Health related quality of life of the elderly in a Peri-Urban Community in South-South Nigeria

AsogunAD[1], OcheiO[1], MomohJ[1], OkakahF[1], OmorogbeO[2], OshomahI[2].

[1]Department of Community Medicine, Irrua Specialist Teaching Hospital, Irrua, Edo State.
[2]Department of Community Medicine, Ambrose Alli University, Ekpoma, Edo State.

Abstract

Background: As there is a global increase in the population of the elderly in both absolute number and as a proportion of the total population, there is also a corresponding need to evaluate the quality of life and health problems of the elderly especially in developing nations. There is an apparent little or no attention to the wellbeing of the elderly in these countries.
Objective: This study was therefore designed to determine the health problems and also the health-related quality of life of the elderly who reside in Esan West Local government area of Edo State, Nigeria.
Methodology: By means of an interviewer administered structured questionnaire in a cross-sectional study design, 249 elderly persons aged 65years and above who reside in Ekpoma, Esan West Local government area of Edo State, Nigeria were selected through cluster sampling technique. Their socio-demographic characteristics, medical/social problems and income were elicited using a questionnaire coined from parameters in the old peoples' questionnaire on quality of life (OPQOL). Data was analysed using SPSS version 21. Multiple linear regression model was used to predict the impact of the independent variables on quality of life.
Results: The ages ranged from 65 – 130 years with a mean age of 75.4±10.37, with majority of the respondents (58.4%) within 65-74 years, female (57.6%), married (48.0%) and no formal education (33.2%). Reported chronic diseases were hypertension (28.4%), diabetes (12.8%), arthritis (26.8%), eye problems (31.8%) while 5.6% had dementia. Most (76.4%) were lonely and 40.4% had severe financial constraints.The mean quality of life scores was77.5% in all domains. There was a relationship between the age, marital status, education, income, presence of chronic diseases and quality of life ($p < 0.05$). The older elderly, the married, those with higher education, regular income and those with no chronic disease had better QOL scores. Presences of chronic and regular income were the conclusive predictors of quality of life.
Conclusion: Quality of life decreases with poor physical health and low income in the Nigerian elderly. Poor quality of life and well-being, and health status in older people are significantly related to marital status, sex and age Thus, the quality of life is still a major concern for the elderly population and a clear public health challenge requiring immediate intervention.
Recommendation: It is therefore recommended that a national policy on ageing be put in place that will comprehensively address their peculiar needs including provision of social welfare services like subsidized medical expenses and subsistence allowance.

Introduction

Longevity and good quality of life at old age are the longing and anticipation of man. However, old age in our society seem to present individuals with numerous challenges and stressors; most of which are either medical, mental, emotional, social or economic in nature or a combination of these.[1] In most countries of the world, ageing is often associated with degenerative disorders resulting in poorer health, increased suffering, reduced productivity and probably poor quality of life.[2] Empirical evidence from a study conducted in Kenya; a developing country in west Africa, shows that about 92.5% of the elderly were said to be sick, with about 45% of them having more than two ailments.[3]The report from similar study carried out in the United States in 2015, revealed that 67% of people over 65 years lived with two of more chronic diseases and care of the elderly accounts for 66% of American health expenditure.[4] Despite this reports, the sufferings of the elderly can be minimized by developing favorable health policies to

Corresponding Author: Ochei O,
Department of Community Medicine,
Irrua Specialist Teaching Hospital, Irrua, Edo State.
E-mail dratare@yahoo.com

improve their living conditions through research based findings.

Studies to assess the health problems of the elderly and quality of life are on the upturn in developed nations. Also, many governments in developed countries, have designed programs, packages, schemes, safe and supportive environment to enhance satisfaction in these aged group owing to the increase life expectancy. WHO projected that 60% of the world in the year 2050 would be dominated by older people, of which majority will be living in rural communities with shoddier resources. Unfortunately, in Nigeria, just like in many developing countries, few scientific evidence are available on the quality of life and the various health challenges faced by the elderly, as a result, the medical experts, health managers may not have the least evidence on the health burden of the elderly and the society at large are not aware of the many problems and sufferings faced by the elderly.

