Medical Science

Health related quality of life for geriatrics patients with common chronic diseases among National Guard Population, Jeddah, Saudi Arabia 2018-2019

Ahmed Ghazi Kamal[1], **Badr A Aljasir**[2], **Hani S Al-mugati**[3], **Amina Bargawi**[4], **Hassan Bin Usman**[5]

[1]MBBS, Saudi Board of Community & Preventive Medicine Program, Saudi Arabia
[2]MD, ABCM, Department of Primary Health Care \Community & Preventive Medicine, King Abdullah International Medical Research Center, Jeddah, Saudi Arabia, King Saud bin Abdulaziz University for Health Sciences, Western Region, Jeddah, Saudi Arabia
[3]MD, SBCM, JBCM, Department of Primary Health Care \Community & Preventive Medicine, King Abdullah International Medical Research Center, Jeddah, Saudi Arabia, King Saud bin Abdulaziz University for Health Sciences, Western Region, Jeddah, Saudi Arabia
[4]MNS, MSc, PhD, Department of Primary Health Care \Community & Preventive Medicine, King Abdullah International Medical Research Center, Jeddah, Saudi Arabia, King Saud bin Abdulaziz University for Health Sciences, Western Region, Jeddah, Saudi Arabia.
[5]MBBS, MPH, Directorate of Public Health, Jeddah, Saudi Arabia

Citation
Ahmed Ghazi Kamal, Badr A Aljasir, Hani S Al-mugati, Amina Bargawi, Hassan Bin Usman. Health related quality of life for geriatrics patients with common chronic diseases among National Guard Population, Jeddah, Saudi Arabia 2018-2019. *Medical Science*, 2020, 24(101), 365-375

General Note

Article is recommended to print as color digital version in recycled paper.

discovery

ABSTRACT

Background: Chronic diseases can have a profound impact on the health and quality of life of elder, not to mention the financial burden that is often associated with long-term illness. But specialists in gerontology and the emerging field of anti-aging medicine are quick to point out that while the risk of disease and disability undoubtedly can increase with advancing years, poor health is not an inevitable consequence of aging. According to the Centers for Disease Control (CDC) a lot of the sickness, disability, and even death associated with chronic disease can be avoided through preventive measures older population is expected to be increased in Arab countries including Saudi Arabia in coming decades. On the contrary, Arab countries are not paying attention to this increasing number of elderly people and most of the time; family is responsible for the increased demand of care for the elderly people. *Aim of the study:* To assess the burden of chronic diseases and their effect on the quality of life of these patients and to make suggestions for improving the health conditions among geriatric patients. *Method:* This cross-sectional study was carried out on 362 elderly people with age ≥ 60 years. Quality of life was assessed using the Arabic translation of the WHO Quality of Life-Brief (WHOQOL) questionnaire. Screening of cardiac diseases and depression was done using Framingham and PHQ-2 questionnaires, respectively. *Results:* Overall, The majority of participants (68.78%) were within the age group 60-<70 years, while the female's gender was (55.52%) while Male was (44.48%) of participants. The majority of participants were married (70.99 %), more than half of the participants (58.01%) were Illiterate. The majority of our participants (63.26%) have been diagnosed with Diabetes mellitus (DM), 22.10% with Hypertension (HTN), 8.56% with Hypercholesterolemia whereas, the Cardiovascular diseases (CVD) and Depression were distributed by only 3.04%. *Conclusion:* Many existing interventions for older adults are simply research-based with limited generalizability; as such, further work in this area is warranted. It seems difficult to get a coherent view of the relationship between HRQoL and chronic disease when the conditions are varying as well as the ethnic and cultural background. The estimation of the relative impact of chronic diseases on HRQoL is necessary to better plan and distribution resources for research, training and health care, to further promote living well with chronic diseases.

Keywords: Quality of Life, Geriatrics, Common Chronic Diseases in older.

1. INTRODUCTION

Management of the rising prevalence of long-term disorders is the main challenge facing governments and health-care systems worldwide (Barnett *et al.*, (2012). Quality of life is outlined by personal feelings, details, outlook, and every day experiences how happy and positive one feels, however snug and secure, however productive and desired, however healthy and free a person considers themselves, etc. Professionals in aging should look for to assess the quality of life through the determination of individual that means related to varied components of quality of life, as best as attainable. (Bakarand Aşılar, 2015). Positive outlook and quality of life in older adults may not always mean an individual is healthy mentally or physically, although positive outlook and presence of hope often encourages improved outcomes (Verdugo *et al*., 2005).

