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## HEALTH ISSUES OF FARM WOMEN: DURING WHEAT HARVESTING

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### Abstract

Wheat cultivated as a food crop mainly in Uttar Pradesh, Punjab, Madhya Pradesh, Maharashtra, Bihar and Rajasthan in month of January to March. Wheat is the second staple food crop of India and occupies about 29 million acres of land. It is consumed mainly by the people in the north. The objective of the study was to find out health status of farm women during wheat harvesting in Allahabad Region of Uttar Pradesh. Total fifty one women were selected for the study. They were aged between 20-60 years. A set of Interview schedule was designed and a body map was used to identify women' health problems and incidences of pain in body during wheat harvesting activity. The findings showed that the cent - percent farm women experienced tiredness and pain in all body parts as well as pain in all joints of body parts. The cent-percent farm women felt moderate pain due to scratches during wheat harvesting, so that they were wearing their husband full shirt during wheat harvesting. During wheat harvesting they couldn't eat sufficient food as compared to other days because they felt tiredness, thus their food intake quantity was decreased. The farm women face very warm environment during wheat harvesting and they covered their body by wearing shirt of their family members. They feel hunger but cannot eat enough food during these day's because they felt too tiredness and low blood pressure. In these day's they were drinking too much of water which is beneficial for them but lack of good nutritional food their health status was very low. But still they were doing harvesting the wheat for their survival of life.

**Keywords:** Health, Food, Pain in Joints, Low Blood Pressure,

### Introduction

Health and nutrition are important as ends in themselves and often are emphasized as critical components of basic needs in developing countries. Country comparisons of standard data suggest that on the average health and nutrition in the developing world falls considerably short of that in the developed world, regarding health and nutrition in developing countries and available studies on the determinants of health and nutrition and on their impact on productivity in developing countries. Physiological cost of operation is influenced by the health of operators, nutrition, basal metabolic

rate and energy expended while working that can be indirectly measured by measuring oxygen consumption and heart rate. Cereals or grains are members of the grass family cultivated primarily for their starchy seeds. Common cereals produced in India are wheat, rice, maize, oats, barley, sorghum and some of the millets. Agriculture with its allied sectors is undeniably the largest livelihood provider in India more so in the vast rural areas. India has world's largest number of agriculture workers as more than sixty per cent of population is engaged in agriculture.

### **Justification**

Wheat cultivated as a food crop mainly in Uttar Pradesh, Punjab, Madhya Pradesh, Maharashtra, Bihar and Rajasthan in month of January to March. Wheat is the second staple food crop of India and occupies about 29 million acres of land. It is consumed mainly by the people in the north. During wheat harvesting they cannot eat enough lunch as compare to other days because they felt tiredness thus eating quantity of food was decreased. The farm women face very warm environment during wheat harvesting and they covered their body by wearing shirt of their family members. They feel hunger but cannot eat enough food during these day's because they felt too tiredness and low blood pressure. In these day's they were drinking water too much which is beneficial for them but lack of good nutritional food their health status was down. But still they were harvesting the wheat for survival of their life.

