International Journal of Community Medicine and Public Health
Verma K et al. Int J Community Med Public Health. 2021 Sep;8(9):4385-4393
http://www.ijcmph.com
pISSN 2394-6032 | eISSN 2394-6040

DOI: https://dx.doi.org/10.18203/2394-6040.ijcmph20213541

Original Research Article

Quality of life and low self-esteem: an alarming phase among elderly

Kavita Verma*, Priyanka Setia, Priyanka Bhardwaj, Preeti Rawat, Preeti Sharma

Department of Child Health Nursing, Akal College of Nursing, Eternal University, Baru Sahib, Sirmour, Himachal Pradesh, India

Received: 25 June 2021
Revised: 13 August 2021
Accepted: 18 August 2021

***Correspondence:**
Ms. Kavita Verma,
E-mail: kavita.sch.verma@gmail.com

ABSTRACT

Background: Old age or elderly is the final stage of the normal life span. The elderly population is facing many health problems such as physical, mental, psychological and social etc. Factors like loneliness, low self-esteem, social isolation, quality of life and several others negatively affect elderly population and increase the risk of various health problems in elderly people.
Methods: A cross sectional study was conducted, in which 200 elderly from Sirmour participated and the subjects were selected using total enumeration sampling technique. For the data collection the Semi-structured interview schedule, WHO brief-26 QoL assessment scale and Rosenberg self-esteem scale (10-items) were used and data was analyzed using descriptive and inferential statistics in SPSS version-23.
Results: Present study shows that religion, education, occupation, monthly income have a very strong significant association at 0.05 level of significance with WHO bref-26 scale. Rosenberg self-esteem scale shows 165 (81.7%) of elderly have high self-esteem whereas 35 (17.3%) of them have low self-esteem. And no significant association was found between the self-esteem and demographic variable.
Conclusions: Indicates that levels of QoL between elderly are moderate and many demographic, social and health factors are correlated with QoL. Also, no significant association was found between Rosenberg self-esteem scale with demographic variable.

Keywords: Quality of life, Self-esteem, WHO bref-26 scale, Rosenberg self-esteem scale

INTRODUCTION

Old-age or elderly or senescence, is the final stage of the normal life span. it is the stage of degeneration where atrophy of various body tissues, cells and muscles started due to various factors such as free-radicals formation, increase in cell rigidity, wear and tear of various body tissues and mutations of DNA under the influence of various harmful rays.[1] Help age India aim to serve elderly need in a holistic manner i.e.; including all physical, mental, social, and spiritual aspect, enabling them to live their life with dignity and healthy. The help age global network 2015 review reported that 12% of the global population >60 years of age and that by 2050 this percentage is estimated to rise to 324 million.[2] Help age India is a leading charity in India working with and for disadvantaged elderly for nearly 4 decades by providing them with pension, quality healthcare, action against elder abuse, cataract surgeries and also focusing on rehabilitation of elderly and making them self-reliant.[3]

Objectives

The objective of this study was (a) to assess the QoL and self-esteem among elderly residing in urban areas of district Sirmour, Himachal Pradesh; and (b) to find association between QoL and self-esteem with selected demographic variables.

Operational definitions

Quality of life

It is the standard or status of an individual to live his/her life effectively within the society and their coping abilities to solve their problem of living.

Self-esteem

Self-esteem is a belief or thinking about their own-self that keeps them motivated/demotivated to perform their work. It can be negative or positive.

Old age population

Old age refers to ages nearing or surpassing the life expectancy of human beings and is thus the end of human life cycle.

Delimitations

Study is delimited to elderly population of 60 years and above residing in selected urban area of district Sirmour, Himachal Pradesh.

Research variable

The study consists of research variables such as self- esteem and QoL.

METHODS

Research approach

Quantitative research approach was carried out.

Research design

Descriptive survey design is used to explore the quality of life, loneliness and self-esteem among the elderly population of selected urban areas of district Sirmour.

Research setting

Selected urban area of district Sirmour, Himachal Pradesh. The data was collection timing was 1st February 2020 to 28th February 2020.

Population

In present study the population comprises of elderly population of selected urban areas of district Sirmour, Himachal Pradesh.

