

Effect of Recreational Activity Program on Older Peoples Quality of Life and Activities Daily Living at Helwan District

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Abstract

Background: Recreational activities enrich life and provide to have a pleasant time as well as increase older people life quality. **Aim:** The current study aimed to assess Effect of recreational activity program on older people quality of life, and activities daily living at geriatric home Helwan District. **Method:** A quasi-experimental design was used in this study. The study was piloted at Huda Tallat Harp, OmklSom and El Saida Nafisa geriatric home Helwan District. A purposive sample was used to choice a total number of 80 participants, representative the attendant's pre mentioned setting. **Tools:** one tool was used as structured interview that covers five parts as Part I: demographic characteristic, part II: older peoples' knowledge, part III: World Health Organization Quality of Life (WHOQOL), part IV: Elderly mobility scale (EMS) and part VI: Barthel Index of activities of daily living (pre and post). **Results:** This study displayed statistically significant enhancement in older peoples' knowledge, quality of life, mobility and activity of daily living (72% poor and 27 % fair to 2.5% poor,22.5% fair and 75% good) (32.33 ± 15.47 to 51.08 ± 14.17) (11.46 ± 6.75 to 15.74 ± 5.32) (14.41 ± 6.66 to 19.57 ± 5.27), respectively pre vs. post program with ($p < 0.05$). **Conclusion:** The current study exposed importance of recreational program for older people to enrich their knowledge, mobility level, activity of daily living and quality of life. **Recommendation:** Adapting and continues application of recreational activity program in geriatric home and clubs to improve older knowledge and quality of life.

Keywords: Activities of Daily Living, Older people, Quality of life, Recreational activity program.

Introduction

Aging populations have become a major global societal issue. In order to address the health-related concerns that older people confront, there is a need for more prevention, treatment, and rehabilitation programs. This demographic transition poses numerous challenges to community health, caregiving for older people, and the load on society. Health care providers frequently deal with chronic illnesses, cognitive decline, and social integration issues, all of which have the potential to cause major societal issues. To address the aforementioned issues and obstacles, it is therefore imperative to promote a healthy lifestyle, raise their level of health, and recognize that aging in a healthy manner is a necessary part of life **(Han et al. 2022)**.

Additionally, aging is a natural part of growing up and experiencing old age, and it is often viewed as a curse that accompanies a decline in many aspects of life, including social, psychological, physical, and economic. Elderly quality of life (QoL) is predicted to be affected by most of these changes, thus it's critical to evaluate older people's QoL and educate them about aging-related changes **(Breytspraak and Badura, 2020)**.

Recreational activities are a major factor in lowering loneliness. Older people's physical and mental health issues, which impact their level of daily activity and mobility, may be exacerbated by loneliness. Since the majority of these changes are anticipated to have an impact on older people's quality of life, recreation is crucial to enhancing their quality of life **(Bakar and Aşilar, 2021)**. Older people are rejuvenated, their confidence grows, and they are given a socializing environment by the activities that are conducted in the nursing home **(Esentaş et al., 2018)**.

The quality of life (QoL) of older people refers to how older individuals assess their lives, including their level of depression, their perceived health, and their level of satisfaction with various aspects of their lives, including their relationship with family members, their financial situation, and their sexual activity. Conditions, decisions, and events made during infancy and adulthood, including lifestyle and environmental factors, greatly influence the quality of life (QoL) of older adults **(Cole et al., 2020)**.

In addition to providing information about the value of recreation in helping older people deal with challenges and identify personal coping mechanisms, nurses can push for improvements in the health care that older people receive. By actively involving older people in decisions about their care and enhancing their quality of life, nurses can also help older people feel more in control of their conditions. Finally, nurses should be interested in offering recreational activities to older people in order to improve their psychosocial well-being and quality of life **(Rondón García et al., 2021)**.

