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Effect of Daily Living Activity on Quality of Life in Geriatric Population

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Abstract

Background: To investigate the Effect of Daily living activity on Quality of Life in Geriatric population.

Materials & method: Subjects selected by using convenient sampling and from Residential Area and Old Age Home in Ahmedabad. Total 150 Participants aged 60 years and above. Both male and female were chosen to be part of the study according to the inclusion criteria. Participants were given the scale SF-12 and Barthel index to fill.

Results: Data is not normal distribution table so spearman correlation test used to analyze data. Result shows that strong correlation is found between pcs -12 and barthel index with value 0.811 and moderate positive correlation between mcs-12 and barthel index value 0.54. Hence it shows that there is correlation between quality of life and activity of daily living.

Discussion: The study's primary goal is to determine how daily living activity and quality of life correlates in geriatric population. The correlation value of Barthel Index and PCS-12 was 0.814 whereas correlation value of Barthel Index and MCS-12 is 0.54. MCS-12 is lower than PCS-12. P value<0.01, geriatrics they could be less able in physical tasks compare to mental tasks.

Conclusion: Study concludes that there is positive correlation between pcs – 12 and barthel index and moderated correlation between mcs-12 and barthel index.

Keywords: activity of daily living, barthel index, geriatrics, SF-12, quality of life

1. Introduction

India's population is undergoing a significant shift. India's population is expanding quickly, which adds to the country's elderly population. There are currently 153 million people 60 years of age and older [1]. The rapid transformation results in more mental and physical impairments. The aging process is not only based on Population growth places tremendous strain on social and economic issues in addition to physical ones. Additionally, there is a greater tendency of chronic illnesses that result in long-term dependence [2]. Geriatric syndrome and multimorbidity are associated with numerous problems. This results in a rise in disabilities and impairments that are not related to the aging population [3]. Because they engage in fewer instrumental activities and daily life activities, and older adults have a lower functional capacity to accomplished. Activity of daily living includes bathing, washing, grooming etc., activities can be performed at home mostly [4]. Activity of daily living affects by physical and psycho social factors. Declined in activity of daily living is associated with quality of life, loss of physical dependency cause depression, anger, loss in confidence which lead in degradation in quality of life [5,6].

It can be seen in stroke patients and dementia patients and many other conditions[6].
Quality of life is considered as a significant research regarding health and medicine. WHO said quality of life as self-perspective health component. Quality of life is not only impacted in diseased population but also in healthy individuals [7]. The declined in physical function and activity of daily living directly or indirectly impacts on quality of life. There are many multicomponent influenced on quality of life [8]. Emotional well-being, in which respondents have impact quality of their everyday emotional [9].There are many causes behind not accomplished lack of physical activity. Physical dependency also leads to deprived in mental state which eventually disturbed quality of life. Factors which affect the quality of life; the reason is physical & mental illness. The objective of the study is to evaluate relation between daily physical activity and quality of life in geriatrics.
Methodology: The subjects included in the study notified the methodology and oral consent was obtained from all participants. Both male and female were included between 60-90 years and various old age homes and residents in Ahmedabad. Subjects participated in the study by purposive sampling. A written content was taken as the basic of inclusion criteria. Two subjective score scales were used in the study - SF12 and Barthel index for assessing the basic daily living activity and quality of life of patients. Initially, participants selected as per inclusion criteria. Thereafter oral consent was taken for the participants in order to conduct the study. A general assessment of the participants was done and their activity in daily living was assessed according to Barthel index scale.SF-12 scale was manually filled by the participant to assess their quality of life.
BARTHEL INDEX: The Barthel Index (BI) is an ordinal scale measures performance of daily living activities (ADL). Each item scored on the basis of time taken & physical assistance. The Barthel Index measures assistance required for an individual.
The Barthel index has high inter-rater reliability (0.95) and test retest reliability (0.89).
SF-12:The Short Form (12) is a 12-item scale, evaluates quality of life. The various components of scale are divide into physical and mental components. Following are the components of the scale general health, physically function, role physical, role emotion, bodily pain, mental health, energy fatigue, social functioning. The scoring format of SF-12 is summary scores of PCS-12 and MCS-12. All the12 questions are involved in the scoring. Maximum scoring of PCS-12 and MCS-12 is 56.57 & 60.75 respectively. The scores are taken in average difference from USA population of 50 points. Score developer John E. Ware used indicator variable for calculating the scores. In this study for scoring ORTHOTOOLKIT is been used shows same score a in original form.
Reliability=0.80