Sample size

$$\mathbf{n} = \frac{\boldsymbol{NZ} \times \mathbf{2}\boldsymbol{p}(\mathbf{1} - \boldsymbol{p})}{\boldsymbol{d} \times \mathbf{2}\ (\boldsymbol{N} - \mathbf{1}) + \boldsymbol{Z} \times \mathbf{2}\boldsymbol{p}\ (\mathbf{1} - \boldsymbol{p})}$$

n= Sample size; N= total population; Z= standards normal variable with 95% confidence interval i.e.; 1.96; d (allowable error)= 5%= 0.05; p= population proportion= 0.5. The calculated sample size was 253 but due to the scattered population of elderly people we took 200 as the final study sample.

Sampling technique

In this study the total enumeration sampling technique is used for quantitative data collection.

Research tool

The semi-structured interview schedule is used for the demographic variables. The standardized scale: Rosenberg self-esteem range and WHO QOL-bref were used.

Validity and reliability

The standardized tools were used in the present study. Internal consistency for the Rosenberg self-esteem range from 0.77 to 0.88 and test-retest reliability for the RSE range from 0.82 to 0.85.

For the WHO QOL-bref scale Cronbach alpha values for each of the four domain scores ranged from 0.66 (for domain 3) to 0.84 (for domain 1), internal consistency of physical health was 0.82, psychological health was 0.75, a social relationship is 0.66, and for environmental domain is 0.80.

Criteria for sample selection

Inclusion criteria for quantitative interview

Elderly who were (a) willing to participate; (b) more cooperative and expressive; and (c) present at the time of data collection were included.

Exclusion criteria

Elderly who were (a) deficits in higher mental functions (amnesia, aphasia); (b) with hearing and verbal impairments; (c) were not cooperative and not willing to participate.

Data collection instruments

Data collection instruments were as follows- (a) tool 1: semi-structured interview schedule; (b) tool 2: WHO QoL assessment scale; (c) tool 4: Rosenberg self-esteem scale

Tool 1: Semi-structured interview schedule to ascertain the background information

Part A of the tool includes variables i.e. age, religion, total no. of family members, type of family, marital status, qualification, occupation, total monthly income of family, earning member of family.

Tool 2: WHO brief-26 QoL assessment scale

The WHOQOL self-assessment instrument assesses the individual's perceptions in the context of their culture and value systems, and their personal goals, standards and concerns. It comprises 26 items, which measure the following broad domains (4): physical health (pain and discomfort, sleep and rest, energy and fatigue, mobility, activities of daily living, dependence on medical substances and medical aids, work capacity) psychological health (positive feelings, thinking, learning, memory and concentration, self-esteem, bodily image and appearance, negative feelings, spirituality/religion/personal beliefs), social relationships (personal relationships, social support and sexual activity) and environment (freedom, physical safety and security, home environment, financial resources, health amd social care: accessibility and quality, opportunities for acquiring new information and skills, participation in and opportunities for recreation/leisure activity, physical environment: pollution/noise/traffic/climate, transport). The WHOQOL-bref is a short version of the original instrument.

Calculation of domain scores

Domain scores for WHOQOL-bref were calculated by multiplying the mean of all items included within the domain by four. Potential scores for all domain scores, therefore, range from 4-20.

Table 1: Scoring.

Assessing criteria	Range	Score
Low quality of life	≤45	3
Moderate quality of life	46-65	2
High quality of life	≥65	1

Tool 4: Rosenberg self-esteem scale

The Rosenberg self-esteem scale, a widely used self-report instrument for evaluating individual self-esteem using a 10-items scale that measures global self-worth by measuring both positive (5) and negative feelings (5) about the self. The scale is believed to be one-dimensional. All items were answered using a 4-point Likert scale format ranging from strongly agree to strongly disagree.

Research analysis

The data was analyzed by using descriptive and inferential statistics in SPSS version-23.

RESULTS

Section A: Background information of the elderly population

Table 2 depicts that 44 (57.0%) of elderly belongs to the age group of 60-65 years, 47 (23.5%) belongs to the age group of 65-70 years another 22 (11.0%) belongs to the age group of 70-75 years and remaining 17 (8.5%) belongs to the age group of 75 years and more.

It was found out that 185 (92.5%) of them belongs from Hindu religion and 6 (3.0%) were from Muslim religion, 5 (2.5%) were from Christian, 4 (2.0%) were from Sikhism. 131 (65.5%) has 5 and more than 5 as total family members, 48 (24.0%) of elderly has family members between 2-4 whereas 20 (10.0%) of elderly has family members between 0-2.

