

# Socioeconomic status overrides age and gender in determining health-seeking behaviour in rural Bangladesh

Syed Masud Ahmed,<sup>1</sup> Göran Tomson,<sup>2</sup> Max Petzold,<sup>3</sup> & Zarina Nahar Kabir<sup>4</sup>

**Objective** To study the health-seeking behaviour of elderly members (aged  $\geq 60$  years) of households in rural Bangladesh, to ascertain how their behaviour differs from that of younger people (aged 20–59 years) living in the same household and to explore the determinants of health-seeking behaviour.

**Methods** Structured interviews were conducted to elicit information on the health-seeking behaviour of household members aged  $\geq 20$  years. Respondents were asked about major illnesses occurring within 15 days prior to the interview. The sample consisted of 966 households that had at least one resident who was aged  $\geq 60$  (32% of 3031 households).

**Findings** We found no major differences in health-seeking behaviour between elderly people and younger adults. On average about 35% (405/1169) of those who reported having been ill during the previous 15 days in both age groups chose self-care/self-treatment; for both age groups the most commonly consulted type of provider was a paraprofessional such as a village doctor, a medical assistant or a community health worker. A household's poverty status emerged as a major determinant of health-seeking behaviour. The odds ratio (OR) that individuals from poor households would seek treatment from unqualified allopathic practitioners was 0.6 (95% confidence interval (CI) = 0.40–0.78); the odds ratio that individuals from poor households would seek treatment from qualified allopathic practitioners was 0.7 (95% CI = 0.60–0.95). For self-care or self-treatment it was 1.8 (95% CI = 1.43–2.36). Patients' level of education affected whether they avoided self-care/self-treatment and drugstore salespeople (who are usually unlicensed and untrained but who diagnose illnesses and sell medicine) and instead chose a formal allopathic practitioner (OR = 1.5; 95% CI = 1.15–1.96). When a household's poverty status was controlled for, there were no differences in age or gender in terms of health-care expenditure.

**Conclusion** We found that socioeconomic indicators were the single most pervasive determinant of health-seeking behaviour among the study population, overriding age and sex, and in case of health-care expenditure, types of illness as well.

**Keywords** Patient acceptance of health care; Aged; Adult, Socioeconomic factors; Age factors; Health expenditures; Health services/utilization; Bangladesh (*source: MeSH, NLM*).

**Mots clés** Acceptation des soins; Sujet âgé; Adulte; Facteur socio-économique; Facteur âge; Dépenses de santé; Services santé/utilisation; Bangladesh (*source: MeSH, INSERM*).

**Palabras clave** Aceptación de la atención de salud; Anciano; Adulto; Factores socioeconómicos; Factores de edad; Gastos en salud; Servicios de salud/utilización; Bangladesh (*fuentes: DeCS, BIREME*).

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يمكن الاطلاع على الملخص بالعربية في صفحة 116.

## Introduction

Bangladesh, one of the most populous and poorest countries in the world (where 29% of the population lives on less than US\$ 1.00 a day) (1), is undergoing a demographic transition as a result of the success of targeted public health interventions, such as immunization, family planning and oral rehydration therapy. In the three decades since the nation's independence in 1971, life expectancy at birth increased from 45 years to 62 years due to a gradual reduction in both crude birth rates and crude death rates and the fertility rate (2). This demographic

change is manifested in the gradual ageing of the population. According to the 2001 census, 6.2% of the population is aged  $\geq 60$  years, the absolute number being more than 8.5 million (3). Approximately 80 000 people move into this age group every year. It is projected that by 2025, the population of elderly people will exceed 17 million (4). Compared with high-income countries, population ageing will take place over a shorter period of time in Bangladesh and the country will have much less time to deal with its consequences (5).

Increasing landlessness, rural-to-urban migration and changes in lifestyles that are leading to smaller families have put

<sup>1</sup> Research Coordinator, BRAC Research and Evaluation Division, 75 Mohakhali, Dhaka-1212, Bangladesh (email: syed.masud.ahmed@phs.ki.se). Correspondence should be sent to this author.

<sup>2</sup> Professor, International Health Systems Research (IHCAR), Department of Public Health Sciences, Karolinska Institutet, Stockholm, Sweden.

<sup>3</sup> Senior Lecturer, Nordic School of Public Health, Gothenburg, Sweden.

<sup>4</sup> Researcher, Division of Geriatric Epidemiology, Neurotec, Karolinska Institutet, Stockholm, Sweden.

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the elderly population of Bangladesh in a vulnerable situation (6–9). Poverty and social exclusion are the greatest threats to their well-being (10). Elderly women are especially disadvantaged due to their marginal position in the society (11). The vulnerability of elderly people is also reflected in a higher burden of ill-health and disability (6, 7, 12) as well as in the gradual deterioration in perceived health outcome measurement scores with advancing age (13). Additionally, the substantial falls in child mortality and adult mortality during the 1980s and 1990s have not been matched among elderly people (14).

