

Problems Faced by the Agricultural Workers at Faizabad District: An Analytical Study

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ABSTRACT

Background: Agriculture workers are defined as workers who work in the field for the wages. They generate almost all of the food that we consume. Their health and safety have a direct impact on the growth of agricultural production. **Aim:** This study focused on risk factors and problems faced by agricultural workers. **Materials and Methods:** The present study included 150 agricultural workers. The study sample was selected using random sampling procedure in the Balramau area of Faizabad district. Data were collected using a self-structured interview schedule. **Results:** The study clearly revealed that maximum problems were faced by the respondents due to irrigation, fertilizers or pesticides, thresher or tractor causes hearing loss, sharp objects occurred cuts and injuries, breathing problems due to soil, and electrocution. Female agricultural workers faced more problems as compared to male agricultural workers. **Conclusion:** Agricultural workers do not have any regular employment, health security, job security, stable income, or social security protection. The analysis underlines that appropriate safety and health management may be feasible by empowering local infrastructure through government policies.

Keywords: Agriculture, Agricultural workers, Electrocution, Thresher, Irrigation

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INTRODUCTION

Agriculture is the backbone of the Indian economy and it is the most important factor in the country's socioeconomic development.^[1] In the recent era of progress, India's agriculture sector is undergoing a dynamic phase. It provides 65% of India's working population with employment opportunities.^[2] Agriculture work is considered as one of the most dangerous occupations in most countries. Because of the high reporting rates among agricultural workers, most of injuries and illnesses happens in this sector. Respiratory disease, noise-induced hearing loss, pesticide- and electrocution-related illnesses, poisonous animal-related illness, and higher cancer case reporting by agricultural workers.^[3] Because of the hard work done under difficult conditions, farming is considered as physical and mental health hazards.^[4] Work-related disorders refer to problems that are also known as cumulative trauma disorder, repetitive strain injury, or overuse syndromes.^[5]

Agriculture workers are the agricultural sector's most important pillars of growth and development. According to the fourth report of the joint ILO/WHO committee on occupational health, an agriculture worker is one who works in field, whether permanently or temporarily, regardless of their legal status. For agricultural workers, accidents (machine injuries, snake, and insect bites), toxic dangers (chemical exposures and insecticide poisoning), physical hazards (severe weather and solar radiation), and respiratory difficulties (farmer's lung and occupational asthma) are all possible health issues.^[6] The use of pesticides or fertilizers in the field or workplace and biomechanical issues may be the main causes of many health problems.^[7] Cuts on the limbs, scraping on the skin, blisters on the skin, superficial vein and deep vein cuts, cuts on toes or fingers, and permanent loss of any body part are all common injuries among agricultural workers. The major division with the highest risk of occupational skin diseases has consistently been recognized as agronomy.^[8]

Injuries sustained while cultivating land are one of the major reasons of a country's economic downturn. Many tools are used in agricultural farms and there is a high risk of injury at

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work.^[9] Accidents and injuries are natural hazards for anyone who works in the farm and may occur as a result of a combination of elements, such as machine, crop, poisonous animal, pesticides, or environmental factors.^[8] Physical risks from agricultural machinery and animals produce evident and immediate damage, but the noise that comes with many farming activities promotes a more insidious onset of noise-induced hearing loss.^[10]

Noise-induced hearing loss is not the only danger that comes with it. Noise exposure can increase stress levels and farmers are more likely to be injured as a result of noise exposure.^[11] Agriculture workers use a variety of machinery, including hand and riding tractors, mowers, millers, and motorized backpack sprayers. The amount of time spent operating field tractors and working around grain dryers has been linked to hearing loss in studies.^[12] Agriculture had the greatest rates of both fatal and non-fatal injuries in the United States in 2015, according to the United States Bureau of Labor Statistics (BLS). For hired farm workers, the fatal injury rate was 22.8/100 000 full-time equivalent (FTE) workers and the non-fatal injury rate was 5.7 injuries/100 FTE.^[13] To control insects and other pests and increase output, agriculture in both

developed and developing countries has become heavily reliant on the usage of chemical compounds. However, widespread usage of these chemicals, mostly pesticides, has been linked to environmental and human health problems around the world.^[14]

The purpose of this study was to evaluate problems or issues faced by the agricultural workers working in the fields.

