Perception of Saudi Older Adults about Themselves and their Health in Makkah Region

Mohammed Abdulrahman Basheikh (1)
Faisal I. Abosoudah (2)
Mohammed Abdulatif Basheikh (2)
Abdulraheem Adnan Almokhtar (2)
Fahad A. Alzahrani (2)
Mohammed A. Bashanfar (2)

(1) Department of Medicine, Faculty of Medicine, King Abdulaziz University
(2) Faculty of Medicine, King Abdulaziz University

Corresponding author:
Mohammed Abdullatif Basheikh
King AbdullAziz University
Saudi Arabia
Phone No: +966505359234
Email: mabasheikh@kau.edu.sa

Abstract

Background: The Saudi Arabian population increases as the world population increases. With the improvements in the healthcare system, the aging Saudi population, specifically at the age of 60 years and above, is increasing and is projected to reach 2 million in 2050. We aimed to address this issue by evaluating Saudi older adults (≥60 years old) perception of themselves and their subjective health compared with their current health status.

Method: This cross-sectional study included 328 Saudi participants aged 60 years and above, who lived in the Makkah region, from July 2019 to June 2020. For data collection, we used the Canadian Study of Health and Aging questionnaire (CSHA), which was sent to the participants or their caregivers if they could not answer it by themselves. Correlations between variables were assessed using bivariate analysis.

Result: Most of our participants (82.01%) perceived their health as "very or pretty good," which was statistically significant with income (p = 0.01), age (p < 0.01), and marital status (p = 0.03). In addition, 60.37% were happy with their life; however, this perception only positively correlated with health (p < 0.001) and income (p = 0.001). Most of them (89.94%) were also satisfied with their life; this outlook positively correlated with age (p = 0.02), income (p = 0.019), health (p < 0.001), and comorbidities (p = 0.026).

Conclusion: Overall, most Saudi older adults, regardless of age, gender, marital status, income, and multiple comorbidities, had a positive perception of life because of socioeconomic factors and an efficient healthcare system.

Key words: elderly, Saudi Arabia, self-perceived health

Introduction

The Saudi Arabian population continues to increase as the world population increases(1). In particular, the country's aging population has increased because of the tremendous improvement in the healthcare system(2). In 2010, the overall aging Saudi population over 60 years of age was 937,902, which is projected to reach 2 million in 2050(3).

Therefore, healthcare professionals need to implement practices necessary for proper geriatric care(2). Such practices must be in accordance with the older adults' needs and the expected growth in healthcare demand(2). To cater to the needs of older adult patients, the healthcare professionals must have knowledge of their patient's subjective health in addition to the observed health status (4). The World Health Organization (WHO) defines health as a state of complete physical, mental, and social well-being and not merely the absence of disease or infirmity(5). The concept of well-being is difficult to assess and may be interpreted in various ways because individuals assess their own lives differently (e.g., psychological, physical, and socioeconomic status)(6). However, considering the patients' well-being is crucial because it is related to their health. Both may potentially impact their quality of life (QoL)(6).

Negative attitude affects QoL, physical function, and health (7). Ounpuu et al. reported that people with negative attitude are less likely to seek preventive health care but more likely to require emergency treatment(8). An intervention study involving older people suggested that subliminal exposure to positive age stereotypes strengthens positive self-perceptions of aging, leading to improved health(9).

Perception of older adults about themselves and their own health is insufficiently investigated in Makkah region, Saudi Arabia. In addition, most studies focused on one center with a smaller sample size. Meanwhile, our research has a larger sample size and focuses on older adults' general perception of their own overall health. Our participants lived in Makkah region of Saudi Arabia.

This questionnaire-based study aimed to address this concern by assessing how the Saudi older adults (≥ 60 years of age) perceive themselves and their subjective health compared with their current health status.

Methods

This cross-sectional study, which was authorized by the institutional review board of King Abdulaziz University, was conducted among older adults aged ≥60 years living in Makkah region, Saudi Arabia, from July 2019 to June 2020. The Kingdom of Saudi Arabia defines geriatric age as 60 years old according to the regulation from the Ministry of Human Resources and Social Development. We used the Canadian Study of Health and Aging questionnaire (CSHA) as a reference and modified its questions to assess the quality of health among these participants. Data were collected by sending the questionnaire to the older adults or their caregivers if they could not answer the questionnaire by themselves. From 500 participants who answered the questionnaire, only 328 participants were recruited according to the following inclusion criteria: 1) Saudi nationality, 2) lives in Makkah region, and 3) ≥60 years of age. Those who did not meet the inclusion criteria were excluded.

