RESEARCH ARTICLE

IMPACT OF SOCIO-ECONOMIC CONDITIONS ON HEALTH STATUS OF FEMALE FARM LABOURERS

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ABSTRACT

In Maharashtra an overwhelming number of women have been a part of the active work force due to their total involvement in agriculture. Present study was undertaken to know the health status of selected female farm labourers from urban slum and rural area of Parbhani District of Marathwada region of Maharashtra state. The study involved survey to find socio-economic background of selected 500 female farm labourers i.e.250 each from urban slums and rural. Equal number of 21-30 and 31-40 years i.e. 125 each in all groups were covered for study. The results indicated that majority of female farm labourers were from nuclear families in urban slums (76.8 per cent) and in rural (67.2 per cent). More per cent of rural families (79.2 per cent) were vegetarian whereas urban slums (69.2 per cent) were non-vegetarian. Maximum numbers of farm women were belonging to income group Rs. 6001-10,000/- per month. The per cent adequacy of food intake of selected female farm labourers as per different socio-economic categories was ranged between 174.88 per cent (sugars and jaggery) to 17.06 per cent (fruits).Whereas per cent adequacy of nutrient intake was ranged between 27.05 per cent (β-carotene intake, urban slum) to 140.52 per cent (fat intake, urban slum). The haemoglobin values were ranging from 9.83 ± 1.48 to 10.22 ± 1.32. Near about 75 to 80 percent surveyed respondents were suffered with one or other grade of anaemia.

INTRODUCTION

The health status of women is of great concern because of multiple roles played by women. An overwhelming majority of women in India is associated directly or indirectly with agricultural production, processing and distribution. About two third of the manual labour in farming is constituted by women. Irrespective of their degree of affluence, they provide 14 to 18 hours of productive physical labour every day in a wide variety of activities directly with agriculture, allied and domestic chores. Thus the picture of health status of female labourers is far serious in the poor socio-economic groups who live in the rural areas and urban particularly slums of urban. The health status is influenced by various socio-economic factor like family, community, population, psycho social and cultural understanding. Social determinants of health included income, education, area of living, type of employment, working conditions and available health services. Nutrition is also one of the most important factor influencing the quality of life and health of women. Nutritional status is an important health indicator to assess a health status. Food habits are also predictors of nutritional status.

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Cultural and socio economic status of workers influences the food choices and pattern of consumption, while consumption of some food items is likely to vary according to season and often based on availability of price. Anaemia is one of the most common health problem among women of reproductive age in India, particularly in rural and urban deprived sections like slums. National family Health survey III(2007), data showed that the prevalence of anaemia among women of reproductive age in India was 54.7 percent whereas in Maharashtra it was 48.4 percent. Thus, the present research study was planned to study the "Impact of socio-economic conditions on health status of female farm labourers".

MATERIALS AND METHODS

The present investigation was designed to assess the health status of randomly selected 500 female farm labourers i.e. 250 each from urban slums and rural area of Parbhani District of Marathwada region of Maharashtra state. A survey was carried out to find socio-economic background by interview method with a pre-planned questionnaire. Mean food and nutrient intake of food consumption pattern and haemoglobin estimation were used for assessing the health status. Per cent adequacy for food and nutrient intake of all 500 subjects was calculated on the basis of food and nutrient intake by using 24

hours recall method for three consecutive days to determine the type and approximate quantity of food stuff consumed by each subject (ICMR, 1996 & 1999). To judge the extent of prevalence of anaemia hemoglobin content was determined by cyanomethemoglobin method (Crossby *et al*1954). The data was analyzed statistically by applying different suitable tests to compare between the two groups and to find out the significant difference between groups.

RESULTS AND DISCUSSION

Table 1 showed that majority of female farm labourers were from nuclear families in urban slum (76.8%) and in rural area (67.2%), while 84.2 percent of families were having 4 to 6 members.

