ISSN: 0975-833X

Available online at http://www.journalcra.com

International Journal of Current Research
Vol. 8, Issue, 09, pp.39051-39055, September, 2016

INTERNATIONAL JOURNAL OF CURRENT RESEARCH

RESEARCH ARTICLE

SELF-REPORTED CHRONIC DISEASES AND HEALTH STATUS OF SAUDI ELDERLY: RESULTS FROM A COMMUNITY HEALTH SURVEY IN RIYADH

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ARTICLE INFO

Article History:
Received 22nd June, 2016
Received in revised form
05th July, 2016
Accepted 10th August, 2016
Published online 30th September, 2016

Key words:

Saudi Arabia,
Elderly,
Chronic Disease,
Self-report.

ABSTRACT

Introduction: Chronic diseases are among the commonest health problems that affect an individual's quality of life and have become a major problem that faces many of the world population, especially in the developing countries. Researchers have found that the increase in age and suffering from chronic conditions are closely related. In Saudi Arabia, the rapid population growth, the growing aging segment, and the prevalence of non-communicable diseases (NCDs) increase the needs for healthcare services.

Aims: To assess the prevalence of NCDs among Saudi elderlies living in Riyadh city, Saudi Arabia.

Settings and Design: This Design for this study was a cross sectional study. Recruitment and data collection lasted from January to June, 2016 and the study population included 1182 people who were Saudi citizens, >60 years old and live in Riyadh City.

Statistical analysis used: Descriptive variables were analyzed and reported as numbers and percentages using SPSS v.21.

Results: Of the 1182 participants, 637 (53.9%) were female, 505 (42.7%) falling in a category from 60-66 years old, and 868 (73.4%) were classified as obese or overweight. Majority of the population were married (63.6%) and uneducated (36.3%). 1090 of the participants (92.2%) had one chronic disease or more. Diabetes was the most common self-reported chronic diseases (51.9%). Of the total population, 531 (44.9%) mentioned hypertension, 428 (36.2%) mentioned poor vision, and 400 (33.8%) mentioned dyslipidemia.

Conclusion: The findings from this study showed that self-reported chronic conditions were common among Saudi elderly, especially, diabetes, hypertension, poor vision, and dyslipidemia. The results showed that obesity is a common problem among Saudi elderly.

Citation: Alhusain, Faisal Ahmed, M., Alotabi, Ibrahim MuthyibI, Almegbel, FaisalYousef I., Alhasan, Ahmed Hassan, A. and Masuadi, Emad, A. 2016. "Self-reported chronic diseases and health status of Saudi elderly: Results from a community health survey in Riyadh" *International Journal of Current Research*, 8, (09), 39051-39055.

INTRODUCTION

Chronic diseases are among the commonest health problems that affect an individual's quality of life and considered one of the most important concerns when it comes to the health care systems. Generally, there is no clear definition for chronic diseases. However, the world Health Organization (WHO) describes a chronic disease as a medical condition in which the disease is not passed from a person to another, has a slow progression pattern and lasts for a long duration.(WHO 2016)Chronic diseases are non-communicable diseases (NCDs) including cardiovascular diseases, cancers, chronic respiratory conditions and diabetes, which are stated as the four main types according to WHO.(WHO 2016)On the other side, the same thing appears to be applied on the word "elderly". It seems that the cut-off age for an individual to be called an elderly varies among different cultures and nations. (UNFPA and HelpAge, 2012) The age of 60 years is used by The United Nations (UNs) as the low margin for old age, which is a stage when functional, mental and physical capacity is declined and people

