



## ORIGINAL ARTICLE

# Knowledge, Attitudes and Practices of Primary Health Care Physician Towards Geriatric Health in Bahrain

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### Abstract

**Background:** with the increase in the elderly population worldwide there is an increased likelihood of developing health problems, and therefore an increased demand for provision of a high standard of care. This places the emphasis on improved knowledge and commitment to work with older people as well as a demonstration of appropriate attitude when dealing with elderly patients to achieve improved quality of care. The study aimed to assess Primary Health Care Physicians' knowledge of ageing, their attitude towards geriatric population and possible contributing factors that affect their knowledge and attitude.

**Methods:** The cross sectional study was carried out on three hundred and fifty-one Primary Healthcare physicians using a self-answered modified "Facts on Ageing" questionnaire for knowledge assessment, and the University of California at Los Angeles Geriatric attitude scale (UCLA- GAS) to assess their attitudes.

**Results:** A total of 237 primary health care doctors responded and filled in the questionnaire representing 67.5% of all PHC doctors working in the Ministry of Health in Bahrain. The key findings showed that the average percentage of the knowledge score of the participants was 57.3%. Statistically insignificant results were noted with respect to the participants' characteristics and level of knowledge. A significant number of the participating physicians had a neutral attitude towards the elderly population, with no statistical significance noted when an association with the physicians' characteristics were studied.

**Conclusion:** This study was the first to be conducted in the Kingdom of Bahrain to assess the knowledge and attitude of primary health care physicians towards the elderly population. It aimed to identify the gaps in knowledge, improve and encourage a more positive attitude and ultimately achieve a high standard of care towards the elderly population.

**Keywords:** Attitude; Characteristics; Factors; Family physicians; Geriatrics; Knowledge

## Background

According to the World Health Organization (WHO), most developed countries have accepted the chronological age of 65 years and above as the definition of ‘elderly’ or older person.<sup>1</sup> In 2002 the WHO published a policy framework for active ageing. This framework defined active ageing as “the process of optimizing opportunities for health, participation, and security to enhance the quality of life as people age”.<sup>2</sup>

Globally, the number of people aged 60 years and over is expected to increase from 600 million to 2 billion between 2000 and 2050.<sup>3</sup> The proportion of elderly is expected to increase worldwide due to improvement in health awareness, improved living standards and improvement in health care services. In 2050 older people are expected to account for 35 percent of the population in Europe, 28 percent in Northern America, 25 percent in Latin America and the Caribbean, 24 percent in Asia, 23 percent in Oceania and 9 % in Africa.<sup>4</sup>

According to a study done in the Republic of Ireland, it has been demonstrated that the country is anticipating a 25% increase in its population aged 65 years and over, from 2004 to 2026.<sup>5</sup> Moreover, according to official figures of TUIK in 2011, Turkey’s population of people above 65 years of age constitutes 7.2% of the total population in 2010, with an expected projection of an increase to 9.8% of the total population in 2025.<sup>6</sup>

In Saudi Arabia, the proportion of the population over the age of 60 has recently escalated and is expected to increase from 4% in 2000 to over 8% by 2020.<sup>3</sup> This means that ‘the number of people over the age of 60 is expected to double by 2050 and will require radical societal change, according to a new report released by the WHO for the International Day of Older Persons’ (1 October).<sup>1</sup>

In Bahrain, the total population in 2017 was 1,501,116 of which 677,506 (45.1%) were Bahrainis. Among the Bahrainis, a total of 31,848 (4.7%) were 65 years or above, and another 21,608 (3.2%) were between 60 to 64 years.<sup>7</sup> As a result of increased incidence of multiple chronic diseases, decreased functionality and increased dependence, older people tend to either over or under-utilize

health care services. Many studies have shown that the elderly more frequently attend health care facilities and usually have longer hospital stays compared to their younger counterparts.<sup>8</sup> Data from the WHO World Health Survey showed that in high-income countries, health-care utilization (particularly of inpatient care) appears to increase with age.<sup>9</sup>

The rapid increase in the aging population and the need to identify and meet their healthcare needs have posed a great challenge to primary care.<sup>3</sup> Understanding and improving the quality of care provided for older patients stems not only from the need to prevent the functional decline and hence promoting independence among this target group. However, due to the well-noted social changes across many cultures such as the breakdown of extended family, weakened family bonds, higher education and independence of female family members who previously were held responsible for the household members’ care. These social changes have resulted in more dependence on the elderly on health care necessitating more skilled and committed healthcare providers to meet this demand.<sup>3</sup>