The questionnaire included information about patients' demographic data (age, gender, marital status, and regional name). No names were obtained to maintain participants' confidentiality. It also included the general health status, psychological state, risk of fall, chronic disease(s) (hypertension [HTN], diabetes mellitus [DM], rheumatoid arthritis, and osteoarthritis), cardiovascular diseases (arteriosclerosis, heart failure, myocardial infarction [MI], etc.), neurological diseases (stroke, Parkinson's disease, etc.), respiratory diseases (pneumonia, tuberculosis [TB], asthma, etc.), gastrointestinal diseases, ear diseases, ophthalmological diseases, orthopedic problems (back pain and fractures), bladder and bowel control problem, and cancer.

The questionnaire was designed on Google Forms. Then, the data were exported to Microsoft Excel 2016. Statistical data were analyzed using SPSS software package version 21.0 (SPSS Inc., Chicago, IL, USA).

All categorical data (frequency and percentage) underwent descriptive statistical analysis. Meanwhile, bivariate analysis was performed between demographic data, health, happiness, life satisfaction, comorbidities, income, and life prediction.

Results

We recruited 328 participants (male, 50%; female, 50%), who were divided into three age groups: 60–69 (71.0%), 70–79 (20.4%), and >80 (8.5%) groups. Additionally, 74.7% of the participants were married (Table 1).

We asked how the participants perceive their health these days. Overall, 82.01% said "Very or pretty good," of which 86.7% were from the 60–69 group and 100.0% from the never married group. Participants who said "Not too good" accounted for 15.24%; most (39.3%) were from the ≥80 group, and 28.2% were divorced/separated/widowed. Participants who said "Very or pretty poor" accounted for 2.13%; most of them (4.5%) were from the 70–79 group, and 2.8% were divorced/separated/widowed. These results showed $p < 0.01$ and $p = 0.03$ for age and marital status, respectively (Table 2).

Both genders, mostly male (82.9%), agreed that their health these days was "Very or pretty good" (82.01%). Furthermore, 15.24% said "Not too good," and most of them were female (17.7%). Finally, participants who said "Very or pretty poor" accounted for 2.13%, and most of them were male (3.7%). These results were not significant ($p = 0.15$) (Table 2).

In terms of income, 82.01% of the participants perceived their health as "Very or pretty good," and most of them had "Very well" income (88.3%). Participants who said that their health was "Not too good" accounted for 15.24%, with the majority having "Inadequate" income (25.0%). Participants who said that their health was "Very or pretty poor" accounted for 2.13%; and most of them had "Inadequate" income (12.5%). These results were significant (p = 0.01) (Table 2).

Regarding the correlation of participants' happiness with age and marital status, 60.37% said "Yes"; most of them (61.8%) were from the 60–69 age group, and 61.6% were married. Participants who said "No" accounted for 39.63%; most of them (50.0%) were from the ≥80 group, and 43.7% were divorced/separated/widowed. These findings revealed no significance (p = 0.49 and p = 0.72 for age and marital status, respectively) (Table 3).

We compared the participants who said they were happy with their income and those who were not. Participants who said "Yes" accounted for 60.37%; in particular, most of them answered "Very well" (68.5%), followed by "Adequate" (63.2%), "With some difficulties" (42.1%), and "Inadequate" (33.3%). In contrast, participants who said "No" accounted for 39.63%; most of them said "Inadequate" (66.7%), followed by "With some difficulties" (57.9%), "Adequate" (36.8%), and "Very well" (31.5%). The results demonstrated to be significant (p = 0.001) (Table 3).

We also compared those participants who said they were happy with their health these days and those who were not. The overall participants who said "Yes" accounted for 60.37%; most of them said "Very or pretty good" (65.4%), followed by "Don't Know" (DK) (50.0%), "Not too good" (40%), and "Very or pretty poor" (14.3%). Meanwhile, those who said "No" accounted for only 39.63%; most of them said "Very or pretty poor" (85.7%), followed by "Not too good" (60.0%), "DK" 50.0%, and "Very or pretty good" (34.6%). The results were significant (p < 0.001) (Table 3).

