Morbidities and Health-seeking Behavior of Elderly Patients Attending Primary Health Care in the Kingdom of Bahrain

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Abstract

Background: Understanding the health-seeking behaviors help in increasing the effectiveness and efficiency of the health-care system; however, there is lack of knowledge regarding the health-seeking behavior of the elderly population in the Kingdom of Bahrain.

Objective: The objective of this study was to identify the morbidity profile and determine the health-seeking behavior of the elderly population.

Methods: This cross-sectional study included all elderly patients ($\geq$60 years) who attended four primary health-care centers that represent four governorates with the largest catchment area in the Kingdom of Bahrain between June 19 and August 31, 2021. Information concerning their sociodemographic data, morbidity profile and health-seeking behavior were collected through direct interviewing using a structured, predesigned and pretested questionnaire.

Results: A total of 414 elderly patients were included, with the majority being Bahraini (89.1%) and male (55%). The most prevalent morbidity was hypertension (67.6%), followed by hyperlipidemia (54.7%), diabetes (52.6%), and arthritis (32.1%); arthritis was significantly more common among females than males ($P < 0.001$). The majority reported the reason for their visit being "repeat prescription" (32.1%). Almost one-third (28.2%) attempted self-management prior to their visit, and almost half (46.7%) reported seeking non-professional medical advice. The majority rated their health as good (39.4%) and moderate (38.2%). Less than one-third (28%) reported having had a health problem for which they did not attend to a health care facility.

Conclusion: The study highlighted the morbidity profile and the health-seeking behavior among elderly population in Bahrain, which may serve as a point from which further efforts may be directed to improve the services.

Keywords: Aged, bahrain, geriatric, health care utilization, morbidity, primary health care, quality of life

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INTRODUCTION

The prevalence of chronic diseases increase with age, which may be due to decline in functional abilities, and thus results in increased use of health services.[1,2] Health status impacts the quality of life,[3] with an increase in the number of morbidities resulting in a decrease in the health-related quality of life.[4]

The prevalence of multimorbidity increases with age and ranges between 55% and 98%.[5,6] Factors associated with multimorbidity are older age, female, and low socioeconomic status.[6] Studies from Sweden and Saudi Arabia have reported that 55% and 34.5% of the elderly, respectively, had two or more chronic diseases, with the multimorbidity median being three diseases.[7,8] In another study, multimorbidity prevalence was found to be the highest (35.5%) among older adults aged ≥65 years (in both genders).[9] In Bahrain, the non-communicable disease bulletin issued by the Public Health Directorate (2013–2020) showed that the prevalence of multimorbidity among elderly aged ≥60 was 20%.[10]

Health-seeking behaviors are defined as "any activity undertaken by individuals who perceive themselves to have a health problem or to be ill for the purpose of finding an appropriate remedy,"[11] including initiating care at the right time, with the right provider, maintaining regular care seeking and follow up.[12] Factors that influence health-seeking behaviors are socioeconomic status, age, gender, financial status, perceived health status, type of illness, and the availably and the accessibility of health services.[13] The elderly population tend to show variability in their health-seeking patterns, with both over- and underutilization of health-care services, and with a tendency to be dependent on their families.[14]

There is a lack of studies from Gulf Cooperation Council (GCC) countries regarding the health-seeking behavior of the elderly population and its determinants. In Bahrain, in 2017, 4.7% of total population were aged ≥65 years, and primary care visits by this age range population accounted for 15% of the total visits.[10] However, their health-seeking behavior were unknown, and thus this study was conducted to fill this gap in the literature. Findings of this study would help toward the development of a more effective and efficient geriatric care system to ultimately decrease disability, improve overall health, and decrease societal and financial burden.

METHODS

Study design, setting, and participants

This cross-sectional questionnaire study included all elderly patients (≥60 years) who attended four primary health-care centers in the Kingdom of Bahrain between June 19 and August 31, 2021 and consented for participation. Patients who did not consent for participation, were critically ill, or unable to respond in person for direct interviewing were excluded.

The Kingdom of Bahrain provides its primary health-care services through 26 health centers and one health clinic across five health regions in all governorates. These centers provide curative, preventive, and rehabilitation services. All citizens and residents are registered for treatment in the health center of their residential area. For this study, the following four governmental primary health centers with the biggest catchment population from the four main governorates were selected: Halat BuMaher Health Centre, Naim Health Centre, Jidhafs Health Centre, and Ahmed Kanoo Health Centre.

