

## Impact of socio-economic status on food consumption pattern of rural farm women

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### ABSTRACT

This study has focused on the functioning of 10 SHG's located in Venkatahalli and Heggadehalli villages of Bangalore rural district comprising of 200 farm women mainly belonging to marginal and landless category with age group of 18-35 years. The women members of SHG's were found to save a portion of their meager income and pool that money for lending among them at an interest decided by the group. A close look at the pattern of lending revealed that large part of the credit was used for improving the sustainability of their agriculture and economic status as the loans were availed for crop cultivation, purchase of milch animals and sericulture activities. Majority of the rural families were non-vegetarians by habit; animal based foods were consumed twice a week by 49 per cent of the families. It was observed that majority of the rural families consumed 3 meals per day and only 18 per cent of the rural families consumed 2 meals per day. The diet of the rural families was monotonous, lacking variety and they care more for bulk rather than quality of the diet. Nutrient intake of rural farm women was compared with Recommended Dietary Allowance (RDA). The intake of all nutrients *viz.* energy, protein, fat, iron, thiamine, riboflavin, niacin and  $\beta$ -carotene were low except for calcium. The per cent adequacy of nutrients was inadequate.

**Key words:** Empowerment, Food pattern, Rural farm women, Socio Economic status.

### INTRODUCTION

The social and economic status of women is a reliable Indicator of their empowerment in a society. The often-repeated argument is that women development or empowerment is possible only if they are given opportunities to develop freedom and participate in socio economic programs. There is an exhaustive list of goals to be achieved through self help program which empower women; saving habits, credit for production and consumption purposes, opportunities for entrepreneurship, functional literacy, developing leadership qualities, gender sensitivity and awareness about the socio-political, economic and cultural issues (Ashwathi *et al*, 2001). The empowerment of women through Self Help Groups (SHG's), a non formal cooperative organization would benefit not only the Individual women but also the family and community as a whole through collective action for development. These SHG's have a common perception of need and an impulse towards collective action (Bharathi and Chaya, 2008). Micro finance interventions are well organized all over the world as effective tools for poverty alleviation and improving socio-economic status of poor and marginalized mainly through women SHG's. The women SHG's involved in micro finance projects are well organized in terms of formation and

stabilization for extending credit support and promotion of thrift to promote viable economic activities in the backward areas has resulted in empowerment of women belonging to low socio- economic strata (Action Aid, 1995). Micro finance is making headway in its effort for eradicating poverty and empowering women (Jayalakshmi, 1998). Empowering women needs a holistic approach to participate in decision-making in the household, community and local democratic sector and prepare women to take up leadership position in agricultural activities (Pinto, 1995 and Sabri, 1998). SHGs in rural India are causing a silent revolution not only in terms of providing micro credit but also by contributing in other forms to make the agriculture sustainable. There is chronic undernourishment in about half of the population, particularly among the vulnerable groups of children, women and elderly from the rural and lower class. The proportion of consumption expenditure spent on food is slowly going down even in the households with chronic undernourishment. The mounting food stocks miserably failed to banish mass undernourishment (Radhakrishna and Ravi 2002). In this backdrop, the present study is an attempt to understand the various activities undertaken by SHGs to empower rural farm women. The specific objectives of the study are:

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1. To understand the social and economic empowerment of the women members of SHG's
2. Elicit the existing information on small scale entrepreneurial activities among SHG's rural households
3. To assess the dietary pattern of rural SHG women

### MATERIALS AND METHODS

The above objectives of the study were achieved through quantitative as well as qualitative assessments. The study was conducted in two villages of Bangalore rural district, Karnataka. A total of 10 SHG's have been selected for the study. Each group consists of about 19 to 20 women members. Information was elicited from all the members of 10 SHG's, which together formed 200 women members, constituting the sample. The data was collected with the help of semi-structured interview schedule. The schedule included questions relating to the family income, savings and loan schemes available to SHG members. Focus group discussions were also conducted to crosscheck the collected data. The data on socio-economic status related to the age, education, and type of family, family size, occupation and land holdings and income of the family. Secondary information was collected from books, ledgers and registers maintained by SHG's. Elicited the existing information on small scale entrepreneurial activities among SHG's rural households by existing information on entrepreneurial activities among rural women was collected the information on existing women self-help groups in both the study areas and their entrepreneurial activities through questionnaire. Dietary pattern was assessed by 24 hour recall method for 7-days. Sets of pre standard vessels were used to obtain estimates of raw and cooked foods consumed by the subjects. Subsequently, the Individual consumption of nutrients like energy, protein, fat, iron, calcium, thiamine, riboflavin and niacin were calculated using food composition table and compared with the recommended dietary allowance (Gopalan *et al.* 1996) and the adequacy of nutrients was calculated as per Thimmayamma (1987).