When comparison was made between different categories it was seen that maximum per cent adequacy was found for consumption of sugar and jaggery (145.32 to 174.88 %) followed by cereals (77.97 to 85.93%), pulses (42.77 to 67.18%) and fats and oils (59.36 to 68.03%) whereas minimum for fruits (17.06 to 21.30%) followed by green leafy vegetables (18.39 to 26.69%). Table 3 revealed the data regarding per cent adequacy of nutrient intake of selected female farm labourers as per different socio-economic categories. The per cent adequacy for energy, protein, fat, calcium, iron, Vit.C and β-carotene was ranged between 79.10 to 81.27 per cent, 91.05 to 102.89 per cent, 130.76 to 140.52 per cent, 69.69 to 79.21 per cent, 67.57 to 79.23 per cent, 91.42 to 105.12 per cent and 27.05 to 36.70 per cent respectively.

Table 1. Socio-economic background of selected female farm labourers (N=500)

Sr.no.	Particular	Urban (N= 250)	Rural (N= 250)	Total (N=500)
1.	Age Group (yrs)			
	21-30	125 (50)	125 (50)	250 (50)
	31-40	125 (50)	125 (50)	250 (50)
2.	Type of Family			
	Joint	58 (23.2)	82 (32.8)	140 (28)
	Nuclear	192 (76.8)	168 (67.2)	360 (72)
3.	Family Size(No.)			
	4-6	223 (89.2)	198 (79.2)	421 (84.2)
	>6	27 (10.8)	52 (20.8)	79 (15.8)
4.	Food Habit			
	Vegetarian	77 (30.8)	198 (79.2)	275 (55)
	Non-vegetarian	173 (69.2)	52 (20.8)	225 (45)
5.	Family Income (Rs. per month)			
	Upto 6000	40 (16)	67 (26.8)	107 (21.4)
	6001-10000	154 (61.6)	139 (55.6)	293 (58.6)
	>10000	56 (22.4)	44 (17.6)	100 (20)

Figure in parenthesis indicates percentage.

Table 2. Per cent adequacy of food intake of selected female farm labours (N=500)

Particular	Cereals (gm)	Pulses (gm)	Green Leafy vegetables (gm)	Roots & Tubers (gm)	Other Vegetables (gm)	Fruits (gm)	Milk and milk roducts (ml)	Fats & Oils (ml)	Sugars & Jaggery (gm)	Meat and Fish (gm)
Age Group (yrs)										
21-30 (N=250)	80.23	54.36	22.96	41.66	32.06	17.70	31.92	67.20	157.16	166.00
31-40 (N=250)	82.18	56.41	22.12	42.54	30.94	21.08	32.74	63.76	46.56	39.86
Area										
Urban Slum (N=250)	76.49	43.58	18.39	39.01	30.50	18.81	30.39	71.60	152.44	77.5
Rural (N=250)	85.93	67.18	26.69	45.19	32.51	19.98	34.27	59.36	170.72	8.93
Food Habit										
Vegetarian (N=275)	83.86	65.70	24.69	45.65	32.81	21.30	34.39	63.40	174.88	-
Non-vegetarian (N=225)	77.97	42.77	19.91	37.76	29.91	17.06	29.81	68.03	145.32	94.6
Family Income (Rs. per month)										
< 6000 (N=107)	80.77	55.10	24.60	41.18	30.83	17.62	31.55	63.36	163.16	47.50
6001 to 10000 (N=293)	82.94	56.05	23.05	38.98	33.44	19.96	32.54	68.00	156.2	42.93
>10001 (N=100)	80.66	53.74	18.87	43.57	31.55	19.64	32.64	60.63	162.44	39.90

The results were also in line with study conducted by Girade and Shambharkar (2012) in Vidharbha region of Maharashtra state. Near about 79 percent rural subjects were vegetarian and 69.2 percent urban slum were non-vegetarian. More than 55 per cent subjects from both groups were belonging to monthly family income of Rs. 6001 to 10,000/. Around 40 percent were educated up to high school and 60 per cent either primary or secondary school educated Table 2 revealed the data regarding per cent adequacy of food intake of selected female farm labourers as per different socio-economic categories. Percent adequacy of mean food intake was better in rural and vegetarian female farm labourers than urban slum and non vegetarian, except fats and oils and meat and meat products.

