

Assessment of dietary diversity of rural women of reproductive age

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■ **ABSTRACT** : Women of reproductive age (WRA) are at greater risk of health issues for which gaps in diet quality and food consumption pattern have been recognized for a long time. To overcome this situation, FAO proposed dietary diversity indicators for assessing and analyzing the nutritional situation and food consumption pattern of households, as promotion of diverse diets is considered as one of the several approaches to improve micronutrient deficiency in women of reproductive age. Therefore, the present study was conducted with an objective to assess dietary diversity of rural. The total sample consisted of 200 women of reproductive age (15 – 49 years). An interview schedule was developed for the procedure of data collection. Background information was procured pertaining to subjects and their families. Twenty four hour recall method was used to obtain the information on the food consumed and dietary diversity was measured using the (FAO, 2016) Minimum Dietary Diversity for Women (MDD-W). The data obtained were analyzed in the light of objectives by calculating frequency, percentage and mean scores. Major findings of the study indicated that majority of the women had received minimum dietary diversity with mean value 4.34 ± 0.54 . The study found most of the women of reproductive age were not consuming diverse diet.

■ **KEY WORDS**: Dietary diversity, Women of reproductive age, Minimum dietary diversity

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Women has to shoulder the burden of dual responsibilities. They are the producers of goods and services as well as indulge in household chores, raise children yet their significant contribution to economy has been ignored. The health of women is of a major growing concern across the world from past since many decades.

Many rural areas do not have access to specialized health care and the primary care is often inadequate.

Even if certain rural areas have desired level of health care, factors such as poverty, lack of transportation, ignorance, child marriages, improper hygiene practices, illiteracy and stigmatization many a time prevent women from availing it.

According to FAO 'The State of Food Security and Nutrition in the World, 2013 report, 195.9 million people in India are undernourished. By this measure 14.8 per cent of the population is malnourished and 51.4 per cent

of women in reproductive age are anemic in India. Also more than 3.5 million women and under five children in developing countries die each year due to underlying causes of malnutrition (NFHS-4). Malnutrition among women is likely to have a major impact on their own health as well as their children's. As women with poor health status are more likely to bear low weight infants, cases of which are mostly noticed in underdeveloped and developing countries.

To overcome this situation, FAO proposed dietary diversity indicators for assessing and analyzing the nutritional situation and food consumption pattern of households, as promotion of diverse diets is considered as one of the several approaches to improve micronutrient deficiency in women of reproductive age.

Dietary Diversity (DD) ensures intake of variety of food groups by an individual which fulfils the requirement of nutritionally adequate diet and reduces the risk of chronic diseases. FAO and FANTA in 2016 proposed Minimum Dietary Diversity for Women (MDD-W) which is a tool used for assessing diversification in diet. It is a dichotomous indicator which states whether or not women of 15-49 years of age have consumed at least five out of ten food groups the previous day or night. The number of women (15-49 years of age) who reach this minimum in a population can be used as an indicator for higher micronutrient adequacy, which is an important dimension of diet quality.

Therefore, the present study aims to study dietary diversity indicators as it can provide base line information with regard to dietary diversity in the area and serve as a tool for assessing the food consumption pattern of rural women which can be useful to make communities aware of their basic rights to health.

■ RESEARCH METHODS

The present study was undertaken with the objective to assess the dietary diversity of rural women of reproductive age. The study was conducted in the villages of Udaipur district of Rajasthan state. A list of villages running under All India Coordinated Research Project (AICRP) on Home Science, Udaipur was procured. Five villages were identified namely Bagdunda,

GujronKaGuda, Jolawas, Majam and Majawad located in Gogunda Tehsil of Udaipur district, Rajasthan. For the purpose of sample selection, a total of 200 women between the age group 15-49 were selected purposively. Forty women from each village were selected. From each village 40 families (one woman from one family) were selected randomly. Pregnant and lactating women were not included in the sample. An interview schedule was developed for the procedure of data collection. Background information was developed to procure information pertaining to subjects and their families. Twenty four hour recall method was used to obtain the information on the food consumed and Dietary diversity was measured using the FAO (2016), Minimum Dietary Diversity for Women (MDD-W), which measures whether women have consumed at least five out of ten food groups the previous day or night. A list of food groups was prepared under which food items were mentioned, on consumption of every food group one point was allotted. Sum of food groups consumed was categorized into less than five which stated micronutrient poor diet and more than five stated micronutrient rich diet.

■ RESEARCH FINDINGS AND DISCUSSION

The overall minimum dietary diversity for women based on a 24-h recall method showed that 76.5 per cent of the subjects with mean±SD 4.34±0.54 had received minimum dietary diversity (less than 5 food groups were consumed) whereas only 23.5 per cent with Mean±SD 6.46±0.58 consumed more than five food groups as shown in Table 1.

Custodio *et al.* (2015) reported that minimum dietary diversity of women was low in West Africa.

Ukegbu *et al.* (2016) assessed the dietary diversity score of rural adult women in Nigeria and found that the total dietary diversity score of women was 2.94±0.74. Majority of the rural women (84.6%) fell in the low dietary diversity category, which is very much similar to the findings in our study which showed 76.5 per cent of the subjects with less than 5 MDD score.