### RESULTS AND DISCUSSION

**Socio –Demographic profile of women members of SHG'S:** Socio-economic characteristics of rural farm women were depicted in Table 1. It was observed that majority of rural farm women were found to be in age group 21- 25 years, followed by 26- 35 years. Middle aged women are generally enthusiastic and innovative nature. The young women will be having the Indication to take risks and need for achievement in general. The findings were in conformity with those findings of Ganeshamurthy *et al.* (2004) and Tara and Negi (2012), who have revealed that majority of the rural farm women belonged to middle age group.

Most of the rural farm women (33 %) were literates i.e., 34 per cent of them had primary school followed by 12 per cent secondary school, 14 per cent had high school level

of education, and remaining 7 per cent of the rural farm women were graduates. These findings are in line with the findings of Mamatha and Chaya (2012) who observed that majority of rural farm women studied upto primary school level. Occupation of the rural farm women that is 26 per cent of them were housewives, 40 per cent of them labourers, 24 per cent of them were involved in dairy, 6 per cent in sericulture and 4 per cent in other activities. These findings were in line with George *et al.* (2009) and Gurumeet and Gurudarshan (2011). It was observed that majority of the rural families (63%) were marginal farmers, 16 per cent of them were small farmers, 11 per cent of them were medium farmers and only 10 per cent were large farmers. Land holding of the subjects Indicated that majority of them belonged to the marginal land holding category (63%) followed by small farmer category (16%). It clearly Indicated that the low economic status particularly rural farm women have low earning power and also may be because of the fragmentation and subdivision of agricultural lands by the members of the family. The

**Table 1:** Socio-Economic Characteristics of Rural farm women.

Variables	Respondents (n = 200)	
	No.	Per cent
<b>Age</b>		
21-25 years	130	65.00
26-35 years	62	31.00
36-40 years	08	04.00
<b>Education</b>		
Illiterate	66	33.00
Middle school	68	34.00
High school	24	12.00
SSLC	28	14.00
Graduate	14	07.00
<b>Family type</b>		
Joint	54	27.00
Nuclear	146	73.00
<b>Family size</b>		
Small (upto 3 members)	28	14.00
Medium (4-6 members)	166	83.00
Large (7 and above)	06	03.00
<b>Land holding</b>		
Marginal farmers (<2.5acres)	126	63.00
Small farmers (2.5-5.0 acres)	32	16.00
Medium farmers (> 5.0 acres)	22	11.00
Land less	20	10.00
<b>Occupation</b>		
House wife	52	26.00
Labourer	80	40.00
Agriculture with Dairy	48	24.00
Sericulture	12	6.00
Other activities	08	4.00
<b>Family Income / month</b>		
< Rs. 2,000	32	16.00
Rs.2,000 – 3,000	112	56.00
> Rs. 3,000	56	28.00
<b>Total</b>	<b>200</b>	<b>100</b>

findings of the present study agreed with the findings of Revanna (2006) and Raksha *et al.* (2011). From the same table it is clear that 16 per cent of the rural families' income ranged between Rs. 2,000-3,000, followed by 56 per cent with the income of Rs. 3,000 per month. And only 28 per cent of the families are in the range of Rs.4,000- Rs.5,000. These findings have also been observed by Chethana (2005) and Mamatha and Chaya (2012) who reported that a majority of the landless (84%) and marginal (72%) households had income in the range of Rs. 685 to Rs. 3,585 per month.

**SHG Formation:** Existing women SHGs in the study area are presented in Table 2. The women formed SHG's primarily to make savings and pool their limited resources to meet their financial requirements. Among the study villages totally ten SHG were actively involved in various functions. Majority of the SHG groups were having 19-21 members in each group with the collection of Rs.10 per week. Among the SHGs groups, Chandrodaya SHG group and Jaymatha SHG's groups were having highest savings of Rs.46,080 per month, followed by Maheshwari group Rs.38,400 per month. Chandrodaya and Jaymatha SHG groups were functioning for past 6 years, followed by Maheshwari group and majority of the SHG's had taken loan for the purchase cattle and sheep followed by education loan. Women save a small portion of their meager income and pool the money which they lend among themselves at an interest rate decided by the group as a whole. A close look at the pattern of lending shows that, credit facilities were availed for meeting the charges on crop cultivation, purchase of milch animals, sericulture activities, purchasing of tailoring unit and also repayment of loan. Thus large part of the credit was used for improving the sustainability of their agriculture and economic status. These findings are supported from the study conducted by Kavitha and Deepa (2013).

