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RESEARCH PAPER

Knowledge of rural women regarding health and nutrition practices in Bikaner district of Rajasthan, India

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Abstract : The present study was conducted in Bikaner district. There are six panchayat samitis out of which Bikaner Panchayat Samiti was selected. Out of thirty one Gram Panchayat in Bikaner Panchayat Samiti four Gram Panchayat were selected namely Kilchoo Deodan, Ridmalsarpurohitan, Palana and Nalbari. One village from each selected Gram Panchayat was selected on the basis of random sampling technique. Thus, four villages were selected for the present investigation (Surdhanachauhanan, Raisar, Palana, Nalbari). A sample of one twenty rural women in the age group 15-45 years (30 rural women from each village). Interview Schedule was developed to collect the data regarding health and nutrition knowledge of rural women. The major findings of the present study revealed that in general information majority of the respondents belonged to middle age group, educated upto primary, belonged to 4001-6000/- monthly income group, nuclear family system, other backward caste, involved in agriculture occupation, had above 2.1-5 hectare of land holding, no membership of social organization, no participated in training programme and medium level of mass media contact, urban contact and extension contact. The overall knowledge of the rural women was medium. Out of eight aspects of health and nutrition the knowledge about the aspect of 'Basics of foods and nutrition' and 'Environmental hygiene' were ranked first with overall mean per cent score. On the basis of these findings it could be concluded that health and nutrition knowledge of rural women was medium.

Key Words : Health, Nutrition, Knowledge, Hygiene, Environment

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INTRODUCTION

Health is primarily a personal responsibility and demands personal care to enjoy it. Health is an essential requirement of all irrespective age, caste, creed, race, religion and economic standard. Health means not the mere absence of disease but it is the "complete state of the physical, mental and social wellbeing". Health of an individual can be affected by general health condition of the society and vice-versa. Therefore, health of the community needs higher attention while considering the development of a region or a country.

Health is a precious asset for everyone. It is the crown of all possessions and untheft treasure. An adequate and safe water supply, disposal of excreta and solid wastes, drainage of surface water, facilities for

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personal and domestic hygiene and sanitary food preparation, control of indoor air pollution, safe handling of things and suitable precautions where the home serves as a work place. Proper medical services at proper time are also needed to maintain health.

Good nutrition is a firm foundation for human happiness, and sound health and skilled performance. It constitutes the most important readily improved environmental influence of health. Even, today 25 per cent of our Indian populations are trapped in the viscous circle of poverty, malnutrition and diseases which reduce their work performance nullify al efforts under taken for their development and finally impede over nation's progress.

In India when the food intake of the "privileged" and "underprivileged" males and females was compared it was realized that 24% of the females were malnourished in the privileged group, while 74% were malnourished among the underprivileged. The percentage for males was lower in both cases; 14% among the privileged and 67% in the underprivileged.

In some cultural and social contexts in India, women are prohibited from eating essential quality food particularly during menstruation, pregnancy and lactation such as milk and green leafy vegetables. In India parents who wish to postpone the marriage of their daughters often limit their food intake because they fear that girls who are well nourished will mature at a younger age, and this will place them at a vulnerability of early marriage.

Nutritional problems have serious public health significance impacting psychological, physical, developmental, behavioral and work performance of pregnant women. Iron deficiency is by far the commonest nutritional cause of anemia. It may be associated with folate deficiency, especially during pregnancy. Pregnant women form a large high-risk group requiring special care. According to WHO, in developing countries, the prevalence of anemia among pregnant women is 56% (WHO, 1992). The prevalence of anemia in India is 60-70% (Park, 2005). In India, anemia is the 2nd most common cause of maternal deaths accounting for 16% of total maternal deaths (Govt. of India, 2012).

The infant mortality rate is 47.57 deaths per thousand live births; general death rate is 7.48 per thousand in 2011. Life expectancy at birth in 2011est. is 63.5 years.

The percentage of deaths caused due to child birth and pregnancy was reported as 2.4 per cent of the total Indian population. The reasons given were malnutrition due to lack of food as well as poor choice of food. Only 48 per cent of the Indian infants were fully immunized against diphtheria, poliomyelitis and tetanus (DPT).

