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## A survey on knowledge of nutrition of physicians in Bangladesh: evidence from Sylhet data

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### Abstract

Knowledge regarding nutrition is an essential part in Medical Education. Several studies indicate that physicians have little knowledge of nutrition. The present study was carried out to determine the knowledge of nutrition of physicians at Sylhet in Bangladesh. For this purpose, the research data was collected by mean of a questionnaire including multiple choice questions. The questionnaire was pre-tested in a pilot survey. The survey was conducted among randomly selected physicians. The analysis shows that the response rate of the physicians was 60.3% and some of the physicians (26.49%) were experienced below 5 years. Only 15% of the physicians were females. The average correctly answered questions was 55.2%. The analysis also shows that most of the physicians (55%) have 'poor' knowledge of nutrition and that of only 10% was good. The physicians were generally aware of nutrition information which has been publicized in the medical press.

**Keywords:** physicians, nutritional knowledge, Bangladesh

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### Introduction

Nutritional knowledge plays an important role in public health. However physicians' knowledge on this issue is unsatisfactory. Nutrition knowledge is one of the factors that affect the nutritional habits of individuals, families and communities. Nutrition is the growth and development, being resistant to disease and living a long and healthy life by keeping the mind and body function at the highest level. The role of nutrition in health promotion, disease prevention and treatment of chronic disease is well recognized (Hu et al., 1997; Schaller & James, 2005). A study of physicians revealed that most of the physicians of England rated their nutrition knowledge as "poor" or "very poor" (Heywood & Wooten, 1992). Temple (1999) observed that 42% of the Canadian physicians had weak knowledge of nutrition. In a separate study Schulman (1999) found low level of knowledge of nutrition among students and educators within medical school. A survey conducted by Feldman (1995) in USA revealed

that only 25% of the USA and Canadian Medical Education has a required course of nutrition. Moreover, information concerning nutritional knowledge among practicing physicians was not satisfactory. Lasswell et al. (1984) conducted research among physicians to assess their nutrition education and found that only 7% rated their knowledge of nutrition as excellent. A study of physicians in USA found that many physicians would give dietary counseling to their patients (Kushner, 1995). A survey of nutritional knowledge of primary care physicians conducted by Khalid (2004) in Saudi Arabia expressed that most of the physicians (75%) have poor knowledge of nutrition. Another survey of physicians in Turkey revealed that the average rate of correct responses was 48.1% and more than 50% of the physicians had mediocre knowledge on nutrition (Ayes Ozfer Ozcelik, 2007). Since there is no published data in knowledge of nutrition among physicians of Bangladesh, the purpose of the present study was to assess the knowledge of nutrition of physicians working at Sylhet in Bangladesh.

### Materials and methods

The present study was based on the data collected from Sylhet of Bangladesh during November-December in 2006. A nutrition questionnaire was adopted and supplied to the physicians. The questionnaire consisted of 26 questions. The questionnaire was pre-tested in a pilot survey before sending it to the physicians. A sample of 250 physicians was selected for interview by simple random sampling. The questionnaires were sent to the physicians by mail. Data have been analyzed by using SPSS

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program. Frequency distribution table, 95% confidence interval and Chi-square ( $\chi^2$ ) test were used to analyze the data.

The result of the  $\chi^2$  were given at the foot note of Table 2.

## Results

### **Demographic characteristics of respondents:**

This part of the study aimed to gather the basic data about the respondent's age, gender, experience in the profession, monthly income (Table 1). Of all physicians, 85% were male while 15% were female. The larger group of physicians were between 40-49 years of age. The average monthly income of the physicians was 18,000 Taka. The average experience of

the physicians was 7 years. Some of the physicians (26.49%) were experienced below 5 years.

