

Activities of Daily Living and It's Effect on Quality of Life among Older Adults

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Abstract

Background: Older adults as a diverse group of individuals with various sociocultural backgrounds but there are many functioning and well-being are influenced by the acquisition of age-related changes and risk factors, they need more preventive care and a high level of promotion and wellness. **This study aimed to** assess activities of daily living and its effect on quality of life among older adults. **Design:** A descriptive-analytical design. **Sampling:** A purposive sample consisted of 327 Older adults people aged (60-80 years) were included in the study. **Setting:** the study was conducted at geriatric out-patient clinics of Alshahid Ahmed Shawke hospital of older adults in Eldemerdash hospital affiliated to Ain Shams University hospital in Cairo. **Tools of data collection** involved **First tool** - and Interviewing questionnaire sheet: which composed of the following parts: Part I: Socio-demographic data of older adults, Part II: health needs and health problems of older adults. **Second tool:** - Activities of daily living checklist. **Third tool:** - Quality of life domains among older adults. **Results:** The study findings revealed that there was high significant positive correlation between health need and total Quality of life I. There was high significant positive correlation between daily living activities and tot Quality of life al. **Conclusion:** The study concluded that difficulty in daily living activities has a significant negative association with health and quality of life among older population (> 60 years). **Recommendation:** Future research should be focused on developing programs of physical activities to promote ADL of older adults in communities.

Keywords: Activities, Daily Living, Effect, Quality of Life, Older Adults.

Introduction:

Older adults as a diverse group of individuals with various sociocultural backgrounds but there are many functioning and well-being are influenced by the acquisition of age-related changes and risk factors, they need more preventive care and a high level of promotion and wellness, The World Health Organization categorized older adults into three groups, young-old (from 60-75 year), middle-age (from 75 - 85) and oldest-old (> 85year) (Beham and Eklund, (2016) & WHO, 2017).

Older adults have more health needs: 1) physical needs as nutrition, hygiene, exercise, movement, mobility, warmth, housing, safety, health care) 2) intellectual needs as stimulation, knowledge, an opportunity to learn new activities, 3) emotional needs as a sense of

belonging, sense of autonomy, feeling of care,4) social needs as communication, social interaction outside, relationship with family and friends (Bruggencate et al., 2018).

The body changes with aging because changes occur in individual cells and whole organs. These changes in function and appearance changes happen in organs like the brain, eye, nose, liver-kidney, bones, reproductive system, blood production, skin, muscles of breathing, immune system. Many health problems need more care atherosclerosis, type2 diabetes, hypertension, and Alzheimer's disease (Sugar, 2019).

The activities of daily living (ADLs) include basic and instrumental activities, basic activities as everyday personal care tasks related to bathing, dressing, grooming, mouth care, toileting, transferring to bed / chair, walking,

climbing stairs, eating and instrumental activities as driving or using public transportation, shopping, cooking, housekeeping, and using the telephone and looking up numbers and managing finances (Parmar and Saikia, 2019).

Performing of activities of daily living increase physical activity older adults need to maintain health, and improve the general quality of life, the benefits of this physical activity including the prevention of heart disease and diabetes, reduction of elevated blood pressure, reduce risk of osteoporosis, promotion of appropriate weigh, reduction of depressed mood, reduced risk of cancer, and promotion of restful sleep, increase, self-satisfaction (Schoenborn et al., 2016).

The community health nurse role with older adults and chronological nurse practitioner is responsible for monitoring chronic health problems such as dementia, high blood pressure, diabetes, arthritis the major responsibility of geriatric nurse provides continuity of healthcare, advocate for overseeing the appropriate utilization of health care resources and provide educational services to older adults and their families (WHO, 2019)

Significance of the study:

People worldwide are living longer today for the first time in history, by 2050 the world's population aged 60 years and older is expected to total 2 billion up from 900 million in 2015, today 125 million people are aged 80 years or older, by 2050 434 million people in this age group worldwide by 2050 80% of older people will live in low-income countries (WHO, 2018). In Egypt older adults aged 60 years and more in 2015 were 6.9 and projected to be 9.2 million in 2021. It's expected to reach 20.8 in 2050 (Egypt Central Agency of Public Mobilization and Statistics, 2016).

