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NUTRITIONAL STATUS OF WOMEN FROM RURAL AREAS: A COMMUNITY-BASED CROSS-SECTIONAL STUDY

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Conflicts of Interest: Nil

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Abstract:

Introduction: In developing countries, malnutrition is most prevalent which effects poor nutrition for growth for physical and mental development. Developing country like India due to poor resources for the health and nutritional status of women of reproductive age aggravate by prevailing cultural and traditional practices. Other low resource also make unsafe for women to under-nutrition for social and biological reasons throughout their lifecycle. According to the report of world health it identifies top ten risks, globally and regionally, in terms of the burden of disease they cause. Globally leading ten risk factors are: alcohol consumption; tobacco consumption; high blood pressure; unsafe water, sanitation and hygiene; underweight; unsafe sex; iron deficiency; indoor smoke from solid fuels; high cholesterol; and obesity. Worldwide together these may caused more than one-third of all deaths. Poor nutrition indicates greater health risk to both women and child born to them. In India over nutrition and under nutrition status are both simultaneous occur in women depending upon their status are suffering from a dual burden of malnutrition.

Aim: The main objective of this study is to know the nutritional status of the women rural areas with their sociodemographic factors.

Material and methods: Samples of 250 women population from that rural area were included with different age groups were selected by simple random sampling. In total women population each women were interviewed and questionnaire was used at their households for the recorded data. General physical examinations as Weight, Height etc were recorded. Body mass index (BMI) was calculated by using the formula weight/height.

Result: Total 250 populations of women were included in this study with the mean age 12.9 ±2.6 years. In which majority of age group was 21-25 years age group that is 34%. In this study there was a majority of primary school education with 40.8% and followed by high school as 30.4%. In this study 70% were currently studying whereas 18% were housewife and 12% were doing domestic work. 22% were illiterate in which 8.5% were school dropouts. 45% were unmarried and 55% were married. From 55% married women 8% were divorced. According to socio-economic status 3(1.2%) belong to class I, 12 (4.8%) belonged to class II, 77 (30.8%) belonged to class III, 95 (38%) belonged to class IV, and

63(25.2%) belonged to class V. Mean height, weight, and BMI were less among the population aged between 15 to 30 years as compare to31 to 45 years.

Conclusion: Nutritional status of women in community was a major public health problem if not addressed strongly. Various factors effect on nutritional status and measures have to be taken to educate about the healthy nutrition and importance of physical activity among women. Therefore emphasis is given for nutrition and there is an urgent need to create awareness and implement interventions to improve the nutritional status as to improve the health of self and family.

Keywords: women, Rural, Nutrition status, Socio-economic status

Introduction

In developing countries, Malnutrition is most prevalent which effects poor nutrition for growth for physical and mental development[i]. Developing country like India due to poor resources for the health and nutritional status of women of reproductive age aggravate by prevailing cultural and traditional practices[ii,iii]. Other low resource also make unsafe for women to undernutrition for social and biological reasons throughout their lifecycle[iv,v]. According to the report of world health it identifies top ten risks, globally and regionally, in terms of the burden of disease they cause. Globally leading ten risk factors are: alcohol consumption; tobacco consumption; high blood pressure; unsafe water, sanitation and hygiene; underweight; unsafe sex; iron deficiency; indoor smoke from solid fuels; high cholesterol; and obesity. Worldwide together these may caused more than one-third of all deaths[vi]. In India only 57% of adult men and 52% of adult women has normal weight for their height. 34% of men and 36% of women are undernourished with a BMI less than 18.5 which indicate high prevalence of nutritional deficiency. Obesity and Overweight are emerging problems in which 9% of men and 13% of women are obese or overweight. For the overall population Nutritional status is an indication. Especially in women adequate nutritional status is important for good health and which increased work capacity for themselves as well as for the health of their offspring. Poor nutrition indicates greater health risk to both women and child born to them. In India over nutrition and under nutrition status are both simultaneous occur in women depending upon their status are suffering from a dual burden of malnutrition[vii]. WHO has also recommended Body mass index in simpler, practical and epidemiological measure for identifying over weight and obese. The ratio between Waist circumference and waist/hip have been used as measures of central obesity and body mass index (kg/m2) has been used as a measure of general obesity[viii,ix]. The main objective of this study is to know the nutritional status of the women rural areas with their sociodemographic factors.