Quality of life (QOL) is the general well-being, as defined by the WHO, of individuals and societies, outlining positive and negative features of life. It observes life satisfaction, including everything from physical health, environmental, social features to religious beliefs (World Health Organization, 2016). Multi morbidity becomes more and more common with age and is related to high mortality. The foremost underprivileged individuals pay double as a few years in poor health before they die than do the most affluent we want to primary treatment database to look at the distribution of aged individuals in reference to age and socioeconomic deprivation we need to primary medical care electronic database to examine the distribution of aged people in relation to age and socioeconomic deprivation (Karlsson *et al.,* 2013).

Quality of life (QOL) is an overarching term for the quality of the various domains in life. It is a standard level that consists of the expectations of an individual or society for a good life. These expectations are guided by the values, goals and socio-cultural context in which an individual lives. It is a subjective, multidimensional concept that defines a standard level for emotional, physical, material and social well-being. It serves as a reference against which an individual or society can measure the different domains of one's own life. The extent, to which one's own life coincides with this desired standard level, put differently, the degree to which these domains give satisfaction and as such contribute to one's subjective well-being, is called life satisfaction (Lee *et al*., 2002).

Aging is related to progressive decline in physical, cognitive, and psychosocial functioning. Because of fast increase in up quality of life and medical aid, the life span redoubled well and ageing was about jointly of the highest public ill health we tend to faced (Cutler and Mattson, 2006). In Saudi Arabia the prevalence of chronic diseases was increasing, i.e., 31-34.5% elderly patients (age ≥

55) suffered from one or two chronic diseases, respectively, hypertension being the most common chronic condition (Saquib *et al.,* 2017), 25% were either hypertensive or diabetic and some studies reported that 49.9% of elderly people are suffering from mild, moderate or severe depression (Memish *et al.,* 2014). The prevalence of chronic diseases among aged individuals (≥ sixty five years) was some 70 %, and regarding one-third of the older adults suffers from co-morbidity (Barnett *et al.,* 2012). while in multi-morbid, presence of quite one chronic malady, patients the prevalence varies from 35–65% in patients aged 60–69 years to 80–99% in octogenarians and is anticipated to perpetually increase within the close to future (Marengoni *et al.,* 2011 and Barnett *et al.,* 2012).

Saudi Arabia has been experiencing a slow however steady amendment in its human ecology with a bigger proportion of old individuals (i.e. 65+ years) within the distribution, because of a number of factors like decreasing fertility and infant-mortality rates additionally because the availability of free, modern healthcare for its citizens. Old individuals were solely three of the Saudi population in 2010; in distinction, they're going to be nearly twentieth by 2050 (Chen and Chen, 2017). According to senany 2016 the Saudi Arabia, aged people increased to 7% in near future (Senany and Saif, 2016). A growing healthcare burden on social and economic burden on both patients and their caregivers was developed (Marengoni et al., 2011). The number of age related chronic diseases is associated with increased use of health care facilities adverse events and hospitalization (Gijsen et al., 2001; Mehr et al. 2019).

Research Problem
- The risk of having chronic diseases rises as the proportion of elderly people increases. Chronic diseases cause medical, social and psychological problems that limit the activities of elderly people in the community.
- The lack of baseline information on the prevalence of the chronic disease in this elderly.
- The proportion of the population aged sixty and over, is additionally growing every year. By the year 2025, the globe can host 1.2 billion folks aged sixty and over and rising to 1.9 billion in 2050. In Saudi Arabia, the aged account for 3.5% of the overall population.

The aim of the study
To assess the burden of chronic diseases and their impact on HRQOL of those patients and to form suggestions for rising the health conditions among the geriatric patients in National Guard Jeddah, Saudi Arabia

Objectives
To assessment the prevalence of chronic diseases and connected effects in quality of life (HRQoL) for geriatric patients

2. MATERIALS AND METHODS
Research Design
This cross-sectional study was conducted on 362 aged ≥ 60 and had one in all chronic diseases like DM, HTN, CVD, symptom and depression. Their age were ≥ sixty years and randomly selected from January 2018 to January 2019 from outpatient clinics. 362 elderly people were enrolled to the study with 100% response rate.

Setting
This study conducted in outpatient specialized clinics in National Guard Health Care Facility, city city, KSA
King Abdullah International Medical Research Center Ethics and Scientific Committee officially approved this research (IRB: RJ18\064\J). Also, informed consent was obtained from each individual who participated in the study.

Sampling technique
We adopted systematic sampling technique employing a lottery methodology, that supported choosing one patient from the primary 5 older patients coming into the PHCC on a daily basis, the remainder of the respondents were elite victimization systematic sampling technique with a sampling interval of 3.

Sample size
Sample size 362 older subjects. Randomly selected from Jan 2018 to January 2019 from outpatient specialized poly clinics in National Guard Health Care Facility, Jeddah city, KSA.