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are more prone to disease or disabilities.(UNFPA and HelpAge, 2012)Since long time, the global phenomenon of aging has been a topic of priority. In 2000, the number of people aged 60 or over outweighed the number of those who were under 5. Nowadays, elderly people represent nearly more than 11% of the total worldwide population and this is expected to reach 22% by 2050. (UNFPA and HelpAge, 2012; He *et al*., 2015) In 2013, 4.3% of the people living in Saudi Arabia are between 55 and 64 of age. This will rise up to reach 18.4% in 2050. (Karlin *et al*., 2016) Nowadays, chronic diseases have become a major problem that faces many of the world population, especially in the developing countries. (http://apps.who.int/iris/bitstream/10665/43314/1/9241563001_eng.pdf; Yusuf and Reddy, 2001) In 2001, there were about 56.5 million total reported deaths in world, 60% of which were caused by non-communicable diseases (NCDs). (Salomon *et al*., 2012)Chronic diseases were responsible, in 2010, for two out of every three deaths worldwide andthe burden of (NCDs) will increase up to 57% by 2020, compared to 46 % in 2001.(Salomon *et al*., 2012; WHO, 2016) In Saudi Arabia, the rapid population growth, the growing aging segment, and the prevalence of chronic diseases increase the needs for healthcare services.(LTD, 2014) 67000 deaths in Saudi Arabia out of 97000 (69% of the total number) were related to chronic diseases in 2002 and this has dramatically risen to 78% in 2014. (http://apps.who.int/iris/bitstream/10665/43314/1/9241563001_eng.pdf; http://www.who.int/chp/chronic_disease_report/ saudi_arabia.pdf)

Overweight and obesity were highly prevalent in all GCC countries relative to the rest of the world. 69% of the Saudi population are overweight, and in each 3 persons, there are 2 are obese (LTD, 2014). Researchers have found that the increase in age and suffering from chronic conditions are closely related (Fortin *et al*., 2005). According to the same previous study, from 10 randomly chosen elderlies, 9 had more than 1 chronic illness while 50% had more than 4 with hypertension, hyperlipidemia, and rheumatologic diseases being in the lead. In addition, 1149 elderlies out of 2873 (who were randomly sampled), were found to have at least one NCD as reported by another study. (Mwangi *et al*., 2015) Moreover, 48% of the health life years lost (Disability Adjusted Life Years – DALYs) worldwide are due to NCDs.(World Economic Forum,2011; Arabia S. Burden of Disease, 2014) The global burden of NCDs has a huge impact on the economy of many countries around the world with developing countries being affected the most. For instance, the total costs of heart disease, stroke, and diabetes were, in 2005, $18 billion in China, $11 billion in the Russian Federation, $9 billion in India, $ 2.7 billion in Brazil, $1.6 billion in UK, $1.2 billion in Pakistan, $ 0.53 billion in Canada, $0.4 billion in Nigeria and $0.1 billion in the United Republic of Tanzania. (World Economic Forum, 2011; Abegunde and Stanciole, 2006) Locally, in Saudi Arabia, the total cost of diagnosed cases of diabetes was 17 billion Riyals (27 billion Riyals if undiagnosed cases were included) in 2014. (Marwa Tuffaha, 2014) Despite the subject importance, the amount of studies and information that are in our hands about the prevalence of chronic diseases and their consequences in the area is still not sufficient. In addition, to the best of our knowledge, no studies have explored the prevalence of chronic diseases among this specific group of population, Elderlies, in the capital city of Saudi Arabia, Riyadh. Thus, the aim of our study was to describe the prevalence of common non communicable diseases (NCDs) among Saudi elderlies living in Riyadh city, Saudi Arabia.

Subjects and Methods

Study Design: Cross-sectional study.

Inclusion Criteria: Saudi citizens who were ≥60 years old and live in Riyadh City.

Exclusion Criteria: People who were not able to answer the questionnaire, and those with cognitive impairment.

Data collection: A data collection form (DCF) was used as a tool in interviewing the participants. Questions were arranged in two categories; health-related questions and demographic questions. The interview usually took 5-7 minutes.

Study period: January-June 2016.

Total interviewed: We interviewed 1182 people who met the inclusion criteria.

Statistical analysis: Descriptive variables were analyzed and reported as numbers and percentages using SPSS v.21.

