Original Article

Association of quality of life of urban elderly with socio-demographic factors

Abstract

Introduction: Quality of life (QOL) of elderly often deteriorates due to many factors. This study was planned to find out the different domains of QOL of elderly people affected by socio-demographic factors. **Materials and Methods:** This was a community-based cross-sectional study conducted in Kolkata and Sonarpur area of West Bengal, India from January to December, 2013. The qQOL questionnaire developed by World Health Organization was used (BREF). The scores of QOL were assessed in the light of different socio-demographic characteristics. **Results and Analysis:** The QOL was significantly lower among people having more age, female, illiterate, financially fully dependent and those having lower socio-economic status. **Conclusion:** QOL is an important determinant of the living status of elderly and socio-demographic factors determine the QOL in this age group.

Key words: Elderly, socio-demographic factors, quality of life

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Access this article online

Website: www.ijmedph.org

DOI: 10.4103/2230-8598.165944

Quick response code:

INTRODUCTION

Quality of life (QOL) is an individual's understanding of his/her life situation with respect to his/her values and cultural context as well as in relation to his/her goals, expectations and concerns. QOL has many dimensions such as material well-being, close relationships, health, emotional well-being, and productivity. QOL differs from individual to individual and is dependent on different factors. As the demographic pattern has changed with more elderly people, the overall QOL of a nation has also changed.[1] Loneliness, social disconnection, poor physical and mental health status contribute to poor QOL of elderly. This study has been planned to find out the different domains of QOL of elderly people affected by socio-demographic factors.

MATERIALS AND METHODS

Study area

This study was conducted in two urban communities of the southern part of West Bengal, India. One of the two communities was selected in the metropolitan area (Kolkata) and other in the nonmetropolitan area (Sonarpur).

Study population

The study was conducted among people aged 60 years and above (geriatric people). Date was collected from 472 geriatric people.

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How to cite this article: Datta D, Datta PP, Majumdar KK. Association of quality of life of urban elderly with socio-demographic factors. Int J Med Public Health 2015;5:274-8.

Study period

The study was conducted from January to December, 2013.

Study design

It was a community-based cross-sectional study.

Study tools

- One predesigned, pretested, semi-structured questionnaire was used to collect data regarding the socio-demographic parameters.
- QOL was assessed using QOL BREF questionnaire developed by World Health Organization (WHO).[1] Permission to use this questionnaire was taken from WHO and they supplied Bengali version of the questionnaire. The questionnaire has four domains:
  - Physical domain.
  - Psychological domain.
  - Social interaction domain.
  - Environmental domain.
  - In addition, one question each for overall QOL and overall health status.

WHOQOL-BREF is a subset of 26 items taken from WHOQOL-100. Each domain raw score is converted to a 0-100 scale using the formula of transformed scale.

Transformed score = ([actual raw score − lowest possible raw score]/possible raw score range) × 100.

This transformation converts the lowest and highest possible scores to 0 and 100 respectively. The scores between these values represent the percentage of the total possible raw score achieved.

Sample design

The sampling was done using a stratified random sampling method. One district having metropolitan city and one other district were selected. Kolkata is the main metropolitan city, and so it was selected. Out of rest 19 districts in West Bengal, one was selected using a simple random sampling technique. The selected district was South 24 Parganas. In Kolkata district, there are 15 boroughs out of which borough VIII was selected using a simple random sampling technique. Two wards out of 12 wards in borough VIII were selected using a simple random sampling technique. In South 24 Parganas, Sonarpur municipality was chosen using simple random sampling technique and in this area two wards were selected using simple random sampling. In the selected wards, all elderly people were encouraged to take part in the present study. The study was done among those elderly people who gave informed consent to take part in the study.

The study was conducted after clearance from Institutional Ethics Committee.

Study technique

Data were collected by interviewing study subjects by the house to house visits.

Statistical analysis

After collection of data, it was double entered in Microsoft Excel sheet for verification. The clean data set was copied into SPSS IBM sheet (version 16.0) for analysis. For demographic factors having binary outcome independent sample *t*-test was used to find out their relationship with QOL score. For socio-demographic factors having more than two categorical outcomes, ANOVA was used and for socio-demographic factors having the continuous outcome correlation test was used. $P < 0.05$ was considered to be statistically significant.

