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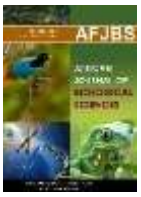

EVALUATION OF HEALTH RELATED QUALITY OF LIFE OF GERIATRICS WITH COMORBIDITIES AT A TERTIARY CARE HOSPITAL

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Abstract

According to the WHO report, there are more than 600 million elderly individuals worldwide; it is estimated this rate will be double by 2025 and 2 billion by 2050. Elderly people have higher probability of suffering from multiple health conditions due to reduced physical and mental functions. Loneliness, impaired sexual activity and chronic metabolic disorders are some of causes that can result in emotional disturbances and affects quality of life of elderly. **Aim:** The aim of the study is to assess the quality of life (QOL) of elderly patients with chronic illness. **Methodology:** The cross-sectional observational study was conducted for a period of among 402 older adult patients (aged above 60 years, both gender) with comorbid conditions. Psychaitric patients were excluded from the study. WHO BREF Quality of life questionaire was used for quality of life assessment. **Results & Discussions:** Majority of patients were diagnosed with hypertension (68.4%), followed by Diabetes mellitus (40.5%). In our study it was found that there is a negative correlation between the domains of WHOQOL-BREF and aging. The mean score of physical health domain is 20.66 ± 3.738, psychological domain 17.14 ± 3.474, social relationship domain 6.704 ± 2.207 and environment domain 22.34 ± 5.294. In the present study, the maximum score were seen in physical health and environment domain whereas least score in social relationship domain.**Conclusion:** The quality of life score of geriatric population was found to be average with the lowest score in social relationships. The study shows that their quality of life was closely correlated with their age and educational level of patients, as quality of life decreases with increasing age and increases with increasing educational level. Appropriate policy design is required to establish a life-learning motivation along with financial security and provision of palliative care service for Quality of life improvement in geriatrics.

Key words: Quality of life, Physical, Social, Psychological, Metabolic disorders.

INTRODUCTION

Ageing as a natural process of life is due to gradual changes in metabolic activity of organs and disability in regeneration capacity of cells. The factors including heredity, life style and healthy diet, avoiding smoking and physical activity can help on the longevity of life.[1] According to the WHO report, there are more than 600 million elderly individuals worldwide; it is estimated this rate will be double by 2025 and 2 billion by 2050.[2,3] Maintaining good health and well-being are often portrayed as markers of healthy or successful ageing and are a target for policymakers and health professionals alike.[4,5] Elderly people have higher probability of suffering from multiple health conditions due to reduced physical and mental functions. Loneliness, impaired sexual activity and chronic metabolic disorders are some of causes that can result in emotional disturbances and affects quality of life of elderly.[6]According to WHO statements, quality of life defined as an individual's perception of their position in life in the context of the culture and values systems in which they live and in relation to their goals, expectations, standards and concerns.[7] It is a broad concept covering the individual's physical health, mental state, level of independence, social relationships, spiritual beliefs, and the environment.

The concept of QOL includes two main dimensions: the feeling of well-being and the health related quality of life (HRQOL) which are strong indicators of successful aging. The distinction of these two dimensions is interesting since well-being may be more sensitive to psychological aspects than measures of HRQOL[8]. Health-related quality of life (HRQOL) is presently considered an important patient- reported outcome. HRQOL measurement enables healthcare bodies to evaluate public health policy centered on a single theme.[9] It is used as an authentic measure to estimate the patient's unmet needs and the outcomes of interventions. Health status measured by self-administered tools provides a powerful forecaster of morbidity and mortality compared with several other objective tools.[10] The integrative analysis of various psychological dimensions such as self-esteem, psychological distress, perceptions of aging and coping, can provide interesting insight into various aspects of life[11]. In addition, quality of life is described as a wellness resulting from a combination of physical, functional, emotional and social factors.[12] Poor economic, cultural, educational and health care conditions and also inadequate social interactions can result in poor quality of life in elderly people.[13] The most common Chronic diseases such

as diabetes mellitus, coronary heart diseases, osteoporosis and cerebrovascular among elderly people can causes disturbances in social, physical and mental functioning. As well as, burden of diseases will be increased obviously.[14] Growing evidence suggests that, when measured in terms of life satisfaction, wellbeing is relatively stable even amongst the oldest old and 'bounces back' following negative life events (including spousal death) to a set point, which itself is determined largely by psychological factors developed over the life course.[15,16] The aim of the study is to assess the quality of life (QOL) of elderly patients with chronic illness.

