

# Health professionals' knowledge and attitudes toward older people in primary care in Saudi Arabia

Badrya H. Alamri, RN, MNg Flin, Lily, D. Xiao, PhD Flin, FACN.

## ABSTRACT

الهدف من هذه الدراسة هو استكشاف المعرفة والمفاهيم تجاه رعاية كبار السن بين المهنيين الصحيين العاملين في مراكز الرعاية الصحية الأولية في المملكة العربية السعودية، وتحديد العوامل التي لها التأثير الأكثر في المعرفة والمفاهيم تجاه كبار السن. على الصعيد العالمي، من المتوقع أن يرتفع عدد الأشخاص الذين تتراوح أعمارهم بين 60 سنة وما فوق من 900 مليون في عام 2015 إلى مليار في عام 2050. ان زيادة عدد المسنين في العالم تدعو إلى زيادة عدد الكادر الصحي المستعد بشكل جيد لرعاية كبار السن في مختلف القطاعات الصحية. في المملكة العربية السعودية من المتوقع ان يزداد نسبة المسنين من 4% في عام 2000 إلى أكثر من 8% بحلول عام 2020. ان الكادر الصحي معرض لرعاية كبار السن من خلال عمله لذلك من المهم ان يكونوا اعضاء الكادر الصحي مؤهلين ومستعدون لتقديم الرعاية الصحية المتكاملة لكبار السن. من اجل توفير رعاية شاملة لكبار السن يجب ان يؤخذ بالاعتبار درجة معرفة الكادر الصحي بالتغيرات الفيزيائية والنفسية والاجتماعية التي يمر بها المسن وايضا بمفاهيم الكادر الصحي نحو المسنين.

Previous international studies have indicated that a range of factors influence knowledge and attitudes toward older people were education, past work experiences, and social contact with healthy older people. This article reports on the findings of a literature review in relation to attitudes toward older people among health professionals working in primary healthcare centers in Saudi Arabia. The findings of this narrative literature are reported through 5 themes: the instruments used in the selected studies to measure attitudes toward older people; the instruments used to measure knowledge on ageing; attitudes toward older people; knowledge of the care of older people; and factors that influence knowledge and attitudes toward older people. Further investigation is needed to identify the level of knowledge on ageing, attitudes toward older people, and the factors which affect health professionals' knowledge and attitudes

toward older people in primary healthcare centers (PHCs) in Saudi Arabia.

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From the School of Nursing & Midwifery, Flinders University, Adelaide, South Australia.

Address correspondence and reprint request to: Assoc. Prof. Lily, D. Xiao, School of Nursing & Midwifery, Flinders University, Adelaide, South Australia. E-mail: lily.xiao@flinders.edu.au  
ORCID ID: <http://orcid.org/0000-0002-4631-2443>

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>1</sup> There is a growing demand for health professionals to demonstrate appropriate attitudes toward older people and to improve their knowledge and commitment to working with older people in diverse settings in the context of a rapidly ageing population.<sup>2</sup> A high standard of care for older people is linked to the positive attitudes of health professionals.<sup>3</sup> The perception that the care of older people requires less skill and knowledge results in poor quality care for this group of patients.<sup>2</sup> Action needs to be taken to raise awareness and to change negative attitudes toward ageing.<sup>4</sup>

In Saudi Arabia, the percentage 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>5</sup> The rapid increase in the ageing population and the need to identify and meet their healthcare needs have posed a great challenge to primary care in Saudi Arabia.<sup>6</sup> It has been reported that an adequate level of knowledge and education in meeting the needs of the ageing population can be beneficial for improving care for older people.<sup>2</sup> Knowledge of ageing, especially, the concept of healthy ageing among health professionals will inform their practice to provide individualized care for older people, manage chronic diseases, prevent functional decline

and promote independence. Traditionally, older people have been held in high regard and great respect in Saudi culture; however, because of the rapid economic growth in recent decades, Saudi society has undergone major social change that has had a negative impact on people's attitudes toward the elderly.<sup>7</sup> Based on Saudi tradition, the role of Saudi women is to take responsibility for the care of the husband's parents. This practice has changed since women's education and employment opportunities have opened up.<sup>7</sup> Furthermore, modern life has led to the breakdown of the extended family, and has weakened the bonds of the typical family structure.<sup>8</sup> The decline of the extended family leaves older people increasingly living alone, while the younger generation prefers more individualistic lifestyles which result in less contact with older people.<sup>3</sup> This social change has increased the demand for health professionals who are skilled and committed to the care of older people in the primary care setting.

