

# Overview of Health Status of Older People in Gadarif Locality Eastern Sudan 2014

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## Abstract

Most developed world countries have accepted the chronological age of 65 years as a definition of 'elderly' or older person, but like many westernized concepts, this does not adapt well to the situation in Africa. While this definition is somewhat arbitrary, it is many times associated with the age at which one can begin to receive pension benefits. At the moment, there is no United Nations standard numerical criterion, but the UN agreed cutoff is 60+ years to refer to the older population.[1] it is age of retirement in Sudan. Geriatric population in Sudan is relatively small. Yet it is important to improve the quality of health and care of this part of the population. This study attempted to bridge the information gap in health status of geriatric in Gadarif locality. The overall objective of this research is to assess the health status and factors affecting the health of elderly 65 years and above in Gadarif Locality. This research was descriptive cross-sectional study. Data were collected by cluster random sample survey covering 388 participants. SPSS version 19 was used for statistical analysis, and chi-square was used for testing the significance of the results. An ethical approval was obtained from the Institutional Review Board. The findings of the elderly survey showed that 67.78% of them were suffering from one or more chronic diseases, 48.8% of them had no problem with their vision, 82.7% had no problem with their hearing, 72.4% did not have urine incontinence, 55.4% had no depression, 55.9% had no memory problem, Chi-Square test showed presence of a significant association between suffering from disease and age, self-reflection regarding health status and gender. The health problems of Gadarif elder persons are similar in some aspects to the health problems of the old population in some other countries.

**Keywords:** Chronic Diseases; Problems Due to Senility; Life style health.

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## **1. Introduction**

Most developed world countries have accepted the chronological age of 65 years as a definition of 'elderly' or older person, but like many westernized concepts, this does not adapt well to the situation in Africa. While this definition is somewhat arbitrary, it is often associated with the age at which one can begin to receive pension benefits. At the moment, there is no United Nations standard numerical criterion, but the UN agreed cutoff is 60+ years to refer to the older population [1]. This represents the age of retirement in Sudan.

In the UK, there are 10.3 million people aged 65 and over. This is an 80 per cent increase over six decades since 1951. Over the last 60 years there has been a substantial change in the age composition of older people. In 1951, those aged 65-74 years represented 67 percent, and those aged 85 years and over made up just 4 percent of the 65 years and over population. Today, these two age groups ( 65-74 and over 85 years ) represent 51 percent and 14 percent respectively [2].

The worldwide increase in longevity has been to a large extent due to the decline in deaths from cardiovascular disease, as well as improved coverage and effectiveness of health interventions [3].

In recent years there has been an increasing international awareness of health issues relating to aging populations[4].A substantial number of studies have been conducted in different parts of the world on geriatric populations but only few of such studies have been done in developing countries [5].

In Sudan, caring for elderly people is mainly provided by the families. The extended family supports and helps its aged members in any way possible[6]. Due to increased awareness of the problems and needs of the elderly people, a number of relevant organizations have been established in this country recently. One of such organizations is the Sudanese Society for Older People Care. This organization was established in Khartoum in 1994 with the aid of Help Age International along with individual sponsors. Its goal is to help the elderly. The specific areas of interest/engagement of this organization include: geriatrics opened health days, nutrition programs for older people, support of income generation projects for older people, advocacy and awareness raising programs for older people, training of volunteers, support for old people houses and researches on the condition of older people.

In Gadarif Locality, a nursing home was established in 2010.This home, which is administered by the State Ministry of Social Affairs, accommodates at present only five elderly men.

This is a pioneer study conducted with the purpose of a better understanding of the problems of the elderly, and identifying the factors affecting their health in this part of the Sudan, as well as being a partial fulfillment of PhD degree in community nursing.