MATERIALS AND METHODS

Sample

The sample size was 150 respondents including male (74) and female (76) agricultural workers. For this study, the sample was selected from the Faizabad district. One block (Balarmau) was randomly selected from the Faizabad district, and in this one block, three villages (Bharat ka purwa, Pandit ka purwa, and Khasha ka purwa) were selected using multistage random sampling technique.

Tool Used

A self-structured interview schedule was used to carry out the present study.

Data Collection

For gathering information from agricultural workers, the interview method was used. Ethical approval and prior permission were obtained from the agricultural workers before the data collection for the study. The protocol was explained verbally in their local language before data collection. A total of 150 agricultural workers who agreed to provide information were selected. All of the government's rules and directions for COVID-19 were followed and the data were gathered by visiting the fields and their residences.

Statistical Analysis

The data were coded and analyzed using IBM SPSS 20.0 Version. The problems faced by respondents were calculated with the help of mean and standard deviation and the significance was tested using t test and ANOVA.

RESULT AND DISCUSSION

Distribution of the Respondents According to the Age

Table 1 shows that the age group (20–30 years) proportion of male and female agricultural workers were 22.9% and 13.1%, respectively. About 20.2% of the male agricultural workers were in the age group of 30–40 while 25% of the female agricultural workers were in the age group of 30–40 years. About 25.6% male and 23.6% female agricultural workers belonged to the age group of 40–50 years.

Table 1: Distribution of the respondents according to the age

S. No.	Age (in years)	Male (N=74)	Female (N=76)
1.	20–30	17 (22.9%)	10 (13.1%)
2.	30–40	15 (20.2%)	19 (25%)
3.	40–50	19 (25.6%)	18 (23.6%)
4.	50–60	10 (13.5%)	7 (9.2%)
5.	Above 60	13 (17.5%)	22 (28.9%)

Figures in parenthesis indicate percentages

About 13.5% male agricultural workers and 9.2% female agricultural workers further come under the age group of 50–60 years. About 28.9% female agricultural workers and 17.5% male agricultural workers were found to be in the age group of above 60 years.

Educational Status of the Agricultural Workers

Table 2 shows that education is a vital part of human well-being and is essential for comprehension. According to the data, 26.3% of female agricultural workers were found to be illiterate, compared to 14.8% of male agricultural workers. The primary education of male agriculture workers was 18.4% whereas female agricultural workers have 8.1%. The percentage of male and female agricultural workers in secondary education was found to be 18.9% and 22.3%, respectively.

About 33.7% male and 23.6% female agricultural workers studied intermediate. About 12% of male agricultural workers had done graduation and postgraduation. The percentage of graduate female agricultural workers was 7.8%. Very few (1.3%) female agricultural workers found to be completed their postgraduation.

Family Income of the Agricultural Workers

Table 3 clearly shows that the family income of 40.5% male agricultural workers was <1000 whereas 32.8% of female agricultural workers had family income <1000. Majority (44.7%) of female and 24.3% of male agricultural workers was found to be 1000–2000 income groups.

However, 29.7% male and 18.4% female agricultural workers had family income between 2000–3000. Very few percentage (5.4%) of male and (18.4%) female agricultural workers had a family income >3000.

Working Hours

The Table 4 shows that majority (62.1%) of male agricultural workers worked for 6–8 h, 21.0% of female agricultural workers worked for 6–8 h a day. About 61.8% of female agricultural workers worked for 8–10 h, 37.8% of male agricultural workers worked 6–8 h a day.

The data in the Table 4 clearly indicate maximum participation of female work force in farm work. About 61.8% of females work for 8–10 h, whereas only 37.8% of male farmers work for 8–10 h. None

Table 2: Educational status of the agricultural workers

S. No.	Education	Male	Female
1.	Illiterate	11 (14.8%)	20 (26.3%)
2.	Primary education	6 (8.10%)	14 (18.4%)
3.	Secondary education	14 (18.9%)	17 (22.3%)
4.	Intermediate	25 (33.7%)	18 (23.6%)
5.	Graduation	9 (12.1%)	6 (7.8%)
6.	Postgraduation	9 (12.1%)	1 (1.3%)

Figures in parenthesis indicate percentages

Table 3: Family income of the agricultural workers

S. No.	Income (per month)	Male	Female
1.	<1000	30 (40.5%)	25 (32.8%)
2.	1000–2000	18 (24.3%)	34 (44.7%)
3.	2000–3000	22 (29.7%)	14 (18.4%)
4.	>3000	4 (5.4%)	3 (3.9%)

Figures in parenthesis indicate percentages

of the male farmers work for 10–12 h whereas 17.1% of the female farmers work for 10–12 h.

