Original Article

Women's contribution in provision of household food security: A study from rural areas of Punjab, Pakistan

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Objective: To examine the women's role and contribution in provision of household food security in rural Punjab.

Methodology: This cross-sectional study collected data from 420 rural households from three districts of Punjab through a simple random sampling technique. The data were analyzed through SPSS and logistic regression analysis was employed for bivariate analysis.

Results: We found that 49% of households were suffering from household food insecurity. Women performed a substantial role in food production such as participation in farming, labor force, and income-generating activities. Three fourth (75.7%) women participated in processing, preparing and allocating food for household members. The multivariate logistic analysis found a significant association of women's education, economic status, knowledge, and awareness about nutritious food, decision-making power, and economic autonomy with household food security. Whereas women's age and household size were negatively associated with household food security.

Conclusion: Rural women play a decisive role in the availability, accessibility, and utilization of food for ensuring sustainable household food security. The study suggests empowering women through capacity building, income-generating opportunities, and vocational skills to overcome the household food insecurity in rural areas of Punjab. (Rawal Med J 202;45:196-200).

Keywords: Nutrition, education, employment, households, health food security.

INTRODUCTION

Food security exists when all people, at all times, have physical and economic access to sufficient, safe and nutritious food to meet their dietary needs and food preferences for an active and healthy life.[1] Nearly a billion people across the world experience the effects of food insecurity and low and middle income countries are facing more severe challenges of food insecurity.[2] Almost half of the population of Pakistan doesn't have access to sufficient food for active and healthy life.

Around the world especially in developing countries, rural women play a decisive role in food production (agriculture and livestock sector) for enhancing household food security.[3] They significantly contribute in rural economic growth and work as an agent of food security.[4] Rural women not only participate in production activities, income generation, purchasing food, process, prepare, store, and allocate food but also natural resources manager and caretaker of household members.[5] Women spend more resources and income on household food needs as compared to men.[6] In poor rural households, women act as wage laborers because their income is very essential for the subsistence of household food security status.[7] However, in rural areas, extensive gender discrimination, patriarchy system and biases exist. Women have a lack of access and control over resources, assets, inputs, skills, and services which negatively affects their contributions.[8] Rural women face various constraints and their roles are often frustrated by numerous social, economic and cultural norms. Rural women have limited access and control over resources such as education, health[9], land, credit,[10] employment, skills,[11] lack of decision making power, less freedom of mobility[12] and lack of training services.[13] The objectives of this study to investigate the contribution of women in provision of household food security and to examine the factors influencing household food security in rural Punjab, Pakistan.

METHODOLOGY

This cross-sectional study was conducted in Punjab province. A multistage random sampling technique

was used for data collection. Punjab province is geographically divided into three zones such as north, central, and south. At the first step: three districts one from each zone Faisalabad, Vehari, and Chakwal from elected randomly. At the second step: three tehsils from each district (Faisalabad Sadder, Burewala, Talagang) were selected randomly. At the third step: twenty-one villages (seven from each tehsil) were selected randomly. In the fourth step: 20 households were selected through systematic random sampling from each village. The sample size (420 households) was determined through the Fitzgibbon table.[14] The population of the study was married women with age between 18 to 60 years. A structured interview schedule was used.

Table 1. Food consumption score scale.

Food Groups	Yes (1)	No (0)	Weight
Cereals and Grains			2
Pulses and legumes			3
Vegetables			1
Fruits			1
Meat/ Fish			4
Milk and Dairy products			4
Sugar and Sweets			0.5
Oil and Fats			0.5
Spices and Condiments			0
FCS Threshold			
Poor	< 28		Less than 1500 kcal
Borderline	28.5-42		Between 1500-1800 kcal
Acceptable	> 42		Above 2100 kcal

Household food security status was stratified into two categories 1= food-secure households, 0=food insecure household. Household food security status was estimated by using food consumption score (FCS) by the world food program. Household food consumption is classified into three categories such as: poor (<1500 kcal), borderline (1500-1800 kcal) and acceptable (>2100) (Table 1). The FCS aggregates household data on the diversity and frequency of food groups consumed over the previous seven days. For example, food groups containing nutritionally dense foods, such as animal products, were given greater weight than those containing less nutritionally dense food such as fruits and vegetables.[15]

Statistical Analysis: The data were analyzed by using SPSS and association between dependent and independent variables was assessed through binary logistic regression.

RESULTS

South Punjab had the lowest food consumption score as compared to Northern and Central Punjab (Fig. 1). Central and north Punjab the food consumption score was high because of better socio-economic status of people. Fig. 2 shows that 67% women participated in assuring household food availability. Fifty-seven percent were involved in food purchasing and 75.5% were involved in preparing, processing, storing and allocating food. Furthermore, Fig. 2 shows the role of women in different dimensions of household food security. More than two third of women frequently engaged in food storage, food allocation and food processing. While 17%, 14% and 12.6% women never participated in food purchasing, food production and food storage, respectively.

Fig. 1. Household food consumption score.

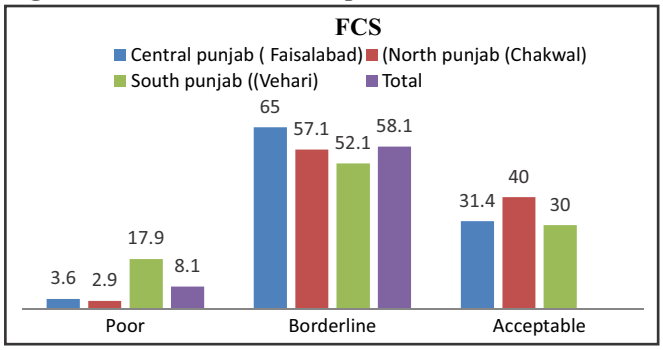

Fig. 2. Role of women in household food security.