RESULT

This study highlighted the association of socio-demographic factors with QOL score of the study population. Table 1 shows that the majority (40.3%) of the elderly were in the age group of 60-64 years. 17.6% were in the age group of 65-69 years, 16.3% were in the age group of 70-74 years, 14.6% of the elderly were aged 80 years and above and only 11.2% were in the age group of 75-79 years of age. The percentage of female elderly (50.6%) was slightly more than male (49.4%). The majority of the study participants were Hindu

Table 1: Socio-demographic characteristics of the study population

Parameters	*n* (%)
Age	
60-64 years	190 (40.3)
65-69 years	83 (17.6)
70-74 years	77 (16.3)
75-79 years	53 (11.2)
80 years and above	69 (14.6)
Sex	
Male	233 (49.4)
Female	239 (50.6)
Religion	
Hindu	392 (83.1)
Muslim	80 (16.9)
Educational status	
Illiterate	210 (44.5)
Up to primary	187 (39.6)
Up to secondary	16 (3.4)
Up to higher secondary	29 (6.1)
Graduate or above	30 (6.4)
Financial dependency	
Independent	195 (41.3)
Partially dependent	22 (4.7)
Fully dependent	255 (54.0)

(83.1%) Only 16.9% were from the Muslim community. Most of the study respondents were illiterate (44.5%). 39.6% had primary level education, 3.4% had secondary level education, 6.1% had higher secondary level education and 6.4% were graduate or above. The majority of the respondents were financially fully dependent on others (54%), 41.3% were independent and 4.7% were partially dependent. Table 2 highlights that mean of transformed scores of QOL is maximum in the environmental health domain (48.36) and minimum in the social relationship domain (39.62). Table 3 shows that with an increase in age the scores of QOL decrease significantly in all domains ($P < 0.001$ in the physical, psychological, and social interaction domain and $P = 0.002$ in the environmental domain).

Figure 1 highlights that QOL scores were significantly more in males than females ($P < 0.001$) in all domains. Figure 2 shows that there was no significant difference in QOL between elderly persons of different religions ($P > 0.05$) in any domain. Table 4 highlights that QOL score improved significantly with an increase in per capita income ($P < 0.05$ in all domains except social interaction domain). Table 5 shows that scores in all domains of QOL of people who were illiterate or had primary level education were significantly lower than people who had an educational level at the secondary level and above. In all domains excluding the physical health domain the scores of the illiterate population were also significantly lower than people having a primary level education. Table 6 indicates that in physical health and psychological health domain the study population who were independent or partially dependent had better QOL scores than those who were fully dependent. In the rest two domains, that is, the social relationship and environmental domain the independent study population had significantly better QOL scores than those who were fully dependent.

DISCUSSION

The present study has highlighted the association of socio-demographic parameters with QOL scores of the study population.

The present study has found out that QOL deteriorates significantly with an increase in age. A study was done by Joshi *et al.*, it was seen that health-related QOL score was associated with age.[1] In a study by Lakshmi Devi *et al.*, it was found that QOL significantly decreased with increase in age.[2] This finding was corroborated with a study conducted by Kumar *et al.* on QOL of elderly in urban Puduchery in 2013.[3] They found that older age was associated with poor QOL. In another study conducted by Lokare *et al.*, they found that QOL was significantly better among young people.[4] This finding is corroborated with the finding of a study done by Lahariya *et al.*[5,6]

As the age advances, the health related problems become more common to a person. Gradually and gradually the power to work decreases and people are more confined to his/her own house. In this scenario loneliness is a very common problem. As age increases, the chance of losing spouse becomes more. In that scenario, loneliness increases to a much greater extent. So, overall the physical and psychological QOL becomes poorer with the advancement of age. Beside this, the social interaction decreases with increased age. So, the social relationship domain of QOL becomes worse.

Table 2: Transformed scores of QOL

Domains	Mean score	SD
Physical health	42.26	15.64
Psychological health	40.84	15.64
Social relationship	39.62	16.39
Environmental	48.36	13.18

SD = Standard deviation, QOL = Quality of life

Table 3: Relationship of age with QOL of the study population

Area	Domain	Correlation coefficient	*P*
Total (*n*=472)	Physical	−0.335	<0.001
	Psychological	−0.201	<0.001
	Social	−0.215	<0.001
	Environmental	−0.142	0.002

QOL = Quality of life

Table 4: Relationship of per capita income with QOL score

Area	Domain	Correlation coefficient	*P*
Total (*n*=472)	Physical	0.101	0.029
	Psychological	0.192	<0.001
	Social	0.081	0.080
	Environmental	0.244	<0.001

