SUMMARY AND CONCLUSION

Nutrition and Health is a prerequisite for human development and is an essential component for the wellbeing of the mankind. The health problems of a community are influencing by interplay of various factors including social, educational and economical. The common beliefs, customs, practices related to health and disease in turn influence the health seeking behavior of the community. There is a consensus agreement that the health status of the tribal population is very poor because of their isolation, remoteness and being largely unaffected by the developmental processes going on in the country. Tribal women in India are at great disadvantage due to illiteracy and ignorance. Various research studies in India revealed their nutritional inadequacy.

Inadequate nutrition is not only due to inadequate food availability but also due to faulty habits, some of them are based on food prejudices superstitions or taboos and importantly lack of awareness of right food choices. Therefore change in behavior ensures better food choice and healthy nutrition. Nutrition education is accepted as an important measure for the promotion of nutrition and is considered challenging because improved nutrition requires sustained and repeated individual behavior. Changes in food consumption patterns, require shifts in deeply ingrained food habits established since childhood and in some cases due to low income. Based on the paucity of information regarding their diet and nutritional status the present investigation was undertaken to assess the nutritional and health status of tribal women.

OBJECTIVES:

1. To study the socio-economic and demographic profiles of the tribal women in Warangal district.
2. To assess the nutritional status of tribal women through direct assessment methods.
3. To assess the reproductive health status of the tribal women.
4. To know the indigenous practices adopted for health by the tribal women.
5. To study the awareness (KAP) on nutrition and health and to develop and impart an integrated nutrition education intervention.

6. To study the impact of nutrition education intervention.

Sample size and technique

Warangal district was selected as the Universe of the study. The district is divided into five revenue divisions namely Warangal, Narsampet, Mulug, Jangaon and Mahabubabad and comprise of 51 mandals, out of 51 mandals, 10 densely populated tribal mandals were selected which encompass Integrated Tribal Development Agency (ITDA) and Modified Area Development Authority (MADA) project area. A multi stage random sampling was adopted, the three staged random sampling include, mandal the first stage (10 mandals) Village the second stage (20 villages) and subjects the third stage (500 subjects). A random sample of 500 young married women in the age group of 20-25 years with at least one child were selected from each village (25 from each village). The sub sample of 10 subjects from each village (N=200) were selected randomly for the intervention programme both for Experimental (N=100) and Control group (N=100). The sub sample was treated with quantitative analysis to know the inner perspectives and to understand their pattern in detail which could help in developing an intense intervention on nutrition and health. Knowledge, Attitude and Practices questionnaire was administered pre and post intervention to the sub sample (N=200).

Major Findings of the Study

Socioeconomic and demographic profile

- The majority of the subjects were in the age group of 20-22 years (68 percent), whose illiteracy ranged up to 43.2 percent, 23.4 percent of the subjects only know how to sign, 21.6 percent have attended primary school and 10.8 percent of the subjects have attended secondary school and only one percent of the respondents are into intermediate education.
▪ 62.2 percent of them were agricultural labourers working on daily wages in fields, only 13.6 percent are tenant land cultivators and 5.8 percent are cultivating their own lands.
▪ Majority of the tribes residing are Lambadis 43.8 followed by Koya 39.4 percent and Erukala 16.8 percent.
▪ The present study depicts the trend of nuclear family with 67.8 percent and joint families with 30 percent and 2.2 percent are extended families.
▪ 62.8 percent of them earn 2000 to 3000 per month, 20.4 percent earn 1500 to 2000 followed by 16.8 percent earning 3000 to 4000. Standard of living index which is an indicator of a household socio economic status was calculated and is divided into three categories; Low, Medium and High. 81.8 percent of the respondents were having low standard of living, 17.2 percent with medium standard of living and only one percent is with high standards.
▪ The monthly expenditure incurred towards the basic necessities at household level are, the mean amount spent on food is 660 and 358 for clothing. Least spent on education, entertainment and shelter, equal amounts were spent on medical, transport, fuel and electricity. Others generally include their life style expenditures.

**Reproductive health status:**

▪ 76.4 percent has attained menarche at 14-15 years and 25.6 has attained at 13-14 years, it is evident from many sources that women with low socio economic status attain menarche at 14 years.
▪ About 83 percent of the subjects were married during 16-18 years followed by 6.3 percent during 14-16 years and 10.7 during 18-20 years.
▪ 89.6 percent of consanguinous marriage were observed in the present study and only 10.4 percent of them were married with in the tribe but not to their blood relatives. Early marriage leads to early conceptions. 48 percent of them conceived during 16-18 years, 40 percent during 18-20 years and 12 per cent during 20-22 years.
The respondents faced abortions at the age of 16-18 years, 19.6 percent at the age of 18-20 years and 38 percent during 20-22 years. The no of living children among the respondents, showed that 63 percent were with two children, 12.0 percent had one child and 15 percent had three children followed by 9.8 percent by more than 3 children.

Majority of them faced severe abdominal and stomach pain, body pain and irritability during menstruation followed by oedema and over bleeding. Gynecological and urinary tract infection were also observed mostly in all subjects.

A very low percentage of women have availed the services during antenatal periods i.e. only 8.8 per cent have done urine examination 40.2 percent of women have gone for blood test, 53.4 percent performed abdominal checkups, 26.2 percent have taken T.T. injections, and only 7.2 percent of them have consumed IFA tablets and none of them had an ultrasound or a sonography test during their pregnancies.

72.6 percent were using female sterilization and 1.8 percent with male sterilization. Two percent of infant mortality and 4.2 percent of child mortality were observed during the study.