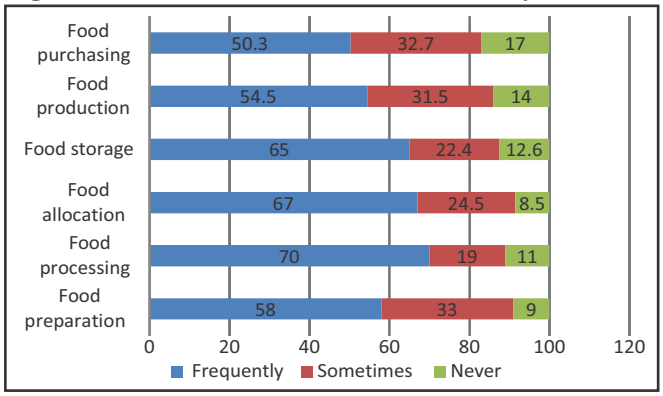

Table 2. Binary logistic regression (factors influencing household food security status).

Variable	B	S.E.	Wald	df	Sig.	Exp(B)	95% C.I.for EXP(B)	
							Lower	Upper
X1 Women age	-.178	.046	14.953	1	.00	.837	.764	.916
X2 Women education	.553	.253	4.788	1	.02	1.738	1.059	2.851
X3 Women occupation	.832	.738	1.271	1	.02	2.298	.541	9.765
X4 Women income	.165	.045	13.386	1	.00	1.180	1.080	1.289
X5 Decision making	1.353	.326	17.228	1	.00	3.868	2.042	7.328
X6 Household income	5.883	1.198	24.129	1	.00	358.961	34.321	3754.303
X7 Household expenditure	1.817	.895	4.120	1	.04	6.151	1.065	35.541
X8 Household size	-2.851	.781	13.319	1	.00	17.313	3.744	80.061
X9 Household asserts	.541	.784	.477	1	.04	1.718	.370	7.982
X10 Earning members	.479	.181	7.036	1	.00	.619	.435	.882
X11Control over capital	.551	.788	.487	1	.01	1.728	.380	7.998
X12 Women knowledge	.497	.188	7.236	1	.00	.719	.535	.982
Constant	-24.755	4.968	24.826	1	.000	.000		
Model summary								
-2 Log likelihood	Cox & Snell R Square				Nagelkerke R Square			
83.910[a]	0.695				0.926			

Binary logistic regression showed the determining factors influencing household food security. The overall logistic regression model indicated that Cox & Snell R Square is 0.695, Nagelkerke R Square is 0.926 and -2 Log-likelihood is 83.910. Women age with a negative value of B= -0.178 with p=0.00 indicated that an increase in women's age causes a negative -0.178-unit decrease in household food security status because with the increase in age productivity decreases. Household size with negative value B= - 2.851 p=0.00 indicated that an increase in household size causes -2.851-unit decrease in household food security because large household members create more burden on household economic resources (Table 2). Women's education, occupation, earned income, decision making power, household income, household food expenditure, household asserts, control over household capital and knowledge and awareness about nutritious food had a significant positive influence on household food security status.

DISCUSSION

The 1996 World Food Summit, hosted by FAO, was testimony to the fact that hunger is a harsh reality of the world. Some 840 million people go to bed each night hungry or not knowing whether they will have enough food to eat the next day.[16] Pakistan is among seven countries where two-thirds of the world's population are undernourished. Different studies have reported that women substantially contribute to household food security and access.[6,12]

World food summit also made commitment to ensure the active role of women in provision of food security.[17] The women's roles directly influence household food availability, accessibility, and utilization. Our study showed that 90% of women were involved in food utilization because of rural women heavily involved in livestock, farming, cooking and preparing food for the family. Rashid et al reported that women were predominantly involved in household food utilization, consumption and dietary diversity of household members was unswervingly linked with women's knowledge and awareness about nutritious food.[18] Another study also pointed out women's active role in food production played an important role in household calorie intake, food consumption, and

dietary diversity.[19]

The study found that almost half of the households were food insecure and the role of the women in household food security found pivotal. The study found that food security status was higher in North Punjab (Chakwal), medium in Centre Punjab (Faisalabad) and comparatively poor in South Punjab (Vehari). Bashir et al reported that food security status varies across the Punjab and South Punjab is the least developed area where food insecurity is higher as compared to other regions.[20]

WHO suggests adults should consume at least 2150 Kcal per day.[21] Our study showed that the majority of households were consuming fewer calories as compared to the required calorie threshold. The reason behind this situation is that the majority of rural households depend on their food production which is not enough for the accomplishment of calorie intake desires and reduces their chances of dietary diversity.

CONCLUSION

The food security situation is worse particularly in rural Punjab. The study revealed that 49% of households were food insecure. Household food consumption score of north Punjab was relatively higher than central and southern Punjab. However, less than two third household were found food secure in Punjab. Women education, occupation, household income, decision making, household assets, household expenditure, and women knowledge about nutritious food had positive effect on provision of household food security. It is suggested that women centered policies should be implement to empower the rural women to actively participate in provision of household food security.

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