

PREVALENCE WORK-RELATED MUSCULOSKELETAL DISORDER AMONG FEMALE IN PADDY CULTIVATION

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ABSTRACT:

In India the role of women are very contributed in the field of agriculture. But argi sector have more work task like as strenuous physical task and also demand of high level of manual labor force.in this present study was design for assessment of MSDs among female farm workers in paddy cultivation. In this study selected area was Rudrapur Tehsil in Deoria districts and sample is 260 female farm workers. Questionnaire schedule used for body assessment and investigate body part discomfort was evaluated by utilizing a 10-point body part discomfort scale. Most of female farm workers suffered from body discomfort especially in the low back (99%), wrist (89%) in winnowing activity, and (26.93%) was suffered frequency of pain 1-2 time in a month. Present study reveal that female farm workers suffered significant physiological stress due to work lode of farming and household. Consequently all these factor affected female farm workers health and life

Keywords - Female farm workers, MSDs, Body Discomfort, Frequency of pain in body part

INTRODUCTION

India is an agriculture-based country and large portion of population maintain their livelihood depending on agriculture. *India* being one of the largest producers of most of the food crops but Paddy (rice) is the main crop in this country. When we saw the paddy cultivation, it is very water dance and hard working and in this cultivation men and women both workers are engage and deplete a great extent of their physiological cost for food production. women have give their main and important contribution in different processes of crop production (Chandra, N., & Parvez, R. 2016)^[2]and also they suffered different type of occupational health hazard, musculoskeletal disorders (MSDs) and various work-related problems (Patil S.2018)^[11]. Musculoskeletal disorders (MSDs) which are the most common and costly problem for people cause of short term and long-term pain, repetitive motion injury and poor work practice as well as physical disability, affected millions of farmers throughout the world. The main factors of these problems are among the less technically advanced sector workers, especially involved in stooped posture and repetitive manual tasks. The farming sector are dispatch by appropriate very difficult posture (Mahto, P. K., & Gautam, B. B. 2018)^[7]. Those postures may be the causes, to some extent, for human work efficiency. The agricultural workers and labors have to suffered many farm related problems during work. According to 11 the International Labor Organization, the work related musculoskeletal diseases play a vital role in terms of occupational health and the economy (Kar,& Dhara 2007)^[7] For the paddy cultivation, several steps are followed, for example., preparation of field, sowing of seeds, transplantation, irrigation, harvesting, winnowing and threshing. Above agriculture activities mostly done by feminization. The term Feminization of agriculture has been refers to increasing participation of women in agricultural activities, measured as a ratio of males to females (Itishree, P. 2017)^[3], unequal fixation of family exertion (Tamanget.al., 2014)^[13] or the important in the participation of women whose main occupation is agriculture, but also this participation she suffered different physically and mentally hazards and reason of various health problems like MSPs and MSDs in women workers. In other study observed that the rural population was a heterogeneous distribution with MSDs. Women held a percentage of 71.0%, while men 29.0% (Athanasios, M. et.al.)^[1]MSDs were occurred in the result of trauma such as sprains, fractures, dislocations (Osborne). *Reported* trends suggest that the *prevalence* of MSDs problems such as osteoarthritis of the hip and knee, upper limb disorders, low back pain (LBP), and syndrome of hand/arm vibration. More than 60% of farmers suffered to work related MSDs disorders during the previous year in Southeast Kansas, (Rosecrance, j. 2006)^[12]. During 1995 a study in Britain, searchers found that approx. to 43000 farmers reported work related MSDs in their occupations (Osborne, A., Blake, C., Fullen, B. M., Meredith, D., Phelan, J., McNamara, J., & Cunningham, C. (2012)^[10]. In other study investigating and found 31.4% suffered with arthritis in the republic of Ireland and 17% farmer had back pain to the most illness/disease were reported as harmful consequence of MSDs. Approximately 122,859 active cases of work-

related musculoskeletal disorders in 2017 in Thailand (Kaewdok, T., Sirisawasd, S., & Taptagaporn, S. 2018) [5]. MSDs are responsible for different type of diseases/illness and go down in the attribute of life and reduction in productivity (Niu, S. 2010) [8]. The musculoskeletal disorders are prevalent into all over the world and diffuse their impact (Athanasios, M., & Gogos, C. V.) [1]

