Abstract

Demographic and epidemiological transitions reveal geriatric problems as burning public health issue. The present cross-sectional study was undertaken to explore the health awareness among geriatric people in Mirpur in Dhaka city from January to April 2008 on purposively selected persons aged 60 years and above. An interviewer administered semi-structured questionnaire was used for data collection. The mean age of the respondents was found to be 66.5 ± 7.25 yrs (Range: 60-103 yrs). It was found that perfect knowledge about food, nutrition, health and disease is significantly high among male respondents. The study revealed that 13.3% and 12.8% respondents have perfect knowledge on balanced diet and fiber containing food for regular bowel movement respectively. A large number of respondents (40.6%) were found having no knowledge about osteoporosis preventing foods. It was also found that 38.0% and 22.6% respondents have no knowledge regarding the causes of gingivitis and helminthasis respectively. On the basis of significant findings, it was suggested that more emphasis should be given on health education and awareness among geriatric people in order to ensure physical, mental and socially sound health.

Introduction

Population ageing is gaining momentum in developing countries, as demographic transformation has profound consequences for all individuals, families, communities and nations. Population aged over 60 years currently represents about 7% of the total population of Bangladesh and is projected to represent 16% by 2050 and will undoubtedly face its own aging crisis in the next two to three decades. In two survey studies of ICDDR,B found that 73% of persons aged over 60 years were living with at least one chronic disease complain in Mirsarai and 44% were in Abhoynagar. As Bangladesh’s population ages, increasing number of geriatric people will be living with chronic conditions. The Government of Bangladesh is committed to sustainable improvement in health, nutrition and family welfare especially for vulnerable groups such as the elderly. These commitments are out line in the Health, Nutrition and Population Sector Programme (2003-2010) and the National S trategy for Accelerated Poverty Reduction. The current study was undertaken to find out the level of knowledge about food, nutrition, health and disease among elderly population.

Materials and Methods

A total of 384 geriatric people (aged 60 years and above) were selected from Mirpur in Dhaka city from January to April 2008. An interviewer administered semi-structured questionnaire was used for data collection. Subjects volunteered to provide interview. Frequency distribution, measures of dispersion and association were used using SPSS 12.0.

Results

The findings of the present cross-sectional study undertaken to explore the level of knowledge among geriatric people are presented below:

Figure-1: Distribution of the respondents by age

Figure-1 shows that the mean age of the respondents was 66.50 ±7.25 yrs. Among all, 173 (45.1%) were in the age group of 60-64 years old, showing the highest percentage followed by 85 (22.1%) in the age group of 65-69 years, 68 (17.7%) in the age group of 70-74 years, 30 (7.8%) in the age group of 75-79 years old and 28 (7.3%) respondents were in
the age group of 80 years and above showing the lowest percentage.

**Figure-2:** Distribution of the respondents by sex

Figure-2 shows that the total number of respondents was 384 of which 331 (86.2) were male and rest were female.

**Figure-3:** Distribution of the respondents by knowledge about balanced diet

Figure-3 shows that among all respondents, 249 (68.9%) having poor knowledge constitute the highest percentage and 73 (19.0%) were considered as no knowledge for balance diet. Among all, 52 (13.5%) had perfect knowledge as they answered correctly "food that contains all elements in definite amount" for balance diet and 10 (2.6%) respondents were considered as partial knowledge as they answer "milk" for balance diet, showing the lowest percentage.

**Figure-4:** Distribution of the respondents by knowledge about fiber containing food for regular bowel movement

Figure-4 shows that 239 (62.2%) of the respondents had partial knowledge on regular bowel movement and 53 (13.8%) were considered as no knowledge as they answer "don't know and irrelevant matters". Among all, 49 (12.8%) of them were considered as perfect knowledge as they answered "fiber containing food" for regular bowel movement and 43 (11.2%) had misconception as they answered "fish and meat" needed for regular bowel movement.

**Figure-5:** Distribution of the respondents by knowledge about preventing osteoporosis

Figure-5 shows that among all, 211 (54.9%) had perfect knowledge as they answered "calcium containing food" for the prevention of osteoporosis, showing the highest percentage followed by 156 (40.6%) with no knowledge and only 17 (4.7%) as poor knowledge for the prevention of osteoporosis carrying the lowest percentage.