Aim of the study:

The study aimed to assess activities of daily living and its effect on quality of life among older adults.

Research Question:

Is there a relation between an older adult's activities of daily living and their quality of life?

Subjects and Methods:

Research design:

A descriptive-analytical design was used to carry out this study.

Setting:

The study was conducted at geriatric outpatient clinics of Alshahid Ahmed Shawke hospital of older adults in Eldemerdash hospital affiliated to Ain Shams University hospital in Cairo. It included: inpatient, ICU, knowledge and functional rehabilitation unit, out-patient clinics as geriatrics clinic, primary health care clinic, orthogeriatric clinic, geriatrics memory clinic, geriatric and palliative care clinic.

Subjects:

A purposive sample consisted of 327 Older adults people aged (60- 80 years) were included in the study in the previously mentioned setting during the time of data collection. The total number of older adult people according to 2018/ 2019 was 2600 older adults' people. So, the sample size was calculated by adjusting the power of the test to 80% and the confidence interval to 95% with margin of error accepted adjusted to 5% and a known total population of 335 of older people using the following equation:

$n =$ sample size (?) $z =$ Confidence Level at 95% (1.96)

$d =$ error proportion $p =$ probability (50%) $N =$ population size

$$n = \frac{N \times p(1-p)}{\left[N-1 \times \left(d^2 \div z^2 \right) \right] + p(1-p)}$$

Eight cases were withdrawal from sample cases due to COVID- 19 episode.

Inclusion criteria:

Older adults people aged (60- 80 years), male and female people, free of mental problems.

Data collection tools:

Data was collected by using the following tool:

First tool: an Interviewing questionnaire sheet: Socio-demographic data of older adults as age, gender, marital status, occupation, have children or no, family number, monthly income, place of residence.

Second tool:

Activities of daily living checklist of which includes an assessment of basic & instrumental activities of daily living of older adults (Graf, Boltz, and Greenberg, 2008).

Basic daily living activities:

This scale asks an observer to rate the S for his competence in the behaviors of toileting (5 items), feeding (5 items), dressing (5 items), self-care (6 items), physical movement (5 items), and bathing (5 items). The six types of behavior assessed by the Langley-Porter scale and many of the points from their scale were retained

❖ **Scoring system:**

Basic daily living activities and if $50 \geq$ considered as independent basic daily living activities.

Instrumental Activities of Daily Living

Both biological and social pressures combine to level this diversity drastically during old age. For women, the maintenance of earlier life levels of adequacy in such tasks as ability to use telephone (4 items), shopping (4 items), cooking (4 items), housekeeping (5 items), laundry (3 items), mode of transportation (5 items), responsibility for own medication (7 items).

❖ **Scoring system:**

Elderly people answers were scores as one scores “no” and two score for “yes”. Total scores were calculated by summed all items scores and converted into percentage. If total

scores less than 50% considered as dependent instrumental activities of daily living and if ≥ 50 considered as independent instrumental activities of daily living.

Total scores of daily living activities were calculated by summed all items scores and converted into percentage. If total scores less than 50% considered as dependent daily living activities and if ≥ 50 considered as independent daily living activities.

Third tool:

Quality of life domains among older adults (life overall (4 items), physical (4 items), social (8 items), emotional (4 items), psychological (9 items), environmental (8 items). (Bilotta et al. 2010). QOL of the participants was evaluated by means of the OPQOL questionnaire.

