

Assessment of nutritional knowledge of nurses regarding diet in some diseases

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■ **ABSTRACT :** Nutrition is involved in taking in and utilization of food substances by which growth, repair and maintenance of the body are accomplished. The nurse plays a key role in patient care. She is often the closest professional to the patient, spending most of the time with him. The present study was conducted to assess the existing knowledge of nurses on nutrition along with some background characteristics. One hundred and twenty nurses from three government hospitals and three private hospitals of three different districts were administered a questionnaire comprising of questions related to nutrition. Findings revealed that half of the total respondents (50 %) belonged to younger age group (20-30 years), 49.2 per cent had diploma in nursing and 49.1 per cent had 1-5 years of professional experience. Majority (91 %) of the respondents had medium level of mass media exposure. Around 61.7 per cent had medium level of nutritional knowledge. There was a need for increasing the nutritional knowledge of nurses, so proper training on nutrition education should be conducted frequently.

■ **KEY WORDS:** Nutrition, Nurses, Knowledge, Diseases

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Nutrition is involved in the taking in and utilization of food substances by which growth, repair and maintenance of the body are accomplished. A well nourished person is more likely to be well developed both mentally and physically, and better able to resist various diseases. Nursing is recognized as a helping profession, one who has traditionally nurtured patients and provided services which contribute to the health and well-being of people. The nurse plays a key role in patient care. She is often the closest professional to the patient, spending most of the time with him. The importance of diet and nutrition crosses into many areas in health care; so nurses' involvement in nutrition management is an important factor for nutritional status of the patients, as patient's diet is an integral part of the total treatment plan of patients. It was recommended by Wynder and Andres (1994) that since nutrition is the key to the health of the populace, it is of great importance for all health care providers to understand how dietary intake could impact on patients' wellbeing. Patients suffering from some diseases like

diabetes, cardio-vascular disease etc. require special dietary practices during their period of illness or remainder of his life (de Lorgeril *et al.*, 1994; Conlin *et al.*, 2000; Hu and Willet, 2002). Prevention of CVD should involve general lifestyle modification, including changes to dietary habits patients with CVD reportedly tend not to follow the appropriate dietary therapy in Western countries, where CVD is a leading cause of death (Suter *et al.*, 1995; Jallinoja *et al.*, 2007; Samal *et al.*, 2007). This might be due to inaccurate or insufficient nutritional knowledge in these patients or to medical personnel not providing sufficient dietary education (Wacækiewicz *et al.*, 2008). Therefore, nutritional support is must for a patient either he has been suffering from acute illness or facing chronic diseases. So, it is duty for a nurse to provide dietary advice to patients who are obese, who are suffering from cardio-vascular problems or who have diabetes. This means that the nurse should have a good knowledge of the food groups, and of what constitutes a balanced diet. Helping the patients to meet their nutritional requirement is therefore, a challenging task

for a nurse.

Objective :

The study was conducted to assess the nutritional knowledge of nurses, employed in the government hospitals and in private hospitals in some selected districts of Assam, along with some background characteristics.

■ RESEARCH METHODS

Three districts of Assam, namely Sivasagar, Jorhat and Golaghat were selected purposively for the study. One government hospital and one private hospital having multi disciplinary facilities were selected from each district. Twenty nurses were selected from each hospital by using simple random sampling method. Total 120 nurses were selected as respondents for assessing nutritional knowledge. The respondents were administered a questionnaire comprising of questions associated with the background characteristics of the respondents and with four sections of nutrition such as: Basics of food and nutrition. It includes the basic nutritional information including nutrients and conservation of nutrients, nutrition for mother: Nutrition related to woman and mother in special condition (pregnancy and lactation, Nutrition for children and knowledge on diet in diseases which

can be controlled by diet like diabetes, cardio-vascular disease (CVD), gastric ulcer and uric acid.

Frequency and percentage were calculated to find out the background information of the respondents. Standard deviation was used to find out the respondents nutritional knowledge level. Correlation co-efficient was computed to find out the relationship between the knowledge of nurses with the selected independent variables.

■ RESEARCH FINDINGS AND DISCUSSION

The results of the study showed that as around 62 per cent of the respondents from private hospital belonged to younger age group (Table 1). Table revealed that 49.2 per cent of total respondents had diploma in nursing where a large majority of respondents (90 %) were from government hospitals and 8 per cent respondents from private hospitals had diploma in nursing. Table 1 also indicated that majority (92 %) of the respondents from private hospitals were Auxiliary Nurse Midwife (certificate holder). Auxiliary Nurse Midwife nurse was not found in government hospitals. It might be the reason that government hospitals preferred more qualified nurses.