The aims of this literature review are to search and critique the current literature on health professionals' knowledge and attitudes toward older people in primary care and to identify the gaps in this field of study in the context of Saudi Arabia. The paper presents 3 critical points: 1) reporting on the collated results from the selected studies and the instruments used to measure attitudes toward older people and knowledge of ageing; 2) describing attitudes toward older people, knowledge about the care of older people, and the factors which influence knowledge and attitudes; and 3) providing an overall discussion of the findings, the gaps in the literature, and the limitations of this review.

The objectives of the review are to: 1) identify published studies related to knowledge about, and attitudes toward, older people among health professionals working in primary healthcare in Saudi Arabia and in other countries; 2) conduct a quality appraisal of these studies; 3) identify and report on integrated findings from these studies; and 4) discuss the implications of the findings for primary healthcare in Saudi Arabia.

This paper presents a narrative literature review by analyzing relevant research articles and synthesizing the findings. This type of literature review is conducted in order to summarize past research, describe findings and to draw overall conclusions from the body of literature on a certain topic in order to inform future studies on the topic.<sup>9</sup> One of the advantages of the narrative literature review is to explore the details of individuals' experiences behind the statistics provided through an overview of participant narratives.<sup>9</sup> After conducting an individual analysis of the selected studies, the articles

were grouped together according to recurrent themes that emerged from the findings. In the literature, the method of thematic analysis was found to be widely used, as it allows researchers to select their theoretical framework.<sup>10</sup> Thematic analysis is a method for identifying, analyzing, and reporting on patterns within the data.<sup>10</sup>

In order to find relevant articles, major databases that cover the subject area including the CINAHL, MEDLINE, and Ovid databases were searched. The study search is about health professionals' knowledge and attitudes toward older people in primary healthcare in Saudi Arabia and other countries, with the combinations of the following keywords used: (Community Health professionals, or Health professionals, or Medical professionals, or Nurses, or Physicians, or Doctors, or General practitioners) and (Attitude, or Stigma, or Labelling, or Prejudice, or Discrimination, or Stereotype), and (Elder, or Aged, or older people, or old people, or elderly) and Knowledge, and primary health and Saudi Arabia. The following limits were applied to the search results: studies published between 2005 and 2015, and written in the English language.

From the search of the databases, 437 studies were identified. Only 2 articles were captured due to the use of keywords "Saudi Arabia". These are relevant to the study aims. During the subsequent review process, 274 studies were excluded as they were found in all 3 databases. The remaining 163 studies were reviewed and assessed for their significance for this study. Studies about student nurses or other medical students were excluded unless they included health professionals. Similarly, studies on attitudes toward a specific disease in older people and studies that tested the validity and reliability of existing questionnaires were excluded as these did not reflect the objectives of the review. In addition, 7 studies were found through a manual search; however, only one of these was included in the review. Overall, 13 studies were included in the review. **Figure 1** shows the details of the selected studies.

*Critical appraisal of the study and thematic analysis.* Of the 13 studies, only 2 were conducted in Saudi Arabia, with the remainder being carried out in Australia (n=2), Ireland (n=2), Turkey (n=2), Jordan (n=1), China (n=1), Sweden (n=1), the United States (n=1), and the UK (n=1). Furthermore, most selected studies are survey studies (n=12), while only a single study was based on an experimental trial. The quality of the selected studies was critically reviewed. A critical appraisal of each research article was conducted using the Critical Appraisal of a Survey Checklist,<sup>11</sup> while the trial study was evaluated through the use of the Critical

Appraisal Skills Program (CASP).<sup>12</sup> Moreover, the purpose, methods, samples, and findings of each study were clearly identified.