It is certain that health is a basic need of all human beings from womb to tomb. Nutrition and health education (NHE) component of ICDS mainly involves diffusion of specific nutrition and health messages through a low cost software type technologies cluster package of maternal and child care, nutrition, health and hygiene practices in the client systems of ICDS project organization.

Material and Methods

The present study was conducted in Bikaner district. There are six Panchayat Samiti out of which Bikaner Panchayat Samiti was selected purposely looking to no such study has been conducted in the area earlier and the area was well known to the researcher. Out of thirty one Gram Panchayat in Bikaner Panchayat Samiti four Gram Panchayat were selected with lottery method namely Kilchoo Deodan, Ridmalsarpurohitan, Palana, Nalbari. One village from each selected Gram Panchayat selected on the basis of random sampling technique. Thus, four villages were selected for the present investigation. A sample of one twenty rural women in the age groups 15-45 years (30 rural women from each village).

Results and Discussion

The results obtained from the present investigation as well as relevant discussion have been summarized under following heads :

Knowledge level of respondents in different aspects of health practices:

Table 1 presents information about knowledge of respondents on each aspect of health and their mean per cent score. Perusal of table reveals that out of five

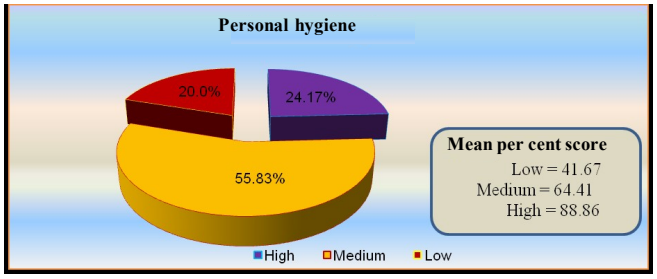

Fig. 1: Knowledge level of respondents in personal hygiene of health practices

aspects, the knowledge for aspect of Basic of 'Environmental Hygiene' ranked first with overall mean per cent score of 66.49. This aspect was in the category of medium knowledge.

The knowledge for the aspect 'Personal Hygiene' ranked second with overall mean per cent score of 64.98. This aspect was in the category of medium knowledge. The knowledge for the aspect 'Health for Pregnant and Lactating Mother' ranked third with overall mean per cent score 59.18. This aspect was in the category of medium knowledge. The knowledge for the aspect 'Normal Disease' ranked forth with overall mean per cent score 51.96. This aspect was in the category of medium knowledge. The knowledge for the aspect 'Health for Children' ranked fifth with overall mean per cent score 50.99. This aspect was in the category of medium knowledge.

Personal hygiene :

The first aspect of knowledge check regarding health practices was "Personal Hygiene" which included 13 items. Table 1 (Appendix 1) reveals that majority of the respondents (55.83%) were in the category of medium knowledge with mean per cent of 64.41. These respondents could give answer of 6 to 11 items correctly. About 24.17 per cent respondents were in the category of high knowledge with mean score of 88.86 per cent that is they could correctly answered 11-13 items. Remaining 20 per cent respondents had low knowledge with mean score of 64.41 per cent. These respondents could give answered 4-6 items correctly out of 13 items. Mohdand Malik (2017) revealed that 88.3% respondents attributed sanitation and hygiene to hand hygiene followed by safe disposal of faces (57.7%). Majority of respondents had adequate knowledge about sanitation and hygiene. The data on practices revealed that, 55.6% respondents were not following any methods of drinking water treatment. Only 11% respondents clean their water storage containers daily and 53.8% dispose solid waste daily.