Significance of the study:

Globally, the average lifespan of individuals has been rising for a number of reasons, such as genetics, lifestyle choices, eating a nutritious diet, quitting smoking, and engaging in physical activity. The continuous rise in the number of older people in Egypt over the past few decades has been one of the primary demographic trends. Egypt is predicted to have the highest proportion of older people in the region—3.1 million—and the highest number of old people overall—23.7 million—by 2050. In the future, this group will be referred to as older people if this scenario persists. Older people sometimes lack understanding about recreational activities, which can lead to a decrease in their daily activity levels and

mobility issues (Sweed, 2019) (World Health Organization, 2020).

Aim of the study:

The study aimed to evaluate the effect of recreational activity program on older people quality of life and activity daily level at geriatric home, Helwan District.

Research hypothesis:

The recreational activity program will improve older people knowledge, activity daily level, mobility level and their quality of life.

Subjects and Methods**Design:**

A Quasi-experimental study was used in this study

Setting:

The study was conducted at the Huda Tallat Harp, Omklom and El Saida Nafisa geriatric home Helwan District where the elderly people resident in it.

Subjects:

A purposive sample was utilized to choose 80 participants, representing those attending the specified setting during the years 2022-2023. Participants were selected based on the following inclusion criteria: they were aged 60 years or older, free from mental illnesses and willing to participate in the study.

Data collection Tools

A structured interview included five parts

Part I: Socio-demographic characteristics for older people as; age, sex, level of education, social status, residence, number of rooms, number of family member, monthly income and occupation.

Part II: older people knowledge about recreational activity program such as: meaning of recreational activity, types, meaning of physical activities, meaning of social Activities, content of recreational activities that keep older people moving; the recreational activities that boost creativity

and imagination; recreational activities that challenge memory and mind; the benefits of indoor recreational activities; safety tips to avoid injuries in recreation activities; the economic benefits of recreational activities; the advantages of recreation activities; the barriers of leisure and recreational activities; characteristics of recreational activity; recreational activities for older people; and the factors promoting the growth of recreation; This part was used twice before and after implementation of the recreation activities program.

Scoring system:

A right response received one point, whereas an incorrect response or no response received zero.

Knowledge answers were classified into three categories: Poor knowledge representing < 50% scored from (0 - <7), Fair knowledge from ≥ 50 - <75% scored (≥ 7 - < 11), Good knowledge 75% or more scored from (≥ 11 -15).

Part III: Standardized quality of life tool Adopted from (WHO, 2012). titled (World Health Organization Quality of Life (WHOQOL) consist of 6 domain and every domain contain sub items: Domain I, Physical Capacity, encompasses aspects like pain and discomfort, energy levels and fatigue, and sleep and rest patterns. Domain II, Psychological, includes elements such as positive emotions, cognitive functions (thinking, learning, memory, and concentration), self-esteem, body image, and negative emotions. Domain III, Level of Independence, covers mobility, daily living activities, reliance on medications or treatments, and work capacity. **Domain IV, Social Relationships**, involves personal relationships, social support, and sexual activity. Domain V, Environment, pertains to physical safety and security, home environment, financial resources, access to quality health and social care, opportunities

for education and skill development, participation in recreational and leisure activities, the physical environment (including pollution, noise, traffic, and climate), and transportation. Lastly, Domain VI focuses on spirituality, religion, and personal beliefs. These domains were assessed before and after the implementation of the recreation activities program.

Scoring system:

Disagree answer was given zero score, while not sure answer was given one; Agree answer was given two.

According to WHO, 2012 (WHOQOL measuring quality of life) the answers were classified into:

0-20 very poor, 21-40 poor, 41-60 moderate, 61-80 good, and 81-130 very good.

Part IV: The Elderly Mobility Scale (EMS), which was adapted from Yu et al. (2007) ⁽¹¹⁾. With the help of this tool, the degree of mobility in older adults can be evaluated using a standard mean. The evaluation of seven dimensions of functional performance comprised seven multiple-choice questions, lying to sitting, sitting to lying, sitting to standing, standing process, gait, timed walk, and functional reach. All seven dimensions pertain to abilities that facilitate the execution of daily living activities.