METHODOLOGY

The cross-sectional observational study was conducted among older adult patients in a tertiary care hospital, Erode, Tamil Nadu for a period of 6 months. Patient with the age of 60 years and above with various disease conditions who were able to communicate were included in the study. Patient with psychiatric disorders and not able to respond properly were excluded from the study. Raosoft sample size calculator online with margin error of 5%, confidence level 95% and approximate population size 2400 was used for sample size determination. The estimated sample size calculated was 330 and the current study included 402 study participants.

Statistical Analysis

Statistical analysis of data were analysed using the GraphPad Prism 9.4.1 (681). WHO Quality of Life Scale- Brief (WHOQOL-Bref) scores were tested for normality of distribution using D'Agostino-Pearson omnibus normality test. All continuous variables were expressed as mean ± SD, and the categorical variables were summarized by frequencies and percentages. Kruskal Wallis test were used to analyse the significant difference between domains of WHOQOL-Bref and spearman correlation to analyze the relation between the domains, education level and age categories.

RESULTS AND DISCUSSION

In the present study, out of 402 study patients, male patients (53.2%) outnumbered females (46.8%) and 215 (53.4%) were married and 187 (46.5%) were single, separated, divorced and widowed. The patients were distributed based on their age and in which the majority of patients 136 (33.8 %) were within the age group of 66-71 years followed by patients 92 (22.9%) in age group of 72-77 years. The study also showed that most of patients (42.8%) were living in urban and semi urban areas (33.1%). Nearly half of the patients recruited in the study (52.9%) were illiterate which can be an indirect influencing factor of QOL (Quality of Life). The similar results obtained from a study conducted by Shah *et al.,*[17] (2017) which stated that, majority of patients in the age group of 60-64 years and 65-70 years were with primary education (52.4%) and illiterate (35.6%). Current study distributed the patients based on their occupation status and found that about 49.5% were employed whereas 50.5% patients were unemployed as most of recruited study participants were with age more than 60 years. The study listed out the possible risk factors among the patients and it was found that, about 23.1% of patients had a habit of smoking and alcoholism.

Table 1 listed out various disease conditions encountered by the patients. Majority of patients were diagnosed with hypertension (68.4%), followed by Diabetes mellitus (40.5%) chronic obstructive pulmonary disease 57 (14.2%), myocardial infarction 54 (13.4%), congestive cardiac failure 38 (9.5%) and anemia 33 (8.2%). The study conducted by Muhammad Saqlain *et al.,*[18] (2020), cardiovascular diseases markedly reduced the quality of life of the geriatric population and become worse after the age of 75 years.

Table No. 1: Distribution of patients based on their disease condition

Diseases	Number of patients (n=402)	Percentage (%)
Hypertension	275	68.4
Diabetes mellitus	163	40.5
COPD	57	14.2
Myocardial infarction	54	13.4
Congestive cardiac failure	38	9.5
Anemia	33	8.2
Seizure	28	7

Stroke	28	7
Chronic kidney disease	21	5.2
Asthma	21	5.2
Tuberculosis	11	2.7
Others	10	2.5

All the patients who participated in the study were diagnosed with multiple disease conditions. In the context of family support, 145 (67.1%) had strong family support and 71 (32.8%) weak family support .The presence of a strong family support was also associated with good QOL for the study population. However, strong family support and high socioeconomic class were the only significant independent predictors of good QOL in the study.