Medical problems that are common amongst the elderly may interact with other inherent determinants in the environment such as income, housing factors and availability of social amenities subsequently reduced their quality of life.Revicki and colleagues define QOL as "a broad range of human experiences related to one's life satisfaction and overall wellbeing.(ref) Quality of life has both subjective and multidimensional aspect and was addressed in many studies either as general quality of life or health related quality of life [5678] The former is broad based form that includes the sense of well-being and happiness regardless of illness and dysfunctions. It takes into consideration the degree of pleasure derived in daily chores, positive attitude towards life, amount of fulfillment in personal achievements, mood tone, the degree of personal self-regard, financial security and time spent with people.[89]Health related quality of life measures individual satisfaction in the following basic domains; functionalities, emotional, social and overall wellbeing, that are more clearly related to symptoms, disabilities and limitation caused by disease.[810]

Without research in developing countries, there would be no generation of empirical data on the health challenges of the elderly and their quality of life. With this in view, this research examines the presence or absence of some chronic diseases (Hypertension, Diabetic Mellitus, Arthritis, eye disorders and dementia) and quality of life in the elderly. The study will also determine the relationship between participant's characteristics and quality of life. This will create awareness on their quandaries in our immediate environment. Also, credible data on the burden of common health problems in the elderly, are needful, in the provision of health care services, so that care is adapted to the facts rather on baseless assertions. The outcome of this study could be used for comparison in future research.

Materials and Methods

Study area

The study area was Ekpoma, a town in Esan West local government Area of Edo State, Nigeria and the home of Edo State University. The area lies between latitude 60 40°N 60 45°N and longitude 60 05°E 60 10°E. It has a population of over 500,000 people and occupies a landmass of 483.29km^2. The major communities within Ekpoma include Ujemen, Iruekpen, Ihumudumu, Ujeolen, Eguare, Emaudo, Illeh, Eke, Uhiele, Ukpenu, Igor, Igoro and Idumebo. Indigenes speak Esan and mainly a residential and commercial area; the major occupation among them is farming, trading and artisan. There were 4,598,114 (5.2%) persons aged 60+ (the elderly) in Nigeria in 1991 of the national population of 88,992,200. The number of the elderly is projected to have increased to around 5 million by the year 2000 (NPC, 1998: 414)[11].

Subject selection

The study was a cross-sectional study conducted from January-March 2016. The minimum sample size for this study was 249, calculated using the formula for cross sectional study. Three communities: Illeh, Eguare and Emaudo were drawn by simple random sampling from the list of all the communities in Ekpoma. Each selected community was taken as a cluster and persons 65 years and above present at the time of the study was approached to participate in the study; information was only obtained from consenting individuals.

Data Collection instrument

Quantitative tool (interviewer administered questionnaires) coined from parameters in the old people questionnaire on quality of life OPQOL was used to assessed quality of life[12]. In addition, the socio-demographic characteristics, medical/social problems, domestic and financial sources were also obtained by asking relevant questions. Interviewers were trained on

questionnaire administration and the questions were interpreted in pidgin English and Esan dialect.

Data Management

Medical problems were measured in terms of presences or absences of chronic diseases such as hypertension, diabetes mellitus, arthritis, eye disorders. Social problems were measured in terms of loneliness, depression, difficulty relating to others and finances. Twenty-eight items were used to assessed quality of life in the in the following domains: life overall (4 items), health (4 items), social relationship (5 items), psychological and emotional well-being (4 items) and financial satisfaction (4 items). Each item had 5-points likert scale from strongly agreed to strongly disagreed. The scale was scored with reversed coding of positive response; strongly agreed having a higher score of 5 while strongly disagreed had a score of 1. The raw (total) score ranges from 21-105 with higher score equals higher quality of life. The total scores for the five domains were also calculated, ranging from 4 to 16, except the social relationship domain that ranges from 5-20. The next step consists of transforming each raw scale score to a 0-100 scale using the U. S. WHO Quality of Life scoring system. The formula is shown below:

$$TransformedScale = \frac{(Actualrawscore - lowestpossiblerawscore)}{Possiblerawscorerange} \times 100$$ [13]

where “Actual raw score” is the respondents total score, “lowest possible raw score” is the lowest possible value that could occur through summation (this value would be 21), and “possible raw score range” is the difference between the maximum possible raw score and the lowest possible raw score (this value would be 105 minus 21 equals 84). The scores from each domain were also transformed using the formula above[13].

This transformation converts the lowest and highest possible scores to 0 and 100, respectively. Scores between those values represent the percentage of the total possible score achieved[13].

Data analysis

Data collected were analyzed using the statistical package for social sciences (SPSS) version 21. [14] The independent variables; socio demographic characteristics, financial support, domestic support and presences of chronic diseases were measured as categorical variables. The depended variable; quality of life scores was measured as quantitative discrete variable (0-100%). The relationship between socio demographic characteristics, financial/domestic support and quality of life were tested using N-way ANOVA. The mean, confidence interval and standard error were derived for each domain of the quality of life scale. Multiple linear regression model was used to predict the impact of the independent variables on quality of life (dependent variables).