Sample size estimation

A sample size of 385 was calculated using the Raosoft sample size calculator, with a margin of error 5%, confidence interval 95%, and response of 50%.[15] Accordingly, an estimated 100 participants were targeted from each of the four centers.

Data collection tool and procedure

Direct interviewing using a structured predesigned and pretested questionnaire was carried out by the research group members who are practicing family physicians caring for elderly patients in primary care settings. The following items were collected for each participant: demographic characteristics (age, gender, education, occupation, marital status, and living status); type of illness/reason of presentation (chronic disease, acute illness, or others); and determinants affecting health-seeking behavior.

Four researchers created the first question guide in English, which was then forward translated to Arabic by two separate translators who are fluent in both written and spoken English and Arabic. Any disparities between the two forward translations were reconciled through consensus. After that, the reconciled translation was again translated into the source language and compared to the original question guide to check that the translation was conceptually equivalent.

The key themes of the questions regarding the profile and health-seeking behavior of elderly patients attending health

care services were meant to be non-leading.[4] The researchers used their combined expertise of often-encountered challenges in the elderly primary care health services in Bahrain to construct the questions.

The questionnaire was pilot tested, wherein three authors who were fluent in written and spoken English and Arabic conducted interviews with 30 elderly patients. The interviews were conducted in private setting when the participant attended the primary health-care center and provided consent. Prior to the start of each interview, the study's aims were clearly communicated to the participants. The participants' chosen spoken language was used for all interviews (i.e., English or Arabic). Most interviews were conducted in Arabic (24 of 30). In English, similarities and differences were examined for correctness. Following this pilot testing, the questions were further refined, becoming more concentrated with subsequent analyses, as common themes emerged from the analytic and reflective processes.

During the data collection phase, timely sessions were held among the group researchers for discussions and to ensure that the procedure was running smoothly. All data were collected in an anonymous manner. For the data entry and processing, each questionnaire was coded. All questionnaires were assigned a manually generated identity number.

Ethical considerations
The approval of the Research Committee, Primary Health Care, Ministry of Health, Kingdom of Bahrain, was obtained before the study was conducted. A letter about the study was sent to the involved health centers a week in advance. Letters were also sent to the health center's registration office and to physicians requesting them to direct the eligible patients to the interview room. All patients were informed that participation was voluntary, and that the data would be completely confidential and only used for this study; they were included after they provided verbal consent for participation. All responses were stored safely without respondents' names or identities to ensure privacy.

Data processing and analysis
Results were collected and plotted in a Microsoft Excel sheet. All data generated were transferred to SPSS version 26, while all variables were labeled and cross-checked to ensure that all questions have been answered and for minimizing the likeliness of errors. Cross-tabulation with chi-square test was done for certain variables of all three domain. A descriptive analysis was also performed.

RESULTS

A total of 411 elderly patients from the four selected primary health-care centers responded and completed the questionnaire through direct interviewing.

Sociodemographic profile
The majority of the participants were Bahraini (89.1%). Further, 226 (55%) were males and more than two-thirds were aged 60–75 years (79.8%). Regarding marital status, 87.2% and 49.2% of the males and females were married, respectively. A total of 23.1% were widowed, with the proportion being significantly higher among females (42.7%) than males (7.1%). Almost half of them were living with their spouse and children (43.6%): 52.2% of the male and 33% of the female. Only 3.6% reported living alone.

In terms of education, 35.1% and 10.6% of the females and males, respectively, were illiterate. A significantly higher proportion of males had a graduate degree and above compared with females (42.9% vs. 20.0%, respectively; $P < 0.001$). Only 19.0% and 6.5% of the males and females, respectively, were employed at the time of the study [Table 1].

Morbidity profile
Hypertension (67.6%) was found to be the most common morbidity, with no significant gender-related difference. This was followed by hyperlipidemia (54.7%) (which was more common in females than males: 60.0% vs. 50.4%, respectively; $P = 0.053$), type 2 diabetes mellitus (T2DM) (52.6%) (no gender-related difference), and arthritis (32.1%) (which was significantly more common in females than males: 42.7% vs. 23.5%, respectively; $P < 0.001$). Depression was reported by 5.9% of the females and 3.1% of the males, while anxiety disorder was reported by 3.9% of the participants [Table 2].