**Physician's knowledge of nutrition:** This part of the survey investigated the practicing knowledge of physicians about nutrition. For this purpose the concern and perception of the physicians, with the amount of attention they put on and their level of knowledge regarding nutrition were determined. The mean mark for correctly answered questions was 55.2% with (SD +18.10). About two-thirds of the physicians scored between 45%-60% (table 2 and table 3). Most of the physicians (55%) rated their nutrition knowledge as poor. Only 10% of the physicians had good knowledge of nutrition and the rest (35%) were mediocre (table 4).

**Table 1. Demographic characteristics of the physicians**

Variable (n = 151)	Frequency	Percentages (%)
Gender		
Male	128	85
Female	23	15
Age (in years)		
30-39	18	11.9
40-49	67	44.37
50-59	24	15.89
60-69	27	17.88
70 and above	15	9.93
Professional experienced (in years)		
0-4	40	26.49
5-9	33	21.85
10-14	31	20.53
15-19	24	15.89
20 and above	23	15.23
Monthly income (in TK.)		
Below 10,000	23	15.23
10,000-15,000	28	18.54
15,000-20,000	39	25.83
20,000-30,000	33	21.85
30,000 and above	28	18.54

**Table 2. Questions, correct answers and percentages of physicians with correct answers**

Assessment questions	Number of correct answers	Percentages of correct answers
Dietary fiber helpful in lowering blood cholesterol level	48	32
Excess of which nutrient may increase body calcium loss	48	32
Nutrient believed to help prevent thrombosis	119	79
Adequate intake level of calcium for an adult aged 51-70 yrs.	53	35
Major type of fat in olive oil	71	47
Hydrogenated fats contain	77	51
Nutrient is protective against hypertension	68	45
Vitamin likely to be toxic if consumed in excess amounts	66	44
Most concentrated sources of vitamin $B_{12}$	80	53
Substance raises the blood HDL-cholesterol level	71	47
In general dietary recommendations are intended to	69	46
Foods have preventive effect on various type of cancer	107	69
Number of Kilocalories in one gram of fat	107	69
Nutrient in not an antioxidant	115	76
Nutrient associated with prevention of neural tube defects	141	94
'Diet plans' are usually successful at achieving weight loss	97	64

**Foot note:** The estimated value (198.72) of the test statistic ( $\chi^2$ ) falls in the critical region (the tabulated value of  $\chi^2$  with 15 d.f is 25.0); we may reject the null hypothesis at 5% level of significance. Thus the test is highly significant. It was observed that the nutrition knowledge were not equal among the physicians.

**Table 3: Frequency distribution of scores of physicians (obtained from Table 2)**

Scores interval	Frequency	Cumulative frequency
30-45	4	4
46-60	6	10
61-75	3	13
76-90	2	15
91-100	1	16

**Table 4: Frequency distribution of the nutrition knowledge level of physicians**

Attribute	Frequency	Percentage of frequency (%)
Poor	83	55
Mediocre	53	35
Good	15	10
Total	151	100

## Discussion

The response rate in the present study was 60.3%, which is higher than those found by Khalid & Numair (2004), Temple (1999), Hu et al. (1997) and Mlodinow & Barrett-Connor (1989). About 45% of the physicians in the present study rated their nutrition knowledge as poor. However, much caution is necessary before generalizing these results beyond our study population of physicians. The mean score for correctly answered questions in the present study was (55.2%), lower than the study (63%) of nutrition knowledge of physicians in Canada (Temple, 1999). But surprisingly the mean scores (55.2%) of the present study was greater than the study of nutritional knowledge of physician in Pakistan (Khalid & Numair, 2004). The results of the present study indicate that physicians are aware of nutritional information publicized in medical press. This trend was similar to what was reported by Mlodinow and Barrett-Connor (1989) and Temple (1999).

The overall findings suggest that there are serious lacks in knowledge of nutrition among the physicians and they do not have enough knowledge of nutrition to properly advice the patient. The knowledge of nutrition varies from physician to physician. The present study indicates that physicians need more education in nutrition. Since advice towards patients is a component of the treatment, medical schools should integrate nutrition course to their curriculum.

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