In depth study of the knowledge of "Personal Hygiene" bring out that items 'one should take care of personal hygiene during menstrual period' and 'centre where folic acid pills are available free of cost is anganwadi' were not answered correctly by 65 per cent and 63.33 per cent respondents. Reshma *et al.* (2016)

Table 1: Knowledge level of respondents in different aspects of health practices **(n=120)**

Sr. No.	Different aspects	Distribution of responses			Per cent mean score			Overall mean per cent score	Rank
		High n (%)	Medium n (%)	Low n (%)	High	Medium	Low		
1.	Personal hygiene	29 (24.17)	67 (55.83)	24 (20)	88.86	64.41	41.67	64.98	II
2.	Environmental hygiene	25 (20.83)	72 (60)	23 (19.17)	88.33	66.2	44.93	66.49	I
3.	Health for pregnant and lactating mother	16 (13.33)	80 (66.67)	24 (20)	82.95	56.14	38.45	59.18	III
4.	Health for children	25 (20.83)	65 (54.17)	30 (25)	69.97	50.07	33.64	50.99	V
5.	Common disease	18 (15)	85 (70.83)	17 (14.17)	75.85	50.63	29.41	51.96	IV

Appendix : Respondent's response on selected items regarding nutrition practices

1. Basics of food and nutrition

Sr. No.	Questions	Answered			
		Correct		Incorrect	
		n	%	n	%
1.	Vegetable like carrot, cucumber etc. are not used in raw form	115	95.83	5	4.16
2.	It is not important to cover the vegetables with a wet cloth in the basket	115	95.83	5	4.16
3.	Always cook the pulses in soaked water	118	98.33	2	1.67
4.	Nutrient required for body building and maintenance is protein	16	13.33	104	86.67
5.	Green leafy vegetables contains vitamins and minerals	5	4.16	115	95.83
6.	Energy providing food is rice	11	9.16	109	90.83
7.	Rice should be washed with cold water	119	99.16	1	0.83
8.	Vegetable should be washed before cooking	120	100	-	-
9.	Vegetable should be cut immediately before cooking	120	100	-	-

revealed that out of 300 subjects, 40% had good knowledge, 42% had average knowledge and 18% had poor knowledge on water, sanitation and hygiene. Study findings revealed that most of the well (66.3%) has cemented compound. Most of the subjects (66.3%) use handled jug to take water from water storing drum, majority (70%) uses boiled or filtered water for drinking. Most of the toilets (68.3 %) are well ventilated, Majority of the subjects (83.7%) cleans water storing vessel daily. Majority (70%) practiced hand washing with soap and water after defecation. Findings of the study revealed that majority (75 %) of the subjects followed unsafe practices on 55 water, sanitation and hygiene. The study found that majority (88 %) of the subjects performed unskilled hand washing. 95.83 per cent of the respondents had the knowledge that 'hands should be washed before eating as well as cooking of the food'.

96.67 per cent of the respondents also disagreed with the items as 'hair should be untied while cooking the food'. The reason could be that rural women are more traditional and majority of then always cover their heads throughout the day. Swain and Pathela (2016) shows that 76% of total respondent were not aware about the "Swachh Bharat Abhiyan" and 56% were not aware about the significance of keeping good sanitary conditions. It was also observed that among the total respondents only 54% were defecating in the toilet and 8% of 10 respondent's dont wash their hands after defecation and 11% of the respondents never wash their hands before meals. As observed, only 33% of female respondents were using sanitary pads during their mensuration.

Environmental hygiene :

The second aspect of "Environmental Hygiene" had 12 items. Table 1 (Fig. 2) reveals that majority of the respondents (60%) were in the category of medium knowledge with mean score of 66.2 per cent. These respondents could give answer of 6 to 10 items. About 20.83 per cent had high knowledge with mean score of 88.33 per cent *i.e.* they could give correctly answers of 10 to 12 items. While only 19.17 per cent were in the category of low knowledge with mean score of 44.93 per cent, they could give answer of 4 to 6 items.

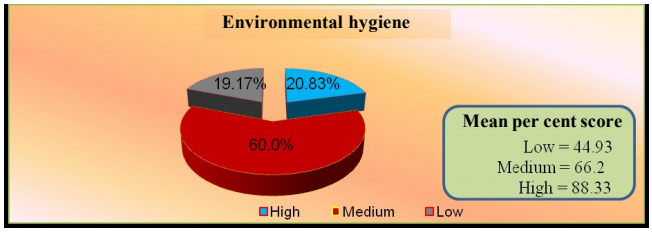

Fig. 2: Knowledge level of respondents in environmental hygiene of health practices

In depth study of the knowledge of "Environmental Hygiene" shows that items 'insects develop in the standing dirty water' were not answered correctly by 96.67 per cent respondents (Appendix 2).