Base line survey results (Table 3) showed that overall 31 per cent of the respondents were engaged in dairy farming followed by vegetable marketing, sheep rearing etc, and only 1.5 per cent was engaged in vermicomposting before training programme on value addition in finger millet. From the study it was clear that none of the respondents had undergone any of the training programmes related to entrepreneurial development. Veena (2009) reported that, training programme was one of the tool for enhancement of skills and value addition activities among the SHG women and also it was helpful for empowerment of SHG members and training programmes enhance the self confidence, leadership qualities, skills to undertake value addition activities, enhances income, utilisation of protective foods and better knowledge. Similar findings on mushroom cultivation have entrepreneurial activity among SC/ST rural farm women as reported by Raguprasad *et al.* (2008).

Table 2: Existing women Self -Help Groups in the study area.

Name of the village	Venkatahalli					Heggadehalli				
	Chandrodaya	Suryodaya	Arunodaya	Kirthini	Nandini	Chandrodaya II	Jaymatha	Maheshwari	Mookambika	Sree Shakthi
No.of members	21	19	19	21	19	21	20	19	21	20
Money collected/ week (Rs.)	10	10	10	10	10	10	10	10	10	10
Total savings (Rs.)	46,080	21,600	21,600	15,360	15,360	10,800	46,080	38,400	21,600	10,580
Average total lending Rs. @ 2% interest per month	2,880	1,440	1,440	960	960	720	2,880	2,400	1,440	756
No.of years in operation (2001-07)	6	3	3	2	2	1½	6	5	3	1½
Investment of loan	Purchase of cattle	Purchase of sheep	Purchase of sheep	Education/ family rituals	Purchase of cattle	Education/ family rituals	Purchase of cattle	Purchase of sheep	To start food processing unit /tailoring unit	Education to children

The total income of the rural women comes from various sources namely land, livestock, labour wages, sericulture, petty business and small-scale entrepreneurship for the annual income of Rs.38,260.00 per annum (Table 4). This might be because of multiple source of income among the rural families. These findings are on par with values reported by Das and Mishra (2012). Hence, there is an urgent need to educate the women about their strength, skill training particularly to motivate them, sufficient loans should be provided to them and also marketing is required to sustain their interest. Along with this the family member awareness should be improved about the importance of the economic support by the women in the family. The result has been in line with the study conducted by Mamatha and Chaya (2012) who pointed that monthly workshops should emphasis more and more on skill teaching and field visits besides being a forum for exchange of technical information.

**Dietary pattern of SHG families:** Food habits of the rural families are shown in Table 5. It was observed that, majority

of the rural families were non-vegetarians by habit, food of animal sources were being consumed twice week by 49 per cent of the families, followed by once a week (18.5%) and fortnightly (32.5%). These findings were in line with the observation of Shree Tulasi (2005) and Vijayalakshmi *et al.* (2008) who observed that majority of the rural families were non-vegetarians and consumption of all commodities was much lower than the RDA. It was clearly evident from the same table that 82 and 18 per cent of the rural families consumed two or three meals respectively. Majority of the households were in the habit of preparing the food twice a day.

**Nutrient intake:** The diet of the rural families was monotonous lacking variety and they care for more bulk rather than quality of the diet. The common meal pattern of the rural families was cereal for breakfast and rice with vegetables or dhal and finger millet dumpling for dinner. The mean intake of nutrients by women namely, protein, fat, energy, calcium, iron,  $\beta$ -carotene, thiamine, riboflavin and niacin are presented in Table 6. The adequacy of nutrients was below recommended dietary allowances. The deficit of nutrient intake of rural farm women was compared with RDA. Intake of energy 1850 kcal, protein 35.3 g, fat 16.3 g, iron 15.7 mg, thiamine 0.9 mg,  $\beta$ - carotene 3600 mg, riboflavin 0.8mg and niacin 11mg were low. But calcium (695 mg) intake was higher compared to RDA due to the consumption of finger millet which is the staple crop. These findings fall in line with the findings reported by Radhai (2000) who reported that majority of the rural farm women were deficit in all the nutrients. An increment in food intake is always associated with an increment in energy intake. It was observed that the mean intake of energy by women in the study group were not up to the recommended levels. The findings reported by Dobhal and Raghuvanshi (2011) found that energy intake of rural farm women was less than recommended dietary allowances.