## **2. Materials and Methods**

### ***2.1. Study Design***

The design of the study is a cross-sectional (descriptive) study based on a sample of 388 elderly populations, from 24 clusters, selected through a cluster sampling procedure of 103 neighborhoods, within the six districts of Gadarif Locality

## **2.2. Study Area**

This study was conducted in Gadarif Locality, which is located in Gadarif State in Eastern Sudan. This State has an area of 75,263 km<sup>2</sup> and an estimated population of approximately 1,400,000 and four Localities (Gadarif Locality is one of these four Localities). The population of Gadarif Locality is about 330,593 living in six Districts and 103 Neighborhoods.

## **2.3. Survey Population**

All population of the age 65 years and above in Gadarif Locality were covered by the study, their number estimated to be 12019. For the purpose of this study they were divided into four age groups: (65-74) young old, (75-84) Middle-Old, (84-95) old-old, and (95 and above) elite-old. Following this age grouping, a sample of 388 was drawn from this population and interviewed. The size of the sample was calculated according to the following formula:

$$388 = 12019 / (1 + 12019 \cdot 0.04) \cdot 2$$

## **2.4. Study Instrument**

Data was collected by interview through an administered questionnaire which was fulfilled by the participant or his/her care attendant. The questionnaire included a number of relevant variables, such as:

*Background Information:* (age, sex-marital status, education, level-economic).

*The participant's General Health Condition:* (Based on his/her subjective opinion and self-assessment) including chronic illness, current treatment.

*Geriatric Review System:* (vision, hearing, memory, depression, control bladder).

Life style (information including, following special diet, smoking alcohol, and taking snuff).

Ten data collectors, who helped in conducting the survey, were 4 nurses and 6 members of the social committees of the neighborhoods. They were trained on questionnaire objectives variables, and how to administer the questionnaire, and on research ethics to consider of preserving the privacy and confidentiality of the participants. They were tested verbally before they began the survey

*Sample Technique:* The technique used was cluster random sampling. Each neighborhood was considered as a cluster, the mean of cluster in district is 5. The number of clusters estimated as following:

103\5=20.6 everybody 65+ was included, and then 4 clusters were added to the sample size. The sample was distributed among the 4 cluster from each of the 6 distract.

The survey was carried out over a month around the mid of the year 2014.

**Ethical Consideration:** An ethical approval was obtained from the Institutional Review Board at Alneelain University, and agreement of the locality popular committee. In addition and informed consent was obtained from each participant prior to the interview

**Data Analysis and Clearance:** Data was analyzed using statistical package for social sciences (SPSS) version 19 and presented in tables and graphics. Cross tabulation was done and used chi-square to test the significance. Data cleaning was done and found that 17 questionnaires had missing data, so these were replaced with other 17 participants

#### Study limitation

The study faced some obstacles and problems during implementation. These include:

- Scarcity of literature pertaining to this age group in the Sudan, due to minimal studies carried out on this subject in this country.
- Changing mood and temperament of some of the elderly hindered the completion of the questionnaire in a number of cases.
- High rate of illiteracy among the elderly also formed a difficulties during fulfilling the questionnaire
- There are also and some financial limitations

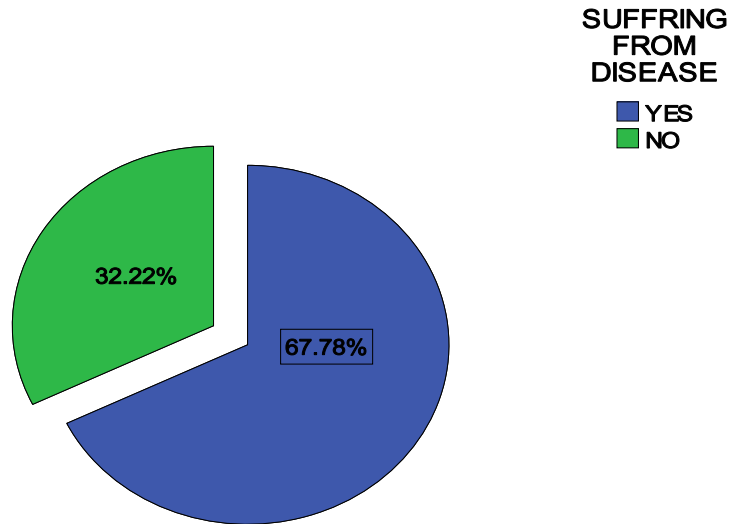
### 3. Results

As mentioned above the percentages of the elderly in the four age groups, (65-74, 75-84, 85-94, 95 +), covered by the survey were 49.5%, 29.6%, 16% and 4.9% respectively.