❖ **Scoring system:**

Five Likert scale was used in this scale. Total scores of elderly quality of life scales were calculated by summed all items scores and converted into percentage. If total scores less than 50% considered as poor quality, 50 % - 70% considered as average quality and if $\geq 70\%$ considered as good quality.

I. Operational Design

It included the preparatory phase, content validity, pilot study, fieldwork, and ethical consideration.

1-The Preparatory Phase

This phase started with a review of current and past, national and international related literature concerning the subjects of the study using textbooks, articles, magazines, journals, and the internet to developed tools of data collection

II. Operational Design:

The operational design includes a preparatory phase, testing validity, tools reliability, pilot study and field work.

The preparatory phase:

This phase started with a review of current and past, national and international related literature concerning the subjects of the study using textbooks, articles, magazines, journals, and the internet to developed tools of data collection. This review was helpful to the researcher in reviewing and developing the data collection tools, and also the preparation of the training program.

Tool validity:

Face and content validity of the tools was assessed by five experts from the staff of community health nursing in the community health nursing department in the faculty of nursing Ain Shams University to measure the content validity of the tools. Jury group members judge tools for comprehensiveness, accuracy, and clarity in language. Based on their recommendation's correction, addition and omission of some items were done.

(2)-Reliability:

Study tools were tested for its internal consistency by Cronbach's Alpha test. It was calculated for the study tools 0.815, 0.795, and 0.825 respectively.

Ethical Considerations: The subject right was secured nature of the study was harmless the client had the right to refuse participation at any time. Ensure that privacy and confidentiality of all records and personal information were used only for research purposes.

Pilot Study:

A pilot study was carried out on 10% (33 elderly) from older adults to ensure clarity and applicability of the tools and was excluded from the sample modification was done and then the final format was developed. The time estimated to fill the questionnaire was ranged between 20 – 30 minutes. This stage took about one week.

Field Work

Before starting the work and taking permission to conduct this study, formal letter was issued from the faculty of nursing, Ain Shams University to the administrator of the geriatric hospital of Ain shams selected for the study describing the aim of the study. The researcher visited the selected area of the study regularly to collect data. The researcher interviewed older adults' women and men three days per week each interview took about 30 min to fill it after taking oral approval consent from them.

III. Administrative Design:

An official letter from the faculty of nursing Ain shams university was delivered to the administrator of the hospital full explanation about the aim of the study was explored to older adults' consent was obtained to carry out this study.

IV. Statistical design:

The collected data were organized, categorized, tabulated, & analyzed using Excel program. The statistical analysis included percentage (%), mean, standard deviation (SD), and Graphs were created for data visualization using Microsoft Excel. A P value of ≤ 0.05 indicates a significant result, while a P value of > 0.05 indicates a non-significant result.

Results:

Table (1) :shows that the mean age of all participants was 69.05 ± 6.246 years (78.9%) between 60 and 74 years old. More than half (67.9%) of the participants were male and 31.8% were females. were married (61.8%), 18.7% were divorced and 19.6% were widow(er)s. (70.6%) were living in urban areas. Half (54.4%) of the participants had free business, (90.5) had children and 67.9% of them had one to three children. (60.2%) reported that they had enough income.

Figure (1) :illustrates that 73.1% & 43.7% of elder adults was independent in basic and instrumental daily living activities respectively. Regarding total daily living activities, 47.7% of elder

adults were independent while 52.3% of them was dependent in daily living activities.

Figure (2) :illustrates that, 38.5% of elder adults had good quality of life, 18.7% cases had poor quality of life and 42.8% had average quality of life.

Table (2) :illustrates that, significantly positive associations between age and the total QoL ($p=0.024$). Also, there were significant associations between marital status ($p<0.001$), income ($p<0.001$) as well as place of residence ($p=0.030$) and the total QoL. While there was no significant relation between total QoL and gender as well as occupation ($p>0.05$).