Ethical Consideration

The research was approved by the ethical committee of Irrua Specialist Teaching Hospital, Irrua. Informed consent was obtained after indicating the purpose of the research and reassuring confidentiality of any information to be obtained.

Result

The ages ranged from 65 – 130 years with a mean age of 75.4±10.37, with majority of the respondents (58.4%) within 65-74 years. Female respondents (57.6%) are more than male respondents (42.4%). Forty-eight percent of respondents were married while 46% were widows/widowers. About one-third (33.2%) had no formal education, while 20.4%, 20.8% and 25.6% had primary, secondary and tertiary level of education respectively. Thirty-five percent were retired, 29.2% were farmers and 24.4% were traders.

About 36.8% of the respondents had at least one chronic diseases of which 28.4% of the respondents said they had hypertension, 12.8% said they are diabetic, 26.8% had arthritis, 31.8% had eye problems while 5.6% were had dementia. Other medical problems observed among the respondents include: low back pain, heat and moving sensation in the head, malaria etc. These were present in 22.4% of the respondents.

Table 1: socio-demographic characteristic of respondents.

Variables	Frequency (n=250)	Percent (%)
Age Group		
65 – 74 years	**146**	**58.4**
75 – 84 years	**56**	**22.4**
85 – 94 years	**36**	**14.4**
≥95 years	**12**	**4.8**

Sex		
Males	**106**	**42.4**
Females	**144**	**57.6**
Marital Status		
Single	**3**	**1.2**
Married	**120**	**48.0**
Divorced	**42**	**4.8**
Widow/Widower	**115**	**46.0**
Ethnicity		
Esan	**201**	**80.4**
Bini	**13**	**5.2**
Etsako	**10**	**4.0**
Others (Owan, Ibos, Yoruba, Efik and Igbira).	**26**	**10.4**
Religion		
Christianity	**231**	**92.4**
Islam	**13**	**5.2**
Others	**6**	**2.4**
Level of Education		
No formal education	**83**	**33.2**
Primary Education	**51**	**20.4**
Secondary Education	**52**	**20.8**
Tertiary Education	**64**	**25.6**
Occupation		
Retired	**89**	**35.6**
Farming	**73**	**29.2**
Trading/In business	**61**	**24.4**
Civil servants	**16**	**6.4**
Artisans	**3**	**1.2**
Others	**8**	**3.2**
Had care givers		
Yes	**197**	**78.8**
No	**53**	**21.2**
Has regular income		
Yes	**194**	**77.6**
No	**56**	**23.4**
Does this income sustain you?		
Yes	**146**	**58.4**
No	**104**	**41.6**
Sources of income		
Working	**59**	**23.6**
Pension	**23**	**9.2**
Children	**73**	**29.2**
Children, friends and relatives	**95**	**38.0**

Table 2: Medical and social problems of respondents

PROBLEMS OF RESPONDENTS	Frequency (n=250)	Percent (%)
Medical Problems of Respondents		
*Presences of chronic disease	**92**	**36.8**
Yes	**158**	**63.2**
No		
Hypertension		
Yes	**71**	**28.4**
No	**179**	**71.6**
Diabetes Mellitus		
Yes	**32**	**12.8**
No	**218**	**87.2**
Arthritis		
Yes	**67**	**26.8**
No	**183**	**73.2**
Eye Problems		
Yes	**77**	**31.8**
No	**173**	**69.2**
Dementia		
Yes	**14**	**5.6**
No	**236**	**94.4**
Others (Back pain, Malaria, Heat in the head etc)	**56**	**22.4**
Yes	**194**	**77.6**
No		
Social PROBLEMS OF RESPONDENTS		
Loneliness		
Lonely	**191**	**76.4**
Not lonely	**59**	**23.6**
Have Difficulty relating with others		
Yes	**175**	**70.0**
No	**75**	**30.0**
Depression		
Depressed	**20**	**8.0**
Not depressed	**230**	**92.0**
Financial Constraint		
Severely constrained	**101**	**40.4**
Not severely constrained	**149**	**59.6**

*Had at least one chronic disorder.