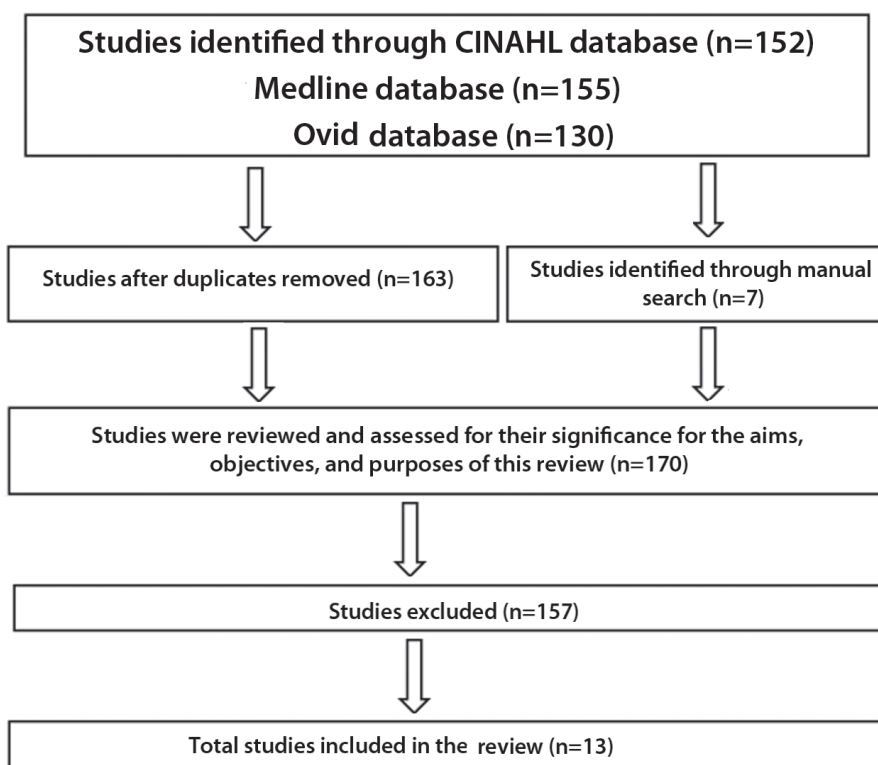
In this review, 5 major themes were identified: 1) the instruments used to measure attitudes toward older people; 2) the instruments used to measure knowledge about ageing; 3) positive attitudes toward older people;

4) poor knowledge about ageing; and 5) factors affecting knowledge and attitudes toward older people. Table 1 presents factors identified in each study reviewed by the researchers.

*Instruments used to measure attitudes.* Four scales were used to measure attitudes toward older people in the selected studies: Kogan's Old People Scale (KOP)

**Table 1** - Factors supported by studies that influence health professionals' attitudes toward older people.

Factors	Studies and references
Age	Engstrom & Fagerberg (2011), <sup>14</sup> Leung et al (2011), <sup>15</sup> Coffey & Whitehead (2015) <sup>24</sup>
Gender	Leung et al (2011), <sup>15</sup> Coffey & Whitehead (2015) <sup>24</sup>
Education	Mellor et al (2007), <sup>21</sup> Doherty et al (2011), <sup>22</sup> Leung et al (2011), <sup>15</sup> Adibelli & Kilic (2013), <sup>23</sup> Polat et al (2014), <sup>16</sup> Coffey & Whitehead (2015), <sup>24</sup> Yang et al (2015), <sup>17</sup> Engstrom & Fagerberg (2011), <sup>14</sup> Hweidi et al (2005), Zakari (2005), <sup>8</sup> Alsenany (2007), <sup>25</sup> Liu et al (2014), <sup>26</sup> Donahue et al (2011) <sup>27</sup>
Clinical experiences	Leung et al (2011), <sup>15</sup> Coffey & Whitehead (2015), <sup>24</sup> Polat et al (2014) <sup>16</sup>
Social contact with older people	Leung et al (2011) <sup>15</sup>
Ethnic/cultural background	Liu et al (2014), <sup>26</sup> Alsenany (2007), <sup>25</sup> Hweidi et al (2005), <sup>3</sup> Zakari (2005), <sup>8</sup> Yang et al (2015) <sup>17</sup>
Self-aging anxiety	Liu et al (2014) <sup>26</sup>
Interest in working with older people	Liu et al (2014) <sup>26</sup>