Scoring system:

There are seven different response possibilities, each worth 0–4 points. These points are added together in the final result to provide a total point total of up to 20. Based on the three total score ranges listed below, there are three categories of interpretations:

14–20: Older people are usually safe at home and self-sufficient in their everyday activities, but may need some assistance.

13–10: Older adults have a borderline degree of independence in everyday activities and need assistance with some mobility tasks.

0–9: older people depend on long-term care and need assistance with everyday tasks

Part V: Barthel Index of Activities of Daily life: Adapted from Collins et al. (1988) to evaluate older people activities of daily life. There were ten multiple-choice questions in all: three about bowels, three about bladder, two about grooming, three about toilet usage, three about feeding, four about transfer, four about mobility, three about dressing, and three about stairs. Two objects for bathing.

Scoring system:

Add up the senior points for every question. There is a total possible score between 0 and 20, with lower scores denoting more disability. It fell into two groups.

-0-9: Older people consider dependent.

-10-20: Older people consider independent.

Validity: A jury comprised of five Community Health Nursing specialists evaluated the tools' content validity in order to validate their significance and thoroughness.

Reliability: Reliability coefficients were calculated for the questionnaires of: people knowledge, Cronbach's Alpha was 0.84.

Standardized quality of life tool, Cronbach's Alpha = 0.82.

Elderly mobility scale (EMS), Cronbach's Alpha = 0.86.

Barthel Index of Activities of Daily Living, Cronbach's Alpha = 0.88.

Pilot Study: To determine how long it would take to complete the questionnaire, a pilot study was conducted on eight participants, or 10% of the total sample. The pilot research indicates that no changes were made to the tools under investigation; yet, the pilot study sample was not included in the larger sample under investigation.

Ethical considerations:

Before beginning data collection, the researchers received oral agreement from the study sample after explaining the purpose

and advantages of the research to those who consented to participate. Throughout the whole study process, the studied sample's privacy was guaranteed. Participants were given the assurance by the researchers that all information gathered would be kept private and utilized exclusively for study. The study sample was informed by the researchers that participation in the study is voluntary and that they are free to leave the study at any time, for any reason, without having to give a reason.

Field work: From the beginning of August 2022 until the end of June 2023, preparations for data collecting were made.

It took thirty minutes to complete the questionnaire. Two days a week, on Saturdays and Thursdays, from 10:00 a.m. to 2:00 p.m., the researchers visited the study setting.

The researchers implemented the program in a waiting area in the at Huda Tallat Harp, Omklsom and El Saida Nafisa geriatric home Helwan District and interviewed the studied samples individually.

Handouts about the program for recreational activity to improve activities Daily Living were provided to the older people

Recreational activity program construction:

Assessment phase: Upon welcoming the researched sample and introducing themselves to each participant in the study, the researchers began the interview. Interviewing the investigated sample to get baseline data was part of this phase. The study sample's knowledge, quality of life, Elderly Mobility Scale (EMS), and Barthel Index of Activities of Daily Living were all assessed using the pretest questionnaire.

Planning and implementation phase:

The intervention program was realized to improve the older people quality of life by using recreational activity program. The program included: Knowledge about

recreational activity program such as: meaning of recreational activity, types, meaning of physical activities, meaning of social Activities, content of recreational activities that keep older people moving; the recreational activities that boost creativity and imagination; recreational activities that challenge memory and mind; the benefits of indoor recreational activities; safety tips to avoid injuries in recreation activities; the economic benefits of recreational activities; the advantages of recreation activities; the barriers of leisure and recreational activities; characteristics of recreational activity; recreational activities for the older people; and the factors promoting the growth of recreation; This part was used twice before and after implementation of the recreation activities program.

The Standardized quality of life consists of 6 domains (Physical Capacity, Psychological, level of Independence, social relationships, environment and spirituality/ religion/personal beliefs) domains.

Elderly mobility scale (EMS) to assess degree of mobility consisted of: lying to sitting, sitting to lying ...etc.

Barthel Index of Activities of Daily Living used to assess daily living activities of older People.