Majority of the elderly 136 (68.0%) have joint families, 57 (28.5%) of them belong to the nuclear families whereas 7 (3.5%) of elderly belong to extended families. The 166 (83.0%) of elderly were married, 29 (14.5%) were widows and 5 (2.5%) were divorced. 71 (35.5%) of the elderly have 4 and more children, 68 (34.0%) have 3 children, 40 (20.0%) have 2 children and 21 (10.5%) have 1 child. 92 (46.0%) of them were pre-literate, 55 (27.5%) had a primary level of education, 45 (22.5%) of them had a secondary level of education whereas 8 (4.0%) had a metric level of education. Majority of 90 (45.0%) were housewives, 67 (33.5%) were working as laborer's, 30 (15.0%) were having private businesses and 13 (6.5%) were government employees. The 144 (72.0%) of elderly has family income less than 10,000, 39 (19.5%) of them has family income between Rs. 10,000-20,000, followed by 9 (4.5%) of them has income between Rs. 20,000-30,000 and 8 (4.0%) of them has family income more than 30,000. Table 3 depicts findings of Rosenberg self-esteem scale in which 165 (81.7%) of elderly has high self-esteem whereas 35 (17.3%) of them have low self-esteem. Table 4 depicts demographic variables such as religion, education and occupation have significant association whereas monthly income has very strong significant association at 0.05 level of significance with WHO brief-26 scale.

Domain 2

Table 5 depicts demographic variables such as age have significant association whereas education status, occupation, monthly income has very strong significant association at 0.05 level of significance with WHO brief-26 scale.

Domain 4

Table 6 depicts association of demographic variables with WHO brief-26 scale.

Domain 3

Table 7 depicts demographic variables such as occupation has significant association whereas education status has very strong significant association at 0.05 level of significance with WHO brief-26 scale.

Table 8 depicts there was no association found between demographic variable and level of loneliness.

Table 2: Distribution of elderly based on background information of population (N=200).

Variables		f	Percentage (%)
Age (in years)	60-65	114	57.0
	65-70	47	23.5
	70-75	22	11.0
	75 and more	17	8.5
Religion	Hindu	185	92.5
	Muslim	6	3.0
	Christian	5	2.5
	Sikhism	4	2.0
Total family members	0-2	20	10.0
	2-4	48	24.0
	5 and more than 5	132	66
Type of family	Nuclear	57	28.5
	Joint	136	68.0
	Extended	7	3.5
Type of marriage	Married	166	83.0
	Divorced	5	2.5
	Widow	29	14.5
Total no of children	1	21	10.5
	2	40	20.0
	3	68	34.0
	4 and more than 4	71	35.5
Education status	Pre-literate	92	46.0
	Primary education	55	27.5
	Secondary education	45	22.5
	Metric and more	8	4.0
Occupation	Government	13	6.5
	Private	30	15.0
	Labourer	67	33.5
	Housewife	90	45.0
Monthly income (in rupees)	<10,000	144	72.0
	10,000-20,000	39	19.5
	20,000-30,000	9	4.5
	>30,000	8	4.0

Table 3: Frequency and percentage distribution of elderly based on Rosenberg scale.

Assessing criteria	f	Percentage (%)
High self-esteem	165	81.7
Low self-esteem	35	17.3

Table 4: Association of demographic variables with WHO brief-26 quality of life scale (N=200).

Variables		QoL			χ2	df	P value
		Low	Moderate	Relatively high			
Age (in years)	45	57	12	14.30	5.50	6	0.481
	31	9	7	4			
	11	9	2	2			
	6	9	2	1			
Religion	83	80	22	4.79	12.91	6	0.044*
	4	1	0	0			
	4	2	0	1			
	2	1	1	1			
	9	11	0	4.986	3.15	6	0.789

Continued.

Variables		QoL			χ2	df	P value
		Low	Moderate	Relatively high			
Total family members	23	18	7	3			
	60	55	16	9			
Type of family	26	25	6	1.22			
	63	56	17	9	4.43	4	0.350
	4	3	0	0			
Type of marriage	79	70	17	4.77			
	2	1	2	1	5.632	4	0.228
	12	13	4	3			
Total no. of children	1	5	13	3			
	2	13	23	4			
	3	21	46	1	6.818	6	0.338
	4 and more than 4	25	40	6			
Education status	Pre-literate	36	52	4			
	Primary education	19	35	1			
	Secondary education	8	30	7	17.41	6	0.008*
	Metric and more	1	5	2			
Occupation	Government	1	9	3			
	Private	6	20	4			
	Labourer	22	41	4	13.90	6	0.003*
	Housewife	35	52	3			
Monthly income (in rupees)	<10,000	48	90	6			
	10,000-20,000	14	21	4			
	20,000-30,000	1	7	1	16.48	6	0.001**
	>30,000	1	4	3			

Note: Depictsdemographic variables such as religion, education & occupation have significantassociation.