Immediate initiation of breast feeding was observed in 86.4 percent and 13.6 percent have discarded the colostrum and 14.8 percent of them used pre lacteal feeds in the form of plain water, honey, sugar water before the initiation of breast feeding.

Anthropometry:

The overall prevalence of under nutrition is 79.8 percent respectively and is intended with income. The mean heights and weights of the respondents were 1.55 and 44.4. The average BMI of the respondents is 18.4 which can be interpreted as undernourished

Body mass index - the grading according to James et al.1988 classification where only 20 percent of the respondents are graded with normal and 20.2 percent are in low normal grade. The chronic energy deficiency included 44.2, 14.2 and 1.4 per cent under I, II and III grades.
The BMI categorization according to WHO classification showed 20.0 per cent were Normal, 20.2 percent were low normal and 59.8 per cent were undernourished.

Clinical signs and symptoms:

The clinical signs and symptoms observed revealed the prevalence of anaemia, diarrhea, gastro intestinal problems, skin infections, Vitamin A deficiency and Angular stomatitis.

Dietary Assessment:

- The levels of intakes of all the nutrients were below RDA (ICMR 2010).
- The mean intakes of all the nutrients were below the RDA. Even though the frequency of consumption of protein and animal foods were marginal the consumption levels were grossly deficient compared to recommended levels.
- Rice is staple food, Jowar and maize were altered and wheat was scantly used.
- The sources of protein are mainly from animal foods, pulses were also included.
- Inadequacy was found in quantitative terms but the frequency of consumption of nutrient dense foods was observed during qualitative analysis.
- There was a correlation observed between inadequate intake and their low BMI.

Qualitative data:

The focus group discussion provided food consumption patterns at different stages and focus ethnographic study administered through pile sorting and rating food attributes provided Qualitative information and community perspective regarding food. Fourteen different most commonly used indigenous health practices were identified under this study.
Intervention:

Channels are the pathways to deliver the developed material for nutrition education. A single channel of communication may lead to monotony and may not grab the attention of the target group, hence multiple channels as inter personal communication and community channels were used to diffuse the information. The actual piles, flash cards, charts posters and lesson plans were prepared to impart nutrition education.

Impact Assessment

Group education, cooking demonstration and promotion of home gardening promoted have shown a positive impact with increased consumption of green leafy vegetables and trying out the recepies at home.

- The mean difference between pre and post intervention, the mean difference on knowledge of the respondents is 12.05 with t-value 57.11 showing a high significance, the attitudes and practices differed with a mean of 13.3 and 13.09 with t-value 51.73 and 75.678 with high significance at 1 percent.
- The control group was kept constant after pretesting the respondents. The mean difference observed was 1.35 on knowledge,0.990 and 1.430 on attitude and practices, but the difference were not statistically significant.
- The effect of nutrition and health education on knowledge, attitude and practices among the respondents for improving their nutritional status during post intervention were highly significant in the experimental group when compared to the control group.
- The ‘F’ value is significant at 0.01 level of significance, education in comparision with post knowledge and practices which shows the effect of education with regard to knowledge and practices. But in view of attitude there is a change according to the mean scores but it is not statistically significant.
- The correlation between Knowledge, and practices was positive and significant at 0.05 percent level between knowledge and practices but a
negative correlation was found between attitude Vs knowledge and practices. Illiteracy do effect the attitudes of the respondents.

Thus the study clearly demonstrated the improved nutritional and health practices of the respondents and longterm programmes as such can focus on their complete behavior change among these communities.

Conclusion:

The nutrition and health status of tribal women is poor as compared to the modern society. They suffer from distinct health problems, not because they have some specific type of health but because of specific placement in difficult areas and circumstances, persistent poverty, illiteracy, malnutrition, non availability of safe drinking water and sanitary living conditions, poor maternal and child health services, ineffective coverage of National health programs .Consanguineous marriages have also been found to effect the health status of the tribal women adversely. Unfortunately proper health services are not available in many tribal areas, beliefs, customs and traditional practices connected with health and disease influence their choice of treatment of methods. The findings of the situational analysis reveal the poor nutrition and health practices of the subjects, despite of the resources and the support from the government they are unable to avail the services, this can be overcome through awareness and with the purge of middlemen. An attempt was made through this study to educate the women regarding nutrition and health. Whenever change is necessitated in the society, the need of participation of women is very much felt.

Implications

1. Success of any developmental programme especially at grass root level depends on people’s participation. It is essential to sensitize and motivate the public in general to participate in the developmental programmes.

2. The importance of education cannot be overemphasised. Many of them have learned to sign through Self help groups for financial help likewise
minimum education should be made mandatory and acquired through non formal and continuing education or Self Help Groups.

3. Imparting nutrition and health education during non formal education through Self Help Groups should be made mandatory.

4. Exposure to various mass media and urban contact are found to be less through the study due to severe power cuts and Non-availability of Radio or Television, government may provide at least one unit to each village and telecast the programmes during the prime time for an hour or two. Improving transportation facilities by government is also one aspect which can be focussed to increase and minimise the urban contact.

5. The present study has focussed only on nutrition and health education but primarily gender sensitisation approach is essential for the tribal women to make them realise that they can equally contribute, and the male partners to ensure women participation.

6. A mobile health service is one aspect which can improve their health conditions with trained health personnel. Tribal women can be trained as Dais/Nurses to avoid primitive practices.

7. The findings are related to different facets of nutritional status of young women living in tribal areas. The data provides scope to plan for specific nutrition intervention programmes geared to the needs of the women and to improve their quality of life.

8. Income plays a vital role in improving their nutritional status so income generating activities like poultry, fisheries, cattles or small scale industries with forest produce can be promoted by the government.