Sample size was calculated kind the equation, n=Z2 (1-α) p (1-p)/d2. Supported previous study in territorial reserve hospital in Riyadh (12), the calculable prevalence of combined chronic diseases (i.e. DM, HTN and vessel disease) was sixty two. Considering a confidence interval level of ninety fifth, Z= 1.96, p=0.62, d=0.05, (1-α) = 0.95 and Z (1-α)=1.96. 362 older patients were needed to participate during this study (GPower 301 http:www.psycho.uni- duesseldorf.de)

Inclusion and exclusion

Patients who had one of the above mentioned diseases were included in study. Exclusion criteria including individuals visiting emergency care for secondary objectives, cardiac patients excluded from Framingham assessment tool and depressive patients excluded from PHQ-2, as these two are just the screening tool, and other cognitive disorders that had no ability to answer the questions and took part in the interview.

Data collection tools

Quality of life in elderly population, health-related functioning in all domains of health, was determined by Arabic translation of Persian self-reported version of WHO of Life-Brief (WHOQOL) questionnaire (The WHOQOL group, 1998) and Khaje-Bishak *et al.*, (2014) which was consisted of 26 questions. The first section was two questions about the Overall Quality of Life (OQOL) and Overall Health Status (OHS). The next 24 questions constituted four domains of health including physical (7 items), psychological (6 items), social (3 items) and environmental (8 items). Scoring and calculation of each of the four domains in the questionaire was performed as mentioned previously (WHOQOL User Manual, 1998); Khaje-Bishak *et al.*, 2014). The values of QoL scores were categorized as ≤ 45= poor or bad QoL; score < 45–65= moderate QoL and > 65= relatively high QoL (BaniIssa, (2011).

All patients, except CVD patients, were subjected to Framingham assessment screening questionnaire to estimate person's 10-years risk for developing chronic cardiac disease (CHD) (Anderson *et al.*, 1991) ; Expert Panel on Detection, Evaluation, and Treatment of High Blood Cholesterol in Adults, (2001). It mainly based on calculating patient's age, total cholesterol concentration, high-density lipoprotein cholesterol concentration, SBP, DM and smoking. Three levels of risk were defined: <10% (low risk), 10% to 20% (intermediate risk) and >20% (high risk) and were considered within a broader framework of risk assessment of CHD presence as well as its involved factors (Wilson et al., 1998).

Patients Health Questionaire-2 (PHQ-2) was also used for screening of depression in all patients except those who already had depression. PHQ-2 scores ranged from 0 to 6, patients with scores ≥ 3 were considered susceptible for depressive disorders and must be fatherly evaluated with the higher PHQ-9 version (Kroenke et al., 2003).

Data collection method

The receptionist were trained/and informed to send every third elderly patient to the researcher for interview and assessment before going to the desired clinic.

Statistical analysis

Results were expressed as mean±SD or number (%). Test of normality, Kolmogorov-Smirnov, was used to measure the distribution of data. Accordingly, data are normally distributed, so comparison between mean values of QOL in different diseased groups was performed using one way ANOVA, Independent t-test and Pearson correlation by SPSS V22

Pilot study/pretesting

An exploratory sample was drawn and the stability of each was calculated reliability target value were 0.8 pilot study conducted on 10% of sample size; and modification made according to the pilot results. For example, Arabic translation of Persian self-reported version of WHO of Life-Brief (WHOQOL)

Ethical Consideration

- King Abdullah International Medical Research Center Ethics and Scientific Committee officially approved this research (IRB: RJ18\064\J). Also, informed consent was obtained from each individual who participated in the study.
- Individual verbal consent from all participants before data collection.
- Acknowledgments of all supervisors, advisors, helpers, facilitators and participants. Relevance & expectations
- All collected data will be kept confidential.

3. RESULTS

Distribution of Socio-demographic data in study group

Table (1) showed that the majority of participants (68.78%) were within the age group 60-<70 years, while the age group 70-80 year was represented 21.82% by the participants, whereas, only 9.39% of participants were within the age group >80 years. The age Range was 60-106 years and the age Mean±SD was 67.85±7.468. The Female's gender was (55.52%) while Male were (44.48%) of participants. The majority of participants were married (70.99 %), while the widowed were (25.14%), the divorced were (3.04 %) and the singles were only (0.83%). More than half of the participants (58.01%) were Illiterate, while, the level of education primary school was constituted (29.01%), and secondary school (10.50%), high school (1.66%) and University education were constituted only (0.83%). The majority of our participants (63.26%) have been diagnosed with Diabetes mellitus (DM), 22.10% with Hypertension (HTN), and 8.56% with Hypercholesterolemia whereas; the cardiovascular diseases (CVD) and Depression were distributed by only 3.04%.

