

Healthy aging conceptualizations in Saudi Arabia: a systematic review

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Abstract

The concepts of healthy aging have been growing in recent years. Based on searches of literature on aging, there are limited studies that address healthy aging issues for older population in Saudi Arabia. A systematic review of the healthy aging conceptualizations in Arab-Muslim cultures was conducted to identify gaps in the evidence base. A systematic review of healthy aging studies was conducted to critically evaluate the quality of the evidence by comparing it to the STROBE (Strengthening the Reporting of Observational studies in Epidemiology) statement checklist. In accordance with PRISMA (Preferred Reporting Items for Systematic Reviews and Meta-analysis), specific databases were searched using key terms. Fifteen articles were selected for review. Few research studies address aging in Saudi Arabia and Arab-Muslim societies. Findings from many of the studies did not provide key information that could be used to draw valid conclusions about the concepts of healthy aging in Saudi Arabia or in Arabic culture. This review has underscored the different associations of sociodemographic background, health status, social and family network, religion, and social activity with satisfaction and well-being in old age. However, there is no existing research that has examined the older people's perspective of healthy aging in Saudi Arabia. Thus, the subjective understanding of older population in Saudi Arabia should be considered to improve the quality of life of Saudi elders.

KEY WORDS: Healthy aging, successful aging, older population, Saudi Arabia

Introduction

One of the challenges of this century is population aging, which is a worldwide phenomenon. On World Health Day^[1] the World Health Organization (WHO) has stated: "This population ageing can be seen as a success story for public health policies and for socioeconomic development, but it also challenges society to adapt, in order to maximise the health and functional capacity of older people as well as their social participation and security." Healthy aging policy is a tool that can be used to address these issues; however, in order to design services in promotion of healthy aging, we need to improve the evidence base for healthy aging.^[2]

Understanding the concepts of healthy aging and how they contribute to the quality of life of older people has received growing interest in recent years. In order to design services that effectively address the needs of older people, it is important to understand their own aspirations for old age and what healthy aging means to them. Healthy aging research has been largely conducted in Western and developed countries. However, culturally relevant research on healthy aging has been very limited in Arabic-speaking regions, especially in Saudi Arabia.

As populations age, the likelihood of the number of dependent older people also grows. In most countries, while families are central to the care of older dependent people, governments are concerned with meeting the increasing costs of aged care.^[3,4] In Saudi Arabia, the aging trends indicate a growing aging population, and the predicted change in the age structure shows a continuous increase in the proportion of elders.^[5-7]

In Saudi Arabia, the family members are currently taking on the active role of carers. However, with changing patterns of the family structure, the government has to take more responsibility. Promoting independence and a good standard of living for older adults, and supporting them to remain in their homes in their own communities for as long as possible, is one of the approaches that could contain costs.

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Most research and policy approaches to healthy aging have relied on the views of practitioners and researchers in the formulation of healthy aging concepts. Also, healthy aging research has been largely conducted in Western and developed countries.^[8,9] However, culturally relevant research on healthy ageing has been very limited in Arabic regions, especially in Saudi Arabia. Therefore, in order to design healthy programs and services for older people, it is important that we understand what healthy aging means to them. To date, no research has examined the question of how older people themselves understand the concept of healthy aging in Saudi Arabia.

This emphasizes the significance of studying the aging experiences of Saudi Arabians. Culture has the ability to influence one's perceptions of aging and healthy aging understanding; therefore, it was decided to undertake an extensive systematic review and expand the search criteria to include Arabic Islamic areas and Arabic Muslim immigrant aging experiences. This systematic literature review will identify research gaps relevant to aging and healthy aging in Arab-Muslim cultures and specifically gaps related to the healthy aging perspectives in Saudi Arabia.

In order to identify and address the research gaps, the subjective understanding of Muslim cultures and Arab countries' perspectives of aging and healthy/successful aging, and the factors that affect the aging process and healthy aging concepts must be taken into consideration. The systematic review aims to achieve its objectives by seeking answers to the following research questions: (1) How do older populations of cultures and religions similar to the Saudi Arabian culture experience their aging processes? (2) What are the influences that are positively related to healthy aging in the context of cultures and religions similar to Saudi Arabia?