Regarding the correlation of participants' life satisfaction with age and marital status, 89.94% said "Yes"; the majority (92.9%) belonged to the ≥80 age group, and 91.7% were never married. Conversely, 10.06% said "No"; the majority (19.4%) belonged to the 70–79 age group, and 11.3% were divorced/separated/widowed. The results were significant for age (p = 0.02) but not for marital status (p = 0.917) (Table 4).

Both genders agreed on life satisfaction and said "Yes," accounting for 89.94% (male, 89.0%; female: 90%), and only 10.06% said "No," demonstrating no significance (p = 0.582) (Table 4).

Moreover, we compared participants' satisfaction with their income. Participants who said "Yes" accounted for 89.94%; most of them answered "Very well" (94.6%), followed by "Adequate" (90.3%), "With some difficulties" (84.2%), and "Inadequate" 75.0%. Only 10.06% answered "No"; most of them said "Inadequate" (25.0%), followed by "With some difficulties" (15.8%), "Adequate" (9.7%), and

"Very well" (5.4%). The results were significant (p = 0.019) (Table 4).

We compared the participants who said they were satisfied with their life or not with their health these days. Participants who said "Yes" accounted for 89.94%; most of them said "Very or pretty good" (94.1%), "Not too good" (80.0%), "DK" (50.0%), and "Very or pretty poor" (14.3%). Moreover, 10.06% responded "No"; most of them said "Very or pretty poor" (85.7%), followed by "DK" (50.0%), "Not too good" (20.0%), and "Very or pretty good" (5.9%). These results were significant (p < 0.001) (Table 4).

We divided the comorbidities into two groups according to the number of comorbidities (≤3 and >3) and compared the groups with what the participants said about their current life satisfaction. We found that 92.9% of the participants with ≤3 comorbidities said "Yes" and 7.1% said "No." Participants with >3 comorbidities who said "Yes" accounted for 85.4%, and "No" accounted for 14.6%, demonstrating significance (p = 0.026) (Table 4).

We compared participants with and without HTN as to if they were satisfied or not with their life today. Participants with HTN who were and were not satisfied accounted for 89.2% and 10.8%, respectively. Participants without HTN who were and were not satisfied accounted for 90.6% and 9.4%, respectively. No significance was found (p = 0.164) (Table 5).

We also compared participants with or without arthritis and if they were satisfied or not with their life today. Participants with arthritis who were and were not satisfied were 90.8% and 9.2%, respectively. Participants without arthritis who were and were not satisfied were 90.3% and 9.7%, respectively. No significance was noted (p = 0.615) (Table 5).

Furthermore, we compared participants with or without diabetes and if they were satisfied or not with their life today. Participants with diabetes who were and were not satisfied were 87.1% and 12.9%, respectively. Participants without diabetes who were and were not satisfied were 92.0% and 8.0%. The results were not significant (p = 0.146) (Table 5).

We asked the participants if things are getting worse as they get older and compared with age and marital status. Participants who said "Yes" accounted for 47.87%; most of them 64.3% were in the ≥80 age group, and 53.5% were divorced/separated/widowed. Participants who said "No" were 52.13%; the majority (55.8%) belonged to the 60–69 group, and 53.9% were married. No significance was found for age (p = 0.07) and marital status (p = 0.54) (Table 6).

According to gender, we asked the participants if things are getting worse as they get older. We found that 52.13% of them said "No" (male, 50%; female, 45.73%), whereas the remaining 47.87% said "Yes" (male, 50%; female, 45.27%). The results were not significant (p = 0.439) (Table 6).

We compared the participants who said that things are getting worse as they get older, or did not, with their income. Participants who said "Yes" accounted for 47.87%; most of them answered "With some difficulties" (71.1%), followed by "Inadequate" (70.8%), "Adequate" (44.5%), and "Very well" (39.6%). In contrast, participants who said "No" accounted for 52.13%; most of them answered "Very well" (60.4%), followed by "Adequate" (55.5%), "Inadequate" (29.2%), and "With some difficulties" (28.9%). These results were significant (p = 0.001) (Table 6).