Cent per cent respondents had knowledge about 'food should be prepared in a clean and hygienic place'. Siwach (2017) revealed that majority of the respondents in the area had low scores on level of knowledge and practices regarding 85 personal hygiene. In order, to enhance their level, a Health education programme was developed, the respondents were divided into experimental and control groups and the programme was administered in the experimental group. After the intervention of Health education programme the results showed an impact of the programme as the scores of the children after post-testing improved in the experimental group and they were found to be significant on various aspects of personal hygiene.

Appendix 2 : Nutrition for mother

Sr. No.	Questions	Answered			
		Correct		Incorrect	
		n	%	n	%
1.	All food items should be included diet of pregnant women	120	100	-	-
2.	Food is not required for the fetus	12	10	108	90
3.	Pregnant women should eat anyone fruit daily	120	100	-	-
4.	Breast feeding should not be given the newly born baby	117	97.5	3	2.5
5.	Pregnant women should consume more water as compare to other women	120	100	-	-
6.	Pregnant women food should be in double quantity than normal women	21	17.5	99	82.5

Health for pregnant and lactating mother :

The third aspects of knowledge check was 'Health for Pregnant and Lactating Mother' including 22 items. Table 1 (Fig. 3) reveals that majority of the respondents (66.67%) were in the category of medium knowledge with mean score of 56.14 per cent. These respondents could give answer of 9-16 items correctly items. About 20 per cent of the respondents were in the category of low knowledge with mean score of 38.45 per cent these respondents could give answer of 7-9 items correctly items. While 13.33 per cent respondents were in high knowledge category with mean score of 82.95 per cent and could give correct answers 16 to 21 items correctly out of 22 items.

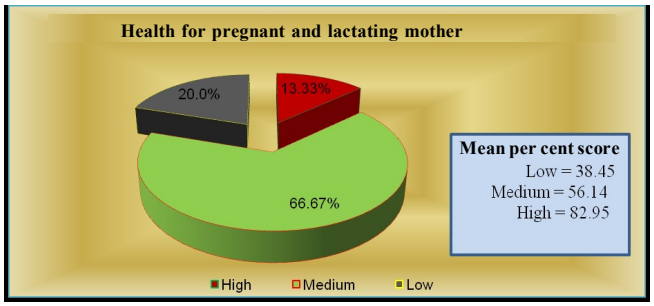

Fig. 3: Knowledge level of respondents in health for pregnant and lactating mother

In depth study of the knowledge of "Health for pregnant and lactating mother" bring out that items, 'iron and folic acid pills help in body maintenance of pregnant women' and 'pregnant women should be vaccinated for tetanus' were not answered correctly by 95.83 per cent and 92.5 per cent respondents (Appendix 3).

Cent per cent respondents had knowledge about items as 'pregnant women should not lift heavy weight' and 'girls should not be married before the age of 18 years'. Cent per cent respondents also disagreed with the item as 'pregnant mother should do more laborious work'.

Health for children :

The fourth aspect of 'Health for Children'had 22 items. Table 1 (Fig. 4) reveals that a majority of the respondents (54.17%) were in the category of medium knowledge with per cent mean score 50.07 and could give correct answers 8 to 14 items correctly out of 10 items. About 25 per cent had low knowledge with mean score of 33.64 per cent that is they could give correctly answer of 6 -8 items out of 22 items. While only 20.83 per cent respondents were in the category of high knowledge with mean score of 69.97 per cent and could