However, poor health need not be inevitable in old age (15). Well targeted primary health-care interventions have considerable potential to prevent ill-health and consequently improve the quality of life of elderly people in any country (16). In Bangladesh adult health has received little attention from primary health-care services with the exception of the reproductive health of women (17), and the issue of health among elderly people rarely appears on the public health agenda except when some fragmented activities are undertaken in the voluntary and nongovernmental sectors (6). With the projected increase in the population of elderly people, it is essential that their health-care needs are addressed through the primary health-care system to reduce the burden of demand for services at higher levels. Understanding the health-seeking behaviour of elderly people, including its differentials and determinants, is necessary in order to design and implement targeted services that are sensitive and responsive to their needs and priorities. Studies that have examined the health-seeking behaviour of elderly people in developed countries reveal several important determinants: age, sex and poverty (18); expectations about ageing (19); the interpretation and experience of symptoms (20); and the degree of social integration into the community (21) among others. In most cases, seeking no treatment or self-treating was the most frequent response to illness (19, 20, 22). However, there is a dearth of information on the behaviour of elderly people in Bangladesh. To bridge this knowledge gap, this paper aims to study whether there are differences in health-seeking behaviour between people aged  $\geq 60$  years and younger adults in the same household and to explore the determinants of health-seeking behaviour.

## Methods

Data for this study originated from a research project funded by the European Commission (Primary Healthcare in Later Life: improving services in Bangladesh and Vietnam, also known as PHILL). It aimed to study the effectiveness of low-cost preventive and health-promotion interventions in improving primary health-care services for elderly people in rural communities (23). In Bangladesh, this project is implemented by BRAC (formerly known as the Bangladesh Rural Advancement Committee), the largest micro-credit-based nongovernmental organization in the country (24).

### Health care at the study site

A baseline survey was done during April–June 2003 in Chandpur district, situated 70 km south of the capital Dhaka, for the PHILL project. This district is typical of deltaic Bangladesh and is a predominantly agricultural community characterized by homogeneity in terms of ethnicity, culture and language. Two subdistricts with similar levels of socioeconomic development, separated by an intervening subdistrict, were purposively

selected so that each had a BRAC health centre, a government primary health-care centre as well as being logistically convenient to access by road. A wide range of choices for health care is available in these communities. In the public sector, the primary health-care centre has inpatient and laboratory facilities and is supported by a number of subcentres and a network of community health workers. The centre is staffed by qualified allopathic practitioners and the subcentres are staffed by paraprofessionals; the centre provides both inpatient and ambulatory care and the subcentres provide only ambulatory care. However, research indicates that there are high rates of absenteeism (of about 40%), particularly among medical doctors, and that about 26% of professional posts in rural areas are vacant (25). These centres also lack appropriate diagnostic facilities and medicines, causing government health services to be used only in about 14% of all instances of illness occurring in the community (26). Staff salaries in the public sector are low and the majority of professional staff also practise privately (27). A basic package of essential health care is provided free of charge from these centres (17). Although there is no official cost for services, the out-of-pocket costs for the consumer may be substantial (28). The BRAC health centres in these subdistricts provide similar services and charge different fees depending on whether a patient is classed as poor or not. In the private sector, there are traditional healers, a few homeopathic practitioners and drugstores in village markets that sell allopathic medicine on demand (also known as drugstore salespeople). In addition to dispensing medicine, sellers at these mostly unlicensed and unregulated retail outlets also diagnose and treat illnesses, despite having no professional training.

### Sampling and data collection

Four villages from each subdistrict, within about a 3 km radius of the health centres, were randomly selected, and a census was completed for all households having at least one individual aged  $\geq 60$  years. This yielded a final sample of 966 households with at least one resident who was aged 60 years or older out of 3031 households (32%) and 1136 elderly individuals and 2466 younger adults aged 20–59 years. The initial sampling frame for the elderly population was obtained from the local BRAC office and verified later using an event calendar and life histories during the survey. Informed consent was obtained prior to conducting the interviews. The non-response rate was about 5% (62/1198).

Twelve interviewers (social science graduates who were experienced in survey methods) and four supervisors (postgraduates who were experienced in managing field activities) were recruited for the baseline survey. All of them received training on the content of the questionnaire, techniques to elicit more information and strategies to establish the rapport and neutrality essential for obtaining complete and accurate data. The training consisted of classroom lectures and role-playing, practice sessions outside the villages to be included in the study and debriefing sessions at the end of the day. The study coordinator (SMA) and the PHILL researchers acted as resource people. The training lasted for 5 days, and a training manual was produced for ready reference in the field. The field activities were supervised and fine tuned by the study coordinator with the help of a field researcher based in the Chandpur office.

After informed consent was obtained, a structured questionnaire that had been pre-tested was used in face-to-face

interviews. The questionnaire on health-seeking behaviour was developed and validated in other studies in Bangladesh (29–31). Demographic and socioeconomic data were provided by the head of household (the person who was perceived by household members to be the primary decision-maker in the family and who may or may not have been the main income earner); specific information on recent illnesses among household members and related health-seeking behaviour was provided by any knowledgeable caregiver (generally female) or the ill person if present. Data on the illness episode with the longest duration that affected household members aged  $\geq 20$  years within 15 days before the survey were recorded. The respondent was asked to describe the symptoms of the illness (excluding the diagnosis) in her or his own words. These descriptions were later classified into “types of illnesses” with a coding system that had been pre-tested and used in BRAC for morbidity studies; the classifications were cross-checked by a physician (SMA). Efforts to improve the reliability and validity of illness reporting included using culturally appropriate language, limiting the recall period to 15 days, providing intensive field supervision and using on-the-spot checks for inconsistencies.