Materials and Methods

In accordance with the Preferred Reporting Items for Systematic Reviews and Meta-analysis (PRISMA) flow diagram for conducting systematic reviews, literature searches were carried out in the following databases: Medline, PubMed, PsycInfo, Jstor, Sociological Abstracts, Social science information journals, Arabic language journals (via Google Scholar) and specifically the Journal of Cross-Cultural Gerontology. The bibliographies and reference lists of resources gathered from the databases were also searched for potential resources. In keeping with best practice, studies published between 1990 and 2015 were included in the search. This decision was based on the observation that earlier work in the field would be somewhat dated and that the proliferation in gerontology literature has occurred in the last 20 years.

The search terms used in the systematic review were healthy ageing/aging, successful ageing/aging, ageing/aging, Islam*/Muslim, Saudi, Arab*, Spiritual*, Culture*, and Religion*. Key books, government/association websites, conference papers, and policy documents in the area were also searched.

Studies identified using the above criteria had to further meet the following inclusion criteria to be eligible for this systematic review:

- Study participants should be old aged.
- The study reported quantitative or qualitative data with healthy aging or successful aging in Arab-Muslim society.
- The study researched the views of older Arabic Muslims about their health, mental health, life satisfaction, quality of life, and care giving in Arab-Muslim society, which are related to healthy aging.
- The study researched the older population's views, perceptions, or opinions within the context of an Arab-Muslim society.
- Only full-text articles written in English or Arabic were considered for inclusion.

Titles, keywords, and abstracts of articles identified through the search process were reviewed to identify eligible articles. The researcher initially checked eligible articles to exclude articles that were out of the scope for this study. Subsequently, the researcher and an academic colleague independently reviewed all potentially relevant references for eligibility. Disagreements between these reviewers were discussed with a third person and a consensus decision was made.

Titles and abstracts of the identified articles were assessed for relevance to the topic. Full texts of the articles were obtained and assessed for relevance if the abstracts were not available or did not contain enough information to determine eligibility. Titles and abstracts of articles identified through this search were keyed into Endnote version 14, and were further assessed against the specific selection criteria for inclusion in the review. Full articles were obtained and appraised at this stage of the selection process. Full texts of the articles were retrieved for further assessment to confirm that the articles met the inclusion criteria. The reference lists and bibliographies of all included studies were examined for additional relevant articles. The bibliographies of all articles thus located were scanned for further relevant references.

The abstracts of full texts that were identified by the search processes were reviewed and discussed by the researcher and colleague, and then chosen for data extraction given that they met the selection criteria. The details and results of the selected studies were then extracted. Through the application of different search strategies, 2,685 articles were initially chosen (including several instances of duplicates of articles that appear in more than one database). Figure 1 shows the flow diagram for study selection. For the final $n = 15$ full-text articles that were evaluated, quality assessment followed the STROBE statement's areas for evaluation. The title and abstract of the text, the introduction that states the background of the topic and the rationale behind the study, the methods used (data sources, variables, participants, setting, and bias removal), the results of the study, the discussion of the results, and other subsequent information were considered in the process of assessing applicability and reliability.

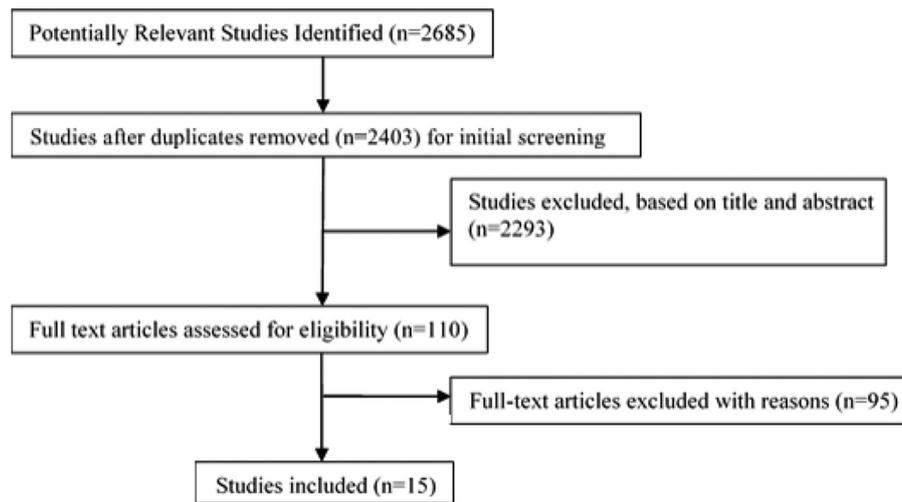


Figure 1: Flow chart of study selection process.