Health-seeking behavior
Reason for visit and self-management
One-third (32.1%) of the participants reported that repeat prescription was the reason for their visit. Further, 29.7% and 28% of the participants visited to request investigations at the non-communicable disease (NCD) clinic and for chronic complaint/condition, respectively; there were no gender-related differences in any of these variables. Almost one-third (28.2%) of the participants attempted self-management prior to their current visit, and this was more common among females (53.8%).

Seeking non-professional advice and source of advice
Less than half of the participants (46.7%) reported seeking non-professional advice prior to the health

Table 1: Sociodemographic profile of the elderly with gender-wise segregation

Sociodemographic profile	*n* (%)	Males (*n*=226), *n* (%)	Females (*n*=185), *n* (%)	*P*
Bahraini nationality	366 (89.1)	201 (88.9)	165 (89.2)	0.935
Age group (years)				
60–75	328 (79.8)	183 (81.1)	145 (78.4)	0.514
>75	83 (20.2)	43 (19.0)	40 (21.6)	
Marital status				
Married	288 (70.1)	197 (87.2)	91 (49.2)	<0.001
Single	18 (4.4)	8 (3.5)	10 (5.4)	
Divorced	10 (2.4)	5 (2.2)	5 (2.7)	
Widowed	95 (23.1)	16 (7.1)	79 (42.7)	
Educational level				
Illiterate	89 (21.7)	24 (10.6)	65 (35.1)	<0.001
Primary school	64 (15.6)	23 (10.2)	41 (22.2)	
Middle school	41 (10.0)	26 (11.5)	15 (8.1)	
High school	83 (20.2)	56 (24.8)	27 (14.6)	
Graduate and above	134 (32.6)	97 (42.9)	37 (20.0)	
Occupation				
Unemployed	157 (38.2)	33 (14.6)	124 (67.0)	<0.001
Employed	55 (13.4)	43 (19.0)	12 (6.5)	
Retired	199 (48.4)	150 (66.4)	49 (26.5)	
Living status				
Alone	15 (3.6)	10 (4.4)	5 (2.7)	<0.001
With spouse	94 (22.9)	63 (27.9)	31 (16.8)	
With spouse and children	179 (43.6)	118 (52.2)	61 (33.0)	
With children	81 (19.7)	15 (6.6)	66 (35.7)	
With relatives	22 (5.4)	11 (4.9)	11 (5.9)	
With a caregiver	15 (3.6)	7 (3.1)	8 (4.3)	
Others	5 (1.2)	2 (0.9)	3 (1.6)	

Table 2: Morbidity profile with gender distribution

Morbidity profile	*n* (%)	Males (*n*=226), *n* (%)	Females (*n*=185), *n* (%)	*P*
Comorbidities				
Type 2 diabetes mellitus	216 (52.6)	120 (53.1)	96 (51.9)	0.808
Hypertension	278 (67.6)	151 (66.8)	127 (68.6)	0.751
Hyperlipidemia	225 (54.7)	114 (50.4)	111 (60.0)	0.053
Hypothyroidism	44 (10.7)	17 (7.5)	27 (14.6)	0.021
Ischemic cardiovascular disease	73 (17.8)	43 (19.0)	30 (16.2)	0.458
Asthma	27 (6.6)	7 (3.1)	20 (10.8)	0.002
Gastritis	118 (28.7)	54 (23.9)	64 (34.6)	0.017
Cerebrovascular disease	12 (2.9)	6 (2.7)	6 (3.2)	0.724
Renal diseases	62 (15.1)	32 (14.2)	30 (16.2)	0.562
Gout	34 (8.3)	19 (8.4)	15 (8.1)	0.913
Arthritis	132 (32.1)	53 (23.5)	79 (42.7)	<0.001
Prostate diseases	52 (12.7)	50 (23)	0	<0.001
Obesity	68 (16.5)	33 (14.6)	35 (18.9)	0.241
Anemia	32 (7.8)	12 (5.3)	20 (10.8)	0.038
Cataract	73 (17.8)	36 (15.9)	37 (20.0)	0.283
Psychiatric disorders				
Depression	18 (4.4)	7 (3.10)	11 (4.9)	0.160
Anxiety	16 (3.9)	9 (3.98)	7 (3.1)	0.918

center visit. Similar results were noted when stratified by gender. A significantly higher proportion of female patients sought out non-professional advice from family members compared to males (68% vs. 47.1%, respectively; $P = 0.005$). The most common advice received was the use of "herbal medication," with no gender-related difference.

