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The study of the macronutrients status of the working and non-working women

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Abstract

Women play an importance role in society, the world over. The health level and the nutritional status affect the status of working and non-working women. Women working outside the home for long duration have less leisure time because of work pressure, and hence they cannot take proper care of their health and often neglect dietary intake. For the preset study 50 working and 50 non- working women were selected through purposive random sampling. Socio- demographic profile of the subject was collected with the help of questionnaire. The mean energy intake in the working women were 2288.6 Kcal which was more than the recommended dietary allowances The mean energy intake in the non-working working women were 2060.6 Kcal which was less than the recommended dietary allowances. The mean protein intake in the working women were 36.16 gm which was more than the recommended dietary allowances The mean protein intake in the non-working women were 33.53 gm which was less than the recommended dietary allowances. The mean fat intake in the respondents were 32.5 gm which was more than the recommended dietary allowances The mean fat intake in the non-working women were 33.53 gm which was less than the recommended dietary allowances.

Keywords: carbohydrate, protein, fat

Introduction

Nutrition awareness for women is extremely important because they, as nurturers, are engaged in bringing up our future generations.

In India the nutrition and health status of women is abysmally low The National Nutrition Monitoring Bureau (NNMB) Survey (1990) done in India shows that women's calorie requirement after the age of 10 years is not adequately met This itself indicates the poor health status of women in India is mainly due to patriarchy and other socio - cultural constraints leading to her secondary status at home and poor health. It is a bitter reality that in India women's health and nutrition is inextricably linked to social, cultural and economic factors. In India when the food intake of the privileged " and "underprivileged" males and was compared it was realized that 24 per cent of the females were malnourished in the privileged group, while 74 per cent were malnourished among the underprivileged.

In some culture and society context in india women are prohibited from eating essential quality food particular during menstruation, pregnancy and lactation such as milk and green leafy vegetables in india present who wish to postpone the marriage of their daughter often limit their food intake because they fear that girl who are well nourished will mature at a younger age.

"Nutritional status is the condition of health of the individual as influenced by utilization of the nutrients. It is determined through correlated responses obtained by a careful medical and dietary history and physical examination" Dietary intake pattern plays a significant role in human health. Improper and inadequate dietary intake pattern especially in women and non-working women have resulted in the deficiency of essential nutrients especially during pregnancy and lactation in India. Those women who consume limited animal source foods. Fruits and Vegetables, increase their risk of micronutrient deficiencies. Women on low protein and carbohydrate diets can be severely malnourished.

Methodology

The community based survey was carried out among working and non-working women of district Kanpur to assess their macronutrient status. The data concerning dietary intake of the respondents were collected using 24 hour recall method was obtained from the respondents by 'questionnaire-cum interview' and purposive random sampling method.

The nutrient intake was compared with the suggested intake was compared with recommend dietary allowances (RDA) of ICMR (2020).

The study was conducted during period of 2020 to 2021 with the sample size of 100 respondents, 50 working and 50 non-working women. Date was analyzed statistically using the MS

Excel 2010. Frequency, standard deviations, correlation coefficient, Z test, mean and percentage. The level of significance was taken at $P < 0.05$ for the study.

Observation and assessment

Table 1: Energy consumption of working and non-working women as compared to R.D.A.

Age group (Years)	Working women		Non -working women		RDA (Kcal/d)	Deficit (%)	
	Frequency	Energy (Kcal)	Frequency	Energy (Kcal)		Working	Non-working
25-35	18	2080.5	36	1925.4	2130	-2.3	-9.6
35-45	34	2355.4	46	2035.9	2130	10.5	-4.4
45-55	48	2430.0	18	2220.6	2130	14.0	+4.2
Mean	100	2288.6	100	2060.6	2130	22.2	-9.8
r	0.9607		-0.7386				

Table 1: Shows the caloric consumption of respondents as compared to R.D.A. The table reveals that in the working women maximum 2.3 percent deficiency of calorie was found in age group of 25-35 years, 14.0 percent increase of calorie was found in age group of 45-55 years in comparison to Recommended Dietary Allowances. Table shows that maximum working women were consuming high calorie diet. The value of correlation coefficient is 0.9607 which is positively correlated with different age groups at 5% level. The table reveals that in the non-working women maximum 4.4 percent deficiency of calorie was found in age group of 35-45 years, 4.2 percent increase of calorie was found in age

group of 45-55 years in comparison to Recommended Dietary Allowances. Table shows that maximum non-working women were consuming low calorie diet. The value of correlation coefficient is 0.7386 which is negatively correlated with different age group. carbohydrates consumption of working women were found increased because they were consuming calories rich food to an everyday diet like potatoes, banana, bread, rice, milk and milk products and non-working women were consuming low energy deity because the consuming low calories diet to an everyday, lack of nutritional knowledge and poverty.