Regarding the gender composition, the survey showed that the males formed 52.3%, while the females formed 47.7% of those surveyed. Data on the marital status showed that 58.5% were married, 4.4% were divorced, 32.7% were widowed, and 4.4% were single.

Regarding the level of education, 50.5% of the elderly surveyed were illiterate, 26.8% could read and write, 12.4% had primary education, 9.8% had secondary education, and only 0.5% had university education.

The elderly in Gadarif had variety of occupations and sources of income. It is noted that 6.7% were employees, 38.9% retired, 12.1% farmers, 15.7% businessmen (merchants), 26.5% house wives. The sources of income include: salary for 6.7% of the elderly persons, pension for 15.5%, rented building for 6.4%, business (commerce) for 11.1%. The children formed the source of income for more than 60% of the surveyed persons.



**Figure 1:** Number of participant suffering from chronic disease previously diagnosed

It was noted that:

*Lifestyle:*

- 92.5% of the surveyed never smoked cigarettes;
- 88.7% never drank alcohols;
- 96.9% never used snuff;
- 20.6%-exercise some sort of sport;
- 30.2% had special diet.

*Physical Exercises:*

- 91% not required assistance on eating or dressing or bathing;
- 46.4% did their shopping without assistance.

*Spiritual Aspects :*

- 80.9% of the surveyed said they were always able to practice prayers and worship;
- 16.8% said they sometimes could not practice worship;
- 2.3% were unable to practice prayers and worship

The following tables depict the main results of the survey.

**Table 1:** Self-Reflection Regarding Health Status

Evaluation of Health	Frequency	Percentage
Excellent	30	7.7
Good	128	33
Fair	202	52.1
Poor	28	7.2
Total	388	100

**Table 2:** Types of chronic Diseases previously diagnosed

Chronic e Disease	Frequency	Percent%
Diabetes Mellitus	83	21.4
Hypertension	107	27.6
Heart Disease	21	5.4
Rheumatic Arthritis	89	22.9
Musculoskeletal	97	25.0
Others	43	11.1

**Table 3:** Health problems due to Senility

Senile disease		Frequency	Percent%
reduced Vision	Yes	144	37.1
	No	187	48.2
	Sometime	57	14.7
diminished Hearing	Yes	40	10.3
	No	321	82.7
Poor Bladder control	Sometime	27	7.0
	Yes	67	17.3
	No	281	72.4
Depression	Sometime	40	10.3
	Yes	54	13.9
	No	215	55.4
	Sometime	119	30.7

Loss of Memory	unable to recall any one of the three items	85	21.9
	recall the three items	217	55.9
	recall 1-2 items	86	22.2
Loss of weight	Yes	198	51.0
	No	190	49.0

**Table 4:** Correlation of Suffering from Disease according and Age

Age	Suffering from Disease			
	Yes		No	
	N	%	N	%
65-74	192	73	0	0
75-84	71	27	44	35.2
85-94	0	0	62	49.6
More than 95	0	0	19	15.2
Total	263	100	125	100
Correlation				0.802
p-value				0.000

**Table 5:** unhealthy habits

Unhealthy habits		Frequency	Percentage
Smoking	Yes	29	7.5
	No	359	92.5
Drunk Alcohol	Yes	44	11.3
	No	344	88.7
Snuff Taking	Yes	12	3.1
	No	376	96.9

#### 4. Discussion

People of the age 65+ formed 50.5% of the elderly and those who were 85+ form 20.9% in Gadarif Locality, the older persons in this locality seem to be aging. Regarding the gender composition, the survey of Gadarif

Locality showed that the males formed 52.3% of the elderly persons in this Locality, while females formed 47.7%. Although life expectancy at birth for (male: female) is 58:61 in Sudan [7], the gender ratio worldwide has increased to 79 males per 100 females [8]. This divergence from aging profile has also been noted by other research studies which reported greater number for men than the number of women.