### **Objective**

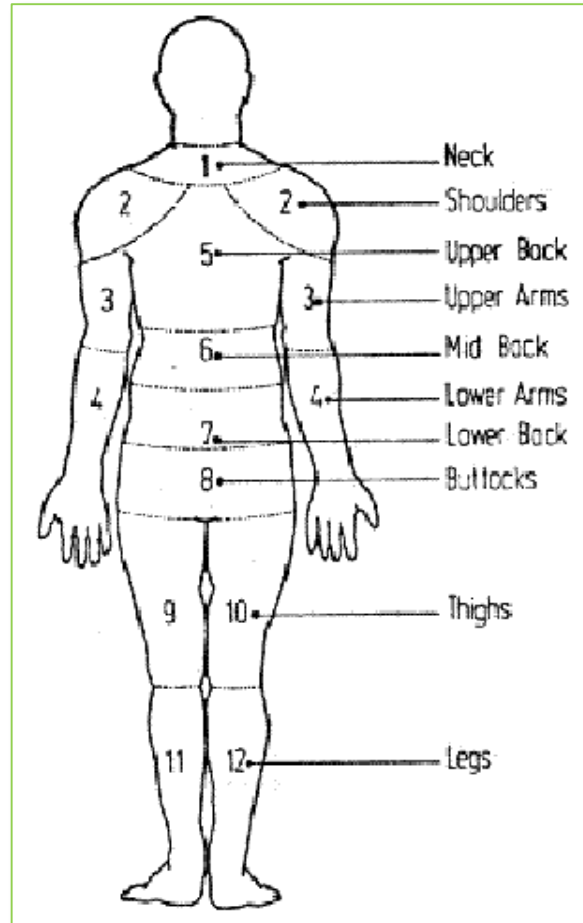
- 1- To know health status of farm women during wheat harvesting in Allahabad Region of Uttar Pradesh.

### **Methodology**

The health problem of farm women was assessed by Ergonomic Evaluation during wheat harvesting in Agro-Climatic zone of Allahabad District of Uttar Pradesh, in the month of Jan to March. Three main Blocks, namely Chaka (Trans Yamuna), Bahadurpur (Trans Ganga) and Kaudhihar Blocks (Kanpur Road) were selected. The villages "Baswar", "Dadri", "Maduka" and "Murlicot", were selected from Chaka Block; "Buduruddin", "Lodva" and "Yarnva" from Bahadurpur block; and "Ahiran ka Pura", "Lalbihar" and "Umari" from Kaudhihar Block were selected. Fifty one women respondents in the age group of 20-60 were selected from above three Blocks. Farm women performed the wheat harvesting activity in squatting posture. The farm women continuously harvesting the wheat for 50 minutes and 10 minutes compulsory break was given. Body map was used for recording the intensity of pain in different body parts. The inventory of pain was measured by five point scale which was marked with the help of colored pen by the respondents.

## Score Inventory of Pain

- 5 Very Severe (Red)
- 4 Severe (Green)
- 3 Moderate (Yellow)
- 2 Mild (Blue)
- 1 Very Mild (Orange)



## Assessment of Physiological Parameters

Following formulae were used to calculate the total cardiac cost of work (TCCW) and physiological cost of work (PCW).

Total Cardiac Cost of Work = Cardiac Cost of Work + Cardiac Cost of Recovery

$TCCW = CCW + CCR$

$CCW = AHR \times \text{Duration of activity};$

$AHR = \text{Avg. working HR} - \text{Avg. resting HR}$

$CCR = (\text{Avg. recovery HR} - \text{Avg. resting HR}) \times \text{Duration}$

Physiological Cost of Work = Duration of work/ TCCW

Energy Expenditure (Kj/min) =  $0.159 \times \text{HR (beats/min)} - 8.72$  .

**Environmental parameter**

Temperature and Humidity measured by Hygrometer, Intensity of light measured by Lux Meter

**Results and Discussions****Table -1 Distribution of farm women according to their background information.**

The table presented below shows the distribution of farm women according to their education, Age group, family size and family type.

Variables		Farm Women N= 51							
		Chaka Block (Trans Yamuna)		Bahadurpur (Trans Ganga)		Kaudhihar (Kanpur Road)		Total N= 51	
		N= 18		N=17		N=16			
		F	%	F	%	F	%	F	%
Illiterate		14	27.5	13	25.5	12	23.5	39	76.5
Primary		3	5.9	4	7.8	4	7.8	11	21.6
8 <sup>th</sup> class		1	1.9	-		-		1	1.9
<b>Age group ( in year)</b>									
20-25		1	1.9	2	3.9	3	5.9	6	11.8
25-30		4	7.8	3	5.9	2	3.9	10	19.6
30-35		2	3.9	3	5.9	1	1.9	6	11.8
35-40		4	7.8	6	11.8	1	1.9	10	19.6
40-45		2	3.9	2	3.9	6	11.8	10	19.6
45-50		4	7.8	1	1.9	3	5.9	8	15.7
50-60		1	1.9	-		-		1	1.9
<b>Family Size</b>									
Small 1-5 Members		3	5.9	9	17.6	6	11.8	18	35.3
Medium 6-8 members		15	29.4	8	15.7	10	19.6	33	64.7
<b>Family Type</b>									
Nuclear		13	25.5	10	19.6	16	31.4	40	78.4
Joint		5	9.8	7	13.7	-		11	21.6