It was observed that most (76.4%) of the elderly respondents were lonely, 70.0% had difficulty relating with others and (8.0%) were depressed. About 59.6%had adequate income while 40.4% had severe financial constraints.The majority of respondents are currently not on any paid job (29.2%) get their income from children, (9.2%) from pensions, (33.6%) gets money from several people-children, relatives and friends. Only (23.6%) are still working. The majority (78.8%) respondents were being helped domestically by caregivers (children, relatives, house help and grandchildren). The mean quality of life scores was77.5% in all domains. The least score was recorded

in the following facets: health (64%) social (58.9%) and finances (62.2%)

Table 3: Mean score of quality of life of respondents

Scale	Mean	95%CI	Standard error
Life overall	**76.5%**	**(74.58-78.42)**	**0.98**
Health and functioning	**64.6%**	**(62.05-67.21)**	**0.32**
Social relationship	**58.9%**	**(57.66-60.18)**	**0.65**
Psychological and emotional well-being	**77.7%**	**(76.00-79.37)**	**0.86**
Financial circumstances	**62.2%**	**(61.74-62.62)**	**0.22.**
Aggregate score	**77.5%**	**(76.23-78.62)**	**0.60**

There was relationship between the variable age, marital status, education, income, presence of chronic diseases and quality of life $p < 0.05$. The older elderly, had poorer quality of life scores (75%) compared to the younger elderly (79%). The married and singles had better quality of life scores than divorces and windows/widowers. Respondents with higher education had better scores (80%) than those with lower education (74%). Those with presences of at least one chronic ailments had worse quality of life scores (70%) than those with no chronic diseases. (79%). Those with regular income had better scores (79%) than those with irregular income (73%). Presences of chronic and regular income were the conclusive predictors of quality of life.

Table 4: Relationship between Respondents characteristics and quality of life scores

Variable	n	Mean (95%CI)	P-value
Age			
65 – 74 years	**146**	**79.14(77.70-80.58)**	
75 – 84 years	**56**	**75.17(72.55-77.74)**	
85 – 94 years	**36**	**75.03(71.62-78.44)**	
≥95 years	**12**	**75.00(70.33-82.13)**	**0.01**
Sex			
Males	**106**	**77.83(73.22-78.09)**	
Females	**144**	**77.18(74.87-79.67)**	**0.59**
Marital status			
Single	**3**	**78.03(68.75-87.40)**	
Married	**120**	**79.90(77.25-82.38)**	
Divorced	**42**	**74.25(69.45-79.05)**	
Widow/Widower	**115**	**75.23(73.10-77.35)**	**0.001**
Education			
No formal education	**83**	**74.56(71.14-77.98)**	
Primary Education	**51**	**78.87(75.57-82.17)**	
Secondary Education	**52**	**77.48(74.14-80.82)**	
Tertiary Education	**64**	**80.08(76.30-83.86)**	**0.003**
Presences of Chronic Diseases			
Yes	**92**	**70.55(67.69-73.41)**	**0.00**
No	**158**	**79.69(77.53-81.85)**	**01**
Had care givers			
Yes	**197**	**77.99(76.71-79.21)**	
No	**53**	**77.63(74.63-80.63)**	**0.098**
Has regular income			
Yes	**194**	**78.79(77.55-80.03)**	
No	**56**	**72.84(70.24-75.44)**	**0.001**
Does this finance sustain you?			
Yes	**146**	**77.99(76.77-79.21)**	
No	**104**	**77.63(74.63-80.63)**	**0.203**

Table 5: Multiple linear regression of quality of life and socio-demographic characteristics

Model	β unstandardized	β standardized	T	p-value	95%CI
Constant	**77.861**		**13.859**	**0.0001**	**66.794-88.927**
Presences of Chronic Diseases	**7.912**	**0.362**	**6.371**	**0.0001**	**5.466-10.359**
Has regular income	**-5.239**	**-0.233**	**-4.224**	**0.0001**	**-7.682-2.796**
Marital Status	**-0.675**	**-0.071**	**-1.123**	**.262**	**-1.858-0.508**
Level of Education	**-0.635**	**0.080**	**1.249**	**.213**	**-0.366-1.637**
Age	**-0.090**	**0.099**	**-1.643**	**.102**	**-0.197—0.018**

F= 17.59 (P= 0.0001); df_1=5, df_2=244; adj R^2 =0.265 *CI means confidence interval

Discussion

As the world population ages and people live longer, it is becoming increasingly important to ensure thatolder people enjoy a good quality of life and experience a positive well-being.[15] This is the ultimate goal of this venture which has started with this study aimed at determining the quality of life of the elderly as it relates to health in a developing nation like Nigeria. In this study, the ages of the respondents ranged from 65