RESULTS

In this study, recruitment and data collection lasted from January to June, 2016. There were 1182 participants interviewed. The socio-demographic characteristics for those participants are shown in Table 1. All of our samples were above 60 years old and majority of them falling in category from 60-66 (42.7%). The elderly in their seventies were the second most common age (23.7%) then those who were between 65 and 69 years old (20.5%). The proportion of males were almost equal to females with slightly more females 53.9% compared to 46.1% males. 38.1% of participants' BMI were classified as obese, 35.3% were overweight and 24.8% were normal with 1.9% were underweight. In the marital status, majorities were married (63.6%) while minorities were single, never married (1.1%). 52 from the participants (4.4%) were separated and 365 of them (30.9%) were widowed. Less than one fifths had diploma, bachelor, or postgrad education. Uneducated participants were the bulk in the education level categories (36.3%). When classified according to monthly family income, 54.7% of them were living in a family with income SR 5000-19999 (~ $1300-5300) while almost 25% were less than SR5000 or non. Chronic diseases were commonly reported among the respondents. The proportion of elderly who had one or more chronic diseases (92.2%) compared to elderly without any chronic diseases (7.8%). Prevalence of self-reported CDs is as presented in Table 2. The most common self-reported chronic disease was diabetes (51.9%), followed by hypertension (44.9%), poor vision (36.2%), and dyslipidemia (33.8). Back pain, osteoarthritis, osteoporosis sleeping problems, and dizziness were between 15% and 30%. Few cases mentioned breathing problems (8.6%), anemia (7.9), hypotension (6.3), or cerebrovascular accident (CVA) (2.6). almost 10% of the patients have one of

these chronic diseases (weakness of lower limb, CAD, depression, urinary incontinence, or balance problem). Of the participants, 44 cases (3.7%) mentioned other chronic diseases.

Table 1. Demographics of the Saudi cohort of elderly who answered the questionnaire

Variable	Category	N	%
Age	60 - 64	505	42.7
	65 - 69	242	20.5
	70 - 79	280	23.7
	80+	155	13.1
Gender	Male	545	46.1
	Female	637	53.9
BMI Group	Underweight	22	1.9
	Normal	293	24.8
	Overweight	417	35.3
	Obese	450	38.1
Educational Level	Uneducated	429	36.3
	Primary school	241	20.4
	Middle school	149	12.6
	High school	163	13.8
	Diploma	50	4.2
	Bachelor	97	8.2
	Postgraduate	53	4.5
Marital status	Single, never married	13	1.1
	Married	752	63.6
	Separated	52	4.4
	Widowed	365	30.9
Monthly family income	Non	81	6.9
	Less than 5000	219	18.5
	5000-9999	350	29.6
	10000-19999	297	25.1
	More than 19999	235	19.9

Table 2. Reported Chronic Conditions by the investigated cohort presented as numbers and percentages

Reported Diseases	N	%
Diabetes	613	51.9
Hypertension	531	44.9
Poor Vision	428	36.2
Dyslipidemia	399	33.8
Back Pain	331	28
Osteoarthritis	317	26.8
Osteoporosis	235	19.9
Sleeping Problems	182	15.4
Dizziness	177	15
Weakness of Lower Limbs	131	11.1
CAD	128	10.8
Depression	116	9.8
Balance Problems	115	9.7
Urinary Incontinence/Urgency	105	8.9
Breathing Problems	102	8.6
Anemia	93	7.9
Hypotension	74	6.3
Others	44	3.7
CVA	32	2.7