Implementation phase: five sessions over the course of six months made up the recreational activity program. Twenty to twenty-five minutes was the average length of each session. Beginning each session with an overview of the previous one, the researchers determined the goals of the current one while making sure to use language that was both clear and simple enough to be appropriate for all educational levels of the investigated sample.

Various instructional techniques, such as brain storming, small group discussions, demonstration, and re-demonstration, were employed. For data visualization, the

researchers used laptop screens, colorful posters, and pamphlets. Every sample under study received a guidebook. The content and time of the following session were decided by the researchers and the researched samples at the conclusion of each session.

Evaluation phase: Two weeks after the program's introduction, an evaluation of the recreational activity was conducted using the identical preprogramming instruments.

Statistical Design:

SPSS, version 22, developed by SPSS Inc. in Chicago, IL, USA, was used to gather, tabulate, and statistically analyze the data. For numerical information, the standard deviation, mean, and range were computed. It offers a frequency, percentage, or proportion of each category for a categorical set of data in qualitative data. A Chi-square test (χ^2) was used to compare two groups and more. Using Pearson's correlation coefficient (r), the relationship between the variables was assessed. When interpreting the findings of tests of significance, significance was defined as $p < 0.05$ (Dawson & Trapp, 2001).

Results

Socio-demographic characteristics of the studied sample revealed that 61.3% of them aged 60<70years old with mean and SD 68.00 ± 6.2399 , female and 31.3% of them has University education & more, while 38.8 % had primary education and less. 51.3% of them retired. 65% had enough income and 70% widow and 58.8 from urban residence.

Figure (1): clear that improvement in total knowledge score of the studied sample regarding recreational activity and quality of life in the post –program than pre –program.

Table (1): clear statistical significant improvement in mean and standard deviation of studied sample Quality of life of studied sample regarding quality of life in

the post program than preprogram, $P < 0.001$.

Table (2): mention that statistically significant improvement in total Quality of life of studied sample regarding recreational activity program post –program than pre –program, $P < 0.001$.

Table (3): show highly statistical significant improvement of studied sample total Barthel of activities daily living regarding quality of life in the post program than preprogram, $P < 0.001$.

Table (4): present the statistical significant improvement of studied sample about mobility limitations regarding quality of life in the post program than preprogram, $P < 0.001$.

Table (5): show highly statistical significant differences in the correlation between studied sample total score knowledge, mobility Limitations, Total score Activities Daily Living and Total quality of life scores pre and post program, $P < 0.001$.