Table 2: Protein consumption of working and non-working women as compared to R.D.A.

Age Group (Years)	Working women		Non -working women		RDA (gm/d)	Deficit (%)	
	Frequency	Protein gm/d	Frequency	Protein gm/d		Working	Non-working
25-35	18	34.3	36	31.5	36	-4.7	-12.0
35-45	34	36.8	46	32.6	36	+2.2	-9.4
45-55	48	38.4	18	36.5	36	+6.6	+1.3
Mean	100	36.5	100	33.53	36	4.1	-20.1
r	0.9962		-0.8437				

Table 2: Shows the protein consumption of respondents as compared to R.D.A. The table reveals that in the working women maximum 4.7 percent deficiency of protein was found in age group of 25-35 years, 6.6 percent increase of protein was found in age group of 45-55 years in comparison to Recommended Dietary Allowances. Table shows that maximum working women were consuming high protein diet. The value of correlation coefficient is 0.9962 which is significant at 5% percent level and positively correlated with different age group. The table reveals that in the non-working women maximum -9.4 percent deficiency of protein was found in age group of 35-45 years, 1.3 percent increase of

protein was found in age group of 45-55 years in comparison to Recommended Dietary Allowances. Table shows that maximum non-working women were consuming low protein diet. The value of correlation coefficient is 0.8437 which is non-significance. The protein consumption of working women were found high because they should taken high protein diet like milk and milk product, pulses, egg, meat, Chicken and soybean in their diet and have knowledge about protein rich food. The protein consumption of Non-working women were found low they were consuming low protein diet because they should not know about protein rich product, lack of source of protein and lack of knowledge.

Table 3: Fat consumption of working and non-working women as compared to R.D.A.

Age group (Years)	Working women		Non -working women		RDA (gm/d)	Deficit (%)	
	Frequency	Fat gm/d	Frequency	Fat gm/d		Working	Non-working
25-35	18	29.5	36	30.8	30	-1.6	+2.6
35-45	34	31.7	46	29.4	30	+5.6	-2
45-55	46	32.4	18	32.6	30	+8	+8.6
Mean	100	32.5	100	30.26	30	4	9.2
r	0.9684		-0.9958				

Table 3: Shows the fat consumption of respondents as compared to R.D.A. The table reveals that in the working women maximum 1.6 percent deficiency of protein was found in age group of 25-35 years, 8.0 percent increase of fat was

found in age group of 45-55 years in comparison to Recommended Dietary Allowances. Table shows that maximum working women were consuming high fat diet. The value of correlation coefficient is 0.9684 which is significant

and positively correlated with different age groups at 5% level. The table reveals that in the non-working women maximum -2.0 percent deficiency of fat was found in age group of 35-45 years, 8.6 percent increase of fat was found in age group of 45-55 years in comparison to Recommended Dietary Allowances. Table shows that maximum non-working

women were consuming high fat diet. The value of correlation coefficient is 0.9953 which is non-significant and negatively correlated with different age groups. Fat consumption of respondents were found high because they were consuming high fat diet and fast food like butter, peanut, meat, fat, mustard oil, cheese, coconut, milk and milk product.

Table 4: Energy, Protein and fat consumption of respondents according to work

S. No.	Nutrient	Working women	Non-working women	Z test	Significant level
1	Energy(Kcal/d)	2288.6±314.37	2060.6±275.34	8.523	P<0.05
2	Protein(gm/d)	36.5±5.96	33.53±3.98	6.852	P<0.05
3	Fat(gm/d)	32.5±3.58	30.2±8.52	1.562	P>0.05

Table 4: Reveals the energy, protein and fat consumption of respondents according to work 2288.6 Kcal of energy, 36.5 gm of protein and 32.5 gm of fat with SD 314.37 Kcal, 5.96 gm and 3.58 gm were consuming by working respondents followed by average 2060.6 Kcal of energy, 33.53 gm of protein and 30.2 gm of fat with SD 275.34 Kcal, 3.98 gm and 8.52 gm were consuming by non-working respondents. Energy consumption with value Z test is 8.523, protein*, protein consumption with value Z test is 6.852*, and fat consumption with value Z test is 1.52 respondents. This study showed that there was significant difference between intake in energy, protein, and fat between working and non-working women. Working women were taking more energy during work than non-working women due to eating high caloric diet. Protein and fat intake were found to be more in working women than non-working women because they were consuming high protein diet, because they were more educated and aware about their health.

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Conclusion

Nutrient intake play impertinence role in life. The macronutrients intake of carbohydrate, protein and fat of working women were found higher than non-working women. Because working women were having good knowledge about nutrients, balanced diet and aware about their health. They were consuming variety of foods, vegetables and nutrients rich food in their diet.

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