Problems According to the Gender

The Table 5 clearly indicates that female agricultural workers experienced more problems as comparison to male agricultural workers. It is evident from the Table 5 that female agricultural workers had to work in water for a long time during irrigation in the field, due to which they had to face many problems ($\mu = 1.00$) as compared to the male agricultural workers. Female agricultural workers had to face more problems ($\mu = 0.82$) when soil particles or any other things went into the eyes while working in the field, they had more problems compared to male agricultural workers. Female agricultural workers had more problems ($\mu = 0.98$) while spraying chemicals, fertilizers in the fields, they complained of itching and allergies caused by the chemical and some female agricultural also reported headache. Due to continuous sound of thresher or tractor entering the ears while working in the field, the female agricultural workers suffered more problems ($\mu = 0.97$) as compared to the male agricultural workers. The ears used to go numb, they could not hear anything from their ears for a long time. Female agricultural workers suffered more ($\mu = 1.05$) injuries such

as cuts, pricks while spinning, hoeing, and weeding in the field with sharper objects compared to male agricultural workers.

The female agricultural workers told that there was a lot of problem ($\mu = 0.77$) in cleaning the grain after the grain was spun in the field, tied it up, and carried it from one place to another and when the grain would come home after getting ready. Compared to male agricultural workers, female agricultural workers suffered more problems. Female agricultural workers had to face more problems ($\mu = 0.94$) while working in the field during the summer season. Female agricultural workers had more ($\mu = 0.97$) problems compared to male agricultural workers due to dust, soil, or other things entering the nose, ears, and eyes while working in the field. Most of the female agricultural workers had complained that there is a lot of fear ($\mu = 0.92$) of current while running the electric motor for irrigation, due to which they had to face many problems. Female agricultural workers had more problems with electric motors compared to male agricultural workers. Male agricultural workers had complained of more ($\mu = 0.94$) problems in the field by snakes and other poisonous animals compared to female agricultural workers. Male agricultural workers reported more ($\mu = 0.87$) skin problems while working in the field compared to female agricultural workers.

Problems According to the Working Hours

The data of Table 6 depicted that maximum problems were felt by the respondents whose working period was 10–12 h. Agricultural workers who worked continuously in water for a long time while irrigation in the field had to face more problems ($\mu = 1.00$) whose work duration was 10–12 h. Those agricultural

Table 4: Working hours

S. No.	Working hours	Male (N=74)	Female (N=76)
1.	6–8	46 (62.1%)	16 (21.0%)
2.	8–10	28 (37.8%)	47 (61.8%)
3.	10–12	0 (0%)	13 (17.1%)

Figures in parenthesis indicate percentages

Table 5: Problems according to the gender

S. No.	Problems	Male		Female		T	P
		Mean	SD	Mean	SD		
1.	Problems in water while irrigation	0.77	0.42	1.00	0.00	4.72	0.00**
2.	Problems in eyes due to soil particles	0.77	0.42	0.82	0.37	0.89	0.74
3.	Problems due to chemicals or fertilizers	0.52	0.50	0.98	0.11	7.77	0.00**
4.	Hearing problems due to thresher or tractor	0.41	0.49	0.97	0.16	9.25	0.00**
5.	Injuries due to sharp objects	0.71	0.45	0.97	0.16	5.77	0.00**
6.	Problems while cleaning grain or making bundles	0.74	0.43	0.77	0.41	0.47	0.34
7.	Problems in summer season	0.63	0.48	0.94	0.22	5.08	0.00**
8.	Difficulty in breathing due to soil	0.44	0.50	0.97	0.16	8.74	0.00**
9.	Fear of electrocution	0.39	0.49	0.92	0.27	8.19	0.00**
10.	Fear of snakes and other animals	0.94	0.22	0.92	0.27	0.60	0.22
11.	Skin problems	0.87	0.32	0.82	0.37	0.85	0.08