Table (3):shows Correlation between daily living activities and QoL among elderly people. There were high significant positive correlation between daily living activities and total QoL ($r= 0.280$, $p<0.001$), life overall ($r= 0.531$, $p<0.001$), health ($r= 0.542$, $p<0.001$), independence, control over life, freedom ($r= 0.236$, $p<0.001$) financial circumstances ($r= 0.237$, $p<0.001$). while there was no significant correlation between daily living activities and social relationships, home and neighborhood, psychological and emotional well-being as well as leisure and activities ($p>0.05$).

Table (1):Distribution of older Adults Regarding Their Demographic characteristics (N=327).

Items	No	%
Age		
60-74 years	258	78.9
≥75 years	69	21.1
Mean and SD of women age	69.0 ± 6.246	
Gender		
Male	222	67.9
Female	105	32.1
Marital status		
Married	202	61.8
Divorced	61	18.7
Widow	64	19.5
Occupation		
Work	178	54.4
Not work	149	45.6
Have a child?		
Yes	296	90.5
No	31	9.5
Family number (n=296)		
1-3 children	201	67.9
4-6 children	95	32.1
Monthly Income		
Enough	197	60.2
Not enough	130	39.8
Place of residence		
Rural	96	29.4
Urban	231	70.6

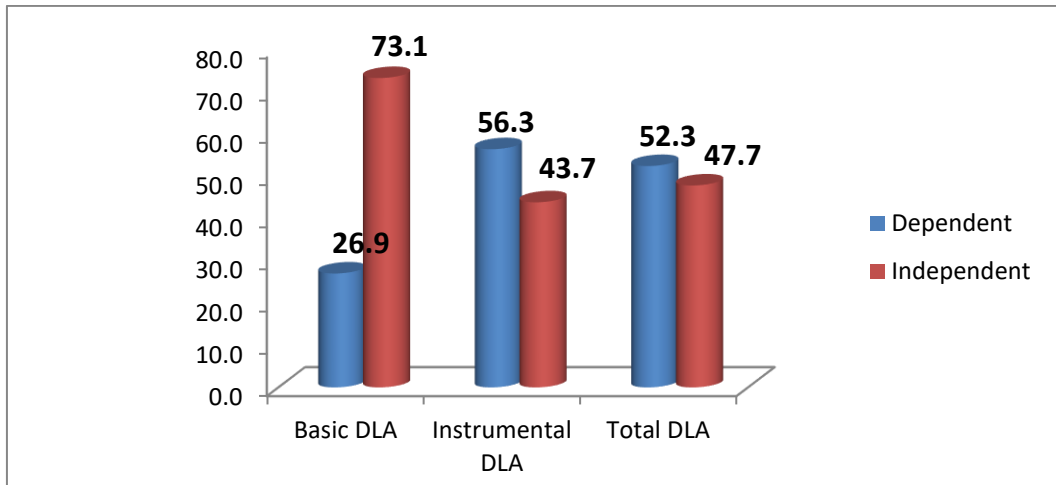


Figure (1): Distribution of elder adults Regarding Their Daily living activities (N=327).