Table 1 The distribution of Socio-demographic data in study group (n=362)

	N	%
Age		
60->70	249	68.78
70-80	79	21.82
>80	34	9.39
Range	60-106	
Mean±SD	67.85±7.468	
Gender		
Male	161	44.48
Female	201	55.52
Marital Status		
Single	3	0.83
Married	257	70.99
Widow	91	25.14
Divorced	11	3.04
Education		
Illiterate	210	58.01
Primary school	105	29.01
Secondary school	38	10.50
High school	6	1.66
University	3	0.83
Type of disease		
HTN	80	22.10
DM	229	63.26
CVD	11	3.04
Hypercholesterolemia	31	8.56
Depression	11	3.04

In our study, in Table (2) the majority of the participants those who did Framingham risk score classified as an intermediate risk with constitutes of 56.70% followed by high risk with constitutes of 43% while Ranged from 8 to 28 and Mean ±SD (18.82±3.51). In PHQ-2 the majority of the participants those who did PHQ-2 and were above 3 scores (positive) constituted 73.20% and the rest of them were below 3 scores (negative) constitutes 26.80% while the Ranged from 0 to 6 and Mean± SD (3.43±1.52).

Among majority of participants Environmental health domain was the highest domain and was ranged from 12.50 to 96.88 and Mean ±SD (60.62±13.77) followed by Psychological health domain was Ranged from 4.17 to 112.50 and Mean± SD (54.30±16.60) then Social relationships domain was Ranged from 0 to 100 and Mean± SD (48.87±19.63) and finally Physical health domain was from 3.57 to 92.86 and Mean± SD (41.92±17.39)

Table 2 Framingham risk and WHOQOL-BREF four domains classified according to incidence of QOL .

	N	%	Range	Mean±SD
Framingham risk				
Low risk	1	0.30	8-28	18.82±3.51
Intermediate risk	199	56.70		
High risk	151	43.00		
PHQ-2				
Negative	94	26.80	0-6	3.43±1.52
Positive	257	73.20		
QOL				
Physical health			3.57-92.86	41.92±17.39
Psychological health			4.17-112.50	54.30±16.60
Environmental health			12.50-96.88	60.62±13.77
Social relationships			0-100	48.87±19.63
Total QOL			7.74-94.08	51.43±13.75

The relation between Framingham and Socio Demographic data

Table (3) show that there is a significant relation between Framingham score and age where p-value <0.001 and F= 53.271. There is no significant relation between Framingham score and gender where T=0.750 and p-value=0.454. There is a significant relation between Framingham score and marital status where F=3.217 and p-value=0.023 Mean±SD (19.769±3.396) flowed by divorced Mean±SD (19.273±4.798). There is no significant relations between Framingham score and level of education where F=1.368 and p-value and there was a significant relation between Framingham score and type of disease where F=2.787 and p-value=0.026.

Table 3 The relation between Framingham and Socio Demographic data (age, Gender, Marital status, Level of education, Type of disease

Items		No	Framingham score			ANOVA or T-test	
			Mean	±	SD	F or T	P-value
Age	60-70	246	17.707	±	3.118	53.271[f]	<0.001*
	70-80	73	20.937	±	3.232		
	>80	32	22.059	±	2.510		
Gender	Male	153	18.975	±	3.654	0.750[t]	0.454
	Female	198	18.697	±	3.399		
Marital status	Single	3	18.000	±	3.000	3.217[f]	0.023*
	Married	248	18.475	±	3.452		
	Widow	89	19.769	±	3.396		
	Divorced	11	19.273	±	4.798		
Level of education	illiterate	203	18.943	±	3.677	1.368[f]	0.245
	Primary school	102	18.800	±	3.274		
	Secondary school	37	18.000	±	2.895		
	High school	6	21.000	±	5.060		
	University	3	17.000	±	2.000		
Type of disease	HTN	80	19.600	±	3.787	2.787[f]	0.026*
	DM	229	18.668	±	3.317		
	Hypercholesterolemia	31	19.226	±	4.031		
	Depression	11	16.636	±	4.056		

F: test value for ANOVA test, t: test value for T-test, * significant at P-value less than 0.05

Table (4) Showed that there is a significant relation between PHQ2-score and age where F=9.273 and p-value <0.001. There is a significant relation between PHQ2- score and gender where T=- 4.085 and p-value <0.001 by Mean ± SD (3.068 ±1.586) in male but female (3.711±1.406). There is a significant relation between PHQ2-score and marital status (Increase in Widow) where F=3.563 and p-value=0.014 by Mean ± SD (3.835 ±1.408) flowed by Married Mean±SD (3.311±1.550). There is a significant relation between PHQ2- score and level of education (increase in illiterate school) where F=3.180 and P-value=0.014 by Mean ± SD (3.590 ±1.501) and secondary school by Mean ± SD (3.526 ± 1.606) and there is no significant relation between PHQ2-score and type of disease where F=0.223 and p-value=0.920

