



Nutritional Status of Pregnant Women and Lactating Mothers and An Intervention of 'Kap' of Dietary Practices among Dangolion Tharu Schedule Tribes Womens

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Abstract

Tharu Schedule Tribe is the most populated tribe in India. Their population in this state U.P. was approx. 2 lakhs that were classified in three sub categories such as Rana Tharu, Dangolion Tharu and Kathurian Tharu. Geographically isolation has strengthened traditional identities and has forced these people to continue with their traditional arrangement for decade together. They are eco-friendly. All their culture, and activities were deeply related to nature. The pregnancy and lactation periods of mothers are a very crucial times among Tharu population. When maternal nutrition is important in influencing the health of both mother and infants. But due to poverty these women could not fulfil extra demand diet for foetus development and lactation of new born baby. Lack of awareness for required nutrition was also another big issue for such target group. The main objective of this paper was "to find out nutritional status and an intervention of the KAP for better dietary practices among Dangolion Tharu Schedule tribe pregnant and lactating women". The paper was prepared at Deengha village of Pachperwa development block of district Balrampur of State Uttar Pradesh (India). Approx all the pregnant and lactating women were selected for detailed study; n=60 for intervention group and 10 subjects in control group. The main findings of this paper; a cent percent target subject were found of lowest order as compared to requirement order of nutritional status. After intervention it was observed that only 18% respondents changed their nutritional intake during pregnancy and lactation period. The changes in nutritional status were observed lowest to requirement order only 6% and lowest to lower order 12%. It was also found that the achievement of services provided by Government or NGOS only on paper. The changes due to 'KAP' for knowledge or awareness generation 47% attitude developed in 22% and adopted in practices on 18% Approx 50% subjects were found anaemic. The calculated value of chi square was found much more higher (6.0) as compared to table value (3.841) at one degree of freedom and five percent significant level i.e. healthy dietary practices through 'KAP' generation improved the nutritional status of pregnant and lactating mothers of Dangolion Tharu women.

Keywords: Pregnancy and Lactation Period, maternal nutrition, Dangolion Tharu Scheduled Tribe, eco-friendly.

Introduction

Historically the Tharu culture is very eco-friendly. All culture, thing and activities of this tribe are deeply related with nature, their residence, food, cloth, art, religion, economy and many other parts of life are based on nature and keep ecological balance. Population of Tharu tribe in Uttar Pradesh is approximately 12 lakh¹. Geographic isolation has strengthened traditional identifies and has forced these people to continue with their traditional arrangement for decade together. Pregnancy and lactation period of mothers are a crucial times when maternal nutrition is important in influencing the health of both mother and infants. These periods are the most stressful periods in the life of a woman and it is a rapid growth period of foetus and other development. Pregnancy is a remarkable anabolic process where by out of food, vitamins, minerals and hormones are also a necessity for a 3.2 kg baby that is born within nine months. The foetus is in a sense a

parasite to the mother and draws its nourishment from her diet. Low weight pregnant women results in premature rupture, and a premature and underweight infants. Prenatal dietary supplements for malnourished women improved fatal birth weight. Low birth weight results in higher risk for death as compared to normal weight infants. On the other hand obese pregnant women increase the risk in the mother of toxemia of pregnancy, gestational diabetes mellitus, high blood pressure, other metabolic disorder and thromboembolic diseases. In such condition foetus is likely to be bigger, and delivery complicated and difficult. During pregnancy increase in nutritional requirement because of: i. Development of the placenta. ii. Enlargement of maternal tissue namely the breast and uterine tissues. iii. Rapid growth of foetus. iv. Increase in maternal blood volume. v. mineralization of the skeletal and bone structure of the foetus as well as tooth buds. vi. storage reserves. vii. Formation of amniotic fluid. Normal changes during pregnancy³

Table-1

Changes in	Basis for change	During Trimester	Relief measure
Gastro Intestinal System Taste Nausea and vomiting Digestion	Progesterone Gastro mobility HCG/Estrogen Nausea and Vomiting	All	Small meals Carbohydrate Fiber Water
Cardio Vascular and Pulmonary System Dyspnea ↑ Cardiac Output Edema	Progesterone ↑ O ₂ ↓ CO ₂ Vasodilation Hypotension	1 st and 2 nd 3 rd	Avoid sudden changes Good posture Small meals Adequate fluids
Urinary System Frequent Urination	↑ Renal Filtration	All	Drink fluids early in the day