Results

After a preliminary screening carried out by the researcher, 282 articles were identified as duplicates. Of the remaining 2,403 articles, 2,293 were excluded because they did not meet the selection criteria based on the content of their titles and abstracts. These excluded articles focused on the economic and political aspects of aging in Arab-Muslim society. Of the 110 articles remaining, 99 were found not to be related to the targeted topic based on the full-text review since they did not fit the inclusion and selection criteria and thus were excluded. Finally, 15 articles were included in this review.

No extra relevant reviews or new studies were found within the reference lists, as those meeting the selection criteria were already included. Therefore, the search ended up with 15 articles that met the inclusion criteria. The following information was extracted from the original review: title and reviewers, total articles reviewed and data collection time, database, purpose of the review, key findings, and overall comments. Table 1 describes the studies that have been selected for this review.

Discussion

This systematic review could not find any studies that specifically focused on the concepts of healthy or successful aging in Arab-Muslim societies as seen in other published studies in the area. The articles either deal with demographic and epidemiological outcomes such as well-being or health status (a measure of healthy aging) or examine living conditions, attitudes to care, or social integration. Most of the studies reviewed were surveys and only one study by Ypinazar and Margolis^[24] was qualitative study.

Most of the included studies examine the aging perspectives from the immigrant Arab or older Arab Israelis. However, there are sporadic studies in Saudi Arabia, Egypt, United Arab Emirates, and Lebanon. Most of the studies from the immigrant Arab focused on the nature of aging and the social networks and social relationships. Also, these studies remark on the role of religion and culture on the aging process of Arab-American elders, with social integration playing a big part in an older person's perception of healthy aging.

Overall, most studies provided appropriate and comprehensive methods, rationale, and objectives of the research study. It provided comprehensive results and discussion of their study and clear findings relevant to aging process. However, some of the studies were having small sample size and did not address limitations nor suggested future research in this area. Moreover, the data are cross-sectional and show static information of aging process; therefore, a longitudinal project would have provided a more dynamic image.

Generalization of results was limited for many studies as one of the limitations is a small sample size and thus the sample may be not representative of older Arabic population. However, a study in Saudi Arabia by Al-Shammari and Al-Subaie^[19] and by Jarallah and Al-Shammari^[20] included a large sample size. Also, most of the data were self-reported and no objective measures assessed the well-being of older participants.

The well-being outcome variable also proved to be significantly associated with all of the study variables, including the sociodemographic background, functional health status, social networks, and activity measure. Thus, the study results suggest that, within the general path to a good old age among culturally distinctive populations, one can find culturally unique characteristics. In the case of older Arab Israelis, these included belonging to family-oriented network structures.

Table 1: Summary of chosen articles

Title/author/year	Purpose/objectives	Method/design/measures	Study sample	Study results
Arab American Elders: Network Structure, Perceptions of Relationship Quality, and Discrimination ^[10]	Comparison between Arab Americans who are immigrant and U.S. born. By focusing on various dimensions of social networks and integration, relationship quality with spouse, children, sibling, friend; and perceptions of discrimination.	Data collection by face-to-face surveys between 2001 and 2002, and targeted three subsets of the Arab-American population: (1) U.S. born Arab Americans, (2) immigrants who speak English fluently, and (3) immigrants who speak Arabic better than English.	Sampling by religious institutions. One mosque and two churches. Snowball sampling was used. A total of 101 Arab Americans aged 56 and above participated in the study.	Similarities among immigrant and U.S. born elders, they tended to live in close proximity to their networks. Immigrant Arab elders represent spousal relations a significant source of emotional support. Arab Americans viewed the family unit as a central aspect of the daily life.
Arab-American immigrant elders' views about social support. ^[11]	It aims to understand how sociocultural, demographic, and social relations link to health in immigrant Arab elders.	Six focus groups' discussions were conducted with Arab immigrants aged 60 years or more in the United States during 2001. The analysis used was grounded theory.	Participants were recruited from a mosque and church. Most of them were Muslim while the rest were Christian.	The older people expected that their children would care for them if they became frail. Two views on nursing homes were identified: (1) they were seen as places to avoid and (2) as facilities that were required.
Resources and well-being among Arab-American elders ^[12]	It investigates the relationships between the immigrant status, religious affiliation, with psychological well-being and resources among Arab-American elders.	Face-to-face survey interviews. Measures used were affective and cognitive dimensions of well-being, immigrant status, religion, and social capital.	Sampling by religious institutions. Snowball sampling followed. Participants included 101 Arab-American elders aged 56 and above in the United States.	Findings show that religious affiliation is not correlated with well-being. Life satisfaction correlated with high education and high income. The results demonstrate significant associations between social capital and well-being.
The path to well-being among elderly Arab Israelis ^[13]	It examines the paths to well-being among the older Arab in Israel.	It is based on a secondary analysis of data that were gathered in a national survey of older people in Israel in 1997. Data were collected from randomly sampled households. A bivariate correlation of study variables with the dependent variable was conducted, followed linear regression analysis.	A secondary analysis on 609 members of the initial sample which was composed of 421 Muslims. The principal dependent variable was well-being. The other measures used were sociodemographic background, functional health status, and social networks of the older person.	The well-being outcome was significantly associated with all of the study variables, including the sociodemographic background, functional health status, social networks, and activity measures. The most powerful association with well-being was disability measures.
Understanding aging in a Middle Eastern context: the SHARE-Israel survey of persons aged 50 and older ^[14]	It compares the results among the populations in Israel and across Europe in the areas of health, employment, and income.	The SHARE-Israel (Survey of Health, Aging and Retirement in Europe) is based on the generic questionnaire. The questionnaire is administered through a computer-assisted personal interview.	The sample included 1,813 individuals. The analysis includes the areas of demographic characteristics, health, employment, and income.	It showed that Arab-Israelis aged 50 and over were at greater risk of disadvantage. A third of the men in this group were disabled or unemployed. Arab women in Israel are the most overweight among Israeli women and the most physically inactive. The majority of Arab-Israeli women are home makers with lower incomes.