– 130years with a mean of 75.4±10.37 and 41.6% were above 75years old. Compared to previous statistics[11,16] this is indicative of a gradual increase in the number of persons entering the old age brackets. It is similar to the finding in a study carried out in South Korea[17], where the mean age was 73.2 ± 5.5. This is a wakeup call for the concerned arm of government like the social welfare services to be more proactive in the planning and policy formulations relating to the elderly. There is obvious need to expand existing services and to start where there is presently none. Female respondents (57.6%) were more than male respondents (42.4%). This is in consonance with the literature that the women tend to do better and live longer in the latter years of life[18]. About one-third (33.2%) of the respondents had no formal education. Education is an asset which enables one to know and appreciate better societal dynamics and potentiates ability to enjoy life. The main physical health problems were chronic ailments which include hypertension (28.4%), diabetes (12.8%), arthritis (26.8%), eye problems (31.8%) while 5.6% had dementia. These ailments which are not uncommon in the elderly is similarly reported by Kimm et al(2012) who found chronic diseases in 35.1% of elderly in South Korea[17] and this negatively impacted on life satisfaction. Chronic diseases though common in the elderly tends to impact negatively on life satisfaction and hence quality life of the elderly. This was corroborated in this study where those with presence of at least one chronic disease had worse quality of life scores (70%) than those with no chronic disease (79%). Similarly, Fatma et al (2012) also reported that 11.5% of the elderly in Sivas city of Turkey expressed non-satisfaction with life because of physical health problems[19]. This condition can be ameliorated through deliberate efforts at meeting the peculiar health problems of the elderly. Subsidized medical expenses or a free medical service via social insurance for the elderly is one way to meet this need. In the developed nations, a lot of these services targeting the elderly to improve their lives are in place. The reverse is not the case in most countries in the developing world where peculiar needs of the elderly is not yet on the health agenda and does not appear to be a thing of concern.

Apart from physical health, the other factors that determine life satisfaction in the elderly as conceptualized for the first time by Neugarten (1961) include gender, age, education, income, marital status, social relationships network, social activity level and nursing home life[20]. In this study, most (76.4%) of the respondents were lonely, 70.0% had difficulty relating with others, 8.0% were depressed and 40.4% had severe financial constraints. These findings present a lower quality of life compared to the observations made by Fatma et. al(2012) that 11.3% of the elderly interviewed said their income was 'insufficient' for them[19]. The differences in the two findings may not be unconnected with the different socio-economic climate prevailing in the two countries. Turkey is higher in the socio-economic ladder than Nigeria. What probably makes the elderly in most African countries to cope in the face of low economic resources at old age is the culture of help available from extended members of the family compared to their counterparts in the developed world. Majority (78.8%) of respondents in this study were being helped in domestic chores by caregivers (children, relatives, house help and grandchildren). This traditional form of care within the family in African countries has in no small way contributed in preventing a more deplorable quality of life in the elderly than is presently seen. This seems to have reflected in the quality of life scores obtained in this study. The mean quality of life scores was77.5% in all domains. The older elderly, had poorer quality of life scores (75%) compared to the younger elderly (79%). The married and singles had better quality of life scores than divorces and windows/widowers. Respondents with higher education had better scores (80%) than those with lower education (74%). Those with presences of at least one chronic ailment had worse quality of life scores (70%) than those with no chronic diseases (79%). Those with regular income had better scores (79%) than those with irregular income (73%). Though the scores appear good, the actual situation may be obscured by the natural resilience of Nigerians to withstand adverse situations and to maintain a positive outlook to life despite the contrary. Realistically; the socio-economic environment of the elderly in the developing world does not seem to favor a positive quality of life. This view is supported by the findings on studies on the quality of life in other parts of Nigeria and some African countries. In Ibadan, Nigeria, Adebowale et al (2012) reported that a high proportion of the elderly in the studied community has poor well-being[21]. Mwanyangala et al(2010) reported that health status and quality of life of older people in

rural Tanzania is reduced significantly during the ageing process[22]. Thus, satisfaction with life is a major concern for the elderly population in Africa. Finally, in this study, there was an association between quality of life and age, marital status, education, income, presence of chronic diseases ($p < 0.05$). With multiple linear regressions, presence of chronic diseases and regular income were the conclusive predictors of quality of life.

Conclusion

The health-related quality of life of the elderly in Nigeria as observed in this study is suboptimal. This is mostly due to the presence of chronic diseases and poor economy. Poor quality of life and well-being, and health status in older people are significantly related to level of education, marital status, and age. Specifically, quality of life decreases with poor physical health and low income. Thus, the quality of life is still a major concern for the elderly population and a clear public health challenge requiring immediate intervention.

Recommendation

Though the elderly as a group is presently the smallest segment of Nigerian Population, in both absolute number and as a proportion of the total population, the population of the elderly is expected to grow in future and so will be the demand for special services tailored to their needs. It is therefore first of all recommended that a national policy on ageing be put in place that will comprehensively address their peculiar needs including provision of social welfare services like subsidized medical expenses and subsistence allowance.

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