For instances in which a health-care provider was consulted, information was obtained about the first contact made to seek treatment and the expenditure incurred (comprising user fees, out-of-pocket fees, transport, etc.) for that person during the 15-day recall period. The choice of who is contacted first reflects a number of factors, such as health beliefs, past knowledge of illness and its remedy, and faith in various therapies rather than the type or severity of illness alone.

The treatments sought were grouped into five categories.

- 1) Self-care/self-treatment: in this category the patient sought no treatment other than rest and possibly care from a family member. This category also included instances when common home remedies (e.g., oral rehydration salts), over-the-counter drugs, or herbal preparations were taken without consultation with any health-care provider.
- 2) Drugstore salespeople: treatment in this category involved patients seeking diagnosis and treatment from a drugstore salesperson but did not include only the purchase of over-the-counter drugs. Those who sell medicine at these mostly unlicensed and unregulated retail outlets usually have no professional training in diagnosis and treatment; a few may have taken a 4–6 week certificate course on dispensing drugs.
- 3) Traditional treatment: this category included treatments sought from herbalists (*kabiraj*) and spiritual healers and also included homeopathic practitioners, although they make up only a negligible proportion of practitioners in Bangladesh.
- 4) Paraprofessional: this included treatment sought from village doctors (*palli chikitsok*) who had had 3 months' training in diagnosing and treating common ailments, mostly from private institutions of questionable quality; medical assistants who had completed a 3-year training programme at a public institution; and various governmental and nongovernmental community health workers who have had some basic training in preventive and curative medicine.
- 5) Qualified allopathic practitioner: this category comprised licensed practitioners who had had professional training (known in Bangladesh as MBBS doctors).

Households were categorized according to self-rated poverty status; this was derived by asking the respondent about the state of the household's overall annual expenditure in relation

to income. This self-assessment tool has been found to be a valid indicator of household socioeconomic status in rural Bangladesh (32). Thus, households were categorized as being in “chronic deficit” (those which were running in deficit most of the year) or being “non-deficit” (those that were in a state of breaking even or having a small surplus).

## Data analysis

Data were analysed in two stages using SPSS software version 11.5. First, bivariate analyses were done to characterize group-level differences in health-seeking behaviour between younger adults (those aged 20–59 years) and elderly people (those aged  $\geq 60$  years). Next, logistic regression analysis was performed to identify determinants of seeking different types of health care. In order to predict whether self-care/self-treatment would be used, “self-care/self-treatment” was coded as “1” and all other types of treatment as “0”. Similarly, to predict whether treatment would be sought from a drugstore salesperson, “drugstore salesperson” was coded as “1” and all other types of treatment as “0”. Lastly, to predict whether treatment would be sought from formally trained allopathic practitioners, “paraprofessionals” and “MBBS doctors” were coded together as “1” and labelled as “formal allopathic care” and all other types were coded as “0”. Independent variables were identified based on the results of bivariate analysis and their known influence on health-seeking behaviour.

## Results

In the study households, 42% (2466/5882) of those surveyed were aged between 20 and 59 years, and 19% (1136/5882) were aged 60 years or older.

Households obtained their income in a variety of ways: 38% (371/966) had someone who worked in the service industry (which could be a governmental or nongovernmental job with a fixed monthly salary) or in small trade (for example, by owning a grocery shop); 17% (164/966) farmed household land; 14% (137/966) were self-employed; 14% (140/966) relied on remittances from wage earners living abroad; and 12% (118/966) depended on selling manual labour for a daily wage in the agricultural or non-agricultural sector. Around 31% (352/1136) of elderly people in this survey were gainfully employed, usually in service or small-trade activities or they were self-employed. Altogether 38% (367/966) of households were assessed as being in a state of chronic deficit with respect to annual income and expenditure. The mean household size was

Table 1. Number of respondents who reported having an illness in the previous 15 days among study population in Bangladesh, by gender and age group

Gender	No. reporting illness in past 15 days <sup>a</sup>		Significance
	20–59 years	$\geq 60$ years	
Men	165/1222 (13.5)	372/628 (59.2)	$P < 0.001$
Women	317/1244 (25.5) <sup>b</sup>	315/508 (62.0)	$P < 0.001$
Both men and women	482/2466 (19.5)	687/1136 (60.5)	$P < 0.001$

<sup>a</sup> Figures in parentheses are percentages.

<sup>b</sup> For men versus women  $P < 0.001$ .

6 people (standard deviation (SD) = 2.7), with 14% (135/966) headed by females. The average amount spent by households on food in the preceding 24 hours was 74 Bangladesh *taka* (SD = 42.4) (60 Bangladesh *taka* = US\$ 1.00). About 41% (396/966) of households perceived that their economic condition had deteriorated over the past year.