We compared the participants who said that things are getting worse as they get older or not with their health these days. Participants who said "Yes" accounted for 47.87%; most of them said "Very or pretty poor" (100.0%), followed by "Not too good" (78.0%), "DK" (50.0%), "Very or pretty good" (40.9%). Those who said "No" accounted for 52.13%, and most of them said "Very or pretty good" (59.1%), "DK" (50.0%), and "Not too good" (22.0%). These results were significant (p < 0.001) (Table 6).

Table 1: Demographic data

		Count	Column N %
Age	(60–69)	233	71.0%
	(70–79)	67	20.4%
	=80	28	8.5%
Gender	M	164	50.0%
	F	164	50.0%
Marital status	Never married	12	3.7%
	divorced/separated/widowed	71	21.6%
	married	245	74.7%

Table 2: Correlation between health and demographic data and income

		Health						p value
		very or pretty good		not too good		very or pretty poor		
		Count	Row N %	Count	Row N %	Count	Row N %	
Age	(60–69)	202	86.7%	26	11.2%	3	1.3%	
	(70–79)	51	76.1%	13	19.4%	3	4.5%	<0.01
	≥80	16	57.1%	11	39.3%	1	3.6%	
Marital status	Never married	12	100.0%	0	0.0%	0	0.0%	
	divorced/separated /widowed	49	69.0%	20	28.2%	2	2.8%	0.03
	Married	208	84.9%	30	12.2%	5	2.0%	
Gender	M	136	82.9%	21	12.8%	6	3.7%	0.15
	F	133	81.1%	29	17.7%	1	0.6%	
Income	Very well	98	88.3%	12	10.8%	1	0.9%	
	Adequate	128	82.6%	23	14.8%	3	1.9%	
	With some difficulties	28	73.7%	9	23.7%	0	0.0%	0.01
	Inadequate	15	62.5%	6	25.0%	3	12.5%	

Table 3: Correlation between demographic data, income, and health

		I am just as happy as when I was younger				p value
		Yes		No		
		Count	Row N %	Count	Row N %	(a = 0.05)
Age	(60–69)	144	61.8%	89	38.2%	
	(70–79)	40	59.7%	27	40.3%	0.49
	≥80	14	50.0%	14	50.0%	
Marital status	Never married	7	58.3%	5	41.7%	
	Divorced/separated/widowed	40	56.3%	31	43.7%	0.72
	Married	151	61.6%	94	38.4%	
Income	Very well	76	68.5%	35	31.5%	
	Adequate	98	63.2%	57	36.8%	0.001
	With some difficulties	16	42.1%	22	57.9%	
	Inadequate	8	33.3%	16	66.7%	
Health	Very or pretty good	176	65.4%	93	34.6%	
	Not too good	20	40.0%	30	60.0%	
	Very or pretty poor	1	14.3%	6	85.7%	<0.001
	DK	1	50.0%	1	50.0%	

Table 4: Correlation between life satisfaction, demographic data, income, health, and comorbidities

		I am satisfied with my life today				
		Yes		No		p value
		Count	Row N %	Count	Row N %	a = 0.05
Age	(60–69)	215	92.3%	18	7.7%	
	(70–79)	54	80.6%	13	19.4%	0.02
	≥80	26	92.9%	2	7.1%	
Marital status	Never married	11	91.7%	1	8.3%	
	Divorced/separated/ widowed	63	88.7%	8	11.3%	0.917
	Married	221	90.2%	24	9.8%	
Gender	M	146	89.0%	18	11.0%	0.582
	F	149	90.0%	15	10.0%	
Income	Very well	105	94.6%	6	5.4%	
	Adequate	140	90.3%	15	9.7%	
	With some difficulties	32	84.2%	6	15.8%	0.019
	Inadequate	18	75.0%	6	25.0%	
Health	Very or pretty good	253	94.1%	16	5.9%	
	Not too good	40	80.0%	10	20.0%	<0.001
	Very or pretty poor	1	14.3%	6	85.7%	
	DK	1	50.0%	1	50.0%	
Comorbidities	≤3	184	92.9%	14	7.1%	0.026
	>3	111	85.4%	19	14.6%	

Table 5: Correlation between life satisfaction and high blood pressure, arthritis, or rheumatology and diabetes mellitus.