METHODES AND MATERIAL

In this study 260 paddy cultivator were selected in different village of Rudrapur Tahsil, Gauri Bazar block, District Deoria, Uttar Pradesh. Female paddy cultivator aged group between 22- 60 and identified paddy cultivator engaged in different activity of paddy harvesting. Respondent were selected through purposive random sampling and they suffering from different type of health hazard and musculoskeletal disorders. In this study prevalence of the workers was evaluated by the modified Nordic musculoskeletal questionnaire technique.[8] This questionnaire find out the details of individual detail, type of work, and also include questions on occurrence or frequency of pain and affected body parts. To investigate body part discomfort was evaluated by utilizing a 10-point body part discomfort scale.[9].where Mild pain was defined as scale ≤ 4 ; and moderate pain was defined as scale 4.1 to 6.9 and severe pain as scale ≥ 7 . discomfort rating of the workers.

RESULT AND DISCUSSION

Table:1 Distribution of percentage (%) of risk factor of musculoskeletal disorders in different body part among female farm workers during paddy cultivation

Affected body part	Paddy Cultivation Task				
	Uprooting of Seedling	Transplanting	Harvesting	Threshing	Winnowing
Shoulder	62	23	25	32	55
Neck	23	34	44	23	12
Hand	13	67	41	71	88
Wrist	76	82	80	20	89
Lower Back	99	98	96	26	66
Knees	87	81	42	18	06
Ankle	16	17	07	00	09

The Table1 Show that the incidence of pain in different body part in different activity in Paddy cultivation lead to musculoskeletal disorders. it was extremely prevalent uprooting seedling job where 99.0% of the workers reported highly stressful condition of lower back, it was followed by transplantation (98.0%) and harvesting operation (98.0%). The result show that 62% female farm workers suffered from Shoulder Stress and Wrist was affected 98%of female farm workers during transplanting operation. In Trashing case 72% female suffered of MSD. The pain full condition and Musculoskeletal disorders occur due to adopted awkward posture and repetitive motions while doing farm activity and most farming task performed in standing posture, sitting posture, squatting posture, and bending posture some time bending posture is causes of abortion.

Table:2 Distribution of female farm workers according to their frequency of pain.

Frequency of pain	Frequency (= 260)	Percentage
Several times a day	22	8.47
Once every day	61	23.47
3-4 times in a week	68	26.16
1-2 times in a month	70	26.93
Constant	34	13.3
No pain	5	1.7

Show the data of table 2 the exertion of pain till how long in the different body segment of female farm workers. It was revealed that maximum percentage 26.16% of female farm workers suffered MSD 3 to 4 time in a week, 26.93% faced problem 1 to 2 time in a month and only 8.47% female experience pain several time in a day, 13.3 % complain feel pain constantly in their body part.

Table:3 Distribution of farm women according to severity of discomfort.

Severity of Discomfort	Frequency	Percentage (%)
Mild	47	18.08
Moderate	92	35.39
Severe	73	28.08
Worst	38	14.62
Over all discomfort	9	3.47

The table 3 shows that the assessment of discomfort had taken by using 10 point scale of female farm workers. The data revealed that female farm workers engaged in different activity of paddy cultivation were suffering different type of body pain. The majority of farm women 35.9% felt moderate discomfort and 28.8 % suffered sever discomfort.

CONCLUSION

The present study concluded that the farm women suffered multiple musculoskeletal problem that causes by the prolonged working hours and awkward postures. It is reality no any cost calculated of farm women, she involved in dual work house and farming work such as cooking , cleaning of house and washing cloths, and also care all family members etc. before they moved off the fields. It may be suggest that awareness program and training about the adoptive postures, PPE, and introducing new design farming equipment should be taken work condition farm workers.

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