Ageism was defined by Butter and Lewis in 1973 as a process of stereotyping of and discrimination against people because they are old.<sup>5</sup> Ageist attitude among healthcare professionals negatively impacts the quality of care older people receive and is supported by research.<sup>5</sup> This may be associated with negative consequences that are not only restricted to financial burden or physical disability and dependence but more importantly adverse mental health and lower self-esteem among the older population, feeling that they are a burden, less valuable and not accepted or respected, with the risk of developing depression and social isolation.<sup>10</sup>

Few studies have investigated the knowledge, attitudes, and factors that may contribute to ageism among treating doctors.<sup>3,6,21</sup> Several studies in this regard have been conducted among nurses. Those studies have highlighted several factors contributing to negative attitudes towards older patients.<sup>5,6,9</sup> Some of these factors include an increase or higher level of knowledge, past work experiences, age, gender and ethnicity of health care workers, with

conflicting observations concerning a negative versus positive influence.<sup>3,5,10</sup> Positive attitude towards the elderly was noted in a study carried out in the Republic of Ireland in those who attained university qualification where higher the level of qualification, the more positive the attitudes.

Negative attitude was noted among nurses towards elderly care in a study carried out in Egypt. That was mainly explained by the lack of knowledge regarding the care of the elderly. A significant difference between males and females regarding ageism has been identified, with young females demonstrating negative attitudes compared to their male counterparts.<sup>10</sup> Whether the same can be seen with other healthcare workers such as doctors is not well studied.

Conflicting observations were noted with regards to age as a factor influencing attitudes towards elderly population where some studies demonstrated that older physicians held more positive attitudes towards older people compared to their younger counterparts, while in other studies a more positive attitude towards older people was noted among younger healthcare professionals.<sup>5</sup>

In Bahrain and the Gulf region, there are limited studies about elderly health in general despite the noted increase in their number and the advances in medical care provided to them. To provide better health services to the elderly in the primary health care setting will ultimately lead to improved function, physical and mental wellbeing of the elder people as well as minimizing the societal and financial burden caused by their impaired health status. Hence the study was conducted to assess the knowledge and attitude of primary health care doctors towards the elderly, to use the results to improve the quality of care provided to elder people in primary care in Bahrain.

## Methods

**Design:** Cross-sectional study.

### **Study sample and sample size**

All the 351 primary health care doctors who are working in the 28 governmental health centers in Bahrain are the population under study.

### **Criteria for exclusion and inclusion**

All primary care doctors working in the health centers either in the morning or evening shifts were included. Those who were on leave during the study period were excluded from the study. Those who refused to participate were counted as non-respondents.

### **Data collection tool (Questionnaire)**

We adapted previously published surveys from Turkey, Australia, and Saudi. The survey was presented to the participants in English printed on paper.<sup>10-12</sup>

The following items were collected for each participant:

Demographic (age, sex, nationality)

Work factors (qualification, years of experience, morning or shift)

Knowledge, Attitude and Practice towards elderly health.

### **Data collection procedure**

A structured, self-administered questionnaire was used to conduct the study. It was anonymized. Instructions regarding filling the questionnaire was provided with each questionnaire and clear instructions for each question was included.

The Questionnaires were distributed to all primary health care doctors following permission from the chief of medical services of the primary health care. The questionnaires were then collected from each health center by the researchers after one week, through the doctor in charge of each health center. Each questionnaire was coded for data entry and processing. All questionnaires were assigned a special identification number for reference.

### **Data processing and analysis**

Data was entered into a database program (SPSS). Frequency tables were produced for each item. Cross tabulation with a chi-square test was done for certain variables with demographic and work-related items.

### **Research committee approval**

An approval letter was granted from the Primary Care Research committee along with approval

from Dr Hala Al-Jassim, Chief of Medical Services Primary Health Care, Ministry of Health.

## Results

A total of 237 primary health care doctors responded and filled in the questionnaire representing 67.5% of all PHC doctors working in MOH in Bahrain.

### *Demographic and work-related characteristics of participants*

More than two-thirds of the respondents were females (77%). Furthermore, the majority were Bahraini (89.4%); graduates of the Family Physician Residency program (85%); and almost two thirds (61.4%) had <15 years' work experience. With regards to the number of elderly patients seen per day, around half of the physicians saw 8 or less elderly patients during their working day. (Table 1).