RESULTS & DISCUSSION

STATISTICS: This study was done to assess the correlation between the activity of daily life and quality of life in geriatrics. The data were analyzed with Statistical Software SPSS version 20, to assess the Normal distribution. But data was not normally distributed so the non-parametric test was used. Microsoft Excel is used to generate graphs and tables. The spearman correlation test was employed to determine correlation between QOL and ADL. Statistical analyses were considered at a significant level of $p<0.01$. The Spearman Correlation test was used to find a correlation between Quality of Life and Activity of daily life.

Inclusion Criteria	• Age- 60 years and above –both male and female. • Participants wiling to be the part of the study • Participants able to write, understand, communicate. • Participants who can walk and perform activities of
Exclusion Criteria	• People with history of CNS, cardiorespiratory disorders. • Severe muscular skeletal disorders • Had acute operation procedure. • Systemic illness.

RESULTS: The Mean & SD calculated was 70.84 & ±7.7 respectively, showed in table I. Subjects participated in the study were both males & females, 89 males participated in the study & 61 females showed in table II. There is also graph showed occupation Distribution in Table III. To analyzed data Spearman Correlation test was used at significant level $p<0.01$. Strong and Positive Correlation value found between PCS-12 & Barthel Index 0.810 showed in Scatter plot graph 2.1. Moderate and positive correlation value found between MCS-12 & Barthel Index 0.54 at $p<0.01$, showed in Scatter plot graph 2.2.

TABLE I showed Mean & SD of the population

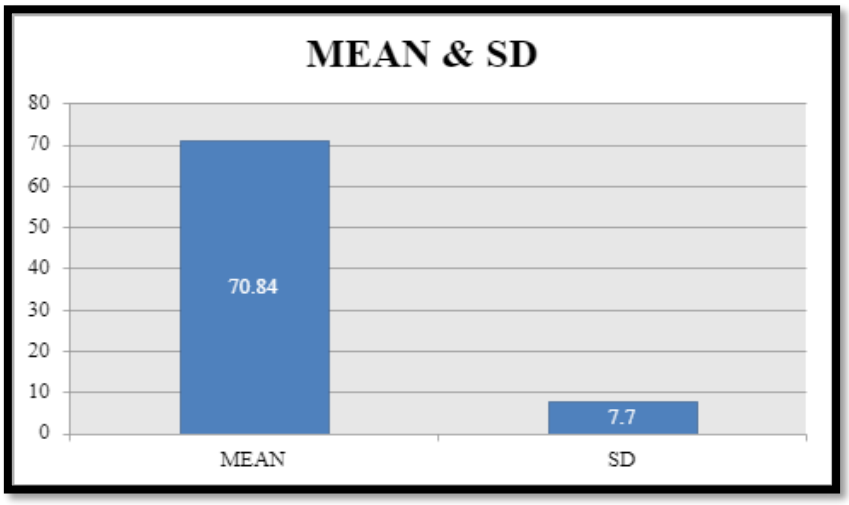
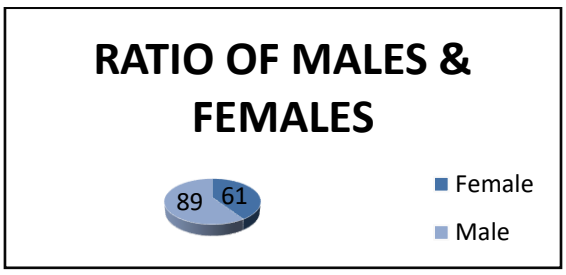
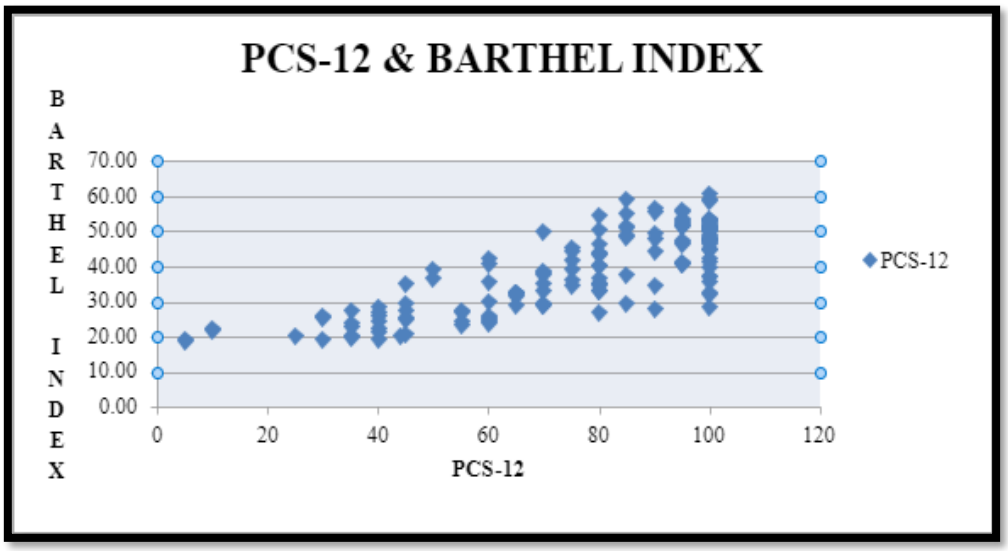