**Figure 1** - Flow diagram for the selection of studies included in the narrative review.

(n=10), Fraboni's Scale of Ageism (FSA) (n=1), The Ageism Attitude Scale (AAS) (n=1), and the Chinese version of the Ageing Semantic Differential (CASD) (n=1). The KOP was the most frequently used scale. Although the KOP shows acceptable reliability and validity in the English version and in other languages, it has been criticized as having a lack of relevance to Eastern cultures.<sup>3</sup> Engstrom and Fagerberg reported on the inadequacy of the KOP in relation to the above issue as one of the limitations of their study, suggesting a need for revision.<sup>14</sup>

Zakari<sup>8</sup> used a modified version of the KOP to make it more appropriate to the cultural and ethnic backgrounds of Saudi nursing students. The modified KOP scale demonstrated acceptable reliability and face validity with Saudi students. Reliability was tested using Cronbach's Alpha to measure internal consistency.<sup>8,9</sup> Zakari's<sup>8</sup> study has high internal consistency and is a reliable tool for use in the cultural context of Saudi Arabia.<sup>11</sup> The results for the ATOP scale in Zakari's<sup>8</sup> study was acceptable for both the pilot study (0.87) and for the total sample (0.73), which indicates high internal consistency.

Fraboni's Scale of Ageism (FSA) is used to measure attitudes. The FSA consists of 29 statements which are rated on a 5-point scale, with a scoring system ranging from 1-5 representing 'strongly disagree' to 'strongly agree'.<sup>15</sup> This scale has many advantages as it includes both cognitive and affective components. It is compatible with the theoretical framework of ageing, and is also the first scale of ageism that indicates the connection between 'affect and behavior' and 'stereotypes and behavior'.<sup>15</sup> Additionally, the FSA has been adopted in the United States, Canada, and the United Kingdom, but has not yet been validated in Saudi Arabia.<sup>15</sup>

The Ageism Attitudes Scale (AAS), developed by Polat et al,<sup>16</sup> demonstrated well-established validity and reliability in a Turkey study. The AAS measures social beliefs and perceptions about the social life of older people as well as social opinions and views toward older people.<sup>16</sup> The AAS contains 23 statements, which are rated on a 5-point Likert scale.<sup>14</sup> Finally, the Chinese version of the Ageing Semantic Differential (CASD) is a 32-item scale, which is widely used to assess attitudes toward older people.<sup>17</sup> According to Yang et al,<sup>17</sup> the CASD is seen as a more accurate scale for assessing attitudes in modern society.

*Instruments used to measure knowledge about ageing.* Most selected studies used the Facts on Ageing Quiz (FAQ) (n=6), while only a single study used both the FAQ and the Nurses' Knowledge of Elderly Patients Quiz (NKEPQ) to examine knowledge about

ageing. The FAQ was developed by Palmore in 1981 to examine health professionals' knowledge of ageing.<sup>18</sup> In the original FAQ, physical, mental, and social facts on ageing were measured through 25 true-false statements, revealing common misconceptions on ageing.<sup>19</sup> The problem with the true-false test was that respondents were able to guess the correct answer to some of the questions.<sup>18</sup> In response, the FAQ was converted from a true-false to a multiple-choice format by Harris and Changas<sup>20</sup> to minimize the chance of respondents guessing the correct answers; this version is known as the FAQ2. The multiple-choice version had greater internal consistency and reliability compared with the true-false version.<sup>20</sup> Thus, the multiple-choice version increased the accuracy of measuring respondents' knowledge levels by minimizing the amount of guessing.<sup>8</sup>

The FAQ2 has been further modified to make it appropriate to Saudi Arabian culture and has been successfully used to measure nursing students' knowledge of ageing in Saudi Arabia.<sup>8</sup> In addition, the NKEPQ, which was developed to complement the FAQ by adding a geriatric focus, contains 20 statements requiring a 'yes', 'no', or 'don't know' answer.<sup>21</sup>