### *Overall primary care physicians' knowledge and attitude towards aging*

The average percentage knowledge score of the participants was 57.3% (95% CI 56.3-58.3) with a minimum score of 40 and a maximum of 94.

Assessment of the physician's attitudes towards the elderly patients fell mainly towards neutral. The average in the University of California at Los Angeles geriatric Attitudes Scale (UCLA) score was 44.3 (95% CI 43.5-45.2) with a minimum score of 26 and a maximum of 61 (Table 2).

It can be noted from the tables that the majority had incorrectly identified that it is normal or inevitable for elderly to develop depression, show lack of interest in or capacity for sexual activity or display personality changes, but many also correctly identified that challenges such as decline in physical strength, memory, and sleeping problems are common among the elderly (Table 3).

With regards to the response of the study participants to UCLA geriatric attitude scale, majority of the respondents agreed that the geriatric patients were pleasant to be with and it was interesting to listen to their accounts of past experiences. Respondents also agreed that geriatric patients were more appreciative of the medical care provided; however, respondents also indicated that geriatric patients in general do not contribute to the society more in terms of social and economical aspects (Table 4).

**Table 1:** Demographic & work-related of characteristics of study participants

Variable	No	%
<b>Nationality</b>		
- Bahraini	211	89.4
- Non Bahraini	25	10.6
<b>Gender</b>		
- Male	54	22.9
- Female	182	77.1
<b>Marital status</b>		
- Married	205	86.9
- Single	22	9.3
- Divorced	4	1.7
- Widowed	5	2.1
<b>Years of practice</b>		
- 1-5 Years	40	16.9
- 6-10 Years	59	25.0
- 11-15 Years	46	19.5
- 16-20 Years	33	14.0
- 21-25 Years	29	12.3
- > 25	29	12.3
<b>Family residency graduate</b>		
- Yes	201	85.2
- No	35	14.8
<b>Number of elderly patient per clinical session</b>		
- 1-4	26	11.0
- 5-8	102	43.2
- 9-12	68	28.8
- >12	40	16.9

### *Association of knowledge score percentage, and attitude score with participants' characteristics*

No significance was noted with regards to the respondent's' years of practice as well as the average number of elderly patients seen per day by a family physician when an association between knowledge and participants' characteristics were studied (Table 5). Looking at the association between the average attitude score with the participants' characteristics, again no statistically significant differences were noted in attitude.

**Table 2:** Mean score for Knowledge and attitude of PHC doctors towards elderly health in Bahrain.

Outcome	Mean (SD)	95% CI	Min-Max score
Knowledge average % score	57.3 (7.6)	56.3-58.3	40-94
Attitude average score	44.3 (6.5)	43.5-45.2	26-61

**Table 3-A:** Examples of responses of study participant to “True” facts on Aging Questionnaire

Below are examples of study participants’ right responses to “True” Facts on Ageing questionnaire that we believe are important areas to be addressed when deficiencies in the level of knowledge are to be assessed and addressed.

Statement	Participants Responses	
	Right (No%)	Wrong (No%)
Memory loss is normal part of aging	140 (59.3)	96 (40.7)
Older adults have more trouble sleeping	204 (86.4)	32 (13.6)
Physical strength declines in old age	216 (91.5)	20 (8.5)
All five senses tend to decline with age	150 (63.6)	86 (36.4)
Older people have more chronic health problems than acute ones	129 (54.7)	107 (45.3)
Geriatric is a specialty in Arab board	176 (74.6)	60 (25.4)
Older person take longer period to recover physically and psychologically	217 (91.9)	19 (8.1)

**Table 3-B:** Response of study participant to “FALSE” facts on Aging Questionnaire

Below are examples of study participants’ right responses to “False” Facts on Ageing questionnaire that we believe are important areas to be addressed when deficiencies in the level of knowledge are to be assessed and addressed.