Table 4 The relation between the patient health questionnaire-2 (PHQ2) –Score and Socio Demographic data

Items		No	PHQ2.score			ANOVA or T-test	
			Mean	±	SD	F or T	P-value
Age	60-70	244	3.317	±	1.503	9.273 [f]	<0.001*
	70-80	74	3.316	±	1.401		
	>80	33	4.471	±	1.562		
Gender	Male	154	3.068	±	1.586	- 4.085 [t]	<0.001*
	Female	197	3.711	±	1.406		
Marital status	Single	3	2.333	±	2.309	3.563 [f]	0.014*
	Married	250	3.311	±	1.550		
	Widow	88	3.835	±	1.408		
	Divorced	10	3.000	±	0.775		
Level of education	Illiterate	200	3.590	±	1.501	3.180 [f]	0.014*
	Primary school	105	3.143	±	1.464		
	Secondary school	38	3.526	±	1.606		
	High school	5	3.000	±	1.673		
	University	3	1.333	±	1.155		
Type of disease	HTN	244	3.488	±	1.450	0.233 [f]	0.920
	DM	74	3.389	±	1.606		
	CVD	33	3.545	±	1.864		
	Hypercholesterolemia	154	3.581	±	1.057		

F: test value for ANOVA test, t: test value for T-test, * significant at P-value less than 0.05

Table (5) Show that there is a significant negative relation between QOL and age (increase in 60-70 years) where F=15.326 and p-value <0.001 by Mean±SD (53.728±12.943). There is a significant relation between QOL and gender (Increase in male than female) where F=3.018 and p-value 0.003 by Mean±SD (53.839 ±14.151) in male but female (49.498±13.141). There is a significant relation between QOL and marital status (Increase in married) where F=3.970 and p-value=0.014 Mean±SD (52.976 ±13.390) flowed by single Mean±SD (52.480±15.525). There is a significant positive relation between QOL and level of education (increase in High school and University). Where F=7.766 and p-value <0.001 by Mean±SD (74.361±14.525) and University Mean ± SD (69.568±1.548) and that no significant relation between QOL and type of disease F=1.991 and p-value=0.095.

Table 5 The relation between the Quality of life (QOL) and Socio Demographic data

Items		No	Final QOL			ANOVA or T-test	
			Mean	±	SD	F or T	P-value
Age	60-70	249	53.728	±	12.943	15.326 [f]	<0.001*
	70-80	79	48.457	±	13.271		
	>80	34	41.494	±	15.186		
Gender	Male	161	53.839	±	14.151	3.018 [t]	0.003*
	Female	201	49.498	±	13.141		

discovery

Marital status	Single	3	52.480	±	15.525	3.970 [f]	0.008*
	Married	257	52.976	±	13.390		
	Widow	91	47.438	±	14.487		
	Divorced	11	47.991	±	8.937		
Level of education	Illiterate	210	49.442	±	13.725	7.766 [f]	<0.001*
	Primary school	105	52.414	±	12.833		
	Secondary school	38	54.635	±	11.907		
	High school	6	74.361	±	14.525		
	University	3	69.568	±	1.548		
Type of disease	HTN	80	50.921	±	12.457	1.991 [f]	0.095
	DM	229	52.598	±	14.274		
	CVD	11	45.208	±	15.300		
	Hypercholesterolemia	31	48.699	±	11.607		
	Depression	11	44.690	±	12.960		

F: test value for ANOVA test, t: test value for T-test, * significant at P-value less than 0.05

Table (6) Show that there is a significant negative correlation between Framingham score and (Physical health, Psychological health, Environmental health, Social relationships and Total Qol) were all p-values <0.001. And there is a significant positive correlation between Framingham score and PHQ2. Score were r= 0.293 and p-value <0.001. Framingham score and WHOQOL-BREF and that presented significant difference were (p-value <0.001).

Table 6 The correlation between the Framingham score and WHOQOL-BREF (physical, psychological, environmental, health and social relation, QOL, PHQ2-score

	Framingham score	
	r	P-value
Physical health	-0.310	<0.001*
Psychological health	-0.344	<0.001*
Environmental health	-0.230	<0.001*
Social relationships	-0.311	<0.001*
QOL	-0.371	<0.001*
PHQ2.score	0.293	<0.001*

.

4. DISCUSSION

Due to the massive decline in all physical and clinical signs of elderly people, they need special attention and care services to maintain their QoL levels and health status. Studying QoL in the elderly is important not only for them but also for their caregivers and provides useful information for health provider in order to effectively and efficiently serve the elderly population. At the same time, chronic diseases often require prolonged periods of treatment and place a significant demand on state-funded health care services (Almeida et al., 1998). Elderly population need especially care services to maintain a high level of quality of life and health status (Khaje-Bishak *et al.*, 2014). This is higher when chronic conditions are not properly controlled. Such situations lead to incapacity and limit the independence and Qol of elderly individuals (Ramos, 2003 and Brasil, 2007).