MATERIALS AND METHODS:

This is a community based cross sectional study which is carried out in the rural field practice areas of Venkateshwara Institute of Medical Sciences Gajraula (UP). Total 250 sample size was obtained for this study. As the reported as prevalence of over nutrition among women age group of 15-49 years as 13%[7] a sample of 250 women population from that rural area were included with different age groups was selected by simple random sampling. Pregnant, lactating mothers were excluded in this study. In total women population each women were interviewed and questionnaire was used at their households for the recorded data. General physical examinations as Weight, Height etc were recorded. Body mass index (BMI) was calculated by using the formula weight/height[7]. According to WHO classification BMI was classified as: normal range (18.50-24.99 kg/m^2); underweight (<18.50 kg/m^2); overweight (≥25.00kg/m^2) and obese (≥30.00kg/m^2)[x].

RESULT:

Total 250 populations of women were included in this study with the mean age 12.9 ±2.6 years. In which majority of age group was 21-25 years age group that is 34% which shown in table below. In this study there was a majority of primary

school education with 40.8% and followed by high school as 30.4%. in this study 70% were currently studying whereas 18% were housewife and 12% were doing domestic work. 22% were illiterate in which 8.5% were school dropouts. 45% were unmarried and 55% were married. From 55% married women 8% were divorced. According to socio-economic status 3(1.2%) belong to class I, 12 (4.8%) belonged to class II, 77 (30.8%) belonged to class III, 95 (38%) belonged to class IV, and 63(25.2%) belonged to class V as shown in table below.

Table 1: Demographic characteristics (n=250)

Demographic characteristics	**Study participants**	
	Number	**Percentage (%)**
Age		
15-20	52	20.8
21-25	85	34
26-30	63	25.2
31-35	28	11.2
36-40	16	6.4
40-45	6	2.4
Total	250	100
		0
Education		0
Illiterate	55	22
Primary school	102	40.8
High school	76	30.4
Collegiate education	17	6.8
Total	250	100
		0
Socio-economic status (Modified B. G. Prasad's Classification)		0
I	3	1.2
II	12	4.8
III	77	30.8
IV	95	38
V	63	25.2

In this study overall mean weight was 30.3 ± 4.9 kgs with range being 15 kgs to 55 kgs and mean height was 135.6 ± 25.5 cms with range minimum being 105.50 cms to maximum 155 cms. The overall mean weight of the study population was 29.5 ± 8.08 kgs with range being 15 kgs to 55 kgs, and mean height was 138.60 ± 29.54 cms with range minimum being 102.50 cms to maximum 165 cms. Among the total population the age 15 and 30 years were more stunted (58%) as compared to 31 to 45 years (42%) based on less than third percentile of NCHS standards. the age 15 and 30 years were more thin (52.8%) as compared to 31to 45 years(47.2%) based on less than fifth percentile of NHANES standards. In this study mean height, weight, and BMI were less among the population aged between 15 to 30 years as compare to31 to 45 years which is shown in table below.

Table no 2: Association of stunting and thinness for total population.

Parameters	15 to 30 years		31 to 45 years	
	No	%	No	%
Height for age<3rd percentile	145	58	105	42
BMI for age<5th percentile	132	52.8	118	47.2

DISCUSSION:

Especially on women Nutritional status in age group is an important factor to determine the outcomes of overall health of the women. There are many studies shown that under nutrition was higher in rural population. In india's population Nearly one fourth representing a vibrant human resource. Therefore nutritional status is important to improve physically as well as mentally development of the body. A recent study from UNICEF's "State of the World's Children 2011" reported as more than half (56%) of women in India are suffering from anemia. Developing countries like sub-Saharan Africa with the highest underweight population of 47% in age group of 15 to 19 years[xi]. According to NFHS-2[xii], not attending school the most common causes for been educated (13.17%),not interested in studies (15.8%), involvement in domestic work (24.5%), and did not afford fee (24.5%). Many studies have reported significant association of socio-demographic parameters like age, socioeconomic status, diet, literacy status of parents, menarcheal status. However, in this study socio-demographic parameters have not shown any statistically significant. In both the age groups, class V socio-economic group indicate nutritional deficiency may expose them to high-risk in their life in future[xiii, xiv]. Expectations for care make a useful contribution to reducing maternal and childhood morbidity and mortality and also improve women in both high- and low-income countries[xv]. Therefore these kinds of studies are important as the nutritional status in women is poor and might impact the health.

CONCLUSION:

The nutritional status of women is poor and common in this study. Nutritional status of women in community was a major public health problem if not addressed strongly. The health of a woman has direct implications on the health of the family in present or in future. Various factors effect on nutritional status and measures have to be taken to educate about the healthy nutrition and importance of physical activity among women. Therefore emphasis is given for nutrition and there is an urgent need to create awareness and implement interventions to improve the nutritional status as to improve the health of self and family.

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