Based on responses to the WHOQOL-BREF questionnaire (Table 2); geriatric patients had moderate or average level of quality of life. Mean score for four different domains, namely, physical, psychological, social, and environmental were illustrated for QOL. The mean score of physical health domain is 20.66 ± 3.738, psychological domain 17.14 ± 3.474, social relationship domain 6.704 ± 2.207 and environment domain 22.34 ± 5.294. In the present study, the maximum score were seen in physical health and environment domain whereas least score in social relationship domain. In contrast with this, a study conducted by Qadri *et al.*,[19] revealed that majority (68.2%) of elderly had good QOL whereas only 0.9% had poor. The mean score of social domains was maximum (69.4±9.7) as compared to other three domains (Table 3). Similar presentation was seen in study by Sowmiya and Nagarani[17] in Tamil Nadu, where the highest score was for the social relationship domain. Mudey *et al.*,[20] in their study concluded that the QOL of rural elderly population was better in physical and psychological domain, whereas QOL in urban slum elderly was better in social relationship and environmental domain. The difference observed in QOL score in different domains may be due to difference in the pattern of associated factors which influence QOL in different study settings.

In our study it was found that there is a negative correlation between the domains of WHOQOL-BREF and aging i.e, while aging the quality of life among elderly patients decreases, The correlation of psychological and social domains with aging is found to be

highly significant, though the former one which deals with positive feelings, spirituality, thinking, memory, concentration, bodily image and appearance, self-esteem and latter one with personal relationships, sexual activity, social support decreases with ageing (Table 4). And there was a positive correlation between the domains of WHOQOL-BREF and educational level i.e, individual with higher education were with better quality of life (Table 5). Similar results were observed in a study conduted by Qadri *et al.,*[19] which mentioned that QOL was better for physical, psychological, social, and environmental domains among the participants who were graduate.

Table No.2: Responses to the WHOQOL-BREF Questionnaire

Sl.No	Questions	Not at all 1 (%)	A little 2 (%)	Moderate 3(%)	Very much 4 (%)	Extreme 5 (%)	Mean ± SD
Overall Quality of Life and General Health							
1.	How would you rate your quality of life?	40 (10)	115 (28.6)	130 (32.3)	102 (25.3)	15 (3.7)	
2.	How satisfied are you with your health?	50 (12.4)	120 (29.8)	153 (38)	70 (17.4)	10 (2.5)	
Physical Health							
3.	To what extent do you feel that physical pain prevents you from doing what you need to do?	15 (3.7)	74 (18.4)	161 (40)	108 (26.8)	44 (10.9)	
4.	How much do you need any	15 (3.7)	86 (21.3)	138 (34.3)	117 (29.1)	46 (11.4)	

	medical treatment to function in your daily life?						**20.66 ± 3.738**
5.	Do you have enough energy for everyday life?	40 (9.9)	106 (26.3)	158 (39.3)	80 (19.9)	17 (4.2)	
6.	How well are you able to get around?	49 (12.1)	111 (27.6)	146 (36.3)	75 (18.6)	21 (5.2)	
7.	How satisfied are you with your sleep?	37 (9.2)	85 (21.1)	129 (32)	110 (27.3)	41 (10.1)	
8.	How satisfied are you with your ability to perform your daily living activities?	41 (10.1)	112 (27.8)	144 (35.8)	89 (22.1)	16 (3.9)	
9.	How satisfied are you with your capacity for work?	55 (13.6)	108 (27.8)	155 (38.5)	67 (16.6)	17 (4.2)	