*Positive attitudes toward older people.* The findings across the 13 studies were somewhat inconsistent in terms of the attitudes expressed. Most selected studies reported positive attitudes toward older people (n=8), with 4 studies reporting satisfactory positive attitudes, and no studies reporting negative attitudes toward older people. Additionally, one study appears to be the first in Australia to measure the attitudes of nurses working in multi-purpose health services (MPHS) toward older people.<sup>21</sup> This study recruited 31 nurses to assess their attitudes. Despite the small sample size, the findings indicated that the nurses held strongly positive attitudes toward the older residents.<sup>21</sup> Another study explored the attitudes of health professionals working with a rural population in Ireland.<sup>22</sup> The study used KOP scales, with the findings demonstrating that health professionals held positive attitudes toward older people. Leung et al<sup>15</sup> used Fraboni's Scale of Ageism (FSA) to examine attitudes toward older people among 325 hospital physicians in Victoria, Australia. The findings demonstrated that physicians held positive attitudes toward older patients.<sup>15</sup>

Adibelli and Kilic<sup>23</sup> used the Turkish version of the KOP to measure the attitudes of 700 nurses working in public hospital clinics in Turkey toward older patients. Although this study included only female nurses, the overall findings reported that their attitudes were positive.<sup>23</sup> Likewise, the findings from Polat et al's<sup>16</sup> study showed that most nurses and physicians working



in medical and surgical hospitals in Ankara, Turkey held positive attitudes toward older people. Coffey and Whitehead<sup>24</sup> examined healthcare assistants' attitudes toward older people in Ireland. Despite the small sample size, and the use of a single site to collect the data, the study reported that healthcare assistants had positive attitudes toward older people.<sup>24</sup>

Yang et al examined general practitioners' (GPs) attitudes toward older people. The study used the Ageing Semantic Differential (CASD) to measure the attitudes of 400 GPs in China.<sup>17</sup> The findings were limited to a convenience sample; however, they showed that the GPs held positive attitudes toward older people. In addition, Hweidi and Al-Hassan examined the attitudes of nurses in an acute-care setting in Jordan toward older people, showing slightly positive results.<sup>3,25</sup> Finally, Liu et al conducted a cross-sectional study of a convenience sample of 579 nurses working in London.<sup>26</sup> The findings revealed that the nurses had slightly positive attitudes.<sup>26</sup> Both studies used the KOP to measure the nurses' attitudes toward older people.<sup>3,26</sup>

**Poor knowledge about ageing.** Knowledge about the ageing process and the care of older people was examined in 4 studies, all of which indicated that the participants had poor knowledge of ageing.<sup>8,17,21,25</sup> These studies showed that nursing students in the 3 major universities in Saudi Arabia had poor knowledge of the physical and social aspects of ageing.<sup>8,25</sup> Similarly, Mellor et al<sup>21</sup> reported that nurses have a lack of knowledge of elderly care, even though they have positive attitudes. The findings of Yang et al's study also showed that GPs had poor knowledge of ageing, particularly the mental and social aspects.<sup>17</sup> All 3 studies commonly suggested that a greater emphasis on gerontological education for health professionals is urgently needed in response to the increasingly ageing population.<sup>17,21,25</sup>

**Factors affecting knowledge and attitudes toward older people.** All selected studies reported an association between advanced education levels and positive attitudes.<sup>3,8,14-17,21-25,27</sup> Adibelli and Kiliç's<sup>23</sup> study indicated that positive attitudes toward older people increased with higher levels of education that include university degree and postgraduate degree. Similarly, a number of other studies have reported that participants with higher levels of education were more likely to report more positive attitudes than those who had lower levels, indicating the importance of educational strategies which focus on meeting older people's needs and encouraging healthcare workers to consider a career working with older people.<sup>3,15,21,25,26</sup>