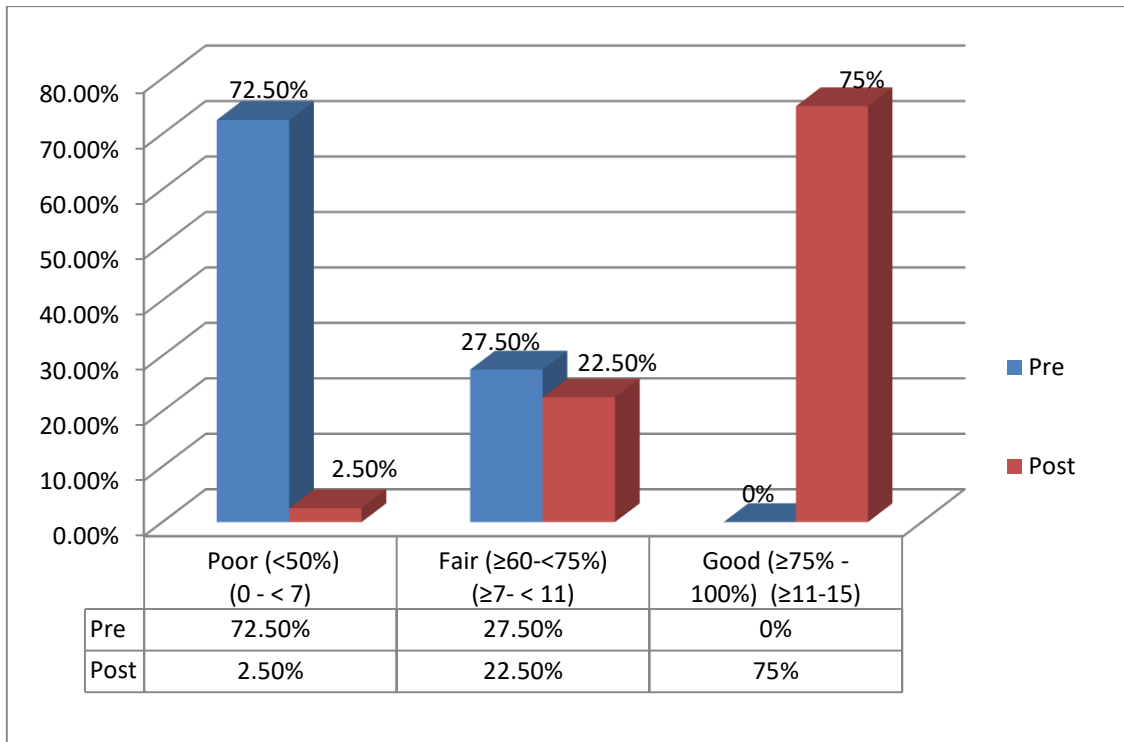


Figure (1): Total Knowledge Score and level among the studied sample regarding quality of life and activity daily living pre and post recreational activity program, (N =80).

Table (1): Mean and standard deviation of studied sample Quality of life pre and post recreational activity program, (N =80).

Quality of life	The studied sample					
	Pre		Post		T-test	P value
	Mean ± SD		Mean ± SD			
Domain I Physical Capacity	4.91 ± 1.903		6.47 ± 2.23		27.6907	0.038*
Domain II Psychological	5.13 ± 2.43		9.12 ± 2.37		23.0004	0.000*
Domain III Level of Independence	5.27 ± 2.41		10.31 ± 2.08		26.0121	0.000*
Domain IV Social Relationships	6.36 ± 2.79		7.91 ± 2.91		26.9385	0.04*
Domain V Environment	5.36 ± 2.36		5.99 ± 2.58		25.9936	0.04*
Domain VI Spirituality/religion/personal beliefs	5.30 ± 2.20		11.28 ± 2.15		30.3836	0.000*
Total	32.33 ± 15.47		51.08±14.17		31.588	0.000*

*Significant (P<0.05)

Table (2): Distribution of Older people with Mobility Limitations regarding total Quality of life (QOL) (n=80).

QOL level	Studied Sample				χ^2	P
	Pre		Post			
	No.	%	No.	%		
0-20 very poor	25	31.2	--	--	82.38	0.000*
21-40 poor	35	43.8	--	--		
41-60 moderate	20	25	40	50		
61-80 good	--	--	25	31.2		
81-130 very good	--	--	15	18.8		

*Significant (P<0.05)

Table (3): Total Barthel Index of Activities Daily Living regarding quality of life pre and post recreational activity program, (N =80).

Total Activities of Daily Living	Studied Sample (n=80)				χ^2	P
	Pre		Post			
	No.	%	No.	%		
Levels of total Activities of Daily Living:					328.45	0.000*
0-9: Elderly consider dependent	58	72.5	19	23.7		
10-20: Elderly consider independent	22	27.5	61	76.3		
Range	16		19			
Mean \pm SD	14.41 \pm 6.66		19.57 \pm 5.27			

*Significant (P<0.05)

Table (4): Distribution of Older people with Mobility Limitations regarding quality of life pre and post recreational activity program, (N =80).

