

Research Note

Improving Food and Nutritional Security of Rural Women: Action Study

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ABSTRACT

The study was undertaken in Kudappanakunnu village of Thiruvananthapuram district in Kerala. Five case studies were done by analyzing their economic condition. The data were collected using questionnaire method. From the study it was found that majority of the respondents had medium level of knowledge on organic farming techniques. The women were provided with grow bags and vegetable seeds for improving their nutritional status. This initiative was introduced for improving their nutritional status along with income of the respondents. It was imperative that small initiative helped in improving nutritional status as well as improved waste disposal practices of the sampled women farmers.

Keywords: Food and Nutritional Security, Rural Community, Organic Farming

INTRODUCTION

Nutrition is the science that interprets the interaction of nutrients and other substances in food in relation to maintenance, growth, reproduction, health and disease of an organism. Gaining access to healthy and affordable food can be a challenge for rural residents. In rural areas, access to food may be limited by financial constraints or other factors, such as transportation challenges. Some rural residents and households are food insecure, meaning they cannot always rely on access to sufficient affordable and nutritious food, increasing the risk of poor health outcomes. According to the 2017 United States Department of Agriculture Economic Research Service (USDA-ERS) publication Food Insecurity, Chronic Disease, and Health among working-age adults, food insecurity is strongly associated with chronic disease and poor health, both of which disproportionately affect rural populations. Long-term food insecurity can affect learning, development, productivity, physical and mental health, and family life. Organic farming is an alternative agricultural system which originated early in the 20th century in reaction to rapidly changing farming practices.

It is defined by the use of fertilizers of organic origin such as compost manure, green manure, and bone meal and places emphasis on techniques such as crop rotation and companion planting. The present study explores the food and nutritional status of the respondents, biodegradable waste management practices adopted and to assess the attitude towards organic farming initiative.

METHODOLOGY

The area selected for the study was Kudappanakunnu, a rural community in Thiruvananthapuram district of Kerala. The sample comprises of twenty five families, of these five families were taken for the case study. The questionnaire method was used to obtain information on socio-economic profile, food and nutritional status, biodegradable waste management practices and attitude towards organic farming initiative of the respondents. Five-point Likert type rating schedule was developed to record their nutrient intake through twenty-four-hour recall method and basic anthropometric details. During twenty-four-hour recall, the investigator lists out all foods and beverages consumed and the amount of food as

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accurately as possible. For determining the quantity of food, measuring cups and measuring spoons were used.

For all the family members, weight, height, Body Mass Index (BMI), waist circumference and Waist Hip Ratio (WHR) were measured at the beginning of the study and at the completion of the study. BMI was calculated for the subjects using the formula $BMI = (\text{Weight in kg}) / (\text{Height in m}^2)$.

RESULTS AND DISCUSSION

Variables like age of the respondent, gender, marital status, family composition, number of family members, educational qualification, employment status, and monthly income were included under socioeconomic status. It was found that 32 per cent of the samples belonged to the age group 20-29 years and above. 25 per cent of the sample belongs to the age group of 30-39 years, and forty per cent of the samples belonged to the age group of 40 above years of age. Regarding the marital status, it was found that seventy six percent of the samples were married; sixteen percent were widowed, and eight percent were single or unmarried. Sixty four percent of the samples belonged to nuclear families and thirty six percent were from joint family. Regarding the educational qualification of the samples, 48 per cent had not completed their tenth standards, while remaining fifty five percent studied up to SSLC. About eight percent of them were presently not working and fifty two percent of them were still engaged in some sort of activities like agriculture or daily labourers and forty per cent were homemakers. It was found that thirty-six samples had a monthly income between Rs. 1500-2500. Forty percent of the samples had a monthly income between Rs. 2500-3500. Twenty four percent of the samples had a monthly income between Rs. 3500-4500. Forty four percent of the samples gain their income from agriculture while fifty six percent from poultry (Table 1&2).

The food and nutritional status of the respondents were assessed using twenty-four-hour recall method and it was found that cereals were mostly consumed by these respondents. Pulses, fruits, milk, egg, fish, fats and oils, sugar and jaggery were the less consumed food items. Majority of the respondents consumed flesh foods monthly

Table 1: Distribution of the samples based on their Socio-economic profile (N=25)

S.No.	Variables	Number	Percentage
1	Age category		
	20-29	8	32
	30-39	7	28
	40+	10	40
2	Marital status		
	Single	2	8
	Married	19	76
	Widowed	4	16
3	Type of family		
	Joint family	9	36
	Nuclear family	16	64
4	No of family members		
	Two	1	4
	Above	24	96
5	Education qualification		
	Below SSLC	12	48
	SSLC	13	52
6	Employment status		
	Retired	2	8
	Presently working	13	52
	Homemaker	10	40
7	Monthly income (Rs)		
	1500-2500	9	36
	2500-3500	10	40
	3500-4500	6	24
8	Income from other sources		
	Agriculture	11	44
	Poultry	14	56

and were consuming vegetables daily. Most of them were consuming vegetables in lesser quantity than normal. For that particular group the researchers introduced grow bags and vegetable seeds to raise their consumption level.