Data on the marital status of Gadarif elderly people showed that 58.5% were married, 4.4% were divorced, 32.7% were widowed, and 4.4% were unmarried. In comparison, a study conducted in the United Arab Emirates (UAE)[9], revealed that 41% were married, 13% were divorced, 42% were widowed, and 4% were unmarried. This showed that there are more couples among the elderly in the Sudan than in UAE.

Approximately half (50.5%) of the elderly surveyed in Gadarif were illiterate, 26.8% could read and write, 12.4% had primary education, 9.8% had secondary education, and only 0.5% had university education. In UAE in the above study [9] 71% were illiterate, 21% could read and write, 5% had primary education, 1% had secondary education, and none had university education. Although the literacy rate seems to be better in Gadarif than UAE, in both cases (UAE and Gadarif) the elderly had less opportunities for formal education.

As mentioned before, the elderly in Gadarif had a variety of occupations and sources of income. Regarding occupation, it is noted that 6.7% were employees, 38.9% retired, 12.1% farmers, 15.7% businessmen (merchants), 26.5% housewives. These results indicate that the aging persons in Gadarif were generally active and directly involved in different types of jobs and the main source of income were children 60.6%

Successful or healthy ageing is defined as a low risk of disease and disease-related disability, high mental and physical function, and active engagement with life, productive and independent life.

According to self-reflection of Gadarif elderly, 7.7% of them said, regarding their health status, that their health in general was excellent, 33% said it was good, 52.1% said it was fair and 7.2% said it was poor. This depends on people's tolerance and ability to cope with their health conditions.

Regarding presence of chronic diseases, the survey showed that 67.78% of elderly people in Gadarif suffered from chronic diseases, and 32.22% did not suffer from such diseases. In comparison chronic diseases among older in South Africa is 55.55 [10].

Regarding the details of the chronic diseases, Gadarif survey showed that 21.4% suffered from diabetes mellitus, 27.6% hypertension, 4.5% heart diseases, 22.9% rheumatic arthritis, 25% musculoskeletal diseases, and 11.1% other diseases (table 2). These results reflect the importance of regular follow up and screen test among elderly.

As a part of aging, there are physical and psychological changes, at the same time aging process differs from one person to another. The Geriatric Review System was done by simple screening standardized assessment tools reviewed by American Academy of Family Physicians (self-rated version) [11], including sensory perception (hearing and vision screening) diet and exercise, and dementia,



One study found that 72 percent of community-based old patients (more than 64 years of age) had impaired vision as tested with a Snelling Eye Chart. Other studies have detected lower percentages of geriatric patients with vision problems, but the prevalence of visual impairment is still quite high. The most common causes of visual impairment in the elderly include presbyopia, cataracts, glaucoma, diabetic retinopathy and age-related macular degeneration. Changes in vision can cause a significant number of problems for elderly patients, including an increased risk for falls on UK 72 percent of community-based patients more than 64 years of age had impaired vision [11].

Assessing participants' health, they were asked: "Regarding your eyesight, do you have difficulties on watching television, reading or doing any of your daily activities?"

- 37.1% of the participants' reported having problems ;
- 14.7% complained that they sometime had vision problems;
- 48.2% said they did not have such problems.

