

AN ANALYSIS OF NUTRITIONAL STATUS OF FARM WOMEN IN PUNJAB: A CASE STUDY OF TEHSIL FATEH JUNG

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Nutrition is the key element for a human to survive. Malnutrition is a major problem of third world countries especially their women are more malnourished than the opposite gender. The main objective of present study was to explore the nutritional status of rural women in the research area. To probe into the matter, out of fourteen rural Union Councils (UCs) of tehsil Fateh Jung, two UCs were randomly selected. From each selected Union Council, 5 villages were selected randomly and a sampling frame was constructed by enlisting the names of females. A sample size of 120 respondents was selected through simple random sampling technique by selecting twelve women from each selected village. They were interviewed through a reliable and validated interview schedule. The data collected, were processed through statistical package for social sciences (SPSS) and a caloric counter was designed to find categories of nutritional status of rural women. The results show that the food intake of respondents in terms of calories was much less than the recommended ones. This research study highlighted the need to reframe their diet pattern by opening the new horizons of income generating activities, enhancing non-formal education facilities such as extension services, and application of gender specific poverty reduction strategies.

Key Words: Analysis, nutritional status, farm women

INTRODUCTION

Food is one of the basic necessities of life, after air and water. There are two concerns, one is the quality and the other is quantity. Both factors have equal significance, the developed world demands for the quality whereas, the food issue raised from third world relate to its quantity (Avni, 2003). Most of the developing countries including Pakistan are facing the problem of shortage of food and nutrition by both genders especially their females are most affected group (FAO, 2002). Whereas, numerous studies show that women have heavier workloads than men have. Men and women share agricultural and livestock tasks quite evenly, but women have additional domestic responsibilities, such as collection of water and wood for fuel, child-care and maintenance of family health. Especially the absence of men due to increasing out-migration intensify the workload of arid women (Dach, 2002). The rural women participate in all operations related to crop production such as sowing, transplanting, weeding, harvesting and post harvest operations like threshing, winnowing, drying, grinding, husking and storage (Beartz, 2004). They also rear livestock, in 90% families' animal look after, fodder cutting, feeding, watering, milking, primary medication and marketing is exclusively done by rural women (Ishaq, 1998). While in domestic chores of work, they perform 90% of food processing work, 80% of food storage, 60% in post harvest packaging, transportation and marketing other than taking care of children, elderly and disabled family members, fetching water and fuel, cleaning and maintaining the house as well as some of its construction (AWDF, 2003). Rural

women helped men to mix and prepare pesticide solution. While 2.6 million women collect cotton and about 25% of all family workers and 75% of part time worker were women. The rural women constitute 36% of total population and only 7% of them can read and write (Khushak and Hisbani, 2004). Whereas the participation rate of women in food production is not comparable with that of their nutritional intake. It was found by UNDP (1997) that nutritional deficiency was thought to affect 40% or more of the population of the world. Women were more vulnerable than men. They had a share of only 33% in total earned income in the country. Whereas, Social Watch (2004) stated that every day 840 million people of the world go hungry, more than 1.3 billion people are half fed and more than 2 billion people suffer from dietary deficiency. Somewhat same situation prevails in Pakistan where malnutrition continues to be one of the serious problems. The per capita calorie per day reduced from 2706 to 2529 between the year 2001-2004 and protein consumption per day from 71.4 to 65.8 grams. While 38.0% of the children under 5 years are underweight and 12.0% of the mothers are malnourished causing anemia, low blood pressure, heart trouble, reproductive problems, weakness, night blindness and cancer (Govt. of Pak., 2004). Despite food deficiency nationally, females (mother, daughters, wives, sisters) within a family, have least access to recommended diet as compared to males (father, brother, husband, son) because they are considered the earning hands and due to invisible nature of work, women are uncountable and eat left over food after eating by males (BLCC, 2004). The needs, interests, and constraints of women are not reflected in national policy-making. They also

have limited access to benefits of research and innovations, which interact directly to nourishment and ultimately, affect their health. (Commonwealth Secretariat, 2001). Ahmad and Arbab (2000) reported that improving income of women would improve nutrition particularly among children. Women's income has far greater impact on household security and child nutrition than men's. It may be spent on daily needs of the household. To improve women's income and thus family nutrition, women need to have their own income generating activities. In the same context Khan (2002) stated that female has an active participation in every field especially in several income generating activities like agriculture, livestock, medicine, education and handicrafts making. They contribute greatly towards family and country's income. But they need proper training and brought-up of coming generations. It is extremely discouraging that 90 million girls across the world never been to school. Dawn (2003) recommended the Universal female education combined with training programmes of income generating activities like sewing, embroidery, knitting, carpet-making and other vocational skills. Increased female education (stick to income) should be considered a social asset, as they play an important