The aim of the study is to assess the burden of chronic diseases and its result on the quality of life of these patients and to form suggestions for up the health conditions among geriatric patients. Older individuals were listed 362 concerning all the participants were enrolled with 100% response rate, while female In our study the bulk of were (201) while the male was (161) of the participant , In our study, the bulk of participant were married (257). The study additionally showed the prevalence of diseases and their varieties show the majority of our participants have DM constituted (63.26%) during this study, QoL in older individuals suffered from one among these chronic diseases, DM, HTN, CVD, Hypercholesterolemia and depression was assessed. The results of this study disclosed that totally different pathologic teams had moderate levels of QoL that followed by high blood pressure (HTN) constituted

(22.10 %) whereas symptom was constituted (8.56 %) however the vessel diseases (CVD) and Depression was constituted (3.04%) (Table 1).

In another result mean values and range of Framingham risk and WHOQOL-BREF four domains classified in keeping with the incidence of QOL. Within the Framingham risk the bulk of participant Framingham risk in the intermediate were constituted (56.70%) followed by high risk were constitutes (43.00%) whereas varying 8-28 and Mean ±SD 18.82±3.51. however, PHQ-2 the bulk of our study in positive were constituted 73.20%, however, negative constitutes 26.80% whereas the very 0-6 and Mean ±SD 3.43±1.52. This distinction might be attributed to the influence of various socioeconomic and cultural factors. Several studies have reported the effects of various factors including culture, Elderly women living in the city and rural areas, older women who were similar between elderly in both urban and rural areas and the amount of high quality. Other possibly contributory lifestyle factors include stress, diet, exercise, disease, and medication. In summary, the genetic influences on aging may be highly overrated, with lifestyle choices exerting far more important effects on physical aging.

Many studies reported that there was a negative association between increased depression severity and poorer QoL in elderly patients and this association was found to be stable over time (Bowling, 2005; Wilkinson and Izmeth, 2012; Wilson et al., 2008). While QOL Show that majority of the participants have high Environmental health were the Range (12.50-96.88) and Mean ±SD 60.62±13.77 and this could be due to how safe are they feel in KSA in their daily life and how satisfied are they with the condition of their living place. The second followed by Psychological health were Range (4.17-112.50) and Mean ±SD (54.30±16.60) then Social relationships were Range (0-100) and Mean ±SD 48.87±19.63 and the least domain was the physical health which was Range 3.57-92.86 and Mean±SD 41.92±17.39 and this could be due to decrease of their energy and their ability to perform daily living activities, moreover their need to the medical treatment to function their daily life and also the shortage in providing seniors health clubs which could help and encourage them to increase their physical life. While the total QOL were Ranged from 7.74 to 94.08 and Mean ±SD51.43±13.75 (Table 2).

According to the relation between the relation between Framingham and Socio Demographic data (age, Gender, Marital status, Level of education, Type of disease) there is a significant relation between Framingham score and age where p-value <0.001 and F= 53.271. There is no significant relation between Framingham score and gender where T=0.750 and p-value=0.454. There is a significant relation between Framingham score and marital status where F=3.217 and p-value=0.023 Mean±SD (19.769±3.396) flowed by divorced Mean±SD (19.273±4.798). There is no significant relations between Framingham score and level of education where F=1.368 and p-value and there was a significant relation between Framingham score and type of disease where F=2.787 and p-value=0.026 (Table 3). The relation between the patient health questionnaire-2 (PHQ2) –Score and Socio Demographic dataShow that there is a significant relation between PHQ2-score and age where F=9.273 and p-value <0.001. There is a significant relation between PHQ2- score and gender where T=- 4.085 and p-value <0.001 by Mean ± SD (3.068 ±1.586) in male but female (3.711±1.406). There is a significant relation between PHQ2-score and marital status (Increase in Widow) where F=3.563 and p-value=0.014 by Mean ± SD (3.835 ±1.408) flowed by Married Mean±SD (3.311±1.550). There is a significant relation between PHQ2-score and level of education (increase in illiterate school) where F=3.180 and P-value=0.014 by Mean ± SD (3.590 ±1.501) and secondary school by Mean ± SD (3.526 ± 1.606) and there is no significant relation between PHQ2-score and type of disease where F=0.223 and p-value=0.920 (table 4).