Overall the per cent adequacy was ranged between 27.05 (β-carotene intake, urban slum) to 140.52 (fat intake, urban slum). The mean value of haemoglobin level of selected female farm labourers is recorded in Table 4. The haemoglobin values of selected female labours as per different socio-economic conditions were ranging from 9.83 ± 1.48 to 10.22 ± 1.32. These findings goes hand in hand with studies conducted in Pune district of Maharashtra by Patavegar *et al.* (2014) and Rao (2014). The observed values were below normal values when compared with standards. Among the group, the least haemoglobin values were recorded for primary educated group (9.83 ± 1.48) followed by urban slum (9.90 ± 1.39) and 21 to 30 years (9.97 ± 1.33) age group female farm labours. Whereas

the highest values was observed for rural areas (10.22 ± 1.39) followed by high income group i.e. > Rs. 1000/- (10.22 ± 1.32). Statistically significant difference was observed in urban slum and rural areas only. Age, food habit, education and income level exhibited non-significant difference with respect to haemoglobin value.

normal values for haemoglobin and very less percent (3.6% and 7.2%) showed severe grades of anaemia. When comparison was made between two food habits, 25.09 percent vegetarian and 21.77 percent non-vegetarian respondent were found to be normal. The improvement in income level reported increased in percent of normal labourers (18.70 to 34.00 %)

Table 3. Per cent adequacy of nutrient intake of selected female farm labours (N=500)

Particular	Energy (kcal)	Protein (gm)	Fat (gm)	Calcium (mg)	Iron (mg)	Vit.C (mg)	β – Carotene (µg)
Age Group (yrs)							
21-30 (N=250)	79.03	96.18	137.72	74.19	73.19	94.07	32.71
31-40 (N=250)	80.33	97.76	134.68	74.70	73.66	105.12	31.03
Area							
Urban Slum (N=250)	78.19	91.05	140.52	69.69	67.57	97.65	27.05
Rural (N=250)	81.17	102.89	131.84	79.21	79.23	101.55	36.70
Food Habit							
Vegetarian (N=275)	81.27	99.34	133.00	77.10	76.90	104.00	33.94
Non-vegetarian (N=225)	77.73	94.07	140.12	71.21	69.14	94.22	29.35
Family Income (Rs. per month)							
Up to 6000 (N=107)	80.34	96.98	138.68	74.93	73.52	103.35	34.32
6001 to 10000 (N=293)	79.10	98.52	134.88	74.88	74.14	91.42	32.31
>10001 (N=100)	78.36	93.34	130.76	72.58	71.23	97.45	27.97

Table 4. Haemoglobin level in the bloodsample of selected female farm labourers to different socio-economic status (N=500)

Sr. No.	Particular	Haemoglobincontent	't' value
	Area		
1.	Urban	9.90 ± 1.39	2.61**
2.	Rural	10.22 ± 1.32	
	Age Group (yrs)		
3.	21-30	9.97 ± 1.33	1.39[NS]
4.	31-40	10.14 ± 1.39	
	Food Habit		
5.	Vegetarian	10.16 ± 1.31	1.73[NS]
6.	Non-vegetarian	9.94 ± 1.43	
	Family Income (Rs. per month)		
7.	Up to 6000	10.00 ± 1.35	0.45[NS]
8.	6001-10000	10.07 ± 1.24	0.64[NS]
9.	>10001	10.20 ± 1.52	1.14[NS]
	Educational Levels of Subjects		
10.	Primary Educated	9.83 ± 1.48	1.80[NS]
11.	Secondary Educated	10.12 ± 1.25	0.15[NS]
12.	High School Educated	10.15 ± 1.38	1.91[NS]

Table 5. Prevalence of anaemia in selected female farm labourers of different socio-economic groups (N=500)