role in developing character. In spite of crucial role of world's women in food production, provision and nutrition as mentioned above, nationally or internationally there is no strategy developed to secure their food on sustainable basis (World Bank, 2002). The Pakistan Poverty Reduction Cell had prepared a framework entitled "Pakistan Interim Poverty Reduction Strategy Paper (I-PRSP)" defined "poverty" as a multidimensional concept, which encompasses economic, political and social needs. According to this paper, the poor in Pakistan are not only deprived of financial resources, but they also lack access to basic needs such as education, health, and nutrition. The poverty reduction strategies designed during 2001 included privatization, devolution of power, gender development opportunities for creating income generation, education, health and nutrition. Four years since IPRSP was passed but still it was not implemented. Therefore, it was considered necessary to analyze the nutritional status of rural women. Nutrition is one of the poverty indicators. The current nutritional status of rural women analyzed as a result of the study will give some food for thought for gender development in country.

Table 1. Distribution of the respondents according to their demographic characteristics

Characters	Category	F	%
Age (years)	15-29	22	18.3
	30-44	66	55.0
	45-59	32	26.7
Total		120	100
Education	Illiterate	93	77.5
	Primary (up to 5 grade)	23	19.2
	Middle (up to 8 grade)	1	0.8
	Matric (up to 10 grade)	3	2.5
Total		120	100
Secondary occupation of the family head	Private servant	6	5.0
	Labourer	39	32.5
	Govt. servant	11	9.2
Total		120	100
Land holding (Acres)	Up to 25	118	98.3
	Above 25	2	1.7
Total		120	100
Marital status	Unmarried	21	17.5
	Married	92	76.7
	Widow	4	3.3
	Divorced	3	2.5
Total		120	100

Table 2. Distribution of the respondents according to their participation in food processing activities

Activity	Response						Mean	SD
	Often		Rarely		Never			
	No.	%	No.	%	No.	%		
Bread/roti making	112	93.3	8	6.7	0	0.0	1.93	0.250
Dough making	110	91.7	10	8.3	0	0.0	1.92	0.278
Flour sieving	108	90.0	11	9.2	1	8.0	1.89	0.338
Washing/cutting of vegetables	107	89.2	13	10.8	0	0.0	1.89	0.312
Making of curry	107	89.2	13	10.8	0	0.0	1.89	0.312
Milk processing	108	90	10	8.7	2	1.7	1.88	0.371
Serving of food	102	83.3	19	15.8	1	8.0	1.83	0.403
Making of jam, marmalade and pickles	21	17.5	52	43.3	47	39.2	0.78	0.724
Storage of pulses	15	12.5	56	46.7	49	40.8	0.72	0.676
Curd making	5	4.2	61	50.8	54	45.0	0.59	0.558
Lassi making	4	3.3	63	52.5	53	44.2	0.59	0.558
Drying of vegetables and meat	4	3.3	37	30.8	79	65.8	0.38	0.551

n = 120 Often = 2 Rarely = 1 Never = 0

METHODOLOGY

Fateh Jung tehsil consisted of 14 rural Union Councils (UCs) two of them—Jung and Kisana—were selected through simple random sampling technique. From each selected Union Council, 5 villages were selected randomly. A sampling frame was constructed by enlisting the names of adult rural women. A sample of 120 respondents was selected by using Fitzgibbon et al (1987) table through simple random sampling technique. The data were collected with the help of pre-tested and validated interview schedule. The respondents were inquired about their previous day diet as it can provide full day diet data at maximum memory level. The data thus collected were analyzed with the help of Statistical Package for Social Sciences (SPSS). Whereas the data regarding nutritional status were interpreted through establishing a caloric counter with the help of food composition tables (Hussain, 1980).

RESULTS AND DISCUSSION

The data regarding demographic characteristics of the respondents such as age, education, occupation of the family head and land holding of the family head are presented in Table 1.

The data given in Table 1 show that 55% of rural farm women of the study area belonged to age group of 30-44 years, followed by 26.7% and 18.3% to age groups of 45-59 and 15-29 years respectively. The mean age of the respondents was 37.43 years. In case of education level, majority (77.5%) of the respondents was illiterate, followed by 19.2 and 2.5% of the

respondents who were primary (up to 5th grade) and matriculate respectively. Only 0.8% of them were middle passed. Regarding family head's occupation all the respondents reported agriculture (crop and livestock sector) as their family heads' occupation. Due to small land holdings they had also some other livelihood strategies like labour, govt. or private service. In case of land holdings of the family it was depicted that an overwhelming majority (98.3%) of the respondents had small land holdings up to 25 acres of land i.e small landholders in arid zone. Only 1.7% of the respondents reported that their families owned 25 or above acres of land i.e large landholders. Regarding marital status, majority (76.5%) of the rural women were married followed by 17.5% who were unmarried. Whereas the present study in Fateh Jung tehsil indicates that the majority of the respondents were married, middle aged, illiterate, labour as a secondary occupation of the family and had small land holdings. The female respondents were asked to give their response as a three point Likert scale i.e Never=0; Rarely=1; and Often=2 regarding their participation in food processing activities. The data regarding this aspect are presented in Table 2 as given below.