Table 1: Continued

<p>Intergenerational family relations and life satisfaction among three elderly population groups in transition in the Israeli multicultural society¹⁵⁾</p>	<p>It examines the relationship between personal and familial resources with well-being of elders who are aged 65 years and over in the multicultural society of Israel.</p>	<p>Face-to-face interviews of 212 older people. The well-being was measured using a self-reported measure. The life satisfaction, intergenerational solidarity and background, health variables, family structure, socioeconomic characteristics, and health functioning were measured.</p>	<p>The criteria for the sample selection differed for the three groups. The Arab sample was selected from four residential communities that differ in terms of population size and the mix of Muslims and Christians.</p>	<p>The intergenerational solidarity and family solidarity were found strong among the Arab population. The Arab older people were also providing less help to their adult children. Also, personal resources including physical functioning and financial adequacy had the strongest effect on life satisfaction in all three groups.</p>
<p>Differences in levels of social integration among older women and men in Egypt¹⁶⁾</p>	<p>It explores the factors that underlie gender differences in terms of social integration levels in the context of older adults in Arab countries.</p>	<p>The survey include sociodemographic characteristics, domestic activities, cultural activities, occupation and work history, family and community activities, housing facilities, health status, and psychological status.</p>	<p>Stratified cluster sampling was implemented in each governorate; gender, and age (60 and above) were the strata utilized for sampling. Face-to-face interviews of 867 people were conducted.</p>	<p>The result confirms the impact of norms associated with patrilineal residence under which older women are simultaneously relieved of the burden of kin-keeping activities which are undertaken by their daughters-in-law and allowed more involvement in social activities.</p>
<p>Attitudes of older Egyptians towards nursing care at home: a qualitative study¹⁷⁾</p>	<p>It aims to identify older Egyptians' attitudes toward receiving medical care at home.</p>	<p>Thirty-three Egyptians above the age of 60 were interviewed using structured guideline interviews. Qualitative content analysis was used.</p>	<p>Purposive sampling was used. Three criteria of selection: (1) sample should cover both, recipients and nonrecipients of home care, (2) it should include older persons from different societies, and (3) it should include Muslims and Christians.</p>	<p>It found that care seeking of older Egyptians is related to their socioeconomic status. Those with insufficient income seem to reject home care whereas independent Egyptians with sufficient income may accept home nursing care.</p>
<p>Socioeconomic resources and living arrangements of older adults in Lebanon: who chooses to live alone?¹⁸⁾</p>	<p>It describes the living arrangements of older Lebanese and it examines the characteristics of living arrangements, socioeconomic resources, and financial security.</p>	<p>The data were analyzed by using weighted data, frequency distributions, means, and standard deviations of the different types of living arrangements, and socioeconomic, sociodemographic, and health characteristics. Then multivariate logistic regression was conducted to examine the association between the various measures of socioeconomic resources with the outcome variable.</p>	<p>The sample used three-stage, stratified, cluster-sample design. First stage: a systematic random sample of 15 geographical areas. Second stage: 459 probability sampling units were chosen randomly. Third stage: a random selection of 7,098 houses. Of these, 5,532 household interviews were conducted yielding 1,856 eligible older adults.</p>	<p>Elders who report satisfied with their income have greater possibility of living alone. A 74.8% of older Lebanese mainly receive their income from their children and a small share from pension. Contrary to findings in Arab countries, older Lebanese seem to have similar living arrangements as Western models do where by wealthy, old individuals are likely to live alone and remain independent.</p>