### Illness and morbidity

Elderly people reported three times more illnesses occurring during the 15-day recall period than did the younger adults ( $P < 0.001$ ); this difference was more pronounced among men than women (Table 1). Differences in prevalence between men and women were found to be significant only for younger

adults, the prevalence being greater for women. The three most frequently reported illnesses (uncomplicated fever, bodily pain or aches or rheumatism, and gastrointestinal illness) were identical within each age group; there were differences in morbidity profiles between age groups and this included variations by gender within age groups (Table 2). Notably, women reported a much higher prevalence of generalized weakness and rheumatism at a younger age, and this prevalence was similar to that seen among older men and women.

### Health-seeking behaviour

No significant difference in health-seeking behaviour between the age groups was observed. Self-care/self-treatment was the

Table 2. Types of illnesses reported in previous 15 days among study population in Bangladesh, by age group and gender

Type of illness	No. of respondents reporting illness <sup>a</sup>						Significance (younger age group versus older)
	20–59 years			≥ 60 years			
	Men (n = 165)	Women (n = 317)	Both (n = 482)	Men (n = 372)	Women (n = 315)	Both (n = 687)	
Uncomplicated fever	64 (38.8)	88 (27.8)	152 (31.5)	67 (18.0)	47 (14.9)	114 (16.6)	$P < 0.001$
Bodily pain or aches (rheumatism)	36 (21.8)	95 (30.0)	131 (27.2)	104 (28.0)	104 (33.0)	208 (30.3)	NS <sup>b</sup>
Gastrointestinal illness	22 (13.3)	37 (11.7)	59 (12.2)	41 (11.0)	31 (9.8)	72 (10.5)	NS
Respiratory illness	11 (6.7)	22 (6.9)	33 (6.8)	38 (10.2)	30 (9.5)	68 (9.9)	NS
Skin, eye or ear, nose and throat illness	6 (3.6)	10 (3.2)	16 (3.3)	25 (6.5)	27 (8.6)	51 (7.4)	$P < 0.01$
Blood pressure or heart disease	4 (2.4)	11 (3.5)	15 (3.1)	16 (4.3)	19 (6.0)	35 (5.1)	NS
Generalized weakness	4 (2.4)	29 (9.1)	33 (6.8)	38 (10.2)	33 (10.5)	71 (10.3)	$P < 0.05$
Other illnesses <sup>c</sup>	18 (10.9)	25 (7.9)	43 (8.9)	44 (11.8)	24 (7.6)	68 (9.9)	NS

<sup>a</sup> Figures in parentheses are percentages.

<sup>b</sup> NS = not significant.

<sup>c</sup> Other illnesses included anaemia, malnutrition and reproductive health illnesses.

Table 3. Type of health care sought in previous 15 days for the three most frequently reported illnesses in study area in Bangladesh, by age group

Type of health care	Type of illness <sup>a</sup>							
	Fever		Bodily pain or aches (rheumatism)		Gastrointestinal illness		All types of illness <sup>b</sup>	
	20–59 years (n = 152)	≥ 60 years (n = 114)	20–59 years (n = 131)	≥ 60 years (n = 208)	20–59 years (n = 59)	≥ 60 years (n = 72)	20–59 years (n = 482)	≥ 60 years (n = 687)
Self-care/self-treatment with home remedies	78 (51.3)	51 (44.7)	44 (33.6)	54 (26.0)	29 (49.2)	37 (51.4)	185 (38.4)	220 (32.0)
Traditional	3 (2.0)	2 (1.8)	4 (3.1)	8 (3.8)	5 (8.5)	0	18 (3.7)	24 (3.5)
Paraprofessional (semi-qualified allopathic)	37 (24.3)	30 (26.3)	32 (24.4)	58 (27.9)	13 (22.0)	12 (16.7)	114 (23.7)	173 (25.2)
Drugstore salesperson (unqualified allopathic)	26 (17.1)	23 (20.2)	20 (15.3)	47 (22.6)	6 (10.2)	15 (20.8)	75 (15.6)	122 (17.8)
MBBS doctor (qualified allopathic)	8 (5.3)	8 (7.0)	31 (23.7)	41 (19.7)	6 (10.2)	8 (11.1)	90 (18.7)	148 (21.5)

<sup>a</sup> Figures in parentheses are percentages.

<sup>b</sup> Only the three most common illnesses are shown here. The last two columns show the aggregate of all illnesses (see Table 2).



Table 4. Odds ratio (OR) for seeking different types of health care in the previous 15 days in study area in Bangladesh, by age, gender, education and poverty status

Characteristic	Type of health care sought ( <i>n</i> = 1169)					
	Self-care/self-treatment		Drugstore salesperson		Formal allopathic care (delivered by paraprofessionals or qualified medical doctors)	
	OR <sup>a</sup>	95% CI <sup>b</sup>	OR	95% CI	OR	95% CI
Age group (years)						
20–59	1.00		1.00		1.00	
≥ 60	0.72 <sup>c</sup>	0.55–0.95	0.99	0.70–1.42	1.33 <sup>c</sup>	1.01–1.73
Gender						
Men	1.00		1.00		1.00	
Women	1.30	0.99–1.70	0.92	0.66–1.28	0.84	0.66–1.08
Education						
None	1.00		1.00		1.00	
Some	0.74 <sup>c</sup>	0.56–0.99	0.68 <sup>c</sup>	0.50–0.94	1.50 <sup>d</sup>	1.15–1.96
Self-rated poverty status of household						
Non-deficit	1.00		1.00		1.00	
Chronic deficit	1.84 <sup>e</sup>	1.43–2.36	0.57 <sup>d</sup>	0.40–0.78	0.75 <sup>c</sup>	0.60–0.95