Table 2 depicts that the respondents were often involved in food processing activities such as: roti making, dough making, flour sieving, milk processing, washing/ cutting of vegetable, making of curry, and serving of food (mean > 1.40). Whereas making of jam, marmalade and pickles, storage of pulses, curd making, lassi making and drying of vegetables and meat were rarely performed by the respondents (mean < 0.80). The above study finding is in line with findings of Qureshi (1996) who concluded that women

in developing world as a whole, worked for 14 to 17 hours a day in the field and at home for domestic chores of work like cooking, storing and distribution of food without compensation for the welfare of their families and communities. The data concerning the participation of rural farm women regarding making of curry (cooking vegetables, meat, pulses etc for curry) were further analyzed according to different age groups. These data are presented in Table 3.

Table 3. Age wise distribution of the respondents according to their participation in food processing activity (making of curry)

Age	f	Participation Rate
15-29	22	18.3
30-44	66	55.7
45-59	32	26.0
Total	120	100

Table 3 reflects the participation rate of respondents in food processing activities such as making of curry. It is clear from above data that 55.7% was the highest participation rate by the age category of 30-44 years. It can be concluded that middle aged women were more involved in food processing activities. The respondents were asked to give their responses about their previous day diet as it was considered a random day of their current life. The data regarding this aspect are presented in Table 4 given below.

Table 4. Distribution of the respondents according to food item they had eaten one day before the interview

Food item	Rank Order	f	%
Bread(Rotti)	1 st	120	100
Tea(one cup)	2 nd	119	99.2
Paratha(one)	3 rd	80	66.7
Vegetable	4 th	67	55.8
Egg(one)	5 th	45	37.5
Milk(one glass)	6 th	41	34.2
Yogurt/ lasi(one glass)	7 th	39	32.4
Daal(Moong)	8 th	33	27.5
Meat(100 gms beef)	9 th	24	20
Desi ghee/Butter	10 th	17	14.2
Fresh Fruit(kinnow)	11 th	13	10.8
Rice(one plate)	12 th	6	5.0
Dry Fruit(peanut)	13 th	3	2.5

It is clear from Table 4 that first four prioritized diet items taken by the respondents were low in nutritive value whereas the high caloric diet items such as meat, egg, milk, and fruit were less in their intake. The

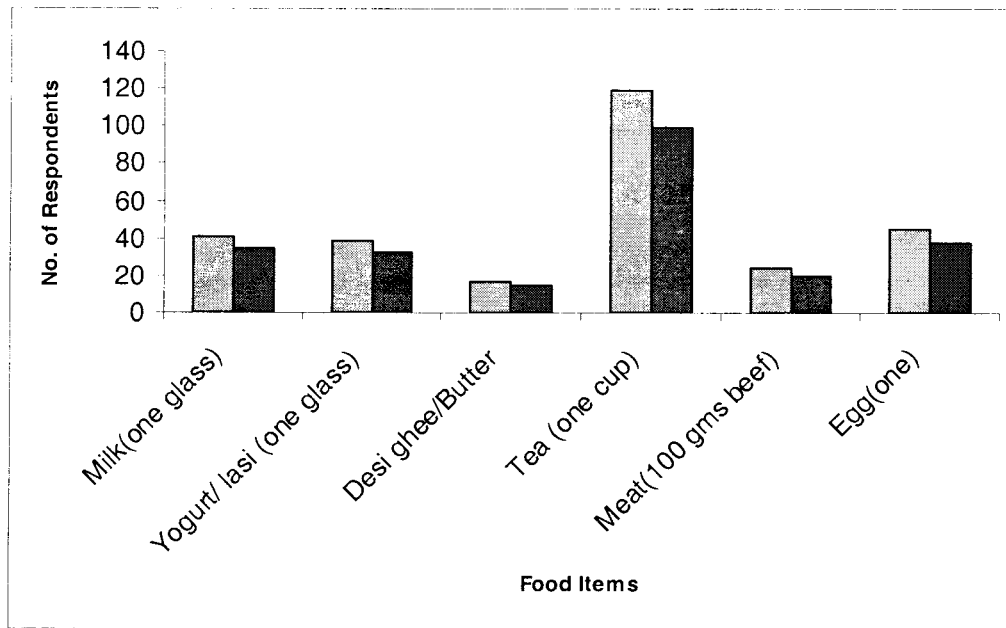
above research findings coincide with the findings of UNDP (2004) report which revealed that 800 million people were chronically malnourished worldwide in which women were more affected. So it was concluded from above data that women of the study area were used to eat such items which are less in calories. Very few women eat the items high in calories & nutritive value. Here the point of concern for administrators, researchers, and gender specialists is to design strategies so that the marginalized sector of community such as small farm women may have opportunity of better food for their nutritional uplift. It can be further concluded that the interim poverty reduction strategy of the government could not fulfill all of its objective even after passing four years since its implementation. There is a vast scope in redesigning the strategy for the next five year plan (2005-2010).