As a result of psychological, financial and mechanical impediments, only 32 percent of persons with moderate to marked hearing loss use a hearing aid in UK. In Gadarif, 82.7% of the participants didn't have problems of hearing normal conversational voices, 10.3% had difficulties, and 7% had difficulties sometimes. A study conducted in Khartoum State revealed that prevalence of hearing loss in the geriatric population ranges from 14 to 46 percent [12]. In both studies the prevalence of hearing impairment had almost the same range. Although there is difference in method of examination (audiometer) .

Incontinence is estimated to occur in 11 to 34 percent of elderly men and 17 to 55 percent of elderly women. Although incontinence is common, it is frequently reversible and has significant social and emotional consequences. Relatively few patients volunteer that they are having problems or request treatment [11].

Regarding urine incontinence, Gadarif Survey respondents by were asking asked if he or she-were experiencing any problems in this area (do you ever lose urine when you cough, exercise, lift, sneeze or laugh?):

- 17.3 have problem with bladder control,
- 10.3 have such a problem sometimes,
- 72.4 have no problem with their bladder control.

Depression significantly increases morbidity and mortality. Depression is usually characterized by a relatively rapid onset, intact but possibly retarded cognitive abilities and a generally time-limited duration. In Gadarif survey by asking the question " Do you often feel sad or depressed?", the answer included the following:

- 55.4% of the participants mentioned that they do not have depression,
- 30.7% said they sometimes have depression,
- 13.9% confirmed that they have depression problem.

The prevalence of depression among elders living in community dwelling in Canada range from 8% to15% [13].

On the other hand, in a cross-sectional house hold survey in Khartoum State the prevalence of depression tested by Geriatric Depression Scale was reported among 47.5% [14]. The situation in Gadarif seem to be slightly better probably due to greater family bond and social interaction ,

Dementia is chronic and progressive, and it is characterized by the gradual onset of impaired memory and deficits in two or more areas of cognition. Gadarif Survey showed that By assessing dementia by Mini-Mental State three-item recall after 1 minute (pen, dog, watch), 55.9% of the participants had no problem with their memory, 21.9% had memory problem as they were unable to recall any one of the three items, and 22.2% have a mild memory problem because they were able to recall 1-2 items. In Canada dementia affects 8.0% of all individuals over the age of 65 [13] . The high prevalence of dementia need farther researches to determine the underlying causes.

Malnutrition and under nutrition are common yet frequently overlooked problems in the geriatric population. Assessing the nutrition aspects in elderly population in Gadarif, the participants were asked in the survey about weight loss during the last 6 months, 51% of these participants confirmed that they lost weight. On this aspect weighing of participant is important [15].

Towards the end of this discussion, needless to say that physical activity, good eating habits, social relations and a meaningful life are the four pillars of good health among older people[16]. An individual who is aging successfully and exercising regularly and had healthy life style may have a biological age 10 years younger than his or her chronological age. Chi-Square test showed presence of a significant association between suffering from disease and age (table5). With respect to self-reflection regarding health status and gender, females describe their health to be poorer than men. Unhealthy habits such as smoking, alcohol and snuff were rare among participants (table6). There was no significant correlation between diabetes and smoking (P Value = 0.69) and between hypertension and drinking alcohol (P Value = 0.89).

In conclusion, the study of the health status and problems of the elder persons in Gadarif revealed that around 68% of these persons suffered from some chronic diseases mainly diabetes mellitus, hypertension, , rheumatic arthritis, musculoskeletal diseases .The number of those suffering from heart diseases seems to be relatively small. Other important diseases can also be identified such as vision problems, depression, memory impairment, malnutrition, reduced sexual activity, hearing problems, and bladder incontinence. Generally speaking the health problems of Gadarif elder persons seem to compare in some aspects with the health problems of the old population in some other countries

## **5. Recommendations**

- encouragement of health promotion activities such as health tests and screening,
- nutrition planning and supplementation, and physical activities,
- adopting policies to encourage and financially support scientific researches regarding geriatrics health care and problems in the Sudan dementia and depression

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