TABLE II Pie Chart Showed Gender Distribution of the population

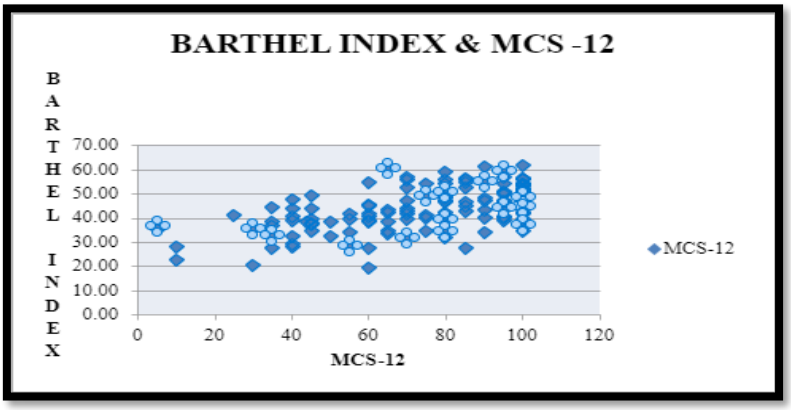


GRAPH 2.1 showed Spearman Correlation between Barthel Index & PCS-12.



TEST	N	r	p value
Spearman Correlation	150	0.810066	<0.01

GRAPH 2.2 showed Spearman Correlation between Barthel Index & MCS-12



TEST	N	r	p value
Spearman Correlation	150	0.542054	<0.01

DISCUSSION:

The purpose of the study is to determine the correlation between Activities of daily living and Quality of life in geriatric population. The challenges faced by the elderly population are steadily increasing. A thorough examination of past literature highlights the need to strongly determine the correlations among five key factors: physiological, psychological, social, emotional, and financial problems. 150 subjects, aged 60 & above including both male and female are taken into the study. The correlation value of Barthel Index and PCS-12 was 0.814 whereas correlation value of Barthel Index and MCS-12 is 0.54. MCS-12 is lower than PCS-12. P value<0. In geriatrics, individuals may exhibit reduced physical

capabilities compared to mental tasks. With age they get emotional problems like depression, anxiety, felt downhearted and blue. In present study we got participants from residential homes and old age shelters, which have positive impact on physical and mental component of the scale. The score of Barthel Index on the basis of ADL was decreasing with age. With increasing age is a there is decline in physical activity, and physical conditions of geriatrics depend upon the manner of living and environmental factors. In our study subjects aged more than 89 years are having their less Barthel Index. There are 38 subjects using external aids in the present study.