The presented table -1 reveals that the farm women of Chaka Block , the majority of 27.5 percent farm women were illiterate and 5.9 percent farm women were educated primary whereas 1.9 percent farm women were educated only high school.

The farm women of Bahadurpur Block, the majority of 25.5 percent farm women were illiterate and 5.9 percent farm women were educated only primary.

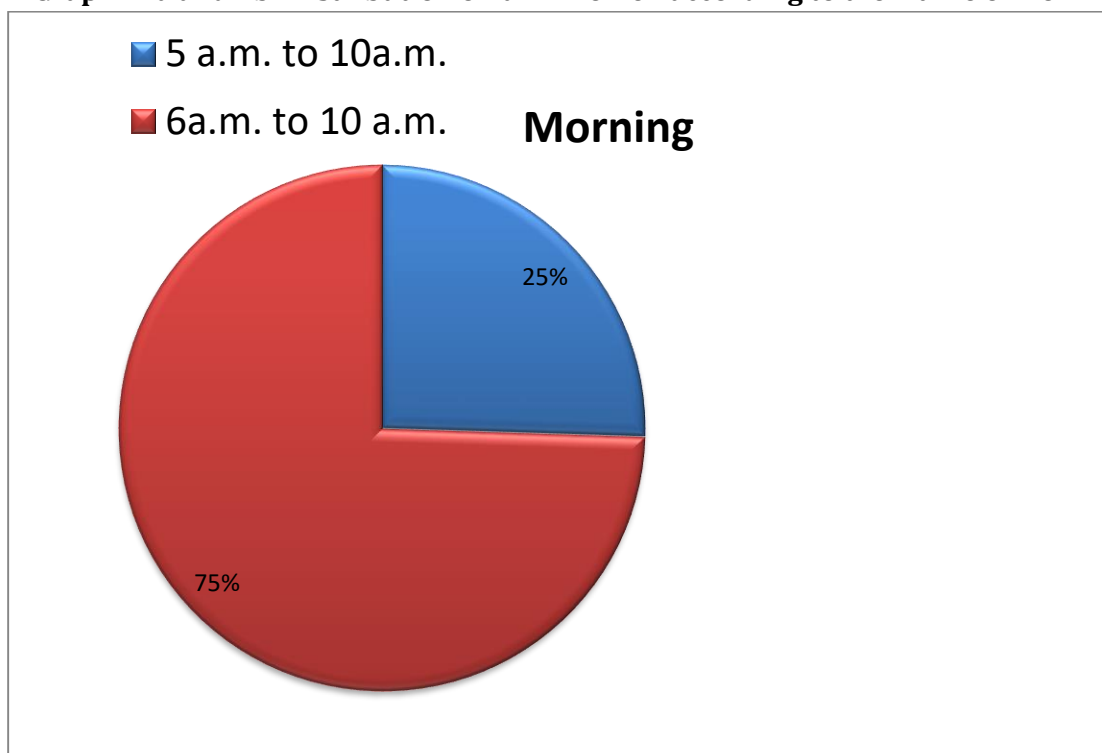
The farm women of Bahadurpur Block, the majority of 35.5 percent farm women were illiterate and 9.8 percent farm women were educated primary.

The farm women of Chaka Block, the 7.8 percent farm women were falling under age group of 20-30, years 35-40years and 45-50 years and 3.9 percent farm women were falling under age group of 30-35years and 40-45 years whereas 1.9 percent farm women were falling under age group of 20-25 years to 50-55 years.