		I am satisfied with my life today				p value
		Yes		No		a = 0.05
		Count	Row N %	Count	Row N %	
High blood pressure	Yes	141	89.2%	17	10.8%	0.164
	No	154	90.6%	16	9.4%	
Arthritis	Yes	119	90.8%	12	9.2%	
	No	140	90.3%	15	9.7%	0.615
	DK	36	85.7%	6	14.3%	
Diabetes mellitus	Yes	122	87.1%	18	12.9%	
	No	173	92.0%	15	8.0%	0.146

Table 6: Correlation between life prediction and demographic data, income, and health.

		Things are getting worse as I get older				
		Yes		No		p value
		Count	Row N %	Count	Row N %	a = 0.05
Age	(60–69)	103	44.2%	130	55.8%	
	(70–79)	36	53.7%	31	46.3%	0.07
	≥80	18	64.3%	10	35.7%	
Marital status	Never married	6	50.0%	6	50.0%	
	Divorced/separated/widowed	38	53.5%	33	46.5%	0.54
	Married	113	46.1%	132	53.9%	
Gender	M	82	50.0%	82	50.0%	0.439
	F	75	45.73%	89	54.27%	
Income	Very well	44	39.6%	67	60.4%	
	Adequate	69	44.5%	86	55.5%	
	With some difficulties	27	71.1%	11	28.9%	0.001
	Inadequate	17	70.8%	7	29.2%	
Health	Very or pretty good	110	40.9%	159	59.1%	
	Not too good	39	78.0%	11	22.0%	
	Very or pretty poor	7	100.0%	0	0.0%	<0.001
	DK	1	50.0%	1	50.0%	

Discussion

The older adult population is growing exponentially worldwide(10). In Saudi Arabia, this population is expected to reach 2 million by 2050(2). Therefore, we need to change from having a negative perspective of old age that is associated with chronic illnesses, weakness, and poor functions to having a positive health perspective, and to improve the QoL of this population.

This study included 328 older adults from the whole Makkah region. The quality of health among older adults can be assessed by many questionnaires, but in our study, we used the CSHA to understand how the Saudi older adults (≥60 years of age) perceive themselves and their subjective health compared with their current health status. Subsequently, the results are discussed through the five domains: health, happiness, life satisfaction, comorbidities, and prediction of life.

Health:
WHO defines health as a state of complete physical, mental, and social well-being and not merely the absence of disease or infirmity(11).

Health and age
We divided the Saudi older adults into three age groups (60–69, 70–79, and ≥80 years). We found that most of our participants said "Very or pretty good" (n = 269, 82.0%) and "Very or pretty poor" (n = 7, 2.13%), demonstrating significance (p < 0.01). In research conducted in Turkey, health did not significantly correlate with age (p = 0.17)(12). Hence, discrepancy exists between these two studies, probably because of the excessive number of factors, such as socioeconomic and advancement in health care.

Health and gender
Our research consisted of a female-to-male ratio of 1:1. Male participants who said "Very or pretty good" (82.9%) were slightly healthier than the female participants (81.1%).

Unexpectedly, the males (3.7%) who said "Very poor or pretty poor" were also healthier than the females (0.6%), with no significance (p = 0.15), consistent with the study results of Edimansyah Abdin et al(13).

Health and marital status
Our study found a significant finding (p = 0.03) in married couples who see themselves as healthier than those who never married or widowed. Multiple studies reported that marital status has a strong positive impact on the older adults(12,14).

Health and income
One of the most important factors that presume a healthier life is income, as evident in a previous study(15). Our study showed a significant correlation (p = 0.01) and is in compliance with this fact.

Happiness:
According to Harvard psychologist Daniel Gilbert, happiness is difficult to measure with a significant subjectivity that could be translated as "anything we please and enjoy." (14). The difference between happiness and life satisfaction is that happiness is a temporary emotion while life satisfaction is the general idea of life.

Happiness and age
We asked the participants about happiness by comparing it to when they were younger. Happiness had no significant (p = 0.49) correlation with age, but most of the age groups answered "yes" (60.37%), except for the ≥80 age group that acquired equal results. This finding is also evident in other studies that came up with the same conclusions(13,16,17). We believe that the similarities between these studies can be explained by the fact that happiness is subjective and depends on the individual's personal lifestyle and viewpoint.

Happiness and marital status
Happiness had no significant correlation (p = 0.72) with marital status. Most of the participants answered "yes" (60.37%) and were married. Compared with the Japanese study that disagrees with our study, we noticed that the difference between them was in the inclusion criteria (age group started from 65 years)(18).