The ability to perform activities of daily living declines with age, and individuals over the age 75 years old typically exhibit significantly reduced functional capacity. In the present study participants presented with history of obesity, hypertension and diabetes mellitus were excluded. Brekke et al found association of ADL ability and Quality of life in cancer population using Assessment of Motor and Process Skills (AMPS), and the European Organization for Research and Treatment of Cancer Core Quality of Life Questionnaire with categorized result. Results showed ADL motor ability was highly associated with QOL than self-reported ADL motor ability [11].

Another reason for differences in the results between study was the instruments used to assess ADL and QOL.QOL not only includes physical and mental factor but also psychological stress which is at most importance in QOL. Jiang et al consider psychological stress, basic daily living activity and instrumental daily living activity to evaluate the association between QOL and health behavior factors. In contrast in the present study this factor separately not taken [12].

It is widely recognized that Activities of Daily Living (ADL) encompass both basic ADL and Instrumental Activities of Daily Living (IADL), with performance typically declining with age. In our study, we found a strong association between ADL and the Physical Component Summary (PCS-12) of the SF-12, both of which significantly impact quality of life (QOL). However, our study did not account for participants' educational level or socioeconomic status. In contrast, the study by Jiang et al included these factors and separately analyzed ADL and IADL functions. Their findings indicated that individuals with better performance in basic ADL were also more capable in IADL tasks [13].

CONCLUSION:

The study concluded that there is a strong correlation between PCS-12 Barthel Index with a value of 0.811. Moderate correlation was found between MCS-12 & Barthel index with a value of 0. 542.The population has been selected from the residential areas and old age shelters at Ahmedabad.

REFERENCES:

1. Malik C, Khanna S, Jain Y, Jain R. Geriatric population in India: Demography, vulnerabilities, and healthcare challenges. J Family Med Prim Care 2021; 10:72-6.
2. Tripathy J. P. (2014). Geriatric care in India: A long way to go. Journal of mid-life health, 5(4), 205–206.
3. Falemban A H (September 02, 2023) Medication-Related Problems and Their Intervention in the Geriatric Population: A Review of the Literature.
4. R.G. Cervantes Becerra et al. Health status of the elderly in primary health care practices using an integral geriatric assessment: Aten Primaria. 2015;47(6):329---335.
5. Tornero-Quiñones, Immacudula et al. Functional Ability, Frailty and Risk of Falls in the Elderly: Relations with Autonomy in Daily Living. International journal of environmental research and

public health, 17(3), 1006.

6. Alsubiheen, Abdulrahman M et al. “The Effect of Task-Oriented Activities Training on Upper-Limb Function, Daily Activities, and Quality of Life in Chronic Stroke Patients: A Randomized Controlled Trial.” International journal of environmental research and public health vol. 19,21 14125. 29 Oct. 2022.
7. Fayers, P. M., & Machin, D. (2016). Quality of life: the assessment, analysis and reporting of patient-reported outcomes (3rd ed.). Hoboken, NJ: Wiley Blackwell
8. 8.Hiroshi Yoshino.et al. Causes of decreased activity of daily living in elderly patient Geriatric Gerontol Internal. 2011; 11: 297-303.
9. Lingyun Ran1,Xiaodong Jiang, et al.Association among activities of daily living, instrumental activities of daily living and health-related quality of life in elderly.BMC Geriatrics.March 201717:74.
10. O’Sullivan, Susan B; Schmitz,ThomasJ (2007), Physical Rehabilitation, Fifth Edition. Philadelphia, PAFA Davis Company p.385.
11. Mette Falk Brekke, et al. “The Association between ADL Ability and Quality of Life among People with Advanced Cancer”,Occupational Therapy International;vol.2019:2629673
12. Wu, Yuhang et al. “The relationship between health behaviors and quality of life: the mediating roles of activities of daily living and psychological distress.” Frontiers in public health vol. 12 1398361.
13. Lingyun Ran1,Xiaodong Jiang, et al.Association among activities of daily living, instrumental activities of daily living and health-related quality of life in elderly. BMC Geriatrics.March201717:74.