In this study, QoL in elderly people suffered from one of these chronic diseases, DM, HTN, CVD, Hypercholesterolemia, and depression was assessed. The results of this study revealed that different diseased groups had moderate levels of QoL which ranged from 44.69% as in depressive to 52.20% as in DM patients and there was no statistical difference between QOL and types of disease F=1.991 and p-value=0.095 and also Show that there is a significant negative relation between QOL and age (increase in 60-70 years) where F=15.326 and p-value <0.001 by Mean±SD (53.728±12.943). There is a significant relation between QOL and gender (Increase in male than female) females this could be due to the fact that males are more active and have different chances to work and contact to others than females in KSA where t=3.018 and p-value 0.003 by Mean±SD (53.839 ±14.151) in male but female (49.498±13.141). There is a significant relation between QOL and marital status (Increase in married) where F=3.970 and p-value=0.014 Mean±SD (52.976 ±13.390) flowed by single Mean±SD (52.480±15.525). That is significant positive relations between QOL and level of education (increase in High school and University) where F=7.766 and p-value <0.001 by Mean±SD (74.361±14.525) and University Mean ± SD (69.568±1.548) (table 5).

This may be due to the fact that Qol isn't depended only on chronic illness but also on other factors such as type of chronic disease, age of patients (Franzen et al., 2007). Another result was Show that is a significant negative correlation between Framingham score and (Physical health, Psychological health, Environmental health, Social relationships, and Total Qol) were all p-

values <0.001. That is a significant positive correlation between Framingham score and PHQ2.score were r= 0.293 and p-value < 0.001(Table 6).

5. CONCLUSION

This study was the first to evaluate HRQoL among people with one of these chronic diseases (DM, HTN, CVD, Hypercholesterolemia and Depression) in Arab Gulf region. Many existing interventions for older adults are merely analysis primarily based on restricted generalizability; as such, further work in this area is warranted. It looks troublesome to urge a coherent read of the link between HRQoL and chronic malady once the conditions are varied furthermore because of the ethnic and cultural background. In Saudi Arabia the prevalence of chronic diseases was increasing, i.e., 31-34.5% elderly patients (age ≥ 55) suffered from one or two chronic diseases, respectively, hypertension being the most common chronic condition 25% were either hypertensive or diabetic and some studies reported that 49.9% of elderly people are suffering from mild, moderate or severe depression. The prevalence of chronic diseases among aged individuals (≥ sixty-five years) was some 70 %, and regarding one-third of the older adults suffers from co-morbidity. While in multi-morbid, presence of quite one chronic malady, patients the prevalence varies from 35–65% in patients aged 60–69 years to 80–99% in octogenarians and is anticipated to perpetually increase within the close to future. The estimation of the relative impact of chronic diseases on HRQoL is important to raised set up and distribution resources for analysis, coaching and health care, to any promote living well with chronic diseases.

The results found to enable to conclude that the perception of the QoL is worse median among older. Moreover, the presences of chronic pain in the same chronic, a lot of diseases, and high intensity of pain have negatively influenced the QoL of the older. Consequently, we recommend to collaboration among completely different sciences to manufacture higher treatment outcomes for individuals living with chronic malady, particularly those that are in greatest want like older adults. And provide a healthy environments and programs for them such as seniors clubs. moreover provide a privet care such a specialized sports couching and enhance the healthy life style plus health awareness and screening, this could decrease the burden of the chronic diseases because of This finding in this study indicates that chronic conditions among older individuals are prevailing and warrant special attention to cut back diseases burden and align health care services to cater the holistic elderly patients' want.

Conflicts of Interest: The authors declare no conflict of interest.

REFERENCE

1. Al Senany, S., & Al Saif, A. Assessment of physical health status and quality of life among Saudi older adults. *Journal of physical therapy science* .2015; *27*(6), 1691-1695.

2. Almeida MF, Barata RB, Montero CV, Silva ZP. Prevalência de doençascrônicasautoreferidas e utilização dos serviços de saúde, PNAD/1998, Brasil. Ciênce Saúde Coletiva 2002;7(4):743–56.

3. Anderson KM, Odell PM, Wilson PW, Kannel WB: Cardiovascular diseas a risk profiles. Am Heart J 1991; 121: 293–8.

4. Bakar N and Aşılar RH: Factors Affecting Depression and Quality of Life in the Elderly. J Gerontol Geriatr Res. 2015, 4(5): 1-8.

5. Banilssa W: Evaluation of the health-related quality of life of Emirati people with diabetes: integration of socio demographic and disease-related variables. EMHJ 2011, 17(11): 825-830.

6. Barnett, K., Mercer, S. W., Norbury, M., Watt, G., Wyke, S., & Guthrie, B. Epidemiology of multimorbidity and implications for health care, research, and medical education: a cross-sectional study. *The Lancet*. 2012; *380*(9836), 37-43.

7. Bowling, A. Measuring health outcomes from the patient's perspective. *Handbook of Health Research Methods*. 2005; 428-444.