Table 5: Association of demographic variables with WHO brief-26 scale (N=200).

Variables		QoL			χ2	df	P value
		Low	Moderate	Relatively high			
Age (in years)	60-65	45	57	12			
	65-70	31	9	7			
	70-75	11	9	2	14.30	6	0.026*
	75 and more	6	9	2			
Religion	Hindu	83	80	22			
	Muslim	4	1	0			
	Christian	4	2	0	4.79	6	0.570
	Sikhism	2	1	1			
Total family members	0-2	9	11	0			
	2-4	23	18	7			
	5 and more than 5	60	55	16	4.986	6	0.546
Type of family	Nuclear	26	25	6			
	Joint	63	56	17	1.22	4	0.875
	Extended	4	3	0			
Type of marriage	Married	79	70	17			
	Divorced	2	1	2	4.77	4	0.311
	Widow	12	13	4			
Total no of children	1	13	5	3			
	2	17	18	5			
	3	31	28	9	4.27	6	0.640
	4 and more than 4	32	33	6			
Education status	Pre-literate	53	36	3			
	Primary education	28	22	5	49.81	6	0.000**
	Secondary education	11	25	9			

Continued.

Variables		QoL			χ^2	df	P value
		Low	Moderate	Relatively high			
	Metric and more	1	1	6			
Occupation	Government	2	5	6	22.01	6	0.001**
	Private	11	15	4			
	Labourer	33	31	3			
	Housewife	47	33	10			
Monthly income (in rupees)	<10,000	74	58	12	19.42	6	0.001**
	10,000-20,000	16	19	4			
	20,000-30,000	2	3	4			
	>30,000	1	4	3			

Note: Depicts demographic variables such as age has significant association whereas Education status

Table 6: Association of demographic variables with WHO brief-26 scale.

Variables		QoL			χ^2	df	P value
		Low	Moderate	Relatively high			
Age (in years)	60-65	40	54	20	4.52	6	0.606
	65-70	24	17	6			
	70-75	10	10	2			
	75 and more	6	8	3			
Religion	Hindu	75	80	30	2.97	6	0.811
	Muslim	2	3	0			
	Christian	2	3	1			
	Sikhism	1	3	0			
Total family members	0-2	8	11	1	5.96	6	0.427
	2-4	22	21	5			
	5 and more than 5	49	57	25			
Type of family	Nuclear	19	30	8	3.82	4	0.430
	Joint	58	55	23			
	Extended	3	4	0			
Type of marriage	Married	63	75	28	2.74	4	0.601
	Divorced	3	2	0			
	Widow	14	12	3			
Total no of children	1	11	7	3	3.39	6	0.759
	2	19	16	5			
	3	24	33	11			
	4 and more than 4	26	33	12			
Education status	Pre-literate	53	33	6	53.64	6	0.000**
	Primary education	22	27	6			
	Secondary education	5	27	13			
	Metric and more	0	2	6			
Occupation	Government	1	5	7	24.04	6	0.001**
	Private	7	16	7			
	Labourer	28	31	8			
	Housewife	44	37	9			
Monthly income (in rupees)	<10,000	61	66	17	17.82	6	0.007**
	10,000-20,000	15	18	6			
	20,000-30,000	2	4	3			
	>30,000	2	1	5			

Note: Depicts demographic variables education status, occupation &monthly income has very strong

Table 7: Association of demographic variables with WHO brief-26 scale.