<sup>a</sup> OR = odds ratio.<sup>b</sup> CI = confidence interval.<sup>c</sup> *P* < 0.05.<sup>d</sup> *P* < 0.01.<sup>e</sup> *P* < 0.001.

most common choice of treatment for the three most frequently reported illnesses irrespective of age group (Table 3). For both age groups the most commonly consulted type of provider was a health worker, such as a village doctor or a medical assistant (paraprofessional). An interesting trend emerged in group-level differences: elderly people were less likely to choose self-care/self-treatment and more likely to choose any allopathic treatment. However, none of these differences was statistically significant. We also found that traditional medicine had only a marginal role in the health-seeking behaviour of our study population.

### Determinants of health-seeking behaviour

Table 4 presents three models for predicting the odds of an individual using self-care/self-treatment, treatment from a drugstore salesperson or treatment from a formally qualified allopathic practitioner by age group, gender, education level and self-rated poverty status of the household. Level of education and poverty emerged as the two most significant determinants of health-seeking behaviour in all three models. Those who had had some education were less likely to choose self-care/self-treatment or treatment from a drugstore salesperson and more likely to seek care from a formally qualified allopathic practitioner. On the other hand, poverty reduced the odds of seeking any allopathic treatment and increased the odds of choosing self-care/self-treatment.

### Health-care expenditure

There was no difference in health-care expenditure among those who had been ill within the 15-day recall period between age groups at the aggregate level or when stratified by gender or the household's poverty status (Table 5). However, among the group aged ≥ 60 years there was a significant difference between those households classed as being in chronic deficit and those classed as non-deficit. The association between health-care expenditure

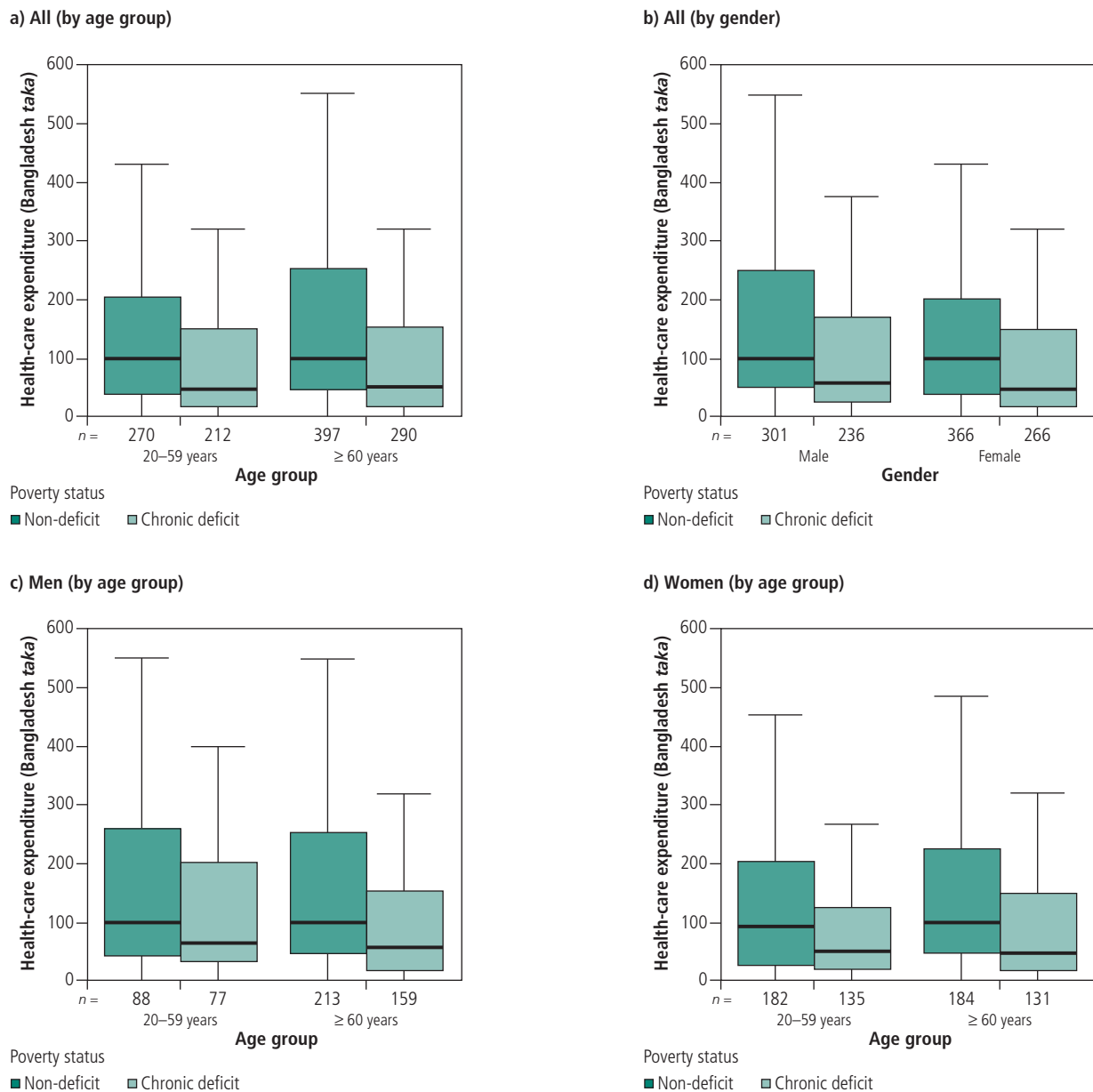
Table 5. Average expenditure on health care in the previous 15 days in study area in Bangladesh, by age group