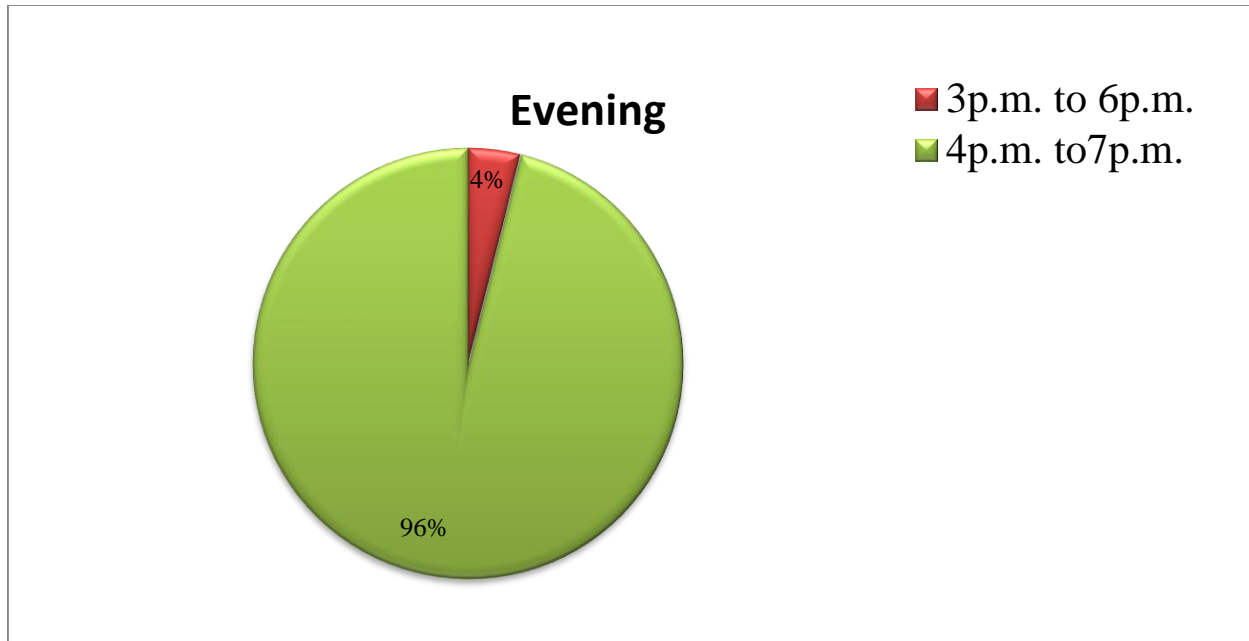
The farm women of Bahadurpur Block, the majority of 9.8 percent farm women were falling under 35-40years age group and 5.9 percent farm women were falling under 25-30years and 30-35 years age group whereas 1.9 percent farm women were falling under age group of 45-50 years.

The farm women of Kaudhihar Block, the majority of 11.8 percent farm women were falling under age group of 40-45years and 5.9 percent farm women were falling under age group of 20-25years, 25-30 and 45-50 years and 1.9 percent farm women were falling under age group of 40-45years.

