/ forearm pain didn't affect with

harvesting, 40.5% having a few interfering, 26.0% needed to take time without work because of ache. There have been 50.4% sufferers in which wrist/elbow ache didn't affect with harvesting, 37.4% having some interfering, 12.2% needed to take break day because of pain. There become widespread association among pain intrude along with your life outdoor work and interfering the pain in sleep at some point of due to the fact p-value turned into sizable. as portrayed in Table 02.

DISCUSSION:

The current study provided a look at frequency of musculoskeletal complaints in farmers. It gave an insight that hand pain of farmers is at high risk due to repetitive actions, twisted and bending one facet[11]. The current study confirmed that musculoskeletal problem are directly related to occupational factors, however, in a previous study by Kirkhorn et al, both direct and indirect factors were considered that may lead to musculoskeletal problems. to determine the occurrence of muscular conditions[12]. Another's studies as well as were shown the frequency of musculoskeletal conditions in workers[13].

In another research in 2006, by Rosecrance et al., study on Kansas farmers, 60% of farmers informed musculoskeletal conditions during the harvesting previous twelve months[14]. The most workload of farming during harvesting and other farming activities leads musculoskeletal disorders. As a result, additional non-working issues can affect the frequency of farmer's muscular conditions. One way to define significant role of crop period is comparison of musculoskeletal during and immediately after harvesting season in comparison to remaining whole year. [15]. The present study put stresses on different regions producing effects of disorders. According to present study farmers suffer elbow pain during working, define the significance part of crop period role in occurrence of musculoskeletal complaints, the consequences of discomfort in the dissimilar portion of body in previous month remained associated with dissimilar portion of body in previous 1 years.

It remained specified that the complaint rate in previous month consume innocently improved in association with complaint rate in previous 1 years [16]. Musculoskeletal disorders in farmers during harvesting can some effects on outside of the work, effects on sleeping 10.7% it interferes with sleep, 74.0% patients in which pain didn't interfere with sleep, 15.3% having some interference. Musculoskeletal disorders occurrence discovery is alike to a Kansas research, wherever 60% of workers reported musculoskeletal disorders warning sign during the previous 12 months, but many factors discovered here, such as farm size, years and age, were not related with basic prevalence of musculoskeletal disorders and unpredictably no change in frequency was found between farm initiative collections, even though variable physical stresses[17]. Conversely, it is recognized, that farmers who worked for long time per day in any kind of work had expressively developed musculoskeletal disorders, representing fatigue or greater distance of contact [18].

CONCLUSION:

The findings concluded that there is high prevalence of musculoskeletal pain disorders among farmers. The most farmers reported that multi-joints were involved, however solely reported joint was elbow followed by wrist and hand.

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Tables: Table 1 Farmers Demographics

Variables	Frequency	Percentage	P Value
Dominant Hand			
Right	112	85.5	0.113
Left	19	14.5	
Gender			.000
Male	81	61.8	
Female	50	38.2	
Age of Workers			.090
15-25 Years	33	25.2	
26-35 Years	43	32.8	
36-45 Years	35	26.7	
46-55 Years	17	13.0	
56-65 Years	3	2.3	
Experience In Current Profession			.104
0-5 Years	18	13.7	
6-10 Years	40	30.5	
11-15 Years	15	11.5	
16-20 Years	26	19.8	
21-25 Years	15	11.5	
26-30 Years	12	9.2	
31-35 Years	1	.8	
More than 35 Years	4	3.1	
Experience In Current Work			.693
0-10 Years	58	44.3	
11-20 Years	41	31.3	
21-30 Years	27	20.6	
> 30 Years	5	3.8	

Table 2: Musculoskeletal Problems

Variables	Frequency	Percentage	P Value
Pain During Work			.000
No	87	66.4	
Less	8	6.1	
Same	15	11.5	
Worse	21	16.0	
Pain after Discontinue Work			.000
No	88	67.2	
Less	24	18.3	
Same	16	12.2	
Worse	3	2.3	
Pain with Work for a Week			.000
No	94	71.8	
Less	32	24.4	
Same	5	3.8	
Taking off Due to Pain			.000
Yes	16	12.2	
No	115	87.8	
Degree of Interference with Your Work			.000
No interference	92	70.2	
Some interference	34	26.0	
Had to take time off work due to pain	5	3.8	
Degree of Interference with Your Life Outside Of Work			.000
No interference	109	83.2	
Some interference	18	13.7	
Had to take time off work due to pain	4	3.1	
Degree of Interference with Your Sleep			.000
No interference	97	74.0	
some interference	20	15.3	
it affect me every night	14	10.7	