Statement	Participants Responses	
	Right (No%)	Wrong (No%)
Majority of old people have Alzheimer’s disease	224 (94.9)	8 (5.1)
As people grow older, their intelligence declines significantly	179 (75.8)	57 (24.2)
Alcohol abuse greater among older than 65 years	191 (80.9)	45 (19.1)
older age have the highest suicide rate of any age	195 (82.6)	41 (17.4)
Most old people lose interest and capacity in sexual relation	74 (31.4)	162 (68.6)
Retirement is often detrimental to health	129 (54.7)	107 (45.3)
People 65 years and above make up 5-7% of Bahrain population	120 (50.8)	116 (49.2)
The modern family no longer take care of its elderly	196 (71.6)	67 (28.4)
Living below or near poverty is not problem for elderly in Bahrain	168 (71.2)	68 (28.8)
Majority of old people are bored	137 (58.1)	99 (41.9)
All medical schools required courses in geriatrics & gerontology	51 (21.6)	185 (78.4)
Elderly abuse is not a problem in Bahrain	157 (66.5)	79 (33.5)

**Table 4:** Response of study participant to UCLA Geriatric attitude scale

Statement	Disagree	Neutral	Agree
Most old people are pleasant to be with.	12 (5.1)	53 (22.5)	171 (72.5)
I would rather see younger patients than elderly ones.	83 (35.2)	73 (30.9)	80 (33.9)
It is society's responsibility to provide care for the elderly.	21 (8.9)	28 (11.9)	187 (79.2)
Medical care for old people uses up too much human and material resources.	53 (22.5)	75 (24.2)	126 (53.4)
As people grow older, they become less organized and more confused.	88 (37.3)	58 (24.6)	90 (38.1)
Elderly patients tend to be more appreciative of the medical care I provide than are younger patients.	22 (9.3)	43 (18.2)	171 (72.5)
Taking a medical history from elderly patients is frequently an ordeal.	55 (23.3)	86 (36.5)	95 (40.3)
I tend to pay more attention and have more sympathy towards my elderly patients than my younger patients.	23 (9.7)	52 (22.0)	161 (68.2)
Old people in general do not contribute much to society.	146 (61.9)	41 (17.4)	49 (20.8)
Treatment of chronically ill old patients is hopeless.	203 (86.0)	19 (8.1)	14 (5.9)
Old persons don't contribute their fair share towards paying for their health care.	146 (61.9)	41 (17.4)	49 (20.8)
In general, old people act too slow for modern society.	88 (37.3)	58 (24.6)	90 (38.1)
It is interesting listening to old people's accounts of their past experiences.	12 (5.1)	53 (22.5)	171 (72.5)

**Table 5:** Association of Knowledge Score percentage with participants' characteristic

Variables	Knowledge mean k	P value
<b>Nationality</b>		
Bahraini	57.58 (56.55-58.61)	0.101
Non Bahraini	54.96 (52.11-57.81)	
<b>Gender</b>		
Male	57.55 (55.26-59.85)	0.782
Female	57.23 (56.16-58.30)	
<b>Years of practice</b>		
- 1-5 Years	59.20 (57.36-61.03)	0.051
- 6-10 Years	55.89 (54.08-57.70)	
- 11-15 Years	58.86 (56.80-60.92)	
- 16-20 Years	54.60 (51.97-57.23)	
- 21-25 Years	57.72 (54.62-60.81)	
- > 25	57.72 (53.82-61.62)	
<b>FPRP training</b>		
- Yes	57.54 (56.53-58.55)	0.249
- No	55.94 (52.83-59.04)	
<b>No. of patients seen</b>		
- 1-4	60.46 (57.72-63.19)	0.023
- 5-8	56.45 (55.03-57.86)	
- 9-12	58.41 (56.43-60.38)	
- >12	55.55 (53.22-57.87)	

## Discussion

Results of the study showed that the majority of physicians were females, of Bahraini nationality. Most of the respondents were graduates of the Family physician residency program and majority had less than 15 years' work experience as previously noted.

With regards to the level of physicians' knowledge on ageing, the knowledge score was subdivided into 3 groups with good, intermediate and low knowledge scores, with a mean knowledge score of (57.3). In our present study the majority of the respondents showed lack of knowledge of ageing which is a major concern. It can be noted from the tables that the majority had incorrectly identified