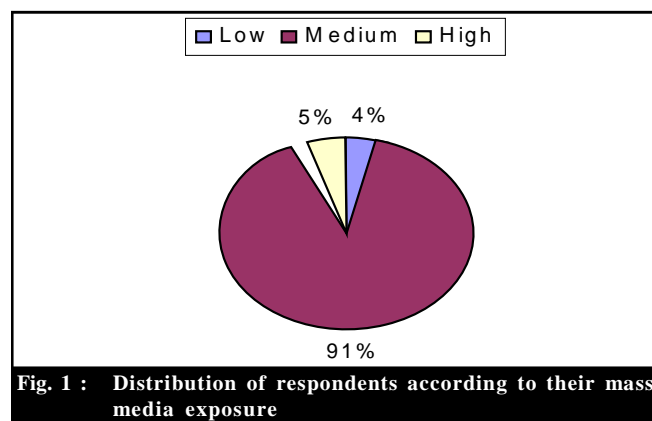
The findings in the Table 1 show that nearly half of the total respondents (49.1 %) had 1-5 years of professional

Age	Total percentage	Professional qualification	Total percentage	Professional experiences	Total percentage
20-30 years	50.00	Certificate holder in nursing	45.80	1-5years	49.10
30-40 years	26.00	Diploma in nursing	49.20	6-10years	15.00
40-50 years	24.00	Degree in nursing	2.50	11-15years	19.20
		Post graduate in nursing	0.80	16-20years	10.00
		Ph. D. in nursing	1.70	21-25years	6.70

Sr. No.	Statement	Percentage
1.	Vegetables are to be washed before cutting into small pieces	100
2.	Vegetables are to be cut just before cooking	100
3.	Dal or any other pulses are the sources of protein	100
4.	Leafy vegetables are to be washed before cutting	85
5.	One should drink 8-9 glass of water in a day	84
6.	Carbohydrate is the nutrient that gives energy to the body	84
7.	Little oil is to be used in cooking	84
8.	Only one type of food is not sufficient for our body	82
9.	Rice, wheat flour, dal etc. are to be preserved in container with lid in dry place	82
10.	Vegetables are not to be kept in warm place	81
11.	Rice is energy giving food	80
12.	Food gives energy to the body	77
13.	Green leafy vegetables do not make harm to our body	73
14.	Dal is to be cooked in the water where it was soaked after washing	71
15.	The major nutrients contained in rice ,wheat, potatoes is carbohydrate	69
16.	Vegetables to be used for cooking are to be peeled thin	58

experience where, more than half of the respondents (60 %) were from private hospitals.

A large majority (91 %) of the respondents had medium level of mass media exposure which was an encouraging scope for them to gather information. A negligible percentage of respondents had high level (5 %) and low level (4 %) of mass media exposure (Fig. 1).



Good nutrition plays an essential role in maintaining health. Foods are grouped together when they share similar nutritional properties, by understanding the basic food groups; and by following the good practices of food preparation, one can be able to plan a healthy daily diet. From Table 2, it is evident that cent per cent of the respondents

knew that the vegetables should be cut just before cooking and that the cut should be a small one. Majority of the respondents (84%) knew that one should drink at least 8-9 glass of water in a day.

A large part of the World Food Programme's nutritional work is directed at mothers as they are usually the most vulnerable from a nutritional point of view. When a woman is pregnant her body has special nutritional needs. After she has given birth, she has a greater need for energy and also for the nutrients that make her breast milk nourishing to her baby. This is critical in situations where women are already malnourished before pregnancy and don't receive certain vitamins or minerals. From Table 3 it has been observed that ninety per cent of the respondents knew that a pregnant mother's diet must include all the food stuff. Ninety per cent of the respondents also knew that the child is to be breast fed as soon as he/she is born.

A healthy diet helps children grow and learn. It also helps prevent obesity and weight-related diseases, such as diabetes. Table 4 shows that majority of the respondents knew that the absence of mother's milk, a new born baby should be fed cow's milk with mixing water and a child should be breast fed if he/she suffers from diarrhoea. More than seventy per cent of the respondents also knew that a child's health may get deteriorated if he/she is not weaned before one year.

Diet plays a crucial role in promoting or preventing a disease. As adults grow older, they have a greater chance of developing certain diet-related diseases, such as diabetes, cardio-vascular disease, gastritis or uric acid. So, providing

Table 3 : Knowledge of the respondents on nutrition for mother

Sr. No.	Statements	Percentage
1.	All the food stuff is to be included in the diet of a pregnant mother	90
2.	The child is to be breast fed as soon as he/she is born	90
3.	Colostrum, the first secretion of mother's milk , thick and yellow in colour , protects the child from diseases	85
4.	A lactating mother is to drink more water than normal women	78
5.	The foetus will not grow properly if a women does not eat nutritious food during her pregnancy	75
6.	Milk is essential during pregnancy because calcium present in milk will help to build bone of foetus	71
7.	During pregnancy , a women will get more iron from green leafy vegetables	69
8.	The lactating mother is to consume such type of diet which contains all the food stuffs	69
9.	Amla is the rich source of vitamin C	63

Table 4 : Knowledge of the respondents on nutrition for children

Sr. No.	Statements	Percentage
1.	In the absence of mother's milk, a new born baby should be fed cow's milk with mixing water	85
2.	A child should be breast fed if he suffers from diarrhoea	81
3.	A child's health may get deteriorated if he/she is not weaned before one year	77
4.	The child is to be given the juice of vegetables or fruits when he/she is 7-9 months old	76
5.	A child is to be fed yellow fruits such as ripe papaya, ripe mango etc. to protect from vitamin A deficiency	72
6.	The child is to be fed the family food without spice ,when he/she is 1 year old	66
7.	The mixture of rice and dal preparation is to be given to a child when he/she is of 7-8 months old	62

an appropriate diet can be healing and even life-saving. Table 5 shows that majority of the respondents knew that sugar, honey, jaggery and sweets are not good for diabetic patients, Curd is good for diabetic patients, and through diet C.V.D. can be controlled. About sixty seven per cent of the respondents knew that gastric ulcerate patients cannot take spicy and oily food and sixty one per cent of the respondents knew that protein containing food is not good for the patients suffering from uric acid.