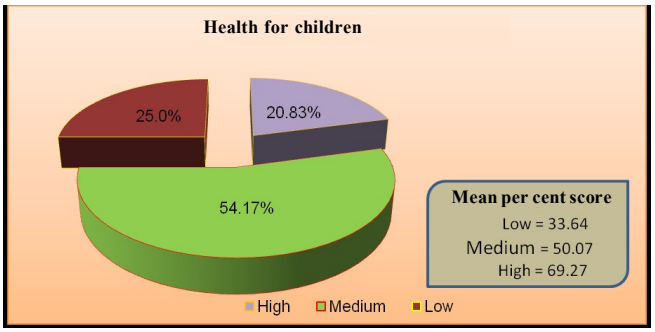

Fig.4 Knowledge level of respondents in health for children

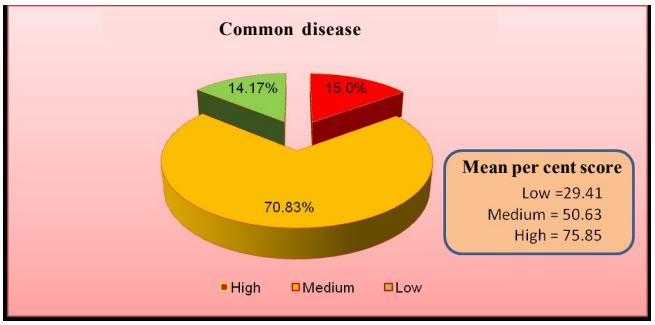

Fig. 5 : Knowledge level of respondents in common disease

Appendix 3 : Nutrition for children

Sr. No.	Questions	Answered			
		Correct		Incorrect	
		n	%	n	%
1.	Mother milk is nutrient rich, easily available, pure, protective and appropriate temperature	113	94.16	7	5.83
2.	Breast feeding should be done as much as possible	120	100	-	-
3.	Source of vitamin A is green leafy vegetables	14	11.67	106	88.33
4.	Common deficiency disease in children are protein energy deficiency, vitamins A deficiency and anemia	15	12.5	105	87.5
5.	Protein, energy malnutrition occurs due to lack of	14	11.67	106	88.33
6.	Critical stage of protein, energy malnutrition is marasmus and kwashiorkor	5	4.17	115	95.83

give correct answers of 14-19 items out of 22 items.

In depth study of the knowledge of "Health for children" bring out that items, 'BCG vaccination protect from T.B.' and 'BCG vaccination should be given in 40 days of birth of child' were not answered correctly by 99.17 per cent and 95 per cent respondents (Appendix 6). Cent per cent respondents had knowledge about 'umbilical cord should be cut at minimum how much distance'.

99.16 per cent respondents also disagreed with the as item 'crying is not important as the child is born' and 'child's cot and cradle should be kept away from clean air and light'. Mohammed *et al.* (2014) found that majority of the mothers had good knowledge about the advantages of breastfeeding for child. As regards weaning, majority (92.5%) of the mothers defined weaning as breastfeeding cessation. Most of the mothers (94.8%) agreed that breastfeeding protect child from infection, (96.1%) agreed that it is the healthiest for infant, (76.5%) agreed that breast milk lead to loss of figure, and (83.4%) agreed that breastfeeding should be avoided during mother's illness. About (84%) initiated breastfeeding immediately after delivery and (42.7%) of the studied mothers offered pre- lacteal feeds to baby before lactation. About thirty quarters (74.2%) of mothers fed colostrums. Krishnendu and Devaki (2017) found that total of (70.8%) of lactating mothers had average knowledge, (55%) displayed good attitude and (79.2%) had good breastfeeding practices. A total of (57.5%) of gave importance to colostrums and (85%) delivered breast milk as the first feed and (15%) reported of pre-lacteal feeds as the first feed. The breastfeeding practices in the most literate state of India still can be improved, although women were aware of the exclusive breastfeeding and its importance they did not practice this to the fullest. We suggest access to nutrition

Appendix 4: Personal hygiene

Sr. No.	Questions	Answered			
		Correct		Incorrect	
		n	%	n	%
1.	Hair should be untied while cooking food	116	96.67	4	3.33
2.	One should brush daily	119	99.17	1	0.83
3.	One should take care for personal hygiene during Menstruation period	42	35	78	65
4.	Hands and nails should be washed before eating	115	95.83	5	4.17
5.	Centre where folic acid pills are available free of cost is anganwadi	44	36.67	76	63.33

Appendix 5: Environmental hygiene

Sr. No.	Questions	Answered			
		Correct		Incorrect	
		n	%	n	%
1.	Food should be prepared in a clean and hygienic place	120	100	-	-
2.	House flies are the agent of spreading disease	44	36.67	76	63.33
3.	Insects develop in the standing dirty water	4	3.33	116	96.67