Happiness and income
Individuals with lower income are less happy than those with "Adequate" or "Very well" income (p = 0.001). However, no recent studies can support this correlation.

Happiness and health
Happiness significantly correlated (p < 0.001) with health. Most of our participants responded "Very good" and "Pretty good." Unfortunately, no recent studies can prove this correlation.

Life satisfaction:

Life satisfaction and age
Saudi older adults were overall satisfied with their life, demonstrating significance (p = 0.02). However, a research in Nepal reported otherwise(19). We assume that this is a result of the difference in socioeconomics, poverty, and geriatric health care between these two countries.

Life satisfaction, gender, and marital status
Having a partner is one of the factors that influence life satisfaction, as shown in this research that had a positive correlation(19). In contrast, most of our married participants were more satisfied than nonmarried participants, but unfortunately, no statistical significance was found (p = 0.917).

Life satisfaction and income
Income has a higher influence on one's life satisfaction from many aspects, such as access to advanced health care, social well-being services, and exposure to stressful events. Life satisfaction significantly correlated with income (p = 0.019), consistent with a Taiwanese study (20). One of life's expectations is that a higher income will lead to better life satisfaction.

Life satisfaction and health
Most of our participants (89.94%) said that they were satisfied with their life despite self-rating health as "Not too good," with a significance value of (p < 0.001). A Brazilian study reported that the healthier the older adults, the more they are satisfied (p < 0.001)(21).

Comorbidities:
We divided the participants who had comorbidities into two groups (≤ 3 and >3 comorbidities), and correlated each group with life satisfaction. We found that 60.37% have ≤3 comorbidities and 39.63% have >3. As expected, participants with fewer comorbidities were more satisfied with their lives than those with many comorbidities, with significance (p = 0.026), as supported by a Spanish study (p = 0.02)(22). However, some studies investigated life satisfaction with major diseases such as HTN, DM, and arthritis or rheumatism, among the older adults(23-25).

Hypertension
HTN is a major medical issue in Saudi general health, with a prevalence of (1,332,234), and older adults comprised 49% of the HTN population(26). It is one of the leading causes of death and disability among older adults(23,25). We found that 48.17% of the participants had HTN, while 51.83% had no HTN. Most participants with HTN are satisfied with their life, but with no significance (p = 0.685). In contrast, Cao, W. and colleagues showed a significantly lower score in physical health, but not in psychological health in participants with HTN compared with those without HTN.(27). These studies have discrepancies, possibly because of the existing factors other than HTN which can affect life satisfaction like social support, income and other diseases that participants may have.

DM

The prevalence of DM in Saudi Arabia is (1,460,934), and the older adults compose 43%(26). DM is characterized by chronic hyperglycemia, leading to various complications, including microvascular (retinopathy, neuropathy, and nephropathy) and macrovascular complications. DM also has an increased risk factor in falls and hip fractures(20). We found that 42.68% of participants had DM, while 57.32% did not have. Most participants with or without DM were satisfied with their lives. However, our results were not significant (p = 0.146). A Japanese study disagrees with our result and showed a significant decrease in life satisfaction in participants with DM(24).

Arthritis

Most of the musculoskeletal pain felt by older adults results from osteoarthritis, which significantly reduces the QoL(28). In 2017, Saudi census reported that 160,979 older adults (≥65 years) had arthritis(29).

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Most of our participants with or without arthritis were satisfied with their lives, but unfortunately, no significant correlation was found (p = 0.615). However, a Japanese study disagrees with our result and showed a significant decrease in life satisfaction in participants with arthritis(24).

Prediction of life:

We asked our participants about their life predictions "if things are getting worse as they get older." All variables (age, gender, marital status, income, and health) were statistically significant, except for marital status, which correlated with the prediction of life. However, no recent studies have investigated this correlation.

Limitations

The present study has some limitations that should be acknowledged. This study was meant to be interview based, but considering the COVID-19 pandemic, we were forced to send the questionnaire via Google Form to the participants, which could have biased some responses.

Conclusion

Overall, most of the Saudi older adults, regardless of age, gender, marital status, income, and multiple comorbidities, had a positive rather than a negative perception in life because of socioeconomic factors and a good healthcare system. Therefore, considering the limited amount of research conducted on this topic in Saudi Arabia, we recommend for further studies in this field and to focus more toward older adults to improve the geriatric healthcare system.

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