Characteristic	Mean (± standard error of the mean) expenditure on health care <sup>a</sup>	
	20–59 years	≥ 60 years
All	185.1 ± 16.9 (482) <sup>b</sup>	196 ± 19.0 (687)
Gender		
Men	211.2 ± 27.1 (165)	184.9 ± 15.3 (372)
Women	171.5 ± 21.4 (317)	209.4 ± 37.5 (315)
Self-rated poverty status of household		
Non-deficit	204.8 ± 22.2 (270)	237.0 ± 30.9 (397)
Chronic deficit	160.0 ± 25.9 (212)	140.0 ± 15.0 (290) <sup>c</sup>
Three most frequently reported illnesses		
Fever	114.4 ± 14.0 (152)	115.6 ± 13.4 (114)
Bodily pain or aches (rheumatism) <sup>d</sup>	203.3 ± 41.6 (131)	127.2 ± 10.6 (208)
Gastrointestinal illness	177.3 ± 41.0 (59)	202.5 ± 51.3 (72)

<sup>a</sup> Expenditure is expressed in Bangladesh taka; 60 taka = US\$ 1.00 in 2003.<sup>b</sup> Figures in parentheses are total number of respondents.<sup>c</sup> *P* = 0.005 for mean of non-deficit and chronic deficit households among elderly people.<sup>d</sup> *P* = 0.079 for mean of age groups reporting rheumatism.

and poverty is shown in Fig. 1. In Fig. 1a) and Fig. 1b) the expenditure distribution between non-deficit households and households with a chronic deficit were not influenced by age or gender. In Fig. 1c) and Fig. 1d) this held true for both age groups even when stratified by sex, indicating that age and gender had a limited influence on health-care expenditure when compared with the household's poverty status.

Fig. 1. Distribution of health-care expenditure (in Bangladesh taka) for study participants who reported illness in the previous 15 days by self-rated poverty status of household and by: age group, gender, age group among men only, and age group among women only. Outliers are not shown. In 2003, 60 Bangladesh taka = US\$ 1.00



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## Discussion

This study found that socioeconomic status was the single most pervasive determinant of health-seeking behaviour among the study population, overriding age and sex, and in the case of health-care expenditure, types of illness as well. These findings may not be generalizable for all of Bangladesh since the study was done only in one specific area. However, much of Bangladesh is homogeneous with respect to economic activity, language, culture and social norms, and the findings thus give a fair idea about rest of the country as well. In this study the measurement of health-seeking behaviour was based on self-reported illness and actions taken to seek treatment; it was not directly observed as the illness process unfolded. Efforts to improve the reliability and validity of self-reported illness included using culturally

appropriate language (lay reporting), focusing on major morbidity experiences and limiting the recall period to 15 days to reduce recall bias (33).

The high prevalence of morbidity among elderly people found in this study is consistent with observations from other studies in Bangladesh (6, 7, 12). The greater burden of reported illness among women in the younger age group when compared to men in the same age group reveals their vulnerability; this difference was not seen among the older age group probably because as men get older they catch up with women in terms of reporting illnesses. Also the similarity in the profile of the most frequently occurring illnesses between age groups reflects the strong influence of environmental and seasonal risk factors in addition to ageing in the study population.

A household's poverty status emerged as the major determinant of both health-seeking behaviour and health-care expenditure: households classed as being in chronic deficit were disadvantaged in their ability to access costly allopathic treatment of any type and instead relied largely on self-care/self-treatment. That poverty is undermining the capacity of families to care for their elderly relatives was also observed in another study from Bangladesh (34). On a more hopeful note, this study found that health-seeking behaviour and health-care expenditure were unaffected by gender. This trend is consistent with recent indications that the scenario is changing in favour of women in Bangladesh (35–37). The effect of education found in this study points to the link between health and education and underscores the need to promote health literacy so that the capacity to act appropriately in a health-care environment is increased (38).

The preponderance of self-care/self-treatment as the most common treatment chosen by the study population is not without precedent (39), and it was also noted in a study from Bangladesh (31) and in an analysis of National Health Accounts in Bangladesh (40). This may reflect an effect of empowerment around health-care issues resulting from the widespread diffusion of preventive health messages through, and routine interaction with, community health workers from both governmental and nongovernmental organizations that increase the local capacity to recognize and diagnose common illnesses and undertake self-treatment. Although self-treatment is an important alternative and supplement to formal health care (41), it is important that health-care decisions taken by sick individuals or their caregivers are both safe and appropriate (42). This is especially true for self-treatment in the case of elderly people (43). In order to make self-treatment safe and appropriate, measures are needed to empower patients to make informed decisions (44). Efforts to increase health-related knowledge and skills to facilitate

decision-making about whether self-treatment is indicated, and if so, which therapeutic regimen is appropriate, should be included as a key component of primary health-care.