Variables		QoL			χ2	df	P value
		Low	Moderate	Relatively high			
Age (in years)	60-65	37	47	30	4.52	6	0.606
	65-70	19	14	14			
	70-75	9	9	4			
	75 and more	6	9	2			
Religion	Hindu	63	75	47	2.97	6	0.811
	Muslim	3	1	1			
	Christian	4	1	1			
	Sikhism	1	2	1			
Total family members	0-2	6	9	5	5.96	6	0.427
	2-4	17	21	10			
	5 and more than 5	47	49	35			
Type of family	Nuclear	17	27	13	3.82	4	0.430
	Joint	51	50	35			
	Extended	3	2	2			
Type of marriage	Married	52	67	47	2.74	4	0.601
	Divorced	3	2	0			
	Widow	16	10	3			
Total no. of children	1	8	7	6	3.39	6	0.759
	2	16	19	5			
	3	21	22	25			
	4 and more than 4	26	31	14			
Education status	Pre-literate	44	36	12	53.64	6	0.000**
	Primary education	21	20	14			
	Secondary education	4	23	18			
	Metric and more	2	0	6			
Occupation	Government	2	5	6	24.04	6	0.001**
	Private	7	12	11			
	Labourer	19	31	17			
	Housewife	43	31	16			
Monthly income (in rupees)	<10,000	58	55	31	17.82	6	0.007**
	10,000-20,000	10	17	12			
	20,000-30,000	3	3	3			
	>30,000	0	4	4			

Note: Depicts demographic variables education status, occupation &monthly income has very strong

Table 8: Association of demographic variables with Rosenberg self-esteem scale.

Variables		Self-esteem		χ2	df	P value
		Low	High			
Age (in years)	60-65	99	15	5.487	3	0.139
	65-70	35	12			
	70-75	19	3			
	75 and more	12	5			
Religion	Hindu	152	33	0.888	3	0.828
	Muslim	4	1			
	Christian	5	1			
	Sikhism	4	0			
Total family members	0-2	15	5	1.884	3	0.597
	2-4	42	6			
	5 and more than 5	107	24			
Type of family	Nuclear	48	9	0.712	2	0.701
	Joint	112	24			

Continued.

Variables		Self-esteem		χ^2	df	P value
		Low	High			
	Extended	5	2			
Type of marriage	Married	138	28	0.272	2	0.873
	Divorced	4	1			
	Widow	23	6			
Total no. of children	1	15	6	6.098	3	0.107
	2	35	5			
	3	52	16			
	4 and more than 4	63	8			
Education status	Pre-literate	74	18	2.020	3	0.568
	Primary education	46	9			
	Secondary education	37	8			
	Metric and more	8	0			
Occupation	Government	11	2	0.574	3	0.902
	Private	26	4			
	Labourer	54	13			
	Housewife	74	16			
Monthly income (in rupees)	<10,000	113	31	6.146	3	0.105
	10,000-20,000	37	2			
	20,000-30,000	8	1			
	>30,000	7	1			

Note: Depicts there is no association found between demographic variable and level of loneliness

DISCUSSION

Domain 1 demographic variables like religion, education and occupation have significant association whereas monthly income has very strong significant association at 0.05 level of significance. In domain 2 variables like age have significant association whereas education status, occupation, monthly income has very strong significant association at 0.05 level of significance. In domain 3 variables like occupation have significant association whereas education status has a very strong significant association at 0.05 level of significance with WHO brief-26 scale. In domain 4 variables such as education status, occupation and monthly income have a very strong significant association at 0.05 level of significance with WHO brief-26 scale.

A similar prospective cohort study was conducted to understand the determinants of nutrition, physical activity and quality of life among older adults. The purpose of the study was to understand the determinants so that the effective interventions must be promoted to develop the health and well-being and also to prevent the diseases and improve the quality of life. Age group was older adults between the age group 55-65 years and the tool used was questionnaire. It was concluded that these determinants were important for the development of well-being, eating and exercise for a long life.

Present study results reveal 127 (63.5%) of elderly have a mild level of loneliness, 44 (22.0%) of them have moderate level of loneliness whereas 29 (14.5%) have a severe level of loneliness. And no significant association was found between the level of loneliness and demographic variable.

Similar results are shown in a study which was conducted to show evidence of exercise programs as intervention to decrease symptoms and to improve quality of life and self-esteem in older people. The design was systematic review of randomized controlled trials. Result shows that exercise therapy improves the quality of life (SMD 0.86; 95% CI 0.11, 1.62) and self-esteem (SMD 0.49; 95% CI 0.09,0.88). Conclusion was exercise improve the quality of life and self-esteem.[5]

In present study the Rosenberg self-esteem scale shows 165 (81.7%) of elderly have high self-esteem whereas 35 (17.3%) of them have low self-esteem. And no significant association was found between the self-esteem and demographic variable.

