

A SURVEY ON NUTRITION KNOWLEDGE OF PHYSICIANS IN BANGLADESH: EVIDENCE FROM SYLHET DATA

¹M.T. Uddin, ²M.N. Islam and ³M.J. Uddin

Mohammed Taj Uddin, Associate professor¹, Md. Nazrul Islam, Assistant professor² and Mohammed Jamal Uddin³, Department of Statistics, Shahjalal University of science and Technology, Sylhet-3114, Bangladesh

Received November 2007, accepted October 2008

Abstract: The present study was carried out to determine the nutrition knowledge of physicians at Sylhet in Bangladesh. For this purpose, data were collected by means of a questionnaire including multiple choice questions. The questionnaires were 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 most of the physicians (26.49%) had professional experience of less than 5 years. Only 15% of the physicians were female. The average correctly answered questions were 55.2%. The analysis also shows that most of the physicians (55%) had 'poor' knowledge of nutrition and that knowledge of only 10% physicians was good. The physicians were generally aware of nutrition information which is routinely publicized in the medical press.

Keywords: Physicians, Nutritional knowledge, Bangladesh

Introduction

Nutritional knowledge plays an important role in public health. However, there has been general concern about the state of nutritional knowledge of physicians in many parts of the world. The physician in Bangladesh should know the adulterant rate in nutritious foods as well as the nutrition levels in the food items set up by Bangladesh Standard Testing Institutes (BSTI) or World Health Organization (WHO). Nutrition knowledge is one of the factors that affects the nutritional habits of individuals, families and communities. Proper nutrition is the primary condition of growth and development that helps in resisting disease. The role of nutrition in health promotion, disease prevention and treatment of chronic disease is well recognized [1,2]. A study of physicians revealed that most of the physicians received their education in England and rated their nutrition knowledge as "poor" or "very poor" [3]. Temple [4] observed that 42% of the Canadian physicians have weak knowledge of

nutrition. In a separate study, Schulman [5] observed poor knowledge of nutrition among students and educators in Medical Schools. A survey conducted by Feldman [6] in USA revealed that only 25% of USA's and Canadian Medical Schools required a course on nutrition. Moreover, a decline in the number of USA's medical schools offering the required nutrition courses has been observed. However information concerning nutritional knowledge among practicing physicians has not been satisfactory. Lasswell *et al.* [7] conducted a research analysis among physicians to assess their nutrition education and found that only 7% rated their nutrition knowledge as excellent. A study of physicians in USA found that many physicians would give dietary counseling to their patients except for some problems. The problems include lack of sufficient nutrition knowledge, inadequate counseling skills, lack of sufficient time and poor patient compliance [8]. A survey of nutritional knowledge of primary care physicians conducted by Khalid [9] in Saudi Arabia showed that most of

Corresponding author:

Mohammed Taj Uddin, Associate professor, Department of Statistics, Shahjalal University of science and Technology, Sylhet-3114, Bangladesh.
Email: mtajstat@yahoo.com, Phone # 880 821 713491ext 257

the physicians (75%) had 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 [10].

Since, the affordability of taking nutritional foods depends on patient's socio-economic con-

dition; physicians should know the socio-economic situation of patients to give proper advice about nutrition which is concordant with patient's ability. Disease prevention is more cost effective than treatment. In the hospitals where there are dietitians, patients can get information about nutrition and diets from them. In other hospitals where no dietitians work, on the other hand, physicians inform the patients about nutrition. In

Table 1
Demographic characteristics of the physicians.

Variable	Frequency	Percentages (%)
Gender	151	100
Male	128	85
Female	23	15
Age (in years)	151	100
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 experience (in years)	151	100
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.)	151	100
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

Bangladesh, generally there are no nutritional specialists in hospitals and clinics. Physicians have to play double role in medicinal as well as nutritional advice. There is need to assess the current status of nutritional knowledge of physicians in Bangladesh to generate recommendations regarding future plans for medical curricula and training programs on knowledge of nutrition among the physicians. There are no published data on this subject from Bangladesh, hence the purpose of the present study was to assess the nutrition knowledge of physicians working in Sylhet city of Bangladesh.

Materials and Methods

The present study was based on the data collected from Sylhet city during November-December in 2006. A nutrition questionnaire was adopted and supplied to the physicians. The questionnaire used in the present study was designed in consultation with expert physicians related to nutrition. 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 sample basis. The data were