Correlation coefficient of selected socio-economic factors on nutrient intake of rural farm women is depicted in the Table 7. Women's dietary status was determined by

**Table 3:** Existing activities of the rural farm women in study area. (n=200)

Existing activities	Number	Per cent
Dairy farming	62	31.00
Sheep rearing	38	19.00
Tailoring	24	12.00
Vermicompost	03	1.50
Silk worm rearing	13	6.50
Vegetable marketing	60	30.00
<b>Total</b>	<b>200</b>	<b>100</b>

**Table 4:** Average annual income from different source of the rural families.

Source of income	No. @	Income (Rs.)	SD
Agriculture	156	9,560	1,421.60
Livestock	124	8,600	972.00
Sericulture	15	7,600	638.20
Labour wages	72	6,700	2,903.40
Petty business and other sources	80	5,800	2,451.05
<b>Total</b>		<b>38,260</b>	<b>8,386.25</b>

@ Multiple response

**Table 5:** Dietary pattern of rural farm women.

Food pattern	Intervals	Respondents	
		No.	Per cent
Food habit	Vegetarian	20	10
	Non-vegetarian	180	90
Frequency of Non-veg. Consumption	Weekly once	37	18.5
	Weekly twice	98	49
	Fortnightly	65	32.5
Number of meals consumed per day	Two	36	18
	Three	164	82
Number of times meal prepared per day	Twice	172	86
	Thrice	28	14

**Table 6:** Mean daily nutrient intake of rural farm women in comparison with RDA. (n=200)

Nutrients	RDA	Intake		Per cent adequacy	't' value
		Mean	SD		
Protein (g)	55	35.3	12.5	64	39.94**
Fat (g)	25	16.3	7.9	65	29.18**
Energy K-cal	2230	1850	442.3	83	59.15**
Calcium (mg)	600	695	117.6	116	83.58**
Iron (mg)	21	14.7	8.1	70	14.14**
$\beta$ -Carotene (mg)	4800	3600	8175.8	75	62.25**
Thiamin (mg)	1.1	0.8	0.4	72	31.82**
Riboflavin (mg)	1.3	0.8	0.3	72	37.71**
Niacin (mg)	14	11.0	4.2	78	37.04**

\*\* Significant at 1%

**Table 7:** Correlation co-efficient of Independent variables on nutrient intake of rural farm women.

Indianependent variables	Correlation co-efficient (r) with nutrients								
	Protein	Fat	Energy	Calcium	Iron	Thiamine	Riboflavin	β-carotene	Niacin
Age	0.02412	0.04404	0.06121	0.04857	0.04657	0.056	0.037274	0.0629	-0.0146
Family type	-0.033568	-0.03538	0.02046	-0.0551	-0.02467	-0.0271	-0.029	0.00042	-0.0077
Family size	-0.005654	-0.00769	0.01712	0.00232	0.01059	0.0009	-0.02172	-0.0476	0.1198
Education	0.10407	0.09571	0.12069	0.10697	0.11373	0.1057	0.12017	0.11343	-0.0379
Land holding	0.1976	0.19296	0.17591	0.19709	0.20659	0.1953	0.183081	0.11967	0.0381
Income	0.413187	0.37984	0.41276	0.36704	0.41501	0.429	0.413679	0.33565	-0.1669

variety of complex factors namely socio-economic characteristics. Factors influencing nutrient consumption were age, education, type of family, size of family, land holding and family income. As age increases the nutrient intake of energy decreases or vice-versa. This may be due to the fact that age is negatively associated with metabolic functions. Hence, there will be lower demand for energy intake. The type of family has positive influence on nutrient intake. Nuclear families had positive influence whereas joint families had a negative influence on nutrient intake. It is an accepted fact that the dietary status of women from joint families are likely to be poorer than the nuclear families due to more members. The food distribution among many thus reduces the per capita consumption of food giving rise to dietary inadequacies. Increase in family size decreased the intake of majority of nutrients. The findings are in concurrence with the findings of Masanta and Pradhan (2011) who reported that increase in household size decreased the nutrient intake. As income increases, intake of energy, protein, fat, calcium, iron, thiamine, riboflavin, niacin and β-carotene also increased. These findings are

supported by Rahman and Rao (2001) who reported that as income and education status increases, nutrient consumption also increases.

### CONCLUSION

The study made an effort to understand the role of SHG in socio-economic empowerment of women. SHG women members utilized the credit availed for productive purposes which contributed substantially to their family development. The saving capacity of the households have also increased after formation of SHG. Majority of the women are taking loan for purchase of cattle, sheep and few of them wanted to setup processing units. Majority of women were engaged in dairy farming, vegetable marketing and sheep rearing. The dietary pattern of women members of SHG indicated that the consumption level of energy, protein, fat and minerals were far below RDA. The diet of rural families was monotonous, lacking variety and they care more for bulk rather than quality of the diet. Education, land holding, income and age had significant and positive association with nutrient intake among rural SHG women groups.

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