Health-related beliefs, perceptions, and care
About two-thirds of the participants believed that their current visit "likely" required professional help, with no gender-related difference. Participants rated their general health status as good (39.4%), moderate (38.2%), and bad (9.2%), with no statistically significant difference noted for gender. A statistically significant difference was seen among males who reported their health as very good (16.8%) compared with females (7.6%) ($P = 0.006$).

About half (53.5%) of the participants reported having visited the health-care centers 4–6 times in the past year, while 8.8% reported having visited ≥10 times. No difference was seen with regards to gender.

Reasons for not visiting health care

Less than one-third (28%) of the respondents reported having had a health problem for which they did not attend a health-care facility. This was observed more commonly among female than male participants (34.1% vs. 23%, respectively; $P = 0.013$). The most common reason for not attending a health-care facility was that the patient believed it was "unnecessary" (15.1%) (female: 20.5%; male: 10.6%; $P = 0.005$). Other reasons included lack of transportation (5.1%), the condition being self-limiting (4.6%), and lack of awareness regarding the significance of the problem (4.4%). None reported that financial factors or difficulty in accessing health-care facility were factors for not attending a health-care facility [Table 3].

DISCUSSION

This study provides a population representative and recent data regarding the morbidity and health-seeking behavior of the elderly (i.e., aged >60 years) in the Kingdom of Bahrain. Hypertension was found to be the most common chronic disease. This finding was consistent with previous studies from the United Arab Emirates (UAE)[2] and the Kingdom of Saudi Arabia,[4] collectively highlighting the commonality of hypertension within the GCC region. The next most prevalent chronic diseases were hyperlipidemia and T2DM. Similar findings were noted in the study from the UAE.[2] The pattern of chronic diseases could be explained by the major socioeconomic development in the Kingdom of Bahrain over the past three decades that have resultantly led to significant changes in lifestyle and dietary habits.

In studies from India, musculoskeletal system problems had been reported to be the most prevalent complaint in the elderly population,[16,17] while in this study, it was the fourth and fifth most prevalent complaint among females and males, respectively. Arthritis affected females significantly more than males, which is likely due to the postmenopausal osteoporotic changes. The prevalence of ischemic heart disease and heart failure was found to be low, which might be because patients such comorbidities are generally followed-up and managed at the secondary care centers in the Kingdom of Bahrain, and thus it is likely that their proportion in this study is not entirely representative of the actual population. Furthermore, the prevalence of depression and anxiety was found to be low, which are consistent with findings of a study from the Kingdom of Saudi Arabia.[4] However, this data should be interpreted with the possibility of an underreporting by patients due to fear of societal stigma and/or inadequate and appropriate screening for mental illnesses among the elderly at the primary care centers of Bahrain.

The most common reasons for visit were to refill prescriptions and request investigations at the NCD clinic. Further, the majority of participants visited the primary care facility 4–6 times in the past year. Therefore, the number of visits appears to be correlated with the most common reasons for visit, given that prescriptions require regular refilling and investigations for NCDs are repeated every 4 months in Bahrain. Similarly, a study from Saudi Arabia demonstrated that the poorer the perceived health status, the higher the utilization of health services.[18]

In the current study, a significant proportion of patients did not visit a health-care facility because they deemed it to be "unnecessary." This highlights patients' lack of awareness of disease, neglect, or belief that ailments are a part of ageing. None of the patients reported financial factors or difficulty in accessing health-care facility as reasons for not utilizing health-care given that all Bahraini citizens and their family as well as governmental workers and their families are provided the health-care services for free. This is in complete contrast to a recent study from Portugal, wherein financial factors and lack of availability of hospital care service and long-term care facilities were the primary barriers in the utilization of health-care by the elderly.[19] In Albania, the elderly were found to more likely attend governmental health centers than private sector and they generally sought care once per month.[20]

In a study in Japan, social support was noted to be an important factor that affected the help-seeking behavior.[21] In Bahrain, the elderly most commonly live with family members such as their spouse and children, as also shown in this study. Such family constructs could potentially be the reason for the most common non-professional medical advice were those taken from family members. However, this highlights the need for better educating the elderly and their family to seek professional advice, and thus increase the uptake of health-care utilization.