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

Assessment questions	Number of correct answers	Percentages of correct answers	95% confidence interval
What type of dietary fiber is helpful in lowering blood cholesterol level?	48	32	(22.86 41.14)
Excess of which nutrient may increase body calcium loss?	48	32	(22.86 41.14)
A nutrient believed to help prevent thrombosis is:	119	79	(71.02 86.98)
The adequate intake level of calcium for adult aged 51-70 years is:	53	35	(25.65 44.35)
Which is the major type of fat in olive oil?	71	47	(37.22 56.78)
Which ingredient contain in Hydrogenated fats?	77	51	(41.20 60.80)
Which nutrient is protective against hypertension?	68	45	(35.25 54.75)
Which vitamin is likely to be toxic if consumed in excess amount?	66	44	(34.27 53.73)
Which is the most concentrated sources of vitamin B_{12} ?	80	53	(43.22 62.78)
Which substance raises the blood HDL-cholesterol level?	71	47	(37.22 56.78)
In general dietary recommendations are intended to:	69	46	(36.23 55.77)
Which foods have preventive effect on various type of cancer?	107	69	(59.94 78.06)
Number of Kilocalories in one gram of fat is:	107	69	(59.94 78.06)
Which nutrient is not an antioxidant?	115	76	(67.63 84.37)
Nutrient associated with prevention of neural tube defects is:	141	94	(89.35 98.64)
Which 'Diet plans' are usually successful at achieving weight loss?	97	64	(54.59 73.41)

analyzed by using SPSS. Frequency distribution table and 95% confidence interval estimation method were used to analyze the data. The 95% confidence interval for the proportion (p) is given by $\hat{P} \pm 1.96 \sqrt{\hat{P}(1-\hat{P})/n}$

Results

Demographic characteristics of the physicians

This part of the study aimed to gather the basic data about the respondent’s age, gender, experienced in the profession, monthly income (Table 1). (85)% of the physicians were male while (15)% were female. The larger group of physicians was 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. Most 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 marks for correctly answered questions was 55.2% with SD (± 18.10). About two-third of the physicians scored between 45% to 60% (Tables 2 and 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).

Discussion

The respondents (physicians) who practice in Sylhet City originated from different part of the country and they studied in different medical schools in Bangladesh where the curriculum is the same. Therefore, it is assumed that the demographics of the respondents represent national level. The response rate in the present study was 60.3%, which is higher than the responses found by Khalid [9], Temple [4], Hu *et al.* [1] and Barrett [11]. About 55% of the physician 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% which is lower than that shown in a study (63%) of Nutrition knowledge of physicians in Canada [4]. But surprisingly the mean scores (55.2%) of the present study is greater than that reported in a study of nutritional knowledge of physician in Pakistan [9]. The results of the present study indicate that physicians are aware of nutritional information publicized in the medical press. This trend is similar to what has been reported for other countries by Mlodinow and

Table 3

Frequency distribution of scores of physicians (obtained from Table 2).

Scores interval	Frequency	Cumulative frequency
30 – 45	4	4
45 – 60	6	10
60 – 75	3	13
75 – 90	2	15
90 – 100	1	16

Table 4

Frequency distribution of the nutrition knowledge of physicians.

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

Barrett-Connor [11] and Temple [4].

The overall findings suggest that there are serious weaknesses in nutrition knowledge among the physicians in Bangladesh and they do not have enough nutritional knowledge to properly advise the patient. The nutrition knowledge varies from physician to physician. The present study indicates that physicians need more education in nutrition. Since proper nutritional advice to the patient is akin to half treatment, the medical schools in Bangladesh should introduce courses on nutrition knowledge in their curriculum.

References

1. **Hu, S. P., Wu, M.Y. and Liu, J.F.** 1997. Nutrition knowledge, attitude and practice among primary care physicians in Taiwan. *J. Amr. Coll. Nutr.* 16:439-442.
2. **Schaller, C. and James, E.L.** 2005. The nutritional knowledge of Australian nurses. *Nurse education today* 25:405-412.
3. **Heywood, P. and Wooten, S.A.** 1992. Nutritional knowledge and attitudes towards nutrition education in medical students at Southampton University Medical School. (Abstract). *Proc. Nutr. Soc.* 51:67A.
4. **Temple, N.J.** 1999. Survey of nutritional knowledge of Canadian physicians. *J. Amr. Coll. Nutr.* 18: 26-29.
5. **Schulman, J.A.** 1999. Nutrition education in Medical school: Trends and implications for educators. *Med. Edu.* 1-10.
6. **Feldman, E.B.** 1995. Networks for medical nutrition education- a review of the US experience and future prospects. *Amr. J. clin. Nutr.* 62: 512-517.
7. **Lasswell, A.B., Jackson, M.E. and Eulpepper, L.** 1984. Nutrition education for physicians. *J. Med. Edu.* 59:352-354.
8. **Kushner, R.F.** 1995. Barriers to providing nutrition counseling by physicians: Survey of primary care practitioners. *Prev. Med.* 24:546-552.
9. **Khalid S.A.N.** 2004. Nutritional knowledge of primary care physicians in Saudi Arabia. *Pak. J. Nutr.* 3:344-347.
10. **Ozcelik, A.O., Surucuoglu, M.S. and Akan, L.S.** 2007. Survey on the nutritional knowledge level of Turkish physicians: Ankara as a sample. *Pak J. Nutr.* 6:538-542.
11. **Mlodinow, S.G. and Barrett-Connor, E.** 1989. Physicians and medical student's knowledge of nutrition. *Acad. Med.* 64:105-106.