**Figure-6:** Distribution of the respondents by knowledge about iron-rich food

Figure-6 shows that among all, 18% had perfect knowledge, 28.10% had partial knowledge, 38.50% had poor knowledge, and 15.40% had no knowledge about iron-rich food.
Figure-6 shows that 148 (38.5%) of the study subjects had poor knowledge for the food that increases hemoglobin in the body and 108 (28.1%) respondents were considered as perfect knowledge as they answer "Iron containing food" while 69 (18.0%) of them were considered as no knowledge and 59 (15.4%) respondents were considered as partial knowledge as they answered "vegetables, milk and meat".

Figure-7: Distribution of the respondents by knowledge about beneficial food for the heart
Figure-7 shows that among the 384 respondents 161 (41.9%) had perfect knowledge regarding the food that is beneficial for the heart, showing the highest percentage and 136 (35.4%) had no knowledge. Among all, 63 (16.4%) had misconception as they answered "potato, oily foods, milk, meat and vitamin" for the food that is beneficial for the heart and 24 (6.3%) had partial knowledge as they answered "vegetables".

Figure-8: Distribution of the respondents by knowledge about hand washing by soap/ash
Figure-8 shows that most of the respondents (92.4%) had perfect knowledge as they answer "after defecation and before eating" about cleaning hands properly with soap/ash.

Figure-9: Distribution of the respondents by knowledge about tooth brushing time
Figure-9 shows that among the 384 respondents 190 (49.5%) of them were considered as partial knowledge as they answer "after awakening in the morning" about tooth brushing time, showing the highest percentage and 178 (46.4%) respondents were considered as perfect knowledge as they answer "before sleeping at night" about tooth brushing.

Figure-10: Distribution of the respondents by knowledge about cause of gingivitis
Figure-10 shows that among all, 146 (38.0%) had no knowledge regarding the cause of gingivitis as the highest percentage and 127 (33.1%) had partial knowledge as they answered "lack of cleanliness, vitamin C deficiency, as well as calcium deficiency" while 98 (25.5%) of them were considered as perfect knowledge.

Figure-11: Distribution of the respondents by knowledge about cancer

Figure-11 shows that among all most of them (75.3%) had perfect knowledge on cancer as a geriatric problem, showing the highest percentage and 89 (23.2%) of them were considered as no knowledge.

Figure-12: Distribution of the respondents by knowledge about what sort of disease is diabetes
Figure-12 shows that among all, 187 (48.7%) had perfect knowledge about diabetes, while 98 (25.5%) respondents had no knowledge, 60 (15.6%) had misconception as they answered "contagious and communicable" while 39 (10.2%) had partial knowledge as they answered "inherited".

Figure-13: Distribution of the respondents by knowledge about impact of nutritional deficiency
Figure-13 shows that among all the respondents 194 (50.5%) had perfect knowledge as they regarding the consequences of nutritional deficiency in elderly people.

Table-1: Association between socio-demographic characteristics and knowledge about balanced diet

<table>
<thead>
<tr>
<th>Socio-demographic Characteristics</th>
<th>Knowledge about balanced diet</th>
<th>p-value*</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Perfect knowledge</td>
<td>Imperfect knowledge</td>
</tr>
<tr>
<td></td>
<td>No.</td>
<td>%</td>
</tr>
<tr>
<td>Sex</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Male</td>
<td>51</td>
<td>98.1</td>
</tr>
<tr>
<td>Female</td>
<td>1</td>
<td>1.9</td>
</tr>
</tbody>
</table>

Table-1 shows that perfect knowledge about balance diet was found high among the respondents who were male and it was 98.1% and 1.9% respondents were found low who were female. The association was statistically significant (p = 0.008).

Table-2: Association between socio-demographic characteristics and knowledge about diabetes

<table>
<thead>
<tr>
<th>Socio-demographic Characteristics</th>
<th>Knowledge about diabetes</th>
<th>p-value*</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Perfect knowledge</td>
<td>Imperfect knowledge</td>
</tr>
<tr>
<td></td>
<td>No.</td>
<td>%</td>
</tr>
<tr>
<td>Sex</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Male</td>
<td>176</td>
<td>94.1</td>
</tr>
<tr>
<td>Female</td>
<td>11</td>
<td>5.9</td>
</tr>
</tbody>
</table>

Table-2 shows that perfect knowledge about diabetes was found high among the respondents who were male and it was 94.1% and 5.9% respondents were found low who were female. The association was statistically significant (p = 0.008).