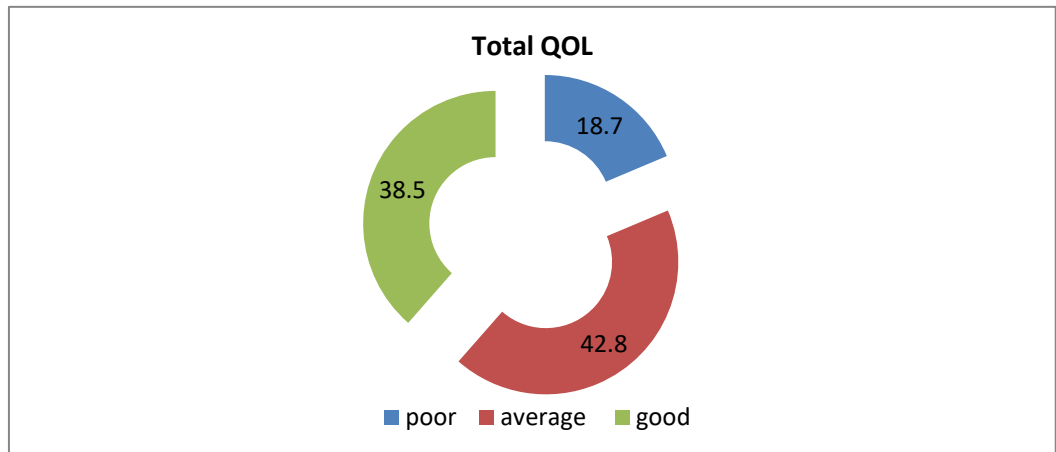


Figure (2): Distribution of elder adults regarding their Total QOL.

Table (2): Relation between demographic characteristics and total QoL among older adults (N= 327).

Items	Total QoL						statistical test	
	Poor (n= 61)		Average (n = 140)		Good (n = 126)		χ^2	P value
	No	%	No	%	No	%		
Age								
60-74 years	42	16.3	108	41.9	108	41.9	7.473	0.024*
≥75 years	19	27.5	32	46.4	18	26.1		
Gender								
Male	38	17.1	103	46.4	81	36.5	3.700	0.157
Female	23	21.9	37	35.2	45	42.9		
Marital status								
Married	1	0.5	93	46	108	53.3	127.199	0.0001**
Divorced	32	52.5	20	32.8	9	14.8		
Widow	28	43.8	27	42.2	9	14.8		
Occupation								
Work	29	16.3	74	41.6	75	42.1	7.794	0.099
Not work	32	21.5	66	44.3	51	34.2		
Income								
Enough	29	14.7	73	37.1	95	48.2	20.025	0.0001**
Not enough	32	24.6	67	51.5	31	23.8		
Place of residence								
Rural	25	26	32	33.2	39	40.6	6.983	0.030*
Urban	36	15.6	108	46.8	87	37.7		

Table (3):Correlation between Daily living activities and QoL among older adults (N= 327).

QoL	DLAs	
	r	P value
Total QoL	0.280	0.0001**
Life overall	0.531	0.0001**
Physical	0.721	0.0001**
Social	0.542	0.0001**
Emotional	0.236	0.0001**
Psychological	0.237	0.0001**
Environmental	0.632	0.0001**

r: Pearson's correlation coefficient (**): statistically significant at $p < 0.01$

Discussion:

Concerning demographic characteristics among the studied patients, the current study showed that the mean age of all participants was 69.05 ± 6.246 years with more than three-quarters of them between 60 and 74 years old. More than two-thirds of the participants were male and nearly one-third were females. More than half of participants were married. More than two-thirds of them were living in urban areas. More than half of the participants had work. Most of them had children. More than half of the participants reported that they had enough income as illustrated in table (1).

This finding was agreed with the result of Li et al., (2020) aimed to explore the current status of activities of daily living (ADLs), life orientation, and health-related quality of life (HRQoL) among older people in nursing homes and to further examine the mediating role of life orientation in the impact of ADLs on HRQoL. A total of 5623 males and 5174 females participated. The mean age of the participants was 74.60 ± 7.27 years, with a range from 60 to 104 years old. The education level of the subjects was generally low, with majority of participants below the level of high school. Three-quarters of the participants were in separated/ widowed/ single; more than one-thirds of the respondents' monthly pension exceeded 1500 RMB. Over half of the

participants had more than two children, but most of their sons or daughters were busy, and more than three-quarters of their families visited them at least once a month.