Appendix 6: Health for pregnant and lactating mother

Sr.No.	Questions	Answered			
		Correct		Incorrect	
		n	%	n	%
1.	Pregnant women should not lift heavy weight	120	100	-	-
2.	Pregnant women should do more laborious work	120	100	-	-
3.	Girls should not be married before the age of 18 years	116	96.67	4	3.33
4.	Iron and folic acid pills helps in body maintenance of pregnant women	5	4.17	115	95.83
5.	Pregnant women should be vaccinated for tetanus	9	7.5	111	92.5
6.	Right age of pregnancy is 21 years	116	96.67	4	3.33

Appendix 7: Health for children

Sr. No.	Questions	Answered			
		Correct		Incorrect	
		n	%	n	%
1.	Crying is the not important as the child is born	119	99.17	1	0.83
2.	Child's cot and cradle should be kept away from clean air and light	119	99.17	1	0.83
3.	BCG vaccination protect from T.B.	1	0.83	119	99.17
4.	Typhoid vaccine is given in the age of 2 years	10	8.33	110	91.67
5.	Umbilical cord should be cut minimum how much distance	120	100	-	-
6.	To protect umbilical cord from infection	112	93.33	8	6.67
7.	After how many days of birth BCG vaccination should be infected	6	5	104	95
8.	BCG vaccination should be given in 40 days of birth of child	6	5	104	95
9.	Crying of infant is not important just after delivery	119	99.17	1	0.83

Appendix 8: Common disease

Sr. No.	Questions	Answered			
		Correct		Incorrect	
		n	%	n	%
1.	Malaria spread through mosquito bite	120	100	-	-
2.	Fever headache is a symptom of dengue	10	8.33	110	91.67
3.	Lack of water does not arise while suffering from loose motion	120	100	-	-
4.	Oil and ghee are given to jaundice patient	12	10	108	90
5.	Light food is given to be patient	119	99.17	1	8.33
6.	HIV positive means AIDS	12	10	108	90
7.	AIDS is spread through unprotected sexual relation	10	8.33	110	91.67
8.	Aids is spread through virus	5	4.17	115	95.83

information pertaining to breastfeeding can be strengthened further through various community programmes. Individual "breastfeeding counseling and health education on nutrition" to the mother 45 by health workers should be promoted.

Common disease :

The fifth aspect of knowledge check on 'Common Disease' included 26 items. Table 1 reveals that majority of respondents (70.83%) were in the category of medium knowledge with mean per cent score of 50.63. These respondents could give answers of 9-17 correctly out of 26. About 15 per cent of respondents were in the category of high knowledge with mean per cent score of 75.85 and could give correct answers of 17-23 items. While 14.17 per cent were in low knowledge category with mean score of 29.41 per cent and could give correct answers of 6-9 items.

In depth study of the knowledge of "Common disease" bring out that items 'aids is spread through virus' and 'HIV positive means AIDS' were not answered correctly by 95.83 per cent and 90 per cent respondents (Appendix 8).

Lack of response related to HIV aids shows that respondents had very low knowledge regarding HIV aids. Cent per cent respondents had knowledge about 'malaria spread through mosquito bite'.

Cent per cent respondents also disagreed with the item as 'during diarrhea there is no loss of water'. Subramanian (2015) Although about 86 per cent of the participants had heard of dengue, although there was no adequate knowledge on dengue vector breeding habitat as 68 per cent of the respondents thought drains and garbage as breeding places of dengue vectors. Only 25 per cent of participants were aware of clean water as a breeding habitat. Insufficient knowledge of disease symptoms was found with fever (59%) being the most common symptom.

Knowledge level of the respondents in different aspects of nutrition practices:

Table 2 presents information about knowledge of

respondents on each aspect of nutrition and their mean per cent score. Perusal of data reveals that out of three aspects, the knowledge for aspect of 'Basics of food and nutrition' ranked first with overall mean per cent score of 58.25. This aspect was in the category of medium knowledge.

The knowledge for the aspect 'Nutrition for mothers' ranked second with overall mean per cent score of 57.13.This aspect was in the category of medium knowledge.