Table-3: Association between socio-demographic characteristics and knowledge about nutritional deficiency

<table>
<thead>
<tr>
<th>Socio-demographic Characteristics</th>
<th>Knowledge about nutritional deficiency impact</th>
<th>p-value*</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Perfect knowledge</td>
<td>Imperfect knowledge</td>
</tr>
<tr>
<td></td>
<td>No.</td>
<td>%</td>
</tr>
<tr>
<td>Sex</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Male</td>
<td>179</td>
<td>92.3</td>
</tr>
<tr>
<td>Female</td>
<td>15</td>
<td>7.7</td>
</tr>
</tbody>
</table>

Table-3 shows that perfect knowledge about nutritional deficiency was found high among the respondents who were male and it was 92.3%. The association was statistically significant (p = 0.008).
Table-3 shows that perfect knowledge about nutritional deficiency was found high among the respondents who were male and it was 92.3% and 7.7% respondents were found low who were female. The association was statistically significant (p = 0.008).

Discussion
Geriatric people are the most vulnerable group of population in Bangladesh and lack of health awareness increases the malnutrition, disease and disability of this greater portion of the population.3,4 Regarding knowledge about balanced diet the present study reveals that 13.5% had perfect knowledge, 2.6% had partial knowledge, 68.9% had poor knowledge, and 19.0% had no knowledge about balanced diet (Figure-3). A study on rural elderly people showed that 12.7% had correct knowledge, 25.5% had partial knowledge, 20.0% had poor knowledge and 41.8% had no knowledge about balanced diet which is consistent with present study by perfect knowledge. A study in Dhaka found that 53.3% geriatric people had no idea about balanced diet while only 15.3% had incomplete knowledge and 31.5% had knowledge about balanced diet. The difference with this study may be owing to the operational definition. The present study found that perfect knowledge about balanced diet is significantly high among male respondents (Table-1). Bhatla PC et al. found that one fourth of the respondents had knowledge about balance diet and among them majority were males which may be due to more literacy, which is consistent with present study.

The present study found that 54.9% had perfect knowledge about bone disease like osteoporosis (Figure-5). The study by Dawlatuzzaman M. found that 43.6% respondents answered bone disease is related to calcium deficiency diet. Jayachandra et al. study found that 59.3% respondents were aware of health problems related to calcium. Braverly J. Tepper, et al. showed that 46% respondents had knowledge of link between bone disease and calcium. There is a similarity between Jayachandra et al. and present study.

The present study found that there is a significant difference of nutritional knowledge between male and female (Table-13) whereas a study on rural elderly people showed that there is no significant difference of nutritional knowledge between male and female. The present study found that most of the respondents (67.2%) belonged to the age group of 60-69 years, 17.7% belonged to the age group of 70-74 and only 7.8% belonged to the age 80 over (Figure-1). Rahim A M. study found that most of the respondents (56.7%) belonged to the age group of 60-69, 34.3% belonged to the age group of 70-74 and only 6% belonged to the age 80 over which is consistent with the present study by the age group of 80+.

Regarding perfect knowledge about iron-rich food which increases blood in the body is found 28.1% (Figure-6). This low knowledge indicates that geriatric people give less attention to their daily diet. Regarding Perfect knowledge about causes of lung cancer relating to smoking is found 75.3% (Figure-12). It indicates anti-tobacco program gives to some extent benefit gathering knowledge about lung cancer. 15.6% respondents answered "contagious and communicable" about diabetes (Figure-13). It indicates there is a misconception about disease among geriatric people. Women were found significantly having less knowledge about diabetes and nutritional deficiency impact (Table-2 and 3). It indicates women might be more sufferers owing to knowledge deficiency.

Conclusion and Recommendations
On the basis of key and significant findings of the present study, an array of concluding remarks is attempted. Knowledge on balanced diet and fiber containing food for regular bowel movement was low and it was also found that many of them have no knowledge about gingivitis and helminthiasis. These situations imply that health awareness among geriatric people is not satisfactory. Knowledge was found significantly low among women. Health awareness programmes can be undertaken for such large section of geriatric people of Bangladesh, more attention should be given on food and nutritional education program in order to provide appropriate knowledge on nutritional impact, the overall diet quality, and special attention should be given to women as having less knowledge, they were found the most vulnerable group.
References