In addition to self-care/self-treatment, the less expensive care provided by paraprofessionals emerged as the main source of formal allopathic care for this population; the second most common choice were drugstore salespeople. Knowledge and skills about treating elderly patients is not covered within the curriculum studied by paraprofessionals or drugstore salespeople. It is essential that these providers be made aware of health issues facing elderly people through the primary health-care infrastructure. Basic pharmaceutical training should be made available to the full spectrum of health-care providers who are of greatest importance to the poor, and managerial and regulatory measures should be introduced to control the use of potentially dangerous drugs (45). Education of patients may also play an important part, as observed in this study, in reducing the use of potentially dangerous drugs by enhancing an individual's capacity to assess services on offer, to judge a provider's competence and to evaluate whether costs are justified and reasonable (39). ■

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## Résumé

### Le statut socio-économique prévaut sur l'âge et le sexe dans la détermination du comportement de recours aux soins dans le Bangladesh rural

**Objectif** Étudier le comportement de recours aux soins des membres âgés (60 ans et plus) de foyers du Bangladesh rural, évaluer comment ce comportement diffère de celui des personnes plus jeunes (âge compris entre 20 et 59 ans) vivant dans le même foyer et étudier ses déterminants.

**Méthodes** Les auteurs ont mené des entretiens structurés pour obtenir des informations sur le comportement de recours aux soins des membres des foyers âgés de 20 ans et plus. Ils ont interrogé les sujets à propos des affections importantes éventuellement survenues dans les 15 jours précédant l'entretien. L'échantillon étudié était constitué de 966 foyers, dont au moins un membre était âgé de 60 ans ou plus (32 % des 3031 foyers).

**Résultats** Les auteurs ont relevé des différences importantes entre le comportement de recours aux soins des personnes âgées et celui des adultes plus jeunes. Environ 35 % en moyenne (405/1169) des personnes des deux tranches d'âge ayant signalé une maladie pendant les 15 jours précédents avaient choisi de se soigner eux-mêmes. Pour les deux tranches d'âge, le type de dispensateur le plus couramment consulté était un paraprofessionnel, tel qu'un médecin de village, un assistant médical ou un agent de santé de la communauté. La pauvreté du foyer s'est révélée un déterminant

majeur du comportement de recours aux soins. L'odds ratio (OR) pour que les individus issus de foyers pauvres recourent à un traitement prescrit par un praticien allopathe non qualifié était de 0,6 (intervalle de confiance à 95 % : 0,40 - 0,78) et l'odds ratio pour que ces mêmes individus recourent à un traitement prescrit par un praticien allopathe qualifié était de 0,7 (intervalle de confiance à 95 % : 0,60 - 0,95). Dans le cas de soins ou d'un traitement autoprescrits, l'odds ratio était de 1,8 (intervalle de confiance à 95 % : 1,43-2,36). Le niveau d'étude du patient influait sur sa décision d'éviter les soins ou les traitements autoprescrits et les vendeurs de drugstore (qui n'ont habituellement ni autorisation, ni formation, mais qui diagnostiquent les maladies et vendent des médicaments) et de choisir à la place un praticien allopathe officiel (OR = 1,5, IC : 1,15-1,96). Une fois la pauvreté du foyer prise en compte, les auteurs n'ont pas relevé de différences en fonction de l'âge ou du sexe pour les dépenses affectées aux soins de santé.

**Conclusion** Les auteurs ont constaté que les indicateurs socioéconomiques constituaient le seul déterminant général du comportement de recours aux soins parmi la population étudiée et qu'ils prévalaient sur l'âge et le sexe, ainsi que sur le type d'affection dans le cas des dépenses consacrées aux soins de santé.

## Resumen

**El nivel socioeconómico prevalece sobre la edad y el sexo como determinante de la búsqueda de atención sanitaria en el Bangladesh rural**

**Objetivo** Estudiar el comportamiento de búsqueda de atención sanitaria de las personas de edad avanzada ( $\geq 60$  años) de hogares rurales de Bangladesh, determinar cómo difiere su comportamiento del de las personas más jóvenes (20–59 años) del mismo hogar, y analizar los determinantes de la búsqueda de atención de salud.

**Métodos** Se realizaron entrevistas estructuradas para obtener información sobre el comportamiento de búsqueda de atención sanitaria por parte de los miembros de la familia de 20 o más años de edad. Se les preguntó por los episodios de enfermedad grave sufridos durante los 15 días previos a la entrevista. La muestra constaba de 966 hogares en los que había al menos una persona de más de 60 años (32% de 3031 hogares).