**Graph -1 a and 1b -Distribution of farm women according to their time of work.**

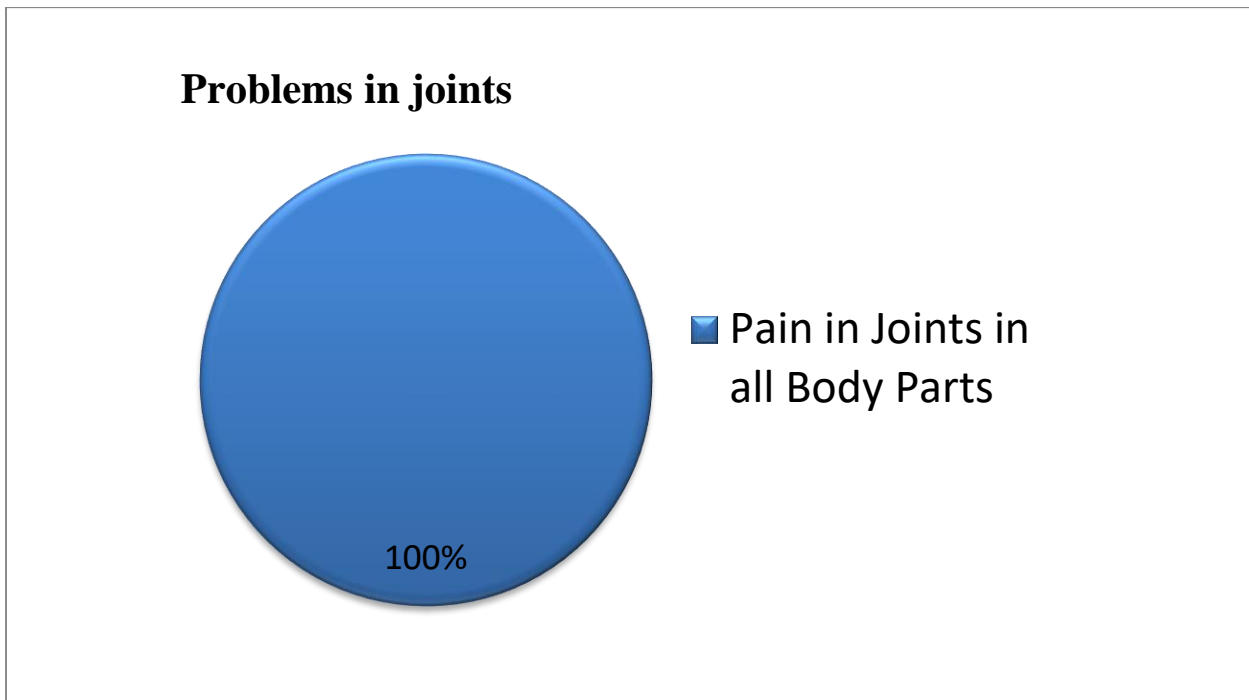


**Graph -1 a**

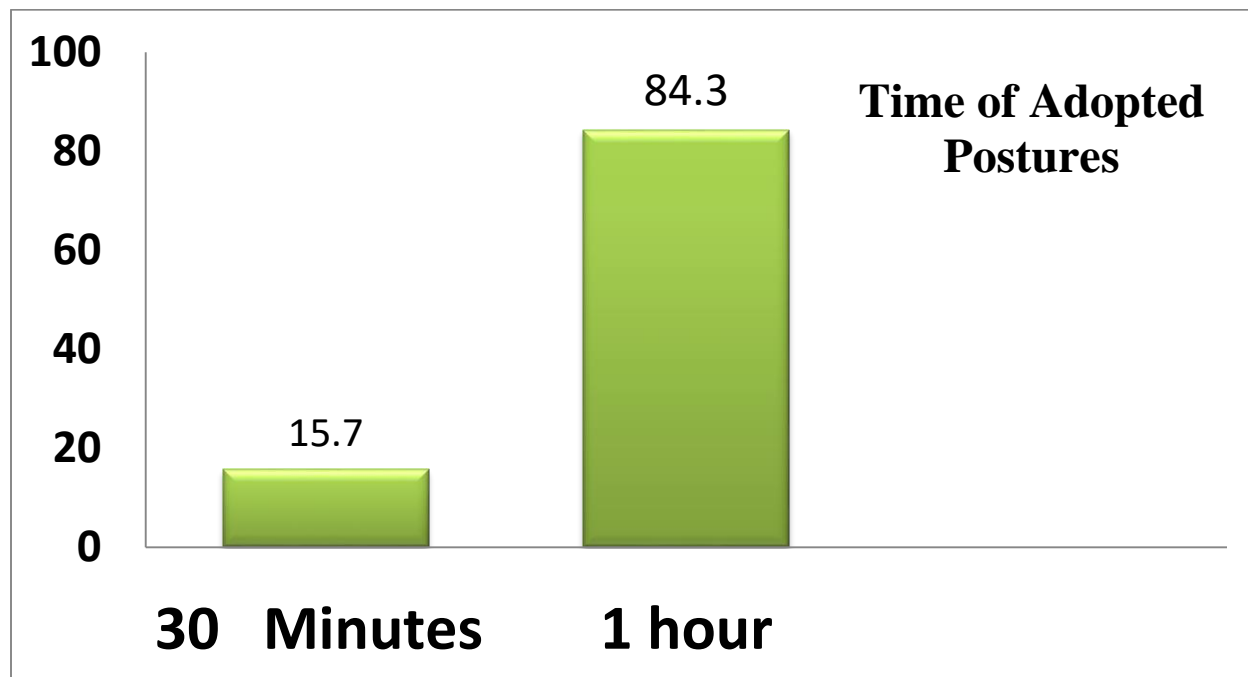


**Graph -1 b**

**Graph -2 -Distribution of farm women according to their time of work.**

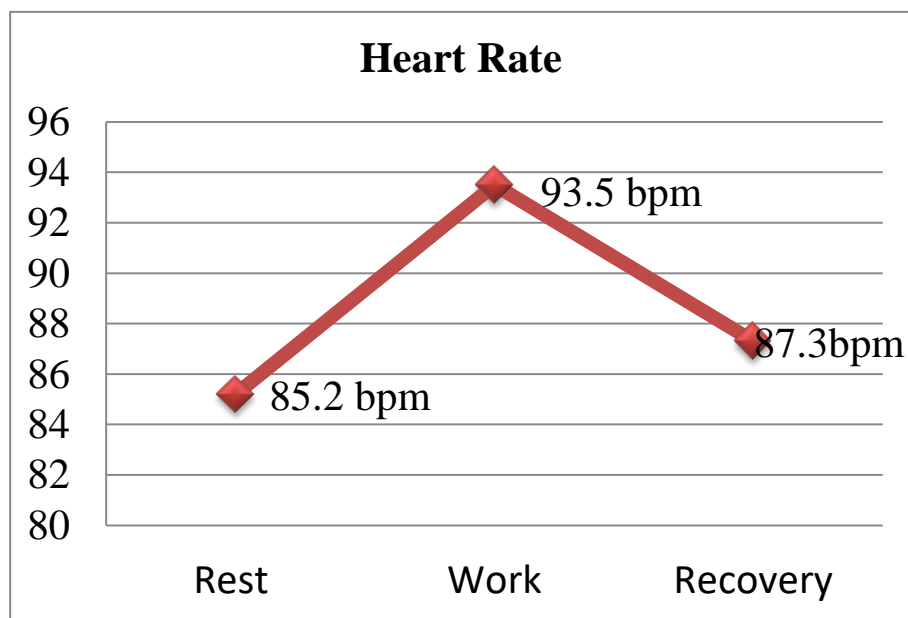


**Graph-3 Distributions of Farm Women According To Adopted Posture for Longer Period of Time**



**Table 2 Distributions of Farm Women According to environmental parameters**

Environmental Parameters	
Temperature	32 °C - 34 °C
	34 °C - 36 °C
	36 °C - 38 °C
Humidity	60 -70 RH
	70 - 80 RH
	80- 90 RH
Noise	85-90db

**Table 3- Distributions of Farm Women According to their heart rate during wheat harvesting**

### Conclusion

The time bound of wheat harvesting is from 15<sup>th</sup> of March to 31<sup>st</sup> of March and 1<sup>st</sup> week of April. This is the hottest time in Allahabad region. Therefore, the intake of water is more and of food is less by the farm women. In addition to this they are given no rest and made to work continuously. Due to this the health of farm women in these areas is very low. Therefore, it is

highly recommended to study the work rest cycle of farm women in order to increase their work efficiency by providing them rest of at least 10 minutes in 1 hour.

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