A significant relationship was found between past work experiences and knowledge, and attitudes toward,

older people. Moreover, Engstrom and Fagerberg reported that participants who had worked more than 21 years in a healthcare setting were more positive than participants with less work experience.<sup>14</sup> Similarly, other studies have argued that doctors with more positive attitudes toward older people tend to work more with older people, while their experiences in aged care may also have stimulated positive attitudes towards older people.<sup>14,15,24</sup> On the other hand, 2 studies reported no significant differences between a person's length of experience in their current role as a healthcare worker and positive attitudes.<sup>17,22</sup>

Health professionals who had social contact with healthy older people on a weekly basis reported more positive attitudes than those who had less than weekly contact.<sup>15</sup> Hweidi and Al-Hassan's study also indicated that nurses who lived with one or more elderly relatives reported more positive attitudes than those who did not.<sup>3</sup>

The research has also shown that older physicians held more positive attitudes towards older people than younger physicians.<sup>15,24</sup> Similarly, another study indicated that healthcare professionals who are older than 51 years had the most positive attitudes.<sup>14</sup> In contrast, Coffey and Whitehead's study indicated that younger healthcare professionals had more positive attitudes towards older people.<sup>24</sup> However, the small sample size of this study may have limited the power of the statistical measurements used.<sup>24</sup> In addition, 2 studies reported no age-related differences in healthcare professionals' attitudes toward older people.<sup>16,23</sup> while age differences were not detected in 2 other studies.<sup>22,26</sup>

In relation to gender, one study indicated that male nurses working in acute-care units had more positive attitudes towards older people compared to female nurses.<sup>3</sup> The reason identified in this was that women were more responsible for taking care of their husbands' parents and their children at the same time.<sup>3</sup> Consequently, this burden of responsibilities may cause negative attitudes towards older people by female nurses in Jordan.<sup>3</sup> In contrast, another study found that female doctors expressed more positive attitudes than male doctors in Australia.<sup>15</sup> In terms of knowledge about ageing, one study reported that female healthcare assistants working in long-term settings in Ireland were more knowledgeable than male assistants.<sup>24</sup> Likewise, the findings of Yang's study indicated that female GPs reported greater knowledge of ageing than male GPs.<sup>17</sup> Yang's<sup>17</sup> study suggested that, due to Chinese cultural influences, older people often live with their family members and help them with the household chores whenever possible. In China, women do the

daily housework; therefore, female GPs are more likely to interact with their older parents, and thus are knowledgeable about the care of older people.<sup>17</sup>

A small number of studies examined other sociodemographic variables such as living environment, marital status, family income, work, and ethnicity. For example, one study by Hweidi and Al-Hassan<sup>3</sup> found no differences in attitudes toward older people between nurses living in remote and urban locations. Hweidi and Al-Hassan<sup>3</sup> concluded that nurses' marital status and family income were also not associated with their attitudes. Polat's study showed that no significant differences were found between the attitudes and the marital status of nurses and physicians.<sup>16</sup> Five of the selected studies explored ethnicity and culture as potential factors influencing attitudes towards older people. One study noted that Caucasian nurses had more positive attitudes than black or Asian nurses.<sup>26</sup> The study indicated that the interaction between one's ethnicity and their attitudes toward working with older people was connected with more positive attitudes among Caucasian nurses; however, there was no such link with other nurses.<sup>26</sup> Moreover, Hweidi and Al-Hassan<sup>3</sup> confirmed that the extended family system in Jordan encouraged and improved strong family ties, which might positively affect nurses' attitudes toward older people. Similarly, one study reported that Saudi Arabia's cultural, social, and religious background influenced nursing students' attitudes toward older people.<sup>25</sup> Finally, Polat's<sup>16</sup> study stated that respect for older people was part of Turkish culture.