Hedwig *et al.* (2011) used a mean dietary diversity score of 4 and found that 19.6 per cent of the women had a dietary score (DDS) less than four indicating a

Table 1 : Minimum dietary diversity score of the respondents				(n=200)
Sr. No.	Minimum dietary diversity for women (MDD-W)	f	%	Dietary score Mean ± SD
1.	<5 food groups	153	76.5	4.34 ± 0.54
2.	≥5 food groups	47	23.5	6.46 ± 0.58

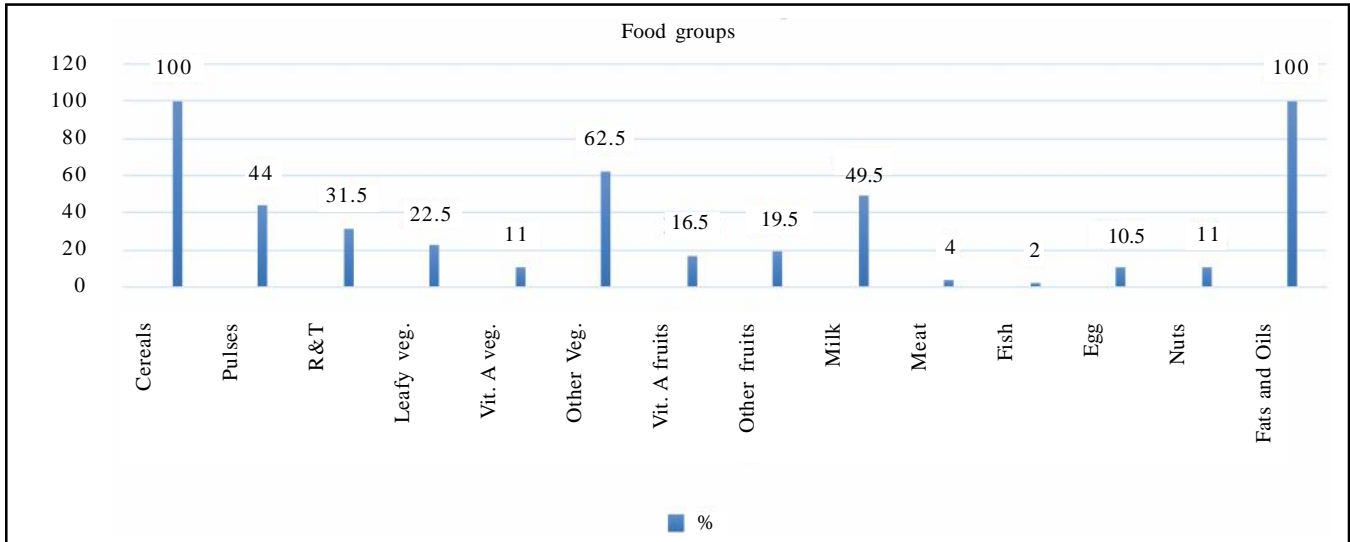


Fig. 1 : Per cent distribution of food consumed by the respondents

Sr. No.	Food item	Score 0 (No) (Not consumed) f (%)	Score 1 (Yes) (Consumed) f (%)
1.	Breakfast	175 (87.5)	25 (12.5)
2.	Sweets	177 (88.5)	23 (11.5)
3.	Tea	34 (17)	166 (83)
4.	Spices	0	200 (100)
5.	Others/snacks	173 (86.5)	27 (13.5)

poor dietary diversity, while 55.4 per cent consumed less than the average number of foods consumed by the group.

Consumption of cereals (100%) and other vegetables (62.5%) were the most commonly consumed food items followed by pulses and milk 49.5 per cent and 44 per cent, respectively. Consumption of roots and tubers and green leafy vegetables was only 31.5 per cent and 22.5 per cent, respectively. Other fruits were consumed only by 19.5 per cent of the respondents. Intake of vitamin A rich fruits and vegetables was low, of the total women only 16.5 per cent and 11 per cent were consuming these. However, consumption of meat and fish was negligible. Egg was consumed by 10.5 per cent of the respondents. Nuts and oilseeds were consumed by only 11 per cent of the respondents. Fat and oils are used for the purpose of cooking food daily thus consumed by all. Similar results were reported by Sarkar (2014).

There was an optional list based on 24 hour recall which stated the consumption of additional food items by the respondents, this list is not included in MDD-W

list. Breakfast is the most important meal of the day still majority of the women were not consuming it. Results shown in Table 2 states only 12.5 per cent of the total women were having breakfast.

A study conducted by Onofiok *et al.* (1996) reported that the usual practice of skipping breakfast was common in most women which may predispose them to nutrient deficiencies.

Sweets were consumed by 11.5 per cent. Majority of women consumed tea that is 83 per cent. Spices includes all minor ingredients mixed while cooking, which primarily provide flavour and would be consumed in very small amounts as 100 per cent of the women were using spices while cooking. Nearly 13.5 per cent of the respondents were consuming snacks.

Conclusion:

Diet of women of reproductive age in rural areas of Udaipur district was not diversified as majority had received minimum dietary score. In under-resourced poor settings across the globe, low quality monotonous diets

are the norm. When grain or other vegetables-based staple foods dominate and diets lack green leafy vegetables, fruits, and animal-source foods, risk for a variety of micronutrient deficiencies is high, impair women's health and their children's health.

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