Similar results are shown in a cross-sectional with objective to assess the loneliness and self-reported health among older persons in New Zealand. The purpose of the study was to identify the rate, degree and impact of loneliness in older people. The sample size was 332 older people and tools used were questionnaires. The findings revealed 8% were severely lonely, 44% were moderately lonely and 48% were not lonely. It was concluded that the difference was found in the physical and mental status of the older people due to loneliness.[6]

Results of a present study showed that 64 (31.7%) of elderly have low QoL, 122 (60.4%) of elderly have moderate quality of life and 14 (6.9%) of elderly have relatively high quality of life in domain 1. 93 (46.0%) of elderly have low QoL, 84 (41.6%) have moderate quality of life and 23 (11.4%) of them have relatively high quality of life in domain 2. 71 (35.1%) has low quality of life, the majority

of them 79 (39.1%) has moderate QoL whereas 50 (24.8%) has relatively high quality of life in domain 3. In domain 4, 71 (35.1%) of elderly have low QoL, 79 (39.1%) of them have moderate quality of life and 50 (24.8%) have relatively high quality of life in WHO-bref-26 quality of life. Study further shows that in domain 1 demographic variables like religion, education and occupation have significant association whereas monthly income has very strong significant association at 0.05 level of significance. In domain 2 variables like age have significant association whereas education status, occupation, monthly income has very strong significant association at 0.05 level of significance. In domain 3 variables like occupation have significant association whereas education status has very strong significant association at 0.05 level of significance with WHO brief-26 scale. In domain 4 variables such as education status, occupation and monthly income have a very strong significant association at 0.05 level of significance with WHO brief-26 scale.

No significant association was found between the loneliness, Rosenberg self-esteem scale with demographic variable.

Assumption

The assumptions were (a) loneliness, self-esteem and quality of life vary among elderly population of the selected urban area of district Sirmour, Himachal Pradesh; and (b) the information provided by the elderly people will present their true feelings.

Strengths of the study

The strengths of the study were (a) present study consisted of a large sample size collected from the urban area of district Sirmour which is not easy to collect; (b) recent study focused on three different variables i.e.; loneliness, self-esteem and quality of life which cannot be measured easily; (c) present study focused on both male as well female participants, the study not only having its focus on male or female participants both are included; and (d) present study uses three different standardized tools i.e.; UCLA scale for loneliness, Rosenberg scale for self-esteem and WHOQOL bref-26 scale for quality of life which is not used collectively in earlier research studies.

Limitations

The limitations of the study were (a) this study cannot be generalized because of the small sample size of only 200 elderly people; (b) was only restricted to urban area i.e.; Rajgarh of district Sirmour; (c) the data collection was time consuming and not easy because of the highly scattered population; and (d) some of the older people did not participated in sharing their feelings regarding their relationship with their family and friends which was useful to assess loneliness, self-esteem and QoL.

CONCLUSION

In conclusion of this research study, it was found that all the three factors have a relation in them. The variations of a factor can bring variation in the other factor too. The implication of this study and its findings can help in understanding the various factors related to the various problems that the older population suffers and also helps in understanding the concept of mental problems that are effect of loneliness, low self-esteem and poor QoL.

ACKNOWLEDGEMENTS

The authors are thankful to all the associated personnel in any reference and study subjects who contributed for the purpose of this research.

Funding: No funding sources
Conflict of interest: None declared
Ethical approval: The study was approved by the Institutional Ethics Committee

REFERENCES

1. Ansari J. PV Textbook of Medical Surgical Nursing. India: S Vikas and Company; 2017.
2. Wikipedia. Help age, 2018. Available at: https://en.wikipedia.org/wiHelpAgeIndia. Accessed on 12 June 2021.
3. Britannica. Old age, 2018. Available at: https://www.britannica.com/scienoldage. Accessed on 12 June 2021.
4. Naughton SA, Crawford D, Ball K, Salmon J. Understanding determinants of nutrition, physical activity and quality of life among older adults: the Wellbeing, Eating and Exercise for a Long Life (WELL) study. Health Qual Life Outcomes. 2012;10:109.
5. Park SH, Han KS, Kang CB. Effects of exercise programs on depressive symptoms, quality of life, and self-esteem in older people: a systematic review of randomized controlled trials. Appl Nurs Res. 2014;27(4):219-26.
6. Grow S, Neville S, Alpass F, Rodgers V. Loneliness and self-reported health among older persons in New Zealand. Australas J Ageing. 2012;31(2):121-3.

Cite this article as: Verma K, Setia P, Bhardwaj P, Rawat P, Sharma P. Quality of life and low self-esteem: an alarming phase among elderly. Int J Community Med Public Health 2021;8:4385-93.