Eating right is vital for a person to prevent or control diabetes. A diabetes diet is simply a healthy eating plan that is high in nutrients, low in fat, and moderate in calories. Table 6 reveals that highest percentage of respondents had medium level of nutritional knowledge on each section such as, basics of food and nutrition, nutrition for mothers, nutrition for children and knowledge on diet in diseases. Table also shows that large majority of the respondents had sufficient nutritional knowledge (88.3 %) on nutrition for mother followed by knowledge on diet in diseases (74.2 %), nutrition for children (72.5 %) and knowledge on basics of food and nutrition (65.9 %). Less percentage of nutritional knowledge on basics of food and nutrition might be due to the fact that the respondents did not have to give counselling to the patients on this section/aspect and might not have recalled and hence, they scored less as

compared to other sections/aspects. However, it was observed that nurse's nutritional knowledge was not inadequate in all sections. Respondent's nutritional knowledge could be improved by giving proper exposure to short term training courses. Present finding had conformity with the study conducted by Kapil and Manocha (1991), who found that majority of the nurses had adequate knowledge about dietary practices during antenatal post-natal period.

The results (Table 7) indicated that majority of the respondents (61.7 %) had medium level of nutritional knowledge. This study had conformity with the study conducted by Starnek *et al.* (1991) who found that nurses had medium level of nutritional knowledge. A sizable percentage of respondents (25%) had high level of nutritional knowledge and more than 13 per cent belonged to 'low' nutritional knowledge level. It might be due to the less exposure of the respondents to nutritional training and also having less professional qualification as the percentage of graduate (0.8 %) and Ph.D. holder (1.7 %) was very negligible. However, looking into the percentage of medium and high level, it could be concluded that selected nurses had sufficient knowledge on nutrition. But, the finding of the present study differed with the results of Kowanko *et al.* (1999) and Kim and Choue (2009), who found that nurses had limited knowledge on nutrition.

Table 5 : Knowledge of the respondents on 'diet in diseases'

Sr. No.	Statements	Percentage
1.	Sugar, honey, jaggery and sweets are not good for diabetic patients	78
2.	Diabetic patients are to restrict alcohol consumption	73
3.	Curd is good for diabetic patients	72
4.	C.V.D. can be controlled by diet	72
5.	Vegetable oil like sunflower oil, soya bean oil etc. is good for C.V.D. patients	70
6.	Gastric ulcerate patients cannot take spicy and oily food	67
7.	Caffeine containing beverages are harmful for gastric ulcerate patients	61
8.	Protein containing food is not to be taken by uric acid patients	61
9.	Diabetic patients cannot take ripe fruits like jackfruit, papaya etc.	58
10.	Vegetables like spinach, cabbage, tomato etc. are advised to avoid by uric acid patients	55

Table 6 : Distribution of respondents according to their nutritional knowledge level on different sections of nutrition

Knowledge level	Basics of food and nutrition		Nutrition for mother		Nutrition for children		Diet in diseases	
	f	%	f	%	f	%	f	%
Low	22	18.3	11	9.2	16	13.3	19	15.8
Medium	79	65.9	106	88.3	87	72.5	89	74.2
High	19	15.8	3	2.5	17	14.2	12	10.0

Table 7 : Distribution of respondents according to their overall nutritional knowledge level

Knowledge level	Range of score	Overall knowledge level (n=120)	
		f	%
Low	54-65	16	13.3
Medium	66-90	74	61.7
High	91-106	30	25.0

Conclusion :

The findings showed that the nurses had medium level of nutritional knowledge. The training on nutrition education should also be conducted frequently and effectively covering maximum information on basics of food and nutrition, nutrition for mother, nutrition for children and knowledge on diet in diseases which can be controlled by diet such as diabetes, cardiovascular disease (CVD), gastric ulcer and uric acid so that the nurses would be able to increase their level of knowledge from medium level to high level because being a medical functionary, they should have more than their existing knowledge on nutrition so that they can render a better service to the patients.

Recommendations :

- More emphasis should be given by organizing training and intervention programme to those areas where the nurses had less knowledge.
- Refresher course should be organised in both government and private hospitals on nutrition education to improve the existing knowledge of nurses.
- Nurses should be encouraged to increase the reading habits of printed materials prepared for dissemination of nutritional information.
- More numbers of training programme on nutrition education should be organised at the regular interval of time for improving the knowledge of nurses.

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