Total mobility level	Studied Sample(n=80)				χ^2	P
	Pre		Post			
	No.	%	No.	%		
Levels of total mobility level :					83.57	0.000*
0 – 9: Elderly requires help with basic activities of daily life and is dependent of Long-term care.	28	35	10	12.5		
10-13: Elderly scores borderline independence in activities of daily life and requires some help with mobility maneuvers.	16	20	15	18.7		
14 -20: Elderly is independent in basic activities of daily life and is generally safe at home, however, might require some help.	36	45	55	68.8		
Range	18		20			
Mean \pm SD	11.46 \pm 6.55		15.74 \pm 5.32			

*Significant (P<0.05)

Table (5): Correlation between Studied Sample Total quality of life scores and Total score Knowledge of the studied subjects pre and post-program, (N= 80).

Variables	Total score Knowledge				Total score Mobility Limitations				Total score Activities Daily Living			
	Pre		Post		Pre		Post		Pre		Post	
	r	P	r	P	r	P	r	P	r	P	r	P
Total quality of life scores												
pre	0.359	0.000*			0.478	0.000*			0.347	0.000*		
post			0.628	0.000*			0.874	0.000*			0.534	0.000*

*Significant (P<0.05)

Discussion:

One of the most urgent worldwide issues is the aging population. A predicted 2.1 billion people over 60 will make up half of the world's population by 2050, up from over 1 billion currently. Age-related health problems include chronic illnesses, impairment, and dependency is linked to a number of bad outcomes, which raises the financial burden and expense of health care. For as long as feasible, older persons should maintain their functional independence in order to reduce the negative consequences of aging. Given this, an increased emphasis should be placed on enhancing older adults' quality of life and encouraging healthy aging (Bowling et al., 2021).

Regard socio-demographic characteristic of the studied sample.

The current study illustrated that 61.3% of them aged 60<70years old, female and 38% had primary education and lower although 31.3% of them has University education &more, while 51.3% of them retired. 70% of widows and 65% of those with sufficient money agree with findings from ÇIYAN et al. (2021) at Darulaceze Institution, Istanbul, who examined the "effect of recreational activities on life quality of elders" and who

found that the participant group was between the ages of 50 and 69. In terms of educational background, the percentage of literate people is 40%, whilst the percentage of high school graduates is 26.7%. A bachelor's degree is held by just 1 individual (3.4%).

Also this finding goes on the same line as Seo et al 2023. who study "Effect of Physical Activity on Health-Related Quality of Life of Older people " Using Newly Developed Health-Related Quality of Life Tool for the Korean Population and reported that individuals >65 years of age, (56.7% women and 43.3% men) .The proportions of participants based on the level of education that less than elementary school represent 54.6%, regarding marital status; widowed represent 67.1%.

Concern the effect of the program of the studied sample knowledge, mobility level, activity of daily living and quality of life.

The current study clear that improvement in total knowledge score, quality of life, mobility limitation, and Barthel of activities daily living of the studied sample regarding recreational activity in the post –program than pre –program and these results was accordance with Sala, etal 2019 who study "The impact of leisure activities on older

people cognitive function, physical function, and mental health" and reported that engaging in leisure activities was positively associated with all the three successful aging indicators. Moreover, **kim, et al. 2020** who study "A Meta-Analysis on the Effects of Therapeutic Recreation Programs for the Elderly", the results of this study prove that therapeutic recreation programs for the elderly can be an effective way to bring along a positive change .From researchers point of view it may be related to the effect of the program.

The researchers' point of view was supported by **Kordi, et al 2019** who study "The Effect of Recreation Therapy on Self-esteem and Quality of life in elderly people Referred to a Daycare Center "and reported that According to the results of ANOVA, repeated measures, inter-group variations in self-esteem ($p = 0.003$) and quality of life ($p = 0.007$) show a significant difference between intervention and control groups. In the subscales of quality of life, intergroup variations in the field of intrusion ($p = 0.004$) and success ($p = 0.006$) show a significant difference between intervention and control groups.

In the same line the study finding was consistent with **Cai et al. 2023** who study "Effects of leisure activities and general health on the survival of older people: a cohort study" in China also stated that the older population's survival was significantly predicted by their leisure time and self-rated general health, with general health acting as both a mediator and moderator in the relationship between the two. Older people who took part in PLA & CLA had the longest survival duration (mean = 50.31 months), whereas the participants in neither group had the shortest (mean = 29.60 months). When it came to participating in various leisure activities, there were significant disparities in survival status

(Log-rank test, Chi-square = 576.80, $p \gg 0.001$).