Additional Dietary Demands on the mother⁴: i. A 20% - 25% increase in basal metabolism in later stage of pregnancy, ii. Formation of placenta and, iii. Blood loss during parturition

Lactating women produces approx 850ml of milk daily which is equivalent of 600kcal with 80% efficiency in converting food energy into milk. Intake of caffeine should be strictly prohibited because of this may result in spontaneous abortion, still births, premature birth and birth defect.

Nutritional Requirements during Pregnancy and Lactation⁵: **Calories:** The total energy cost of pregnant is about 40,000-88,000 kcal (168-336ml): of this about 36,000 kcal (151ml) is stored as 4kg fat in the mother of a total weight gain of 12.5kg. The additional energy allowances required is 150kcal Per day in the first trimester. For a 58kg pregnant women a daily intake of 2000-2100 kcal +300 kcal is necessary. Lactating women produce 850ml of milk daily, which is the equivalent of 600kcal. A mother needs an additional 750kcal daily or 13,000 kcal during six months of lactation. i.e. 2000-2100+750kcal. Calorie should be sufficient to meet energy and nutrient demands and to spare protein for tissue building.

Protein: During pregnancy the additional protein laid down for the fetus, placenta etc. About 950g roughly estimated as 0.5g, 3.0g, 4.5g and 5.7g daily during successive 10- week period. Additional 25-30g of protein daily is recommended to the mother. The requirement of protein in Pregnancy increases by about 30% over the normal requirement. If the normal requirement of an adult woman is 45g per day. During Pregnancy she would be required to take an additional 14g per day. In Lactating period from birth to six months increases the protein allowance of an adult woman from 45g Per day to 70g Per day, i.e. an increase of 25g per day.

Vitamins: Vita-A 4000 IU units should be given to pregnant and lactating mother. Vita D 400 IU (10 microgram) thiamine

1.5mg riboflavin 1.5mg, Pyridoxine 1mg nicotinamide 15mg, ascorbic acid 40mg, Folic acid 0.36mg.

Calcium: About 30g calcium accumulates during pregnancy. Mostly in the fetal skeleton. About 25mg of calcium is required daily at the third month, gradually increasing to 300 mg in the nine month.

Mineral Requirement: Calcium and iron are two minerals the need for which is urgent during pregnancy. Additional calcium may be obtained from legumes and leafy vegetables. In lactating stage the calcium that was used for mineralization of bones of the fetus during pregnancy is now diverted to the production of milk. Pregnant women needs to maintain a daily intake of 32mg of Iron throughout her child bearing years. Lactating women iron is not secreted much into the milk hence, the requirement of iron remains the same as during pregnancy.

Vitamin Requirement: All the vitamins, especially vitamin A, B complex, C and D, and folic acid are required in increased doses during pregnancy. Vitamin A requirement increases by about 25% over the usual adult intake. Vitamin B complex group, folic acid supplementation may be required to protect against megaloblastic anaemia. In lactation the requirement of vitamin A and B complex especially riboflavin and niacin, is also increased as they are secreted into milk. The requirement of vitamin D cannot be overlooked as it is involved in their absorption and utilization.

Objective: The main objective of this paper was “to find nutritional status and an intervention the role of KAP (Knowledge attitude and practices) for better dietary practices among Dangolion Tharu Schedule Tribe pregnant and lactating women.

Methodology

This paper was prepared in Deengha village of Pachperwa development block of district Balrampur of State Uttar

Pradesh INDIA. The validation chart n=60 invention group and n=10 for control group.