The knowledge for the aspect 'Nutrition for children' ranked third with overall mean per cent score 55.13.This aspect was in the category of medium and low knowledge.

Basics of food and nutrition :

The first aspect of knowledge check was of "Basics of Food and Nutrition" which included 32 items. Table 2 reveals that majority of the respondents (61.67%) were in the category of medium knowledge with mean score of 55.49 per cent. These respondents could give answers of 13 to 23 items correctly. About 20 per cent respondents were in the category of low knowledge with mean score of 38.02 per cent that is they could correctly answered 10 to 13 items. Remaining 18.33 per cent respondents had high knowledge with mean score of 81.25 per cent and answered 23 to 30 items correctly out of 32 items.

In depth study of the knowledge of "Basics of food and nutrition" bring out that items 'green leafy vegetables contains nutrients as vitamins and minerals' and 'nutrient required for body building and maintenance is protein'

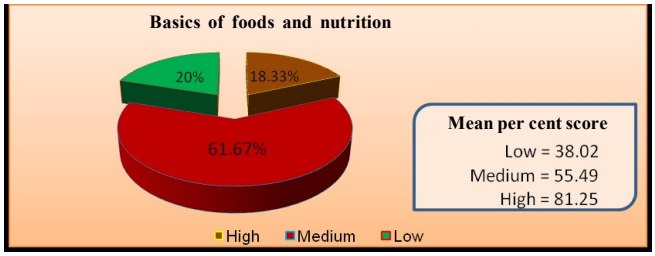

Fig. 6: Knowledge level of respondents in practices of basics of foods and nutrition

were not answered correctly by 95.83 per cent and 86.67 per cent respondents, respectively Nutrition knowledge was limited to familiar practices in the actual diet. Attitudes toward complications of pregnancy and illness tended to be fatalistic. Awareness of the importance of maternal nutrition and the harmful effects of insanitary living conditions was evident. Beliefs regarding proteincalorie malnutrition in infants were based on superstition. Although attitude towards weaning was nontraumatic and permissive, prolonged breast feeding without supplementary foods needs to be changed. The overall knowledge, attitude and practices regarding utilization of underutilized green leafy vegetables in selected rural women that is 43.12 per cent, 46.12 per cent and 49 per cent, respectively. Rao (2010); Masuku and Lan (2014) and Singh *et al.* (2015).

Cent per cent respondents had knowledge about 'vegetables should be cut immediately before cooking' and 'vegetables should be washed before cooking'.

95.83 per cent of the respondents also disagreed with items as 'green leafy vegetables harm the human body' which shows that rural women are somewhat aware about importance of vegetables. Payghan *et al.* (2014) found that nutritional knowledge and practices of urban mothers are high compared to rural mothers, while rural and urban mothers had almost equal positive attitude towards nutrition. It has been shown that 68% of urban respondents and 73% of rural respondents are avoiding some foods like papaya, coconut, and meat during pregnancy. The above findings can be used to plan a customized nutritional intervention programme aiming to improve the maternal nutritional knowledge and practices and eventually improve the health status of the pregnant mothers especially in rural areas.

Nutrition for mothers :

The second aspect of "Nutrition for Mothers" had 18 items. Table 2 (Fig. 7) reveals that majority of the respondents (66.67%) were in the category of medium knowledge with mean score of 57.08 per cent. These respondents could give answer of 8 to 13 items. About

Table 2 : Knowledge level of the respondents in different aspects of nutrition practices **(n=120)**

Sr. No.	Different aspects	Distribution of responses			Per cent mean score			Overall mean per cent score	Rank
		High n (%)	Medium n (%)	Low n (%)	High	Medium	Low		
1.	Basics of food and nutrition	22(18.33)	74 (61.67)	24 (20)	81.25	55.49	38.02	58.25	I
2.	Nutrition for mothers	18 (15)	80 (66.67)	22 (18.33)	81.48	57.08	32.83	57.13	II
3.	Nutrition for children	22 (18.33)	83 (69.17)	15 (12.5)	79.55	53.1	32.73	55.13	III

18.33 per cent had low knowledge with mean score of 32.83 per cent *i.e.* they could give correctly answers of 4 to 8 items. While only 15 per cent were in the category of high knowledge with mean score of 81.48 per cent, they could give answer of 13 to 16 items.