Particular	Grades of anaemia			
	Normal (>12.0)	Mild (>10 - 12)	Moderate (7 - 10)	Severe (< 7)
Area				
Rural	66(26.4)	91(36.4)	84(33.6)	9(3.6)
Urban	52(20.8)	88(35.2)	92(36.8)	18(7.2)
Age Group (yrs)				
21-30	52(20.8)	94(37.6)	88(35.2)	16(6.4)
31-40	66(26.4)	85(34.00)	88(35.2)	11(4.4)
Food Habit				
Vegetarian	69(25.09)	98(35.63)	99(36.00)	9(3.27)
Non-vegetarian	49(21.77)	81(36.00)	77(34.22)	18(8.00)
Family Income (Rs. per month)				
Up to 6000	20(18.70)	41(38.31)	37(34.58)	9(8.41)
6001-10000	64(21.84)	104(35.51)	109(37.20)	16(5.46)
>10001	34(34.00)	34(34.00)	30(30.00)	2(2)
Educational level				
Primary Educated	27(21.6)	34(27.2)	54(43.2)	10(8.00)
Secondary Educated	40(22.59)	75(42.37)	55(31.07)	7(3.95)
High School Educated	51(25.75)	70(35.35)	67(33.83)	10(5.05)

Figure in parenthesis indicates percentage

Prevalence of anaemia in selected female farm labourers belonging to different socio-economic groups is presented in Table 5. It is observed from table that near about equal percent subjects from rural (36.4 %) and urban slum (36.8 %) areas were having mild and moderate grades of anaemia respectively. Whereas 26.4 percent and 20.8 percent recorded

and decreased in moderate (34.58 to 30 %) and severe (8.41 to 2 %) grade of anaemia. On the whole subjects from high income group (>Rs.10,000) recorded highest (34.00 %) value for normal grade followed by rural (26.4 %) and 31 to 40 years age group (26.4 %). Whereas 42.37 percent secondary educated labourers recorded mild grade of anaemia followed

by low income group (38.31 %) and 21-30 years of age group (37.6 %). High values for moderate grade of anaemia was recorded by primary educated (43.2%) respondents and low value by high income group (30.00 %). However near about 2 to 8.41 percent female farm labourers from different socio-economic categories were having severe grade of anaemia. On the whole prevalence of anaemia on the basis of different socio-economic livings 18.70 to 34 percent respondents were in normal grade these findings were in line with Shrinivasa *et al.* (2014).

Summary and Conclusion

Majority of selected female farm labourers were from nuclear families in urban slum (76.8%) and in rural area (67.2%), while 84.2 percent of families were having 4 to 6 members. Near about 79 percent rural subjects were vegetarian and 69.2 percent were non-vegetarian from urban slum. More than 55 per cent subjects from both groups were belonging to monthly family income of Rs. 6001 to 10,000/-. Around 40 percent were educated upto high school and 60 per cent either primary or secondary school educated. In case of food intake maximum percent adequacy was noted for sugar and jaggery and minimum for fruits. However in terms of nutria intake Highest percent adequacy was noted for fat intake while lowest for β-carotene. 26.4 percent of rural while 20.8 percent of urban slum subjects showed normal haemoglobin content. Near about 75 to 80 percent surveyed respondents were suffered with one or other grade of anaemia.

REFERENCES

Crossby, W.H. Munn. J.I., and furth F.W. 1954. Standardizing a method for clinical Haemoglobinometry U.S., *Armed Foce. Med. J.,* 5 : 693-696.

Girade, S. and Shambharkar, Y. 2012. Profile of farm women and constraints faced by them in participation of farm and allied activities. *Indian I. applied research*, 1(12): 69-71.

Indian Councial of Medical Research, 1996. Nutritive value of Indian Foods.NIN: Hyderabad. 8-9

Indian Councial of Medical Research, 1999. Nutrient requirement and recommended dietary allowance for Indians. An expert report of ICMR NIN, Hyderabad.

Patavegar, B.N., Kamble, M.S. and Langare, S. 2014. Prevalence of anamia and its epidemiological correlates among women of reproductive age in a rural setting. *International J. Basic and Applied Medical Sciences*, 4 (2): 155-159.

Rao, S. 2014. Potential of community based approach for prevention of anaemia among women of childbearing age from rural *India. J. Foods and Nutrition Sciences*, 2 (6) : 270-276.

Shrinivasa, B.M., Philip, R.R., Krishnapali, V.K., Suraj, A., and Sreelakshmi, P.R. 2014. Prevalence of anaemia among tribal women of reproductive age-group in Wayanad district of Kerala. *International Journal of Health and Allied Sciences*, 3 (2) : 120-124.

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