Conclusion

Ages: Age wise distribution of subjects were: upto 25yrs; 30%, 25-30yrs; 20%, 30-35yrs; 28% and 35+yrs; 22% approximately similar trend was seen in up 30yrs of age group and above 30+yrs that was 50% each. The academic status of the subjects a maximum; 35% subject was found still illiterate; and rest 15% up to primary. Family occupation of the respondents; farming and agriculture labour 86%, govt. services; 4% , businessmen; 6%, and other activity; 4% such as service sector. Dietary intake of respondents before intervention , it was found all the subjects were taking their traditional recipies such as Chakna-bhator kuchlabhatwhich is made by rice, and potatoes. A small amount of oils, spices and dried fish powder were incorporated in the Chakna. The intake of milk only in tea. Home made wine chakli was taken by all respondent during in ceremonial occasions. Liking of Food: Fruits - 26%, vegetables-18%, milk – 21%, rice- 80%, chapati-36%, fried food- 21%, fast and junk food – 58%, nuts – 81% (peanuts).

After intervention the intake of healthy diet was taken only 16% respondents. A large number of respondents were not taking interest in improving healthy dietary intake. It was due to perhaps traditional adamant for dietary intake or poverty reasons. Before intervention it was found all the subjects were lowest order of nutritional status. After intervention it was found 6% respondents; degree of changes to first i.e. lowest order to third i.e. requirement order. A 12% respondent changed lowest order to lower order. There were no changes observed in control group and rest of the respondents. Obesity status- Thin - 68%, healthy - 24% , over wt. - 8%.

The KAP after intervention for healthy diet and smart nutrient intake.: Knowledge/Awareness generation – 47, Attitude develop – 22, Practices – 16, anaemiaby Hb % - 37% , By physical examination- 52%. Govt. services provided to such population were found totally malpracticizing and not improving their nutritional status during pregnancy and lactation. NGO's services were also not given any support to this target population to improve the nutritional status of subjects. Anganbadi services and midday meal achievement was found only on paper. The delivery was carried by unsterilized knifehasia or blade and only 10% subjects get their delivery by sterilized manner. The calculated value of Chi-Square was found higher (6.0) as compared to table value (3.841) at one degree of freedom and 5 percent significant level i.e. healthy dietary practices and KAP generation improved the nutritional status of pregnant and lactating mother of dangoliontharus.

Table-2

Full time infants drawn from mothers during pregnancy

Weight	3.2kg
Blood	300ml
Proteins	500gm
Calcium	30gm
Phosphorus	15gm
Iron	300-400mg

Table-3

Prenatal Supplement Guidelines for Women at risk for deficiency

Iron	30-60 mg
Zinc	15 mg
Copper	2 mg
Calcium	250 mg
Vitamin D	400 IU
Vitamin C	50 mg
Folic Acid	400 Ug
Vitamin B ₆	2 mg
Vitamin B ₁₂	2 Ug

Table-4

Balanced diet for a Pregnant Woman²

Food Group	Food Stuff	Amount Per day
i	Rice, wheat and millets	+300g
	Oil, ghee, butter, etc.	30g
	Sugar and Jaggery	20g
ii	Milk, Curds, etc.	500ml
	Pulses, dried beans, nuts	60g
	meat, fish, egg	20g
iii	Fruits	200g
	Vegetables	350g
	Green leafy Vegetables	150g
	Other Vegetables	120g
	Root and Tubers	100g

Table-5

The Intervention guidelines as follows Per day

Cereal	310gms
Pulses	50-75gm
Egg	1 (one)
Oils and Fat	30gm
Milk	1-2 glass
Curd	150gm
Fruits	2 (two)
Vegetable	150gm
Green Vegetable	As desired

Table-6
Low Cost Diets for Pregnant Women

Diet	Food Group										
	I				II				III		
	Cereals (g)	Oil (g)	Sugar and Jaggery (g)	Milk in L	Pulses etc. (g)	Meat (g)	Egg (g)	Fruits (g)	Green Leafy Vegetables (g)	Other Vegetables	Roots and Tubers (g)
Balanced Diet for a Pregnant Women	300	30	20	500	60	-	-	200	130	120	100
Prevalent Diet of South India Pregnant Woman	342	15	21	62	20	20	-	25	23	25	-
Nutritious Low Cost Diets A	440	20	25	110	50	-	-	-	150	50	50
B	450	20	25	100	45	-	-	-	150	50	50
C	440	20	25	100	25	30	1 egg		150	50	100

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