It was tried to analyze the food items taken by the respondents which were deficient in protein. The information regarding this aspect is given below in Fig.1.

Figure 1 reveals that an overwhelming majority of 119 respondents took one cup of tea, which has minimum protein diet item whereas 72.34% of the respondents were deficient of proteineous diet items like egg, milk, yogurt/lasi and meat. Above figure clearly shows that high protein diet items are minimum whereas least proteineous diet item is at the maximum level in their intake. The deficiency regarding the gap in Kcal intake was calculated through the diet table of Hussain (1980) making the sub total of calories obtained from each diet item i.e ADA (Available Daily Allowance) and it was compared with RDA (Recommended Daily Allowance). It was found that a gap existed between RDA and ADA which is presented in Table 3.

Table 5 reveals that the age group of 15-29 years was most malnourished with average caloric intake of 1321 K. Cal (ADA). Whereas the mean RDA (Recommended Daily Allowance) is 2100 K.Cal. So, there was a gap of 779 K.Cal, which resulted in 37.5% deficiency as compared with recommended ones. The caloric intake of age group of 30-44 years was 1253.5 K Cal. (ADA) whereas the mean RDA for this age group is 2000 K. Cal. with gap of 746.5 K.Cal which resulted in 37.3 % deficiency. The least deficient age group in this study was 45-59 years with 1273 K. Cal. (ADA) the mean RDA 1800 K.Cal. and there is a gap of 527 K. Cal. which resulted in 29.7% deficiency as compared with recommended ones. The female body wear and tear and child bearing during reproductive age period (15-45 years) is high which requires more intake and this reduces after menopausal stage. On the other hand with increased age women became

Figure 1. Bar diagram showing the number of respondents who had taken protein related food items one day before the day of survey interview.



more authoritative in home and family matters which results in the intake of better food. It was further explored from that there was a nutritional deficiency both in caloric and protein intake but proteinaceous diet items are much expansive as compared to carbohydrates or fats. The results indicate the reason of fatness of Pakistani women who have more risk of high blood pressure and heart disorders infect they are not physically healthy and strong but chronically malnourished (Avni, 2003). The results obtained from data given in Table 5 clearly indicate that the age group of women (30-40 years) who are generally middle aged women were much deficient in food intake in terms of K. Calories. Mostly this age group is married and at child bearing age. Focus group discussion revealed that they are more involved in household and farm operations than women of other

age groups. Their lower nutritional status may be due to their sacrifice for other family members such as male members, younger brother, sisters and older family members (grand father and grand mother). Ben Oke (2004) also mention that malnutrition affects a woman's quality of life, that of her newborn infant well beyond delivery, and that of her family and community. For example, in many parts of the world, poor nutrition in early childhood not only increases the risk of infant, and child morbidity but also affects long-term physical growth, cognitive development and future learning capacity, school performance, educational outcomes, and work performance. There may be some other reasons such as dominance by male or by other older family members. These are the factors which need to be explored further.

Table 5. Distribution of respondents according to K. Caloric intake

Age category	f	RDA (K. Cal)	Mean RDA (K. Cal)	Mean ADA (K. Cal)	Gap in ADA & RDA (K.Cal)	Gap in %
15-29	22	1700-2500	2100	1321	779	37.5
30-44	66	1600-2400	2000	1253.5	746.5	37.3
45-59	32	1400-2200	1800	1273	527	29.7

n=120

CONCLUSIONS

Pakistan, like the other developing countries, is facing gender malnutrition as a serious problem. The average women of the study area was middle aged (about 38 years old), illiterate, married, belonging to a family owning small farm with private sector service as a secondary livelihood strategy. They are suffering from nutritional deficiency both in K. Caloric and protein intake but the. Especially women in the rural areas are most affected group who have to perform the tough task of food production including child bearing and rearing. It indicates that rural farm women are active partners for coping with the menaces of poverty and hunger. There still remains need to plan and explore income generating activities for them. Their diet patterns may be reframed by opening the new horizons of income generation, increasing opportunities for non-formal education such as extension, and exploring gender specific poverty reduction strategies.

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