Furthermore, **Yaya et al., (2020)** aimed to examine the relationship between self-reported difficulty in activities of daily living (ADL), health and quality of life among community-dwelling, older population in South Africa and Uganda. The study enrolled 1495 men and women from South Africa ($n = 514$) and Uganda ($n = 981$). A greater percentage of the participants were aged 50–59 years, female, currently unmarried, and were followers of Christianity. About three-fifth reported their living condition as satisfactory. Just under three quarters of the participants had no chronic conditions, whereas the minority were suffering from more than two chronic conditions. Mild/Moderate and Severe/Extreme sleep difficulties were reported by one third and one quarters of participants, respectively. Two fifth of the participants rated their health as good, and one-fifth reported having good quality of life.

Regarding Activities of daily living of elderly adults, the current study showed that, nearly three quarters of elder adults was independent in basic daily living activities, nearly half of them was independent in instrumental daily living activities, while more than half of them was dependent in daily living activities.

This study was in agreement with the result of **Akosile et al. (2018)** in Nigeria the prevalence figure of IADL disability was 39.3% versus ADL disability 32.5%. Also, **Wolinsky et al. (2011)** found long-term functional decline in elderly persons' ability to manage ADL (37%), mobility (31%) and instrumental activities of daily living (IADL) (32%).

From the research point of view, this results may be due to Health needs of elder adults, more than two-thirds of participants reported that their Physical needs were meet majority of the participants reported urine control,, more than half can walk in the city park,use telephone, that effect on their QOL.

Concerning the Relation between demographic characteristics and total QoL among elder adults, the current study showed that there were significantly positive associations between age and the total QoL ($p=0.024$). also, there were significant associations between marital status ($p<0.001$), income ($p<0.001$) as well as place of residence ($p=0.030$) and the total QoL. While there was no significant relation between total QoL and gender as well as occupation ($p>0.05$). This finding was congruence with the result of **Unsar et al. (2016)** reported that there were significantly negative associations between the total QoL and age, Number of children, Number of hospitalization and Numbers of drugs taken. Also, our results were supported by **Yaya et al., (2020)** as they reported that that there were significant associations between the total QoL and age, Sleep problem and ADL.

Concerning correlation between daily living activities and QoL among elder adults, **The present study revealed that**, high significant positive correlation between daily living activities and total QoL ($r= 0.280$, $p<0.001$), life overall ($r= 0.531$, $p<0.001$), health ($r= 0.542$, $p<0.001$), independence, control over life, freedom ($r= 0.236$, $p<0.001$) financial circumstances ($r= 0.237$, $p<0.001$). while there was no significant correlation between daily living activities and social relationships, home and neighborhood, psychological and emotional well-being as well as leisure and activities ($p>0.05$).

This study was agreed with the result of **Li et al. (2020)** who mentioned that the daily living activities was significantly correlated with health related QoL, age, sex, Number of children, Status of children's jobs, Type of nursing home, nursing home expenses, and Frequency of activities.

Also, this finding was congruence with the result of **Gobbens (2018)** who revealed that All ADL disability items combined and all IADL disability items combined explained a significant part of the variance of the physical and the mental dimension of quality of life. Only ADL item “stand up from sitting in a

chair”, and IADL items “do “heavy” household activities” and “do the shopping” were negatively associated with both quality-of-life dimensions after controlling for all the variables in the model. Also, the study by **Medhi et al. (2019)** concluded that the decline in ADL can negatively impact different dimensions of HRQOL among elderly individuals.

Conclusion:

The conclusion of present study support research question. Assess activities of daily living and its effect on quality of life. The result of present study showed that there were significantly positive associations between age and the total QoL. Also, there were significant associations between marital status, income as well as place of residence and the total QoL.

There were high significant positive correlation between health need and total QoL. There were high significant positive correlation between daily living activities and total QoL achieve aim of the study.

Recommendations:

The results of this study projected the following recommendations:

1. Training exercise must be provided upon initial range of motion of older adults.
2. Activity of daily living and quality of life of older adults should be promoted by treating sickness, and encouraging them to look for extra jobs to increase their income
3. Future research should be focused on developing programs of physical activities to promote ADL of older adults in communities.

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