8. Chen, H. M., & Chen, C. M. Factors associated with quality of life among older adults with chronic disease in Taiwan. *International Journal of Gerontology*. 2017; *11*(1), 12-15.

9. Cutler, R. G., & Mattson, M. P. Introduction: The adversities of aging. *Ageing research reviews*. 2006; *5*(3), 221-238.

10. Expert Panel on Detection, Evaluation, and Treatment of High Blood Cholesterol in Adults. Executive summary of the third report of the National Cholesterol Education Program (NCEP) expert panel on Detection, Evaluation, and Treatment of High Blood Cholesterol in Adults (Adult Treatment Panel III). JAMA 2001; 285: 2486–97.

11. Franzén, K., Saveman, B. I., & Blomqvist, K. Predictors for health related quality of life in persons 65 years or older with chronic heart failure. *European Journal of Cardiovascular Nursing*. 2007; *6*(2), 112-120.

discovery

12. Gijsen, R., Hoeymans, N., Schellevis, F. G., Ruwaard, D., Satariano, W. A., & van den Bos, G. A. Causes and consequences of comorbidity: a review. *Journal of clinical epidemiology*. 2001; *54*(7), 661-674.

13. Karlsson, M. K., Magnusson, H., von Schewelov, T., & Rosengren, B. E. Prevention of falls in the elderly—a review. *Osteoporosis international*. 2013; *24*(3), 747-762.

14. Khaje-Bishak, Y., Payahoo, L., Pourghasem, B., &Jafarabadi, M. A. Assessing the quality of life in elderly people and related factors in Tabriz, Iran. *Journal of caring sciences*.2014; *3*(4), 257.

15. Kotler, P., Roberto, N., & Lee, N. Improving the quality of life. *Social Marketing, Second Edition, Sage Publications, London*. 2002; 5:221–238.

16. Kroenke K, Spitzer RL, Williams JB. The patient health questionnaire-2: validity of a two item depression screener. Med Care. 2003; 41:1284-1292.

17. Marengoni, A., Angleman, S., Melis, R., Mangialasche, F., Karp, A., Garmen, A., & Fratiglioni, L. Aging with multimorbidity: a systematic review of the literature. *Ageing research reviews*. 2011; *10*(4), 430-439.

18. Mehr MA, Kalhorpour H, Shirani V, SeyedNezhad M, Kord A, Zainivand M. Study of quality of life from the perspective of parents and children with thalassemia major. *Medical Science*, 2019, 23(97), 333-338

19. Memish, Z. A., Jaber, S., Mokdad, A. H., AlMazroa, M. A., Murray, C. J., Al Rabeeah, A. A.,& Saudi Burden of Disease Collaborators. Peer reviewed: Burden of disease, injuries, and risk factors in the Kingdom of Saudi Arabia, 1990–2010. *Preventing chronic disease*. 2014; *11*.

20. Ramos LR. Fatores determinants doenvelhecimentosaud ávelemidososresidentesemcentrourbano. Projeto Epidoso, São Paulo. Cad Saúde Pública 2003; 19(3):793–8.

21. Ratanakul, P. Reflections on aging in Buddhist Thailand. *Journal of Religion, Spirituality & Aging*. 2013; *25*(1), 12-19.

22. Saquib, N., Saquib, J., Alhadlag, A., Albakour, M. A., Aljumah, B., Sughayyir, M., & Al-Mazrou, A. Chronic disease prevalence among elderly Saudi men. *International journal of health sciences*. 2017; *11*(5), 11.

23. Verdugo, M. A., Schalock, R. L., Keith, K. D., & Stancliffe, R. J. Quality of life and its measurement: Important principles and guidelines. *Journal of intellectual disability research*. 2005; *49*(10), 707-717.

24. Whoqol Group. Development of the World Health Organization WHOQOL-BREF quality of life assessment. *Psychological medicine*. 1998; *28*(3), 551-558.

25. WHOQOL Group. WHOQOL user manual. *World Health Organization. Geneva*. ; 1998.

26. Wilkinson P and Izmeth Z: Continuation and maintenance treatments for depression in older people. Cochrane Database Syst Rev 2012; CD006727.

27. Wilson KC, Mottram PG, Vassilas CA: Psychotherapeutic treatments for older depressed people. Cochrane Database Syst Rev 2008;CD0048

28. Wilson PW, D'Agostino RB, Levy D, Belanger AM, Silbershatz H, Kannel WB. Prediction of coronary heart disease using risk factor categories. Circulation 1998; 97:1837–47.

29. World Health Organization. *WHO Technical meeting on piloting RSV surveillance based on the Global Influenza Surveillance and Response System* (No. WHO/OHE/PED/GIP/2016;6). World Health Organization.