DISCUSSION

Based on self-reports, our study shows that most elderly people (60 years or above) in Riyadh, Saudi Arabia are either obese or overweight. In addition, Diabetes Mellitus, Hypertension, Poor vision and Dyslipidemia are the top four chronic conditions reported among this category. Diabetes Mellitus (51.9%) and Hypertension (44.9%) being the most common two conditions reported among elderlies. In regard to its validity, studies have shown that self-report of common chronic conditions among elderly people compares favorably with medical records (Espelt *et al*., 2012; Schneider *et al*., 2012; Martin *et al*., 2000). Self-reports of arthritis, lower back pain and peripheral atherosclerosis tend to be less accurate(Skinner *et al*., 2005; Simpson *et al*., 2004). As for self-reports of weight and height, people tend to over-estimated their height and under-estimate their weight (Gorber *et al*., 2007; Taylor *et al*., 2006). Accordingly, our results understate the problem of obesity among elderlies in our community. In regard to Diabetes mellitus, our results are fairly comparable with previous local data, which indicate that the prevalence of diabetes among Saudi elderly (61-80 years) in Riyadh city is 58.2% based on objective measurements (Al-Daghri *et al*., 2011). Among different age groups, elderlies (60 years and above) represent the highest percentage increase in the diagnosis of diabetes (Alhowaish, 2013). In 2012, there were 4.9% (1.4 million) of the Saudi population who were over the age of 60 years. This number will reach up to 21.8% (ten million) by 2050 (UNFPA and HelpAge, 2012). This truly makes diabetes a significant economic burden on the individual level and on the national healthcare system of Saudi Arabia. Especially since this age group is of the highest use of healthcare resources attributed to diabetes (WHO, 1997). In addition, there is a significant relationship between prevalence of hypertension and advance in age. This is due to the degenerative aging process resulting in thickening and loss of elasticity of arteries which leads to high blood pressure (Alwan *et al.,* 2014). As for the 44.9% prevalence of self-reported hypertension among Saudi elderly shown in our study, it is highly comparable to a study published in 2007, which estimates a 46.5% prevalence of hypertension among Saudis aged 60-70 years (Al-Nozha *et al.,* 2007). These are strikingly high rates in a country with free medical care and high standard medical capabilities. Saudi Arabia has one of the fastest growth rates in health spending according to Saudi Arabia government budget. During the past 5 years in Saudi Arabia, ministry of health's budget has been increasing at an annual rate of more than 6%(Statistical Book for the Saudi Minstry of Health, 2014). Diabetes costs comprise about 18% of Saudi MOH budget. $0.9 billion dollars is the Ministry of Health expenditures on diabetic patients in 2010, and upped to $2.4 billion in 2015 (Alhowaish, 2013). With improved living standards in Saudi Arabia coupled with sedentary lifestyle and over-nutrition and several other factors, the burden of obesity and diabetes will further increase (Alwan *et al.,* 2004; Al-Hazzaa, 2004). Accordingly, the proportion of public healthcare spending devoted to diabetics is conservatively expected to escalate to 18.3% by 2020 (Alhowaish, 2013). From our study and previous studies in the literatures, it is clear that chronic diseases are a challenge these days in our country, Saudi Arabia. So, it is better to take care that a problem does not happen than to have to solve the problem afterwards. Health care system in Saudi Arabia and other GCC countries should place more emphasis on chronic diseases preventive care and programs. Indeed, a nationwide plan to increase awareness, early detection and control hypertension is needed. To be most effective, chronic diseases prevention must occur in multiple sectors and across individuals' entire life spans. A comprehensive plan should include the employment of primary health care centers and awareness campaigns to target unhealthy habits and behaviors

such as sedentary lifestyle and western diets. As uncontrolled hypertension is ominous of catastrophic events such as myocardial infarction, strokes and renal failure, physician, also, should play a role in encouraging their patients to monitor their blood pressure and follow treatment (Messerli *et al*., 1931). In conclusion, the findings from this study showed that self-reported chronic conditions were common among Saudi elderly, especially, diabetes, hypertension, poor vision, and dyslipidemia. The results showed how common obesity is among Saudi elderly.

Acknowledgements

The Authors would like to thank Professor Ali Hajeer for his unwavering support, guidance and persistent help, kind words, and encouragement to keep going this research.

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