Table 1: Continued

Prevalence and correlates of depression among Saudi elderly ^[19]	It assesses the prevalence of depression and associated social and health factors in older people in Saudi Arabia.	Cross-sectional national survey of older population. The physical, environmental health statuses, sociodemographic features, Activities of Daily Living (ADL), and laboratory and radiological investigations were assessed by an interview with a structured questionnaire.	A stratified two-stage sampling technique was used.	Depressive symptoms were common among Saudi older people, which represent 39%. Personal characteristics that correlated with depression were poor education, unemployment, low income, divorced or widowed status, old age, and female gender.
Factors associated with health perception of Saudi elderly ^[20]	To study the determinants of health perception among Saudi older people in Saudi Arabia	Cross-sectional national survey of the older people in Saudi Arabia. The subjects' physical, mental, social, sociodemographic features, ADL, economic status, environmental health status, and health perception were assessed.	A stratified two-stage sampling technique was used to select the older people aged 60 years and above.	The poor health perception was predominant among females and more with advanced age, also it is associated with poor social and economic features. Poor health was also associated with living in small houses, with losing a close relative recently. These sociodemographic and sociomedical factors are found to be important determinants of health perception among Saudi older people.
Appraisal of clinical, psychosocial, and Environmental health of elderly in Saudi Arabia: A Household Survey ^[21]	Examine clinical, psychosocial, and environmental disorders in the Saudi older people.	A cross-sectional national survey of Saudi older people. The participants' physical, mental, social, and environmental health status were assessed in a personal interview.	A stratified two-stage sampling technique was used.	A large proportion of the older people live with their family members. Around 2.6% of the elders have four or more generations in their household.
Assessment of the functional status of elderly subjects in Qassim Region, Saudi Arabia ^[22]	Assess the elderly functional activities in the form of ADL and Instrumental Activities of Daily Living (IADL).	A cross-sectional study on older people aged 65 years and above, in Qassim, in Saudi Arabia. Data was collected using home-based interviews. Information recorded included demographic data, living companionship, household status, house ownership, and literacy status, chronic diseases, and functional status.	A two-stage sampling procedure used whereby five PHC centers were randomly selected.	Old age and female gender were found to be negatively, while male gender and having an occupation were found to be positively associated with functional activity.

Table 1: Continued

The health status of community based elderly in the United Arab Emirates ^[23]	This study aims to assess the health status of older people in the United Arab Emirates	Cross-sectional survey of 184 randomly chosen communities based people aged 65 years. Demographic, social, health, psychological, nutritional, cognitive, functional, physical strength, and clinical data were collected.	This was stratified by age into those aged between 65 and 74 and those aged 75 years and over. Each group was randomly ordered by use of a random number table.	Majority of the participants rated their health as satisfactory or higher. There may be a need to increase health-care resources for aged care in the future due to a combination of high growth rate of older people, high prevalence of diabetes, and hidden psychological morbidity.
Delivering culturally sensitive care: the perceptions of older Arabian Gulf Arabs concerning religion, health, and disease ^[24]	It aimed to understand how older Muslim Arabian Gulf Arabs in the United Arab Emirates perceive their health and illness with a focus on the impact of the religion of Islam on their health beliefs.	Qualitative semistructured interviews. The data analysis includes a thematic inductive process. The inclusion criteria were participants aged 65 years and over, Muslim, Arab, residents in the Arabian Gulf for more than the past 50 years, have at least one chronic illness, and without cognitive impairment.	Sample selection was purposively from a community-dwelling older people in the United Arab Emirates. The participants were identified through the Health Card database by the Ministry of Health. Then this group was randomly ordered using a random number table.	The religion was an integral part of the life of participants and that their health-care practices were based on the teachings of the Qur'an and the Hadith.