**Resultados** No encontramos ninguna diferencia sustancial del comportamiento de búsqueda de atención sanitaria entre las personas de edad y los adultos más jóvenes. Por término medio, aproximadamente un 35% (405/1169) de quienes declararon haber estado enfermos durante los 15 días previos en ambos grupos de edad optaron por la autoasistencia y el autotratamiento; en ambos grupos de edad el tipo de proveedor más consultado fue un paraprofesional, como un médico de aldea, un ayudante de medicina o un agente de salud comunitario. El grado de pobreza del hogar resultó ser un determinante fundamental del

comportamiento de búsqueda de atención de salud. La razón de posibilidades (OR) de que los miembros de los hogares pobres solicitaran tratamiento a profesionales alopáticos no calificados fue de 0,6 (intervalo de confianza del 95% (IC) = 0,40–0,78), mientras que la razón de posibilidades de que los miembros de esos hogares solicitaran tratamiento a profesionales alopáticos calificados fue de 0,7 (IC del 95% = 0,60–0,95). Para la autoasistencia o el autotratamiento la OR fue de 1,8 (IC del 95% = 1,43–2,36). El nivel educativo de los pacientes influyó en su tendencia a evitar la autoasistencia y el autotratamiento, así como los consejos de los dependientes de establecimientos de venta de medicamentos (quienes generalmente no están habilitados ni formados para ese trabajo, pese a lo cual diagnostican enfermedades y venden medicinas), y a acudir en cambio a un profesional alopático formal (OR = 1,5; IC del 95% = 1,15–1,96). Cuando se controló el efecto del grado de pobreza de los hogares, no se observó ninguna diferencia en función de la edad o el sexo en lo tocante al gasto de atención sanitaria.

**Conclusión** Los indicadores socioeconómicos fueron el determinante único más generalizado del comportamiento de búsqueda de atención de salud entre la población estudiada, superando a la edad y el sexo, así como, en el caso del gasto en atención sanitaria, el tipo de enfermedad.

## ملخص

**الوضع الاجتماعي والاقتصادي يتجاوز تأثير العمر والجنس على سلوك التماس الرعاية الصحية في ريف بنغلاديش**

والعاملين في صحة المجتمع. وقد ظهر أن الوضع الخاص بفقر السكان هو أهم المحددات لسلوك التماس الرعاية الصحية. وقد بلغ معدل الأرجحية لاحتمال أن يلتمس الأفراد المعالجة من ممارسين مؤهلين بالطب 0.7 (وذلك بفاصلة ثقة 95%، وتتراوح بين 0.60 - 0.95). فيما بلغ معدل الأرجحية لاحتمال الرعاية الذاتية والمعالجة الذاتية 8% (بفاصلة ثقة 95% وتتراوح بين 1.43 و 2.36) وقد كان لمستوى التعليم بين المرضى أثر على احتمال تجنبهم التماس الرعاية الذاتية والمعالجة الذاتية أو الذهاب إلى البائعين في مخازن الأدوية والذين يفتقدون في العادة الترخيص والتدريب ولكنهم يمارسون التشخيص للأمراض ويبيعون الأدوية، كما كان لمستوى التعليم بين المرض أثر على اختبار الممارسين للطب فقد كان معدل الأرجحية 1.5 بفاصلة ثقة 95 وتتراوح بين 1.15 و 1.96 وذلك إذا كان هناك حالات شاهدة تقابل حالات الوضع الخاص بالفقر دون أن يكون هناك أي اختلافات في العمر والجنس من حيث الإنفاق على الرعاية الصحية.

**الاستنتاج:** لقد وجدنا أن المؤشرات الاجتماعية والاقتصادية هي المحددات الوحيدة والأكثر شمولاً لسلوك التماس الرعاية الصحية في المجموعة السكانية المدروسة، وهي تتجاوز أيضاً تأثير العمر والجنس، وتأثير أنماط الأمراض الأخرى على سلوك التماس الرعاية الصحية من حيث الإنفاق على الرعاية الصحية.

**الهدف:** دراسة سلوك التماس الرعاية الصحية بين كبار السن ممن يتجاوز عمرهم 60 عاماً من سكان الريف في بنغلاديش، وللتأكد من كيفية تغيير سلوكهم عن سلوك من يصغروهم سناً وتتراوح أعمارهم بين 20 و 59 عاماً، ويعيشون في نفس المسكن، وللتعرف على محددات سلوك التماس الرعاية الصحية.

**الطريقة ك:** أجريت مقابلات منهجية منظمة للحصول على المعلومات حول سلوك التماس الرعاية الصحية لدى السكان الذين تتجاوز أعمارهم عشرين عاماً، وقد سئل المستجيبين عن أهم الأمراض التي ألمت بهم خلال الأيام الخمسة عشر المنصرمة قبل المقابلة. وقد شملت العينة 966 أسرة من الأسر التي تأتي واحداً على الأقل من تزيد أعمارهم عن ستين عاماً، وهذا ما يشكل 32% من مجمل الأسر التي يبلغ عددها 3031 أسرة.

**الموجودات:** لم نجد فروقات واضحة في سلوك التماس الرعاية الصحية بين كبار السن وبين من يصغروهم عمراً. فقد اختار ما يقرب من 35% (405 من أصل 1169) ممن أبلغوا عن إصابتهم بمرض ما خلال الأيام الخمسة عشر في كل من المجموعتين العمريتين الرعاية الذاتية، والمعالجة الذاتية، وكان النمط الأكثر شيوعاً لمقدمي الرعاية الصحية الذي اختاره كل من المجموعتين العمريتين من الفئات الطبية المساندة مثل طبيب القرية، ومساعد الطبيب

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