By analyzing the collected data researchers found that the respondents were unaware, the of proper waste management techniques. They dumped the waste in an inappropriate manner. Through the organic farming initiative, they can convert the biodegradable waste (especially waste from kitchen and poultry farming) into useful organic fertilizers. The attitude of the respondents

Table 2: Distribution of the sample based on their consumption pattern

Food stuffs	Daily	Weekly	Monthly	Rarely	Never
Cereals	25	0	0	0	0
Pulses	0	12	6	7	0
Vegetables	17	6	2	0	0
Fruits	-	2	13	10	0
Milk	4	16	-	5	0
Egg	6	3	9	7	0
Fish	7	9	6	2	1
Flesh foods	0	3	11	9	2
Fats and oils	5	2	7	8	3
Sugar and jaggery	4	4	12	3	2

towards organic farming initiative were assessed and found positive. Many of them were unaware of the proper organic farming procedures and the researchers made them confident and provided them with the proper farming techniques.

The in-depth case study of five cases was conducted and the qualitative description case wise is presented below:

Usha, aged 43, is the homemaker of her family consisting of her husband and two daughters. Their monthly income is just Rs. 3500. The breadwinner is a coolie labourer. The anthropometric assessment done in her family revealed that both her daughters were underweight. Due to the poor socioeconomic condition, it was identified that their purchasing power for food was comparatively low. Her husband was a drunkard and was unwilling to do any sort of work rather he was the problem maker in the family. It was because of those conditions that the children couldn't pay attention to academics. Usha has shown much interest in undertaking organic farming. The investigators facilitated five grow bags and enough vegetable seeds, guided her in the initial phases of the organic farming and gave her detailed awareness about the significance and importance of organic farming. They used kitchen waste as the manure for this farming practice. They showed high interest toward this initiative. Usha is continuing her organic farming initiatives and is growing more vegetables currently than domestic requirements. Another case was

Sindhu, aged 38, a Kudumbhashree worker and her family consists of her husband who is bed ridden and two children. Their monthly income was Rs. 2500. From the anthropometric assessment, it could be understood that the elder adolescent daughter was anemic and the son was underweight. Her husband was suffering from paralysis. It was difficult for Sindhu to take care of all the needs especially nutritional requirements of the family. The waste management practices of the family were very poor and did not paved much attention in disposing waste. Her attitude towards organic farming was positive and she was interested to make this initiative to a higher level to improve the economic condition of her family. She was motivated to make her understand how beneficial the organic farming was and guided her with proper instructions. As her daughter was anaemic, seeds of spinach, tomato were given mostly which she could capitalize. Similarly, Shylaja, aged 56, is a woman tailor and her family consisting of her mother and a son. Their monthly income was Rs.1500. She had a medical condition called PCOS (Polycystic Ovarian Syndrome). Due to this condition she was having Type 2 diabetes and abnormal uterine bleeding. Among the three members of the family, two of them were underweight. After the evaluation, it was found that the resources were not much available to them and were motivated regarding organic farming and new agricultural practices. These respondents had enough facilities for waste management, but the samples were unaware about the proper techniques of organic farming, so responded negatively. Radhamani, aged 41, is a homemaker with monthly income of Rs. 3000. Her family includes her husband, a pregnant daughter and her son in law. All the members in her family were underweight and the daughter was suffering from iron deficiency and anemia. The respondents showed a great interest in the organic farming method. Their kitchen waste management practices were unhygienic and poor. She was suggested to make the kitchen waste as the manure in the organic farming and helped them in the process with proper guidance. Geethu, aged 25, is a breadwinner of her family and her family consisted of her mother only. Their monthly income was Rs. 4000. The anthropometric assessment performed in her family revealed that both the ladies were underweight. Her mother had severe heart disease and she couldn't

do any strenuous activities. Their waste management techniques were unhygienic and poor, and they used to dump the waste on nearby road. When explained about how they could convert and use the kitchen waste as manure, Geethu showed a great interest in this initiative to perform the organic farming. With the required guidance and all the supports and services she could convert her waste management practices into organic matter production.

CONCLUSION

Organic farming is one of the most important ways of sustainable agriculture which is based upon a set of processes that lead to safe and healthy food without using any harmful chemicals. Today organic farming is looked upon as the answer to problems posed by conventional farming. From the collected data we understood that majority of the samples had a poor health condition. More than half of the women were anemic. It could be understood that the respondents were interested in organic farming, therefore the trigger was provided and facilitated with grow bags and seeds to safeguard the food and nutritional security of rural community. Through the organic farming initiative, they were able to dispose their kitchen waste in a proper manner. The awareness

class regarding the different aspects of organic farming could improve nutritional status. In the present scenario such types of initiatives may be more relevant not only in the rural community but also in urban community.

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