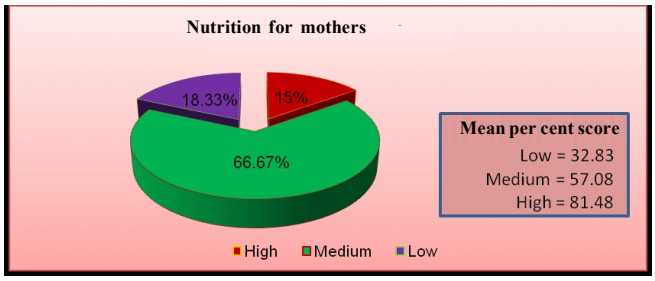

Fig. 7: Knowledge level of respondents in nutrition practices for mothers

In depth study of the knowledge of "Nutrition for mother" bring out that items, 'food is not required for foetus' and 'pregnant women's food should be in double quantity than normal women's food' were not answered correctly by 90 per cent and 82.5 per cent respondents respectively Rani *et al.* (2015) revealed their ethnic traditional knowledge treasure which they possessed. In spite of their traditional knowledge 50 per cent and 57.14 per cent of women were not aware of the scientific role and importance of iron and folic acid during pregnancy and about regular vaccines, respectively. Around 66.67 per cent of women feed the babies as long as it needs and 35.71 per cent were not aware of the impact of not breast feeding the baby. Their daily nutritional requirements do not seem to meet their RDA due to lack of awareness or due to unavailability of affordable foods to meet their nutritional needs especially fruits and milk. Nivedita and Shanthini (2016) concluded that knowledge about food rich in iron was poor among the participants. (74.36%) claimed to have taken iron supplementation regularly whereas (9.8%) had not taken iron supplementation. On hemoglobin estimation it was found that (62.97%) of the participants were anemic taking 11 grams as the cut off for anemia.

Cent per cent respondents had knowledge about the items as 'all food items should be included in diet of pregnant women' and 'pregnant women should eat anyone fruit daily' and 'pregnant women should consume more water as compare to other women'.

97.5 per cent of the respondents also disagreed with the items as 'breast feeding should not be given to the newly born baby'. This shows that rural women were aware of importance of breast feeding.

Nutrition for children :

The third aspect of knowledge check was 'Nutrition for children' included 22 items. The Table 2 (Fig. 8) reveals that majority of the respondents (69.17%) were in the category of medium knowledge with mean score of 53.1 per cent. These respondents could give answer of 9 to 16 items correctly. About 18.33 per cent of the respondents were in the category of high knowledge with mean score of 79.55 per cent they could give correctly answers of 16 to 20 items. While 12.5 per cent respondents were in low knowledge category with mean score of 32.73 per cent and could give correct answers 7 to 9 items.

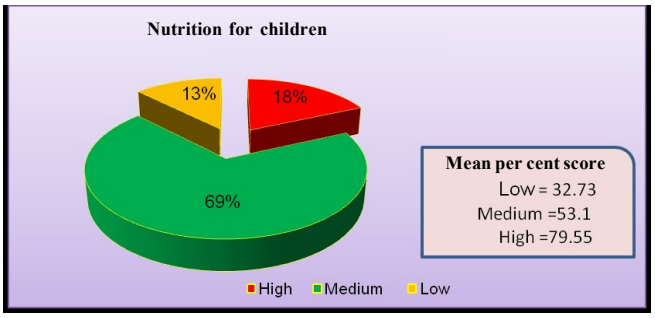

Fig. 8: Knowledge level of respondents in nutrition practices for children

In depth study of the knowledge of 'Nutrition for children' bring out that items 'source of vitamin A are green leafy vegetables', 'critical stage of protein, energy malnutrition is marasmus and kwashiorkor' and 'common deficiency disease in children are protein energy deficiency, vitamin A deficiency and anemia were not answered correctly by 88.33 per cent, 95.83 per cent and 87.5 per cent respondents. This shows that rural women were not aware of deficiency disease of children.

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