M: Mean, SD: Standard deviation, **highly significant $P < 0.01$

Table 6: Problems in the field according to the working hours

S. No.	Problems	Working hours			F	P
		Mean±SD				
		6–8 h	8–10 h	10–12 h		
1.	Problems in water while irrigation	0.79±0.41	0.94±0.22	1.00±0.00	5.29	0.00**
2.	Problems in eyes due to soil	0.75±0.43	0.81±0.39	0.92±0.27	0.99	0.37
3.	Problems due to chemical or fertilizers	0.66±0.47	0.80±0.40	1.00±0.00	4.18	0.01**
4.	Problems in summer season	0.74±0.44	0.80±0.40	1.00±0.00	2.22	0.11**
5.	Hearing problems due to tractor or thresher	0.59±0.49	0.73±0.44	1.00±0.00	4.75	0.01**
6.	Problems while cleaning grains or making bundles	0.79±0.41	0.89±0.31	0.84±0.37	2.10	0.25
7.	Injuries due to objects	0.79±0.41	0.90±0.33	1.23±0.43	7.53	0.00**
8.	Difficulty in breathing due to soil	0.56±0.49	0.78±0.41	1.00±0.00	7.51	0.00**
9.	Fear of electrocution	0.53±0.50	0.72±0.45	0.92±0.27	5.09	0.00**
10.	Fear of snakes and other animals	0.96±0.17	0.90±0.29	0.92±0.27	1.02	0.36
11.	Skin problems	0.83±0.37	0.88±0.32	0.76±0.43	0.62	0.53

M: Mean, SD: Standard deviation, **highly significant $P < 0.01$

workers whose working period was 10–12 h suffered more problems ($\mu = 0.92$) due to soil particle or any other thing getting into the eyes while working in the field. Agricultural workers had to face a lot of problems ($\mu = 1.00$) while spraying the chemical to protect the crop from insects, mold, and other things that can damage the crop, those workers had more complaints who worked in the field for more than 10 h. Agricultural workers whose working for 10–12 h had told that hearing tractor or thresher continuously while working in the field causes more ($\mu = 1.00$) difficulty in hearing.

Agricultural workers whose working duration was more than 8 h had to face more problems in cleaning the grain and keeping it tied. More injuries ($\mu = 1.23$) during working in the field were found among those workers whose working hours were 10–12 h. Those workers whose working duration was more than 10 h had more problems ($\mu = 1.00$) in breathing due to dust and soil while working in the field. The fear of electrocution was found maximum ($\mu = 0.92$) in those agricultural workers who work continuously for 10–12 hours in the field. Fear of snakes and other poisonous animal ($\mu = 0.96$) was found among the agricultural workers whose working period of 6–8 h. Lot of skin problems ($\mu = 0.88$) felt by the agricultural workers whose working hours were more than 10 h.

CONCLUSION

India is primarily a farming country. Agriculture is an important source of income for many Indian families. A large number of rural women are also engaged in agriculture. Agricultural workers are vulnerable to the same illnesses and chronic diseases as the general population, but there is a evidence that they are at a higher risk of occupational acute injury, some chronic diseases, and pesticide poisoning. Farm workers are more likely to develop a variety of non-occupational (e.g., obesity and diabetes) and occupational (e.g., injury, respiratory disease, and chemical injury) diseases. On a daily basis, agricultural workers confront dangers such as operating heavy machinery and equipment, lifting weights, and working with animals. They are frequently exposed to extreme weather, high levels of noise and vibration, chemicals, pathogenic agents, dust, and other organic compounds. Agricultural workers suffer more problems due to irrigation, fertilizers or pesticides, thresher or tractor causes hearing loss, sharp objects occurred cuts and injuries, problems in summer, breathing problems due to soil, and electrocution. Female agricultural workers suffer more problems as comparison to male agricultural workers. Female agricultural workers have to face more problems because they work for long hours in the field. Female agricultural workers work longer hours as compared to male agricultural workers. Agricultural workers, however, typically lack access to the required health information and training services to appropriately respond to these health

concerns due to the distant nature of rural locations. Agriculture-related health issues must be integrated into a well-defined rural development strategy and recognized risk factors should be taken into consideration when targeting injury prevention programs.

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