**Table 6:** Association of Attitude mean Score with participants' characteristics

Variables	Attitude	P value
<b>Nationality</b>		
- Bahraini	44.13 (43.25-44.99)	0.216
- Non Bahraini	45.84 (42.75-48.92)	
<b>Gender</b>		
- Male	44.31 (42.34-46.28)	0.999
- Female	44.31 (43.38-45.23)	
<b>Years of practice</b>		
- 1-5 Years	43.42 (41.25-45.59)	0.653
- 6-10 Years	45.50 (44.01-47.00)	
- 11-15 Years	44.45 (42.71-46.19)	
- 16-20 Years	43.54 (41.30-45.78)	
- 21-25 Years	43.93 (40.63-47.22)	
- > 25	44.13 (41.64-46.63)	
<b>FPRP training</b>		
- Yes	44.42 (43.51-45.33)	0.519
- No	43.65 (41.46-45.84)	
<b>No. of patients seen</b>		
- 1-4	42.57 (39.87-45.27)	0.461
- 5-8	44.65 (43.45-45.85)	
- 9-12	44.08 (42.52-45.65)	
- >12	44.95 (42.57-47.32)	

that it is normal or inevitable that elderly is more likely to develop depression, show lack of interest in or capacity for sexual activity or display personality changes, but many also correctly identified that challenges such as decline in physical strength, memory and sleeping problems are common among the elderly.

Many studies have also reported low knowledge scores among general practitioners, with average knowledge score of 50.74% in a study done in China using a modified Chinese version of the Facts on Ageing questionnaire.<sup>13</sup>

These findings necessitate investigations of contributing factors to such low level of knowledge

and effective methods to improve and enrich the level of family physicians' gerontological knowledge, in order to achieve and deliver quality and safe care to the elderly.

Further analysis of the association between knowledge and physicians' characteristics show no statistically significant association. Similar findings were noted from the original Palmore study, knowledge and misconceptions about elder population were similar in all age, gender, occupational and racial groups.<sup>14</sup>

In relation to physicians' attitudes towards elderly patients in this study, the majority had a neutral attitude towards the elderly. While many seemed to agree the elderly are pleasant to be with and felt societal responsibility towards them, many also were of the opinion that they take up too much human and material resources. Remaining questions showed neutral responses.

Even when an association between physician's characteristics and attitudes were studied, no significant advantage or disadvantage was noted with regards to gender, nationality, number of years of experience, whether board certified or not, as well as the average number of elderly patients seen.

Comparing the results to other studies that used the UCLA attitude scale as an assessment tool, negative attitudes towards ageing among healthcare professionals were reported,<sup>13-16</sup> where a survey found that 16% of GPs made a decision not to refer some older patients to secondary care treatment because they believed patients would not be treated due to their older age.<sup>15</sup>

Furthermore, some studies showed significant differences in attitude scores with regards to certain characteristics of participants such as gender,<sup>10,17</sup> where higher attitude scores were interestingly seen in males, more positive attitude scores in urban cities compared to rural,<sup>5,10</sup> and level or duration of experience where a study reported that more positive attitudes were seen among participants who had worked more than 21 years in a healthcare setting.<sup>3, 11,18</sup>

The concern towards negative attitude was around the fact that it may be a barrier to providing quality healthcare for older people.<sup>13</sup>

## Limitations

This research had some potential limitations that need to be considered when interpreting the results. First, those participants that did not respond may be systematically different from those who did, both their level of knowledge and attitudes may differ from the participants that did respond and this may alter the overall results. The other potential limitation may be a systematic error in data collection in relation to the social desirability, that is responding with a socially acceptable answer even if it is not a true reflection of the respondents' beliefs or views.

## Conclusion

In light of the rapid increase in the elderly population and corresponding increase in demand for safe and effective healthcare services provision, we believe it is essential that family physicians and other healthcare providers involved in the assessment and management of elderly patients. In our study, the mean knowledge score was (57.3%) and following the subdivision of knowledge scores the majority fell among the intermediate knowledge scores (between 51-60%)

With regards to attitudes towards the elder people, there was no evidence of negative stereotypical view among family physicians and the mean score indicates a neutral attitude. Further education interventions may improve the level of knowledge further with a possible shift towards a more positive attitude as a result of better knowledge and awareness of the physical, psychological and social changes observed with ageing. The aim is to identify any knowledge gaps and highlight the areas that require improvement to achieve an optimal standard of care to the patient population in question.

## Suggestions

1. To intensify and improve the family physicians' training in the field of geriatric medicine, through conducting more workshops, courses and clinical training.
2. Further research needs to be conducted with in-depth interviewing to seek further clarification of physician's level of knowledge, identify any deficits that need to be addressed, and clarify the physician's beliefs and views that may affect their attitudes towards the elder patients.



3. Consider conducting comparison studies between medical students and board-certified family physicians/ General practitioners, and possibly comparisons between physicians and other team members of the healthcare system.

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