In the current study, which examined the impact of recreational activities on older people's quality of life, a rise in mean \pm SD in the physical health area total score pretest/posttest data was also noted ($4.91 \pm 1.90/6.47 \pm 2.23$). When comparing the psychological total scores with the pretest/posttest data, a statistically significant change was also discovered ($5.13 \pm 2.43/ 9.12 \pm 2.37$) statistical significant improvement in mean and standard deviation of studied sample independence differed from ($5.27 \pm 2.41 /10.31 \pm 2.08$) Social Relationships from ($6.36 \pm 2.79/ 7.91 \pm 2.91$), environment from ($5.36 \pm 2.36/5.99 \pm 2.58$), and Spirituality/religion/ personal beliefs from ($5.30 \pm 2.20/11.28 \pm 2.15$).

Supported with **Esentaş et al. (2021)** who study "The Role of Participation to Leisure Activities in the Quality of Life at Individuals Living in Nursing Homes Niğde University " A marginal rise in averages was noted between the pretest and posttest data for the physical health area total score ($27, 06 \pm 2, 62 / 27, 33 \pm 2, 64$; $p = .413$). Still, there is statistically little evidence of this growth. The comparison of psychological total scores with pretest/posttest data revealed a statistically significant difference as well ($22, 06 \pm 3.25 / 22, 70 \pm 2, 91$; $p = .000$).

Studies yielding similar outcomes to ours as well as those with differing results have also been conducted. In a 2019 survey titled "Relationship between Physical Activity Level and Quality of Life in Middle-Aged," **Vatanserver et al.** found that older adults' physical activity scores increased along with their life quality and in the areas of physical function, physical role, pain, and social function. Furthermore, researchers **Çetiner and Yayla (2021)** of Pamukkale University discovered in their study "The Effect of Activity Adherence on Life Satisfaction and

Quality of Life: A Study on Cyclists" that post-activity life satisfaction significantly affects and raises people's overall quality of life.

Additionally, these findings concur with **Alzahrani 2022**, in a study titled "Dose-response association between physical activity and health-related quality of life in general population" confirmed that physical activity enhances elderly Koreans' HRQoL. The improved HRQoL may have a beneficial impact on the lives of Korean seniors by encouraging physical activity and addressing a range of social difficulties.

The present study showed highly statistical significant improvement of studied sample total Barthel of activities daily living in the post program than preprogram, (14.41 ± 6.66 to 19.57 ± 5.27 , $P < 0.001$) these results on the same direction with **Stolarz et al 2022**, Lubleskie Voivodeship (Poland), who study "Functional Status, Quality of Life, and Physical Activity of Senior Club Members—A Cross-Sectional Study" and reported that statistically significant effect on Barthel index score ($F = 19.68$, $p < 0.001$) and Lawton's IADL scale results ($F = 17.59$, $p < 0.001$). All four domains of life quality were strongly improved.

The present study clear that improvement in total knowledge score of the studied sample regarding recreational activity and quality of life in the post –program than pre –program. And these results agree with **Provencher et al. 2018** who study "Activities, Adaptation & Aging Exploring the Impact of a New Intervention to Increase Participation of Frail Older Adults in Meaningful Leisure Activities" Canada and reported that intervention improved their knowledge regarding the compensatory strategies learned and their participation in meaningful leisure activities.

Conclusion

Based on the results of the study results and research hypothesis, the present study concluded that after implementation of the program, it was founded that there was a statistically significant positive effects on improving the studied sample knowledge, mobility level, activity of daily living, and quality of life.

Recommendations

On the light of the current study finding the following recommendation suggested:

1. Continuity of adapting and application of recreational activity program in geriatric home and clubs to improve older people knowledge and quality of life.
2. Applying other program as an educational program, instructional leisure activity program for older people.
3. Further researches are needed for older people in different community setting.

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