Limitations

A limitation of this study is that all variables were collected through the interview format, including chronic diseases being self-reported. Given the possibility of recall bias, variables such as the prevalence of chronic morbidity among the elderly may differ from that being reported in this study. In addition, this study was conducted during the COVID-19 outbreak, during which the elderly were advised by the health authorities to stay home and seek

Table 3: Health-seeking behavior among the elderly segregated by gender

Variable	n (%)	Males (*n*=226), *n* (%)	Females (*n*=185), *n* (%)	P
Reason for the visit				
Acute complaint	103 (25.1)	63 (27.9)	40 (21.6)	
Acute on chronic	37 (9)	13 (5.8)	24 (13)	
Chronic complaint	115 (28)	58 (25.7)	57 (30.8)	
For investigations	122 (29.7)	65 (28.8)	57 (30.8)	
For referral	20 (4.9)	13 (5.8)	7 (3.8)	
For repeat prescription	132 (32.1)	78 (34.5)	54 (29.2)	
Follow up/discussion of results	68 (16.5)	38 (16.8)	30 (16.2)	
Others	22 (5.4)	15 (6.6)	7 (3.8)	
Attempted self-management	116 (28.7)	60 (26.5)	56 (30.3)	0.014
Seek nonprofessional advice	192 (46.7)	107 (47.3)	85 (45.9)	0.777
Types of nonprofessional advice received				
Herbal medications	66 (16.1)	30 (13.3)	36 (19.5)	0.059
Over-the-counter medications	28 (6.8)	11 (4.9)	17 (9.2)	
Complementary medicine	4 (1.0)	2 (0.9)	2 (1.1)	
Visit doctor	38 (9.2)	27 (11.9)	11 (5.9)	
Others	7 (1.7)	5 (2.2)	2 (1.1)	
Source of the advice				
Family	78 (57.8)	32 (47.1)	46 (68.7)	0.005
Friends	44 (32.6)	31 (45.6)	13 (19.4)	
Others	13 (9.6)	5 (7.4)	8 (11.9)	
Believed that the current visit required professional help				
Very unlikely	10 (2.4)	5 (2.2)	5 (2.7)	0.876
Unlikely	6 (1.5)	2 (0.9)	4 (2.2)	
Probably	42 (10.2)	23 (10.2)	19 (10.3)	
Likely	278 (67.6)	154 (68.1)	124 (67.0)	
Very likely	75 (18.2)	42 (18.5)	33 (17.8)	
Self-health status perception				
Very good	52 (12.7)	38 (16.8)	14 (7.6)	0.006
Good	162 (39.4)	95 (42)	67 (36.2)	
Moderate	157 (38.2)	78 (34.5)	79 (42.7)	
Bad	38 (9.2)	14 (6.2)	24 (13)	
Very bad	2 (0.5)	1 (0.4)	1 (0.5)	
Number of visits to health-care facilities/year				
1–3	93 (23.5)	48 (22.6)	45 (24.6)	0.630
4–6	220 (55.7)	117 (55.2)	103 (56.3)	
7–9	46 (11.6)	24 (11.3)	22 (12)	
≥10	36 (9.1)	23 (10.8)	13 (7.1)	
Reasons for not attending health-care centers	115 (28)	52 (23.0)	63 (34.1)	0.013
Unnecessary	62 (15.1)	24 (10.6)	38 (20.5)	0.005
Lack of awareness	18 (4.4)	14 (6.2)	4 (2.2)	0.054
Financial	0	0	0	NA
Difficulty in accessing health center	0	0	0	NA
No transportation	21 (5.1)	6 (2.7)	15 (8.1)	0.012
No social support	12 (2.9)	4 (1.8)	8 (4.3)	0.148
Self-limited	19	11 (4.9)	8 (4.3)	0.794

NA – Not applicable

teleconsultations; therefore, the sample may not be entirely representative despite including the four primary health care centers that represented the main governorates and biggest catchment areas. Moreover, only those attending the governmental primary health care centers were studied and not those attending private health care clinics.

CONCLUSION

The study provides a population representative and recent data regarding the morbidity and health-seeking behavior of the elderly in the Kingdom of Bahrain. Data from this study may serve as a point from which further efforts are directed to improve the effectiveness and efficiency of health-care utilization by the elderly.

Ethical considerations
This study was approved by the Research Committee, Primary Health Care, Ministry of Health, Kingdom of Bahrain on June 17, 2021. The study adhered to the Declaration of Helsinki, 2013, and all participants provided verbal consent before inclusion.

Data availability statement
The datasets generated and/or analyzed during the current study are not publicly available but are available from the corresponding author on reasonable request.

Peer review
This article was peer-reviewed by two independent and anonymous reviewers.

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Conflicts of interest

There are no conflicts of interest.

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