Psychological							
10	How much do you enjoy life?	30 (7.4)	121 (30)	146 (36.3)	86 (21.3)	19 (4.7)	**17.14 ± 3.474**
11.	To what extent do you feel your life to be meaningful?	34 (8.4)	106 (26.3)	150 (37.3)	94 (23.3)	18 (4.4)	
12.	How well are you able to concentrate?	36 (8.9)	116 (28.8)	150 (37.3)	84 (20.8)	16 (3.9)	
13.	Are you able to accept your bodily appearance?	40 (9.9)	143 (35.5)	135 (33.5)	70 (17.4)	14 (3.4)	
14.	How satisfied are you with yourself?	42 (10.4)	127 (31.5)	130 (32.3)	87 (21.6)	16 (3.9)	
15.	How often do you have negative feelings such as blue mood, despair, anxiety, depression?	37 (9.2)	70 (17.4)	149 (37)	103 (25.6)	43 (10.6)	
Social relationships							
16.	How satisfied are you with your personal relationship?	67 (16.6)	101 (25.1)	125 (31)	94 (23.3)	15 (3.7)	**6.704 ± 2.207**
17.	How satisfied are you with your sex life?	273 (67.9)	87 (21.6)	42 (10.4)	-	-	
18.	How satisfied are with the support you get from your friends?	107 (26.6	80 (19.9)	118 (29.3)	79 (19.6)	18 (4.4)	
Environment							

19.	How safe do you feel in your daily life?	22 (5.4)	83 (20.6)	179 (44.5)	102 (25.3)	16 (3.9)	
20.	How health is your physical environment?	36 (8.9)	74 (18.4)	173 (43)	99 (24.6)	20 (4.9)	
21.	Have you enough money to meet your needs?	57 (14.1)	186 (46.2)	113 (28.1)	41 (10.1)	5 (1.2)	
22.	How available to you is the information that you need in your daily-to-daily life?	54 (13.4)	131 (32.5)	145 (36)	59 (14.6)	13 (3.2)	
23.	To what extent do you have the opportunity for leisure activities?	65 (16.1)	126 (31.3)	127 (31.5)	66 (16.4)	18 (4.4)	
24.	How satisfied are you with the condition of your living place?	34 (8.4)	121 (30)	138 (34.3)	89 (22.1)	20 (4.9)	**22.34** ± **5.294**
25.	How satisfied are you with your access to health services?	24 (5.9)	92 (22.8)	157 (39)	101 (25.1)	28 (6.9)	
26.	How satisfied are you with your transport?	43 (10.6)	97 (24.1)	171 (42.5)	68 (16.9)	23 (5.7)	

Table No.3: Descriptive Statistics of the WHOQOL-BREF Health related Domains

WHOQOL-BREF Domain	Mean ± SD	Kruskal-Wallis statistical Value	*p* value
Physical Health	20.66 ± 3.738	**1040**	**<0.0001**
Psychological	17.14 ± 3.474		
Social relationships	6.704 ± 2.207		
Environment	22.34 ± 5.294		

Table No.4:Correlation between WHOQOL-BREF health related Domain & Aging

Correlation	r_s	95 % CI	*p* value
Aging Vs Physical health	-0.09488	-0.1937 to 0.005856	**0.057^{NS}**
Aging Vs Psychological	-0.1552	-0.2520 to -0.05540	**0.002****
Aging Vs Social relationships	-0.2261	-0.3195 to -0.1283	****<0.001**
Aging Vs Environment	-0.04939	-0.1493 to 0.05155	**0.323**

Table No.5: Correlation between WHOQOL Health related domain & Education level of patients

Correlation of Educational level Vs QOL Domain	***r s***	**95 % CI**	***p* value**
Education level Vs. Physical health	0.3135	0.2198 to 0.4015	*****<0.0001**
Education level Vs. Psychological	0.2950	0.2003 to 0.3843	
Education level Vs. Social relationships	0.2990	0.2045 to 0.3880	
Education level Vs. Environment	0.3257	0.2326 to 0.4128	

CONCLUSION

The quality of life score of geriatric population was found to be average with the lowest score in social relationships. Social recreational activities will help in building self-image and quality of life. Social support interventions are valid only when mental stress are managed effectively. The study shows that their quality of life was closely correlated with their age and educational level of patients, as quality of life decreases with increasing age and increases with increasing educational level. The psychological well-being like QOL can be improved by better education, household income and mitigating age-related disabilities. All these factors require an appropriate policy design to establish a life-learning motivation along with financial security and provision of palliative care services.

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