

## **MINOR RESEARCH PROJECT**

**Topic: - “Assessment of Nutritional Status of Rural Women”**

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### **Summary**

The present work was taken up to assess the nutritional status of rural women of villages at Gourala, Khairi, Devli, Kalmana, Chikna, Salai and Vihirgaon, District Nagpur, Maharashtra, India. About 200 rural women were selected between the age group of 21 – 40 years. The selected women were classified into two groups viz., 21-30 and 31-40 years age groups, each consisting of 100 women. These groups were studied with respect to their socio demographic profile, dietary and nutrient intake, anthropometric measurements, clinical assessment and the general nutritional awareness and practice. The results are summarized below.

Majority of husband of women of 21-30 years (42%) were in the age group of 31-35 years. The majority of husband of women of 31-40 years (87%) were above forty years of age. The mean age of husbands of 21-30 years and 31-40 years women were 32.65 + 4.87 and 41.98 + 7.36 years respectively. A majority of women in both the groups got married below 21 years of age. About 91% and 93% of women of 21-30 years and 31-40 years belonged to Hindu religion respectively. Majority of women i.e. 68% each lived in nuclear family. Majority of both the group (67% and 85%) had 4 to 6 members in the family. All the (100%) women of 21-30 years age group were married but in 31-40 years age group 98% were married and 2% were widow. Majority of both the group (57% and 68%) had their total family income ranging between Rs 10,000 – 15,000 per month. The mean monthly income of 21-30 years and 31-40 years were Rs 11445.00 + 2874.03 and 11631.00 + 3239.27 respectively. 63% and 25% husbands of 21-30 years age group and 68% and 27% husband of 31-40 years age group had education up to SSC and HSSC respectively. About 14% and 17% of husbands of 21-30 years and 31-40 years age group were farmers whereas 34% and 20% were engaged in service. The majority of women studied up to SSC and HSSC in 21-30 years (49% and 30%) age group and in 31-40 years (76% and 18%) age group. Majority of women i.e. 82% and 83% was labour in both the age group.

A majority of women of 21-30 years (67%) and of 31-40 years (69%) were vegetarian whereas 25.00% and 24.00% of both the age groups of women were

non-vegetarian respectively. Both the age group of women indicated that majority women (76.00% and 77.00%) were consuming four meals a day.

The diet of 21-30 years age group and 31-40 years group were found to be deficient in all foodstuffs except other vegetables. The per cent adequacy of 21-30 years women for milk and milk products, green leafy vegetables, and root and tubers ranged and pulses between 53.00 % to 66.40 %. The intake of cereals, sugar and jaggery and fats and oils were 75.00% and 90.16 % of RDA. The per cent adequacy of fruits was the lowest (34.00%). The per cent adequacy of 31- 40 years of women for milk and milk products, pulses, root and tubers, green leafy vegetables and cereals ranged between 51.00 % to 74.63%. The intake of sugar and jaggery and fats and oils were 78.40% and 92.16 % of RDA. The per cent adequacy of fruits was the lowest (36.00%).

An insignificant difference was observed between the mean intake of cereals ( $t=0.484$ ,  $p=0.629$ ), pulses ( $t=0.621$ ,  $p=0.535$ ) green leafy vegetables, ( $t=1.298$ ,  $p=0.196$ ), roots and tubers ( $t=0.321$ ,  $p=0.748$ ) and other vegetables ( $t=0.975$ ,  $p=0.331$ ) fruits ( $t=0.295$ ,  $p=0.768$ ), milk and milk products ( $t=0.680$ ,  $p=0.497$ ), fats and oils ( $t=1.176$ ,  $p=0.241$ ) and sugar and jaggery ( $t=1.100$ ,  $p=0.273$ ) of women of 21-30 years and 31-40 years.

The nutrient intake of women revealed that the diet of 21-30 years and 31-40 years were deficient in energy, protein,  $\beta$  Carotene , riboflavin, niacin , iron and calcium. The mean of fat, thiamin and vitamin C were found to be higher than that of RDA.

The mean intake of energy ( $t=0.263$ ,  $p=0.793$ ), protein ( $t=0.166$ ,  $p=0.869$ ) fat, ( $t=0.150$ ,  $p=0.881$ ),  $\beta$  Carotene ( $t=1.676$ ,  $p=0.095$ ) vitamin C ( $t=1.459$ ,  $p=0.146$ ) thiamin ( $t=1.233$ ,  $p=0.219$ ), riboflavin ( $t=1.676$ ,  $p=0.095$ ), niacin ( $t=0.020$ ,  $p=0.984$ ) and iron ( $t=0.787$ ,  $p=0.432$ ) and calcium( $t=0.543$ ,  $p=0.588$ ) intake of women of 21-30 years and 31-40 years groups did not show any significant difference.

About 61% of 21-30 years age group of women and 65% of 31-40 years of age group of women were found in normal BMI range (18.5 to 24.9 kg/m<sup>2</sup>). The prevalence of chronic energy deficiency (BMI < 18.5) was observed in 21% women of 21-30 years and 13% in 31-40 years of age group. The mean height, weight, BMI, mid upper arm circumference, waist circumference, hip circumference and WHR of women of 21-30 years were 152.48 5.96 cm, 49.80 8.41kg, 21.44 3.51 kg/m<sup>2</sup>, 24.27 2.30 cm, 77.51 9.08 cm 93.50 7.54 cm and 0.827 0.46 respectively whereas 151.72 5.17cm, 51.83 9.02 kg, 22.46 3.49kg/m<sup>2</sup>, 25.23 2.53cm, 78.87 9.81cm, 94.88 8.34cm and 0.829 0.049 respectively for women of 31-40 years group.

An insignificant difference was observed between the women of both the age group with respect to height, weight, waist circumference, hip circumference and WHR. A significant difference was observed between the women of both the age group with respect to BMI ( $t=2.082$ ,  $p=0.039$ ) and mid upper arm circumference ( $t=2.837$ ,  $p=0.005$ ).

Majority of women of 21-30 years (61%) and 31-40 years (57%) had moderate anemia whereas 2% and 3% were having severe anemia respectively. The overall mean of

hemoglobin level of both age group were  $10.59 \pm 1.04$  and  $10.69 \pm 1.31$ (g/dl). The statistical analysis did not show a significant difference ( $t=0.627$ ,  $p= 0.531$ ) between the mean hemoglobin levels of 21-30 and 31-40 years of women.

The mean systolic and diastolic blood pressures were found to be 119.0412.93 and 118.2711.90 and 78.689.12 and 78.628.74 mm of Hg in women of 21-30 years and 31-40 years. The mean pulse rate (per min) and random blood sugar level were found to be 75.583.58 and 76.215.71 and 127.7613.86 and 128.0515.72 respectively.

The common health problems in 21-30 years and 31-40 years women were headache (15.00% and 20.00%), backache (18.00% and 25.00%), weakness (24.00% and 36.00%) and pain in legs (16.00% and 38.00% respectively). About 80% and 91% of both age groups was consuming the right food to keep their bones healthy. Most of them were also following healthy sanitation practices by keeping their surroundings clean and also taking care of the hand hygiene.