In relation to other issues, one study showed that less anxiety about the self-ageing was significantly associated with more positive attitudes toward older people.<sup>26</sup> Liu's study explored the predictors of attitudes toward older people, with the results indicating that more positive attitudes toward older people were associated with less anxiety about self-ageing.<sup>26</sup> Moreover, having an interest in working with older people was also reported as a factor that influences attitudes toward older people.<sup>26</sup> This study found that attitudes toward working with older people were not a predictor of attitudes toward older people; thus, positive attitudes toward older people do not necessarily result in wanting to work with them.<sup>26</sup> According to the study, further research is needed to explore the relationship between attitudes toward older people (ATOP) and attitudes toward working with older patients (ATWWOP).<sup>26</sup>

This literature review has identified a correlation between higher education levels and positive attitudes toward older people.<sup>14-16</sup> A significant relationship has also been found between past work experiences and knowledge and attitudes toward older people. These

studies reported that health professionals who had work experience in aged care reported more positive attitudes toward older people than health professionals who did not.<sup>14-16</sup> It has been argued that initiating an obligatory aged care rotation for intern health professionals may promote positive attitudes. As well, it has been pointed out that it is important to establish which elements of the aged care rotation help promote positive attitudes.<sup>15</sup> Apart from clinical experiences, health professionals who had contact with healthy older people were more likely to develop positive attitudes toward them. Leung et al<sup>15</sup> reported that health professionals who had social contact with healthy older people on a weekly basis reported more positive attitudes than those who had less than weekly contact. This study suggested that medical students need to have contact with healthy older people early in their course in order to develop positive attitudes. Furthermore, a number of selected studies explored other factors that influenced knowledge, and attitudes toward older people. Identifying these factors in the Saudi population may help to develop strategies that improve the quality of care provided for older people in Saudi Arabia.

Donahue et al<sup>27</sup> examined the impact of a 21-hour elderly care program on nurses' knowledge and attitudes toward older people in the United States. They found that the continuous education program increased the nurses' knowledge about ageing and promoted more positive attitudes toward older people. The findings from this narrative literature review support Donahue et al's<sup>27</sup> study that geriatric education can improve knowledge and attitudes toward older people.<sup>28,29</sup> In addition, the fact that there are no studies, which have examined either the attitudes of healthcare professionals in Saudi Arabia, or the potential knowledge gaps that these professionals may have, signifies the importance of continuing education for health professionals in the care of older people.

The primary healthcare approach has been accepted by the Kingdom of Saudi Arabia as a foundation for the healthcare system since 1978.<sup>30</sup> The Saudi Ministry of Health (MOH) is responsible for the management, planning, funding, and regulation of Primary Health Care Centers (PHCCs), which provide basic preventative and curative services for the entire population. Health professionals have much contact with older people in their daily practice in PHCs as many older people live with chronic conditions and have become the major users of primary care services.<sup>2</sup> According to the WHO, efforts should be made to identify strategies that make primary health services more effective and accessible for older people.<sup>31</sup> These efforts should include the

employment of knowledgeable health professionals who are committed to working with older people.<sup>21</sup>

**Study limitations.** The limitations of this review include the selection of only the CINAHL, MEDLINE, and Ovid databases for the literature search, which may have not captured all the research in the field. The selection of only English language publications may also have excluded studies published in other languages that may have been relevant to this review. In addition, the synthesis of the findings and the development of the themes may not be exhaustive due to limitations in the selected studies related to various sample size, the inclusion of only a single gender, and the collection of data from a single site.

**Conclusion and implications.** This narrative review has revealed that the instruments used to measure health professionals' knowledge about ageing and attitudes toward older people need to be culturally appropriate and have sound psychometric properties. Overall, health professionals in primary care generally demonstrate positive attitudes towards older people; however, a lack of knowledge about the physical and social aspects of ageing among these has been identified across a number of countries. The main factors affecting positive attitudes toward older people and knowledge about ageing are education levels, years of experience, social contact with healthy people aged 65 years or older, and ethnic and cultural background.

The literature strongly suggests that more studies in this area are needed in order to inform evidence-based practice in Saudi Arabia. This review has addressed the important aspects of the instruments used, and the study designs required to undertake such research in primary healthcare in Saudi Arabia to provide evidence-based education programs, curriculum development, and recruitment programs for the care of older people. The findings from this review also have implications for policy change and funding allocation to enhance gerontology content and clinical experience for the preparation of health professionals to work with older people in primary care settings. Finally, the review provides evidence for healthcare organizations in Saudi Arabia to take action to support professional development in primary care.

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