Many studies showed findings that were valuable and could be extracted to further the research relating to healthy aging conceptualization in older population; for example, the positive roles of personal resources, health status and function, family and social connections, religion in general well-being, and life satisfaction of older Arabic participants. All of the studies that were examined were targeted toward the well-being of Arabic Muslim or Arab immigrants and were geared toward understanding the factors and predictors of aging well in older populations in Arab-Muslim society. The approaches are mostly quantitative in nature and focus on first-hand retrieval of aging experiences and empirical data. Findings commonly pointed out socioeconomic status, level of social integration, ability to exercise culture-specific behavior, and reliability of one's social networks as important attributes of healthy perceptions and objective health in aging. However, some of the study findings showed the significance of religion and culture in aging perceptions across Arabic cultural structure and social networks.

Overall, results of this review suggested that only few studies examined the aging perspectives in Arabic Muslim cultures. Also, there are very limited studies about aging in Saudi Arabia. Further research is thus required, particularly studies specifically understanding perspectives of healthy aging from older population in Saudi Arabia. This systematic review shows that only 15 articles have investigated the perspectives of aging among Arabic Muslim cultures. There is a need to expand on this by adding culture-specific information pertinent to the Saudi Arabian culture. The corpus of knowledge with regard to Arabic Muslim aging must be added upon to inform approaches that will improve the quality of life, well-being, and social integration of Saudi elders. This review has underscored the different associations of sociodemographic background, health status, social and family network, and religion and social activity with well-being in old age. Moreover, it points to the interrelationships that exist among most of these variable groups. The literature suggests that sociodemographic background affects older people's health, and that both health and background are related to social environment. It is also apparent that social activity is influenced by background, health, and social ties.

Few research studies address aging in the Saudi population; for example, a study of Saudi older population found that poor education and female gender correlated strongly with depression.^[19] Interestingly, a study of older people in the United Arab Emirates concluded that unique cultural factors, such as a high regard for traditional family values and universal practice of religion, protected them from psychological problems in later life.^[23] A positive relationship has been documented between health and psychological well-being in later life.^[13] A study of persons aged 65 and older in the Qassim region of Saudi Arabia by Al-Mahadi and Elzubier,^[22] concluded that age and female gender were inversely associated with functional abilities, while male gender and occupation were positively related to functional abilities. Another Saudi study showed that poor health perception was more predominant among women and older age (Jarallah and Al-Shammari 1999). These differences underscore the potential influence of social factors and

interpersonal environment, or the social networks and support on older people's well-being in later life.

There is a growing public health interest in understanding and promoting healthy aging worldwide, though the research into aging and healthy aging in the context of an older Saudi population has received little to no recognition in the literature. Therefore, one of the main strengths of this review is that it is the first review that seeks to explore older Saudi's perspectives of healthy aging concepts in Saudi Arabia. Other strengths are that the outcomes resulting from this study can contribute to the process of developing policies and programs for the older Saudi population. Also, these findings do provide critical preliminary evidence about an understudied aging experience in Saudi Arabia, thereby guiding the direction of future longitudinal research of aging in Saudi Arabia. However, this study was not free of limitations and one of the main limitations was restricted time and resources. Finally, although there are some limitations of the current study, the researcher addresses limitations and suggests avenues for future research.

Conclusion

With global trends in aging, many nations are developing and implementing healthy aging policies to promote better quality of lives for the older people. The aims of this systematic review were to critically review and summarize the evidence from studies that examined healthy aging perspectives and concepts in older Arabic Muslims cultures and evaluate the quality of the evidence by comparing it to the STROBE statement. All reviewed studies provided clear aims for their research; however, the findings of some of the studies were limited and not related directly to the concept of healthy aging. In-depth analysis of the studies revealed that the selected studies were primarily cross-sectional in nature, based on small population-based studies that included older adults and were not specifically designed to investigate the healthy aging perspectives. Studies primarily collected data via self-reported survey. Based on the findings of the systematic review, no research has examined the question of how older people themselves understand the concept of healthy aging in Saudi Arabia. In order to address the research gaps, the subjective understanding of older Saudi population must be taken into consideration in understanding the factors and elements that affect their personal aging process and healthy aging concepts. This review emphasizes the needs to examine Saudi Arabian older people's perspectives of healthy aging and the factors associated with healthy aging by executing an empirical qualitative study to shed light on the experiences of older population in Saudi Arabia.

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