QOL = Quality of life

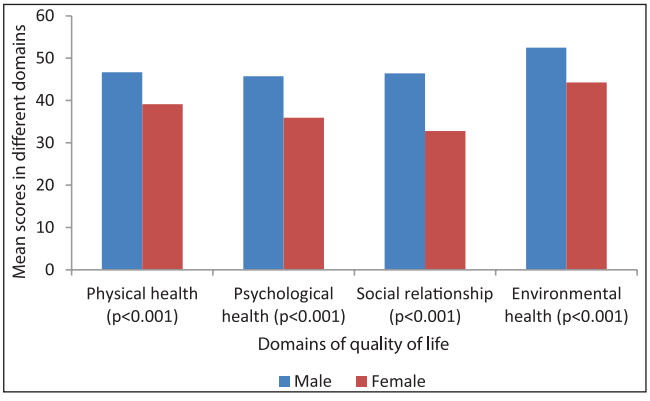

Figure 1: Relationship of sex with quality of life score of the study population

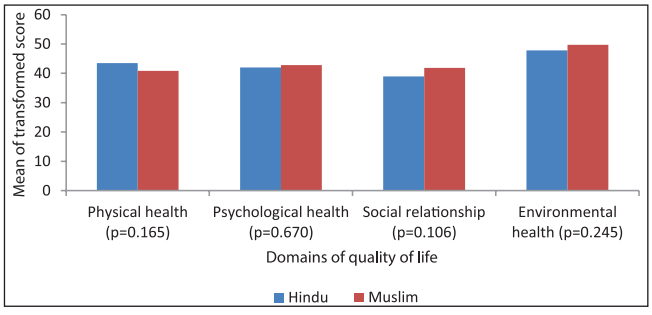

Figure 2: Scores of different domains of quality of life according to religion of the study population

Table 5: Relation of educational status with QOL score of study population

Domain	Comparing groups	Mean difference	*P*	95% CI	
				Lower	Upper
Physical	Illiterate				
	Primary	−2.754	0.172	−6.357	0.849
	Secondary and above	−10.670	<0.001	−15.490	−5.850
	Primary				
	Secondary and above	−7.916	<0.001	−12.814	−3.018
Psychological	Illiterate				
	Primary	−6.174	<0.001	−9.682	−2.666
	Secondary and above	−12.349	<0.001	−17.042	−7.656
	Primary				
	Secondary and above	−6.175	0.007	−10.943	−1.407
Social	Illiterate				
	Primary	−6.642	<0.001	−10.344	−2.940
	Secondary and above	−13.754	<0.001	−18.707	−8.801
	Primary				
	Secondary and above	−7.112	0.003	−12.144	−2.080
Environmental	Illiterate				
	Primary	−6.804	<0.001	−9.696	−3.932
	Secondary and above	−14.470	<0.001	−18.313	−10.627
	Primary				
	Secondary and above	−7.662	<0.001	−11.571	−3.762

CI = Confidence interval, QOL = Quality of life

Table 6: Relation of financial dependency status with QOL score of study population

Domain	Groups	Mean difference	*P*	95% CI	
				Lower	Upper
Physical	Independent				
	Partially dependent	0.827	0.967	−7.081	8.734
	Fully dependent	9.476	<0.001	6.132	12.821
	Partially dependent				
	Fully dependent	8.650	0.026	0.837	16.462
Psychological	Independent				
	Partially dependent	−0.051	1.000	−7.962	7.859
	Fully dependent	8.106	<0.001	4.760	11.452
Social relationship	Independent				
	Partially dependent	5.715	0.220	−2.356	13.786
	Fully dependent	12.474	<0.001	9.060	15.888
	Partially dependent				
	Fully dependent	6.759	0.115	−1.216	14.733
Environmental	Independent				
	Partially dependent	0.855	0.952	−5.872	7.582
	Fully dependent	7.178	<0.001	4.332	10.023
	Partially dependent				
	Fully dependent	6.322	0.066	−0.324	12.969

CI = Confidence interval, QOL = Quality of life

In a study conducted by Joshi *et al.*, the association of health-related QOL with sex was highlighted.[1] A study conducted by Qadri *et al.*, it was found that the QOL was significantly better in the male sex.[7] In another study by Lokare *et al.*, they have found that QOL was significantly better among male elderly.[4] This finding is matched with the finding of a study done by Lahariya *et al.*[5] Male participants scored significantly higher in all domains in the present study than females. Kumar *et al.* have also found that gender played an important and significant role in determining QOL of elderly.[8] Like these studies another study conducted by Ibrahim *et al.* also found that men scored significantly better in QOL in Iraq.[9] According to study by Muhwezi *et al.* in Uganda, they found that females scored significant poor QOL in the physical health domain in WHOQOL-BREF questionnaire.[10]

The present study has showed that with an increase in per capita monthly income the QOL score improve significantly. The increase in per capita income indicates better socio-economic status. A study conducted by Nilsson *et al.* in Bangladesh also showed that poor

economic status was a significant determinant of poor QOL among the elderly.[11] In a study conducted by Kumar *et al.*, they have found that socio-economic status played an important and significant role in determining the QOL of elderly.[8] The Brazilian version of WHOQOL-BREF was used to study the QOL of elderly in Brazil by Alexandre Tda *et al.* They also found that income had an impact on the QOL.[12] Niedzwiedz CL *et al.* found that individuals having poor socioeconomic status had lower QOL score.[13]

Elderly people live with many physical as well as mental problems, and social detachment deteriorates the condition. QOL of elderly people is closely associated with different socio-demographic factors. The triple evils of ill-health, loneliness, and social disconnection deteriorate the QOL of elderly. The modern philosophy is that old must continue to take their responsibilities and in the enjoyment of the privileges like others. Social interaction can directly or indirectly assist the aged to fight the triple evils of ill health, loneliness, and social disconnection.

Financial support and sponsorship

Nil.

Conflicts of interest

There are no conflicts of interest.

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