

Effect Of A Physical Activity And Health-Related Quality Of Life Among Older Adults Living In Makkah City Saudi Arabia 2025

Safwan Badr Habeebullah¹, Majed Mahdi Mohammed Alzahrani², Njoud Khaled abualfaraj³, Eidhah Mbarak Al Hosiniy⁴, Fatin Adnan Abdullah Alabbadi⁵, Refal Waleed Aziz Alrahman⁵, Amani Hashem Al Jambi⁵, Suha Saad Mosa Alzahrani⁵, Renad Abdulrahman Hawsawi⁵, Sifran Ibrahim S Alharthi⁴

¹Physical therapist, Department of medical rehabilitation, king abdullah medical complex hospital, Jeddah, Saudi Arabia.

²Physical Therapist, King Faisal Hospital Makkah, Saudi Arabia.

³Physical Therapist, King Abdulaziz Hospital Makkah, Saudi Arabia.

⁴Physical Therapy Technician, King Faisal Hospital Makkah, Saudi Arabia.

⁵Physical Therapist, King Abdulaziz Hospital, Makkah, Saudi Arabia.

ABSTRACT:

Background

Older adults are a rapidly growing segment of the Saudi Arabia. population. Mobility problems that lead to further disability can be addressed through physical activity interventions. Quality of life outcome results are reported from a large trial of physical activity for sedentary older adults at risk for mobility disability. Physical activity can improve health-related quality of life (HRQoL) in older adult; also the effect of physical activity on quality of life is unclear among the Saudi adult population. Physical activity is associated with health-related quality of life (HRQL) in clinical populations, but less is known whether this relationship exists in older men and women who are healthy, people aged 85 years and over are the fastest-growing group, and the proportion of these “oldest old” is expected to triple between now and year 2030. Continued good health of the elderly population is a major challenge to public health. **Aim of the study:** To assess the effect of a physical activity and health-related quality of life among Older Adults living in Makah city Saudi Arabia 2025 **Methods:** cross-sectional descriptive study conducted at among Older Adults, age above the 50 years among visitors of walking tracks/fitness centres/gyms and governmental hospitals in Makkah city and contacted to participate in an 8-month follow-up. Individuals completed a battery of questionnaires assessing activities of daily living, dependence on medicines and medical aids, energy and fatigue, mobility, pain and discomfort, sleep and rest, Work capacity, dependence on medicines and medical aids, our total of 300 eligible participated in this study start from March to September. **Results** most of the participants with their family were (69.0%) follow by alone were (31.0%), regarding the location the majority of them were Gym/Walking tracks were (52.0%) while hospital visitors were (26.0%) while malls were (22.0%), regarding body mass index (BMI) the majority of participant normal were (42.0%) followed by overweight were (37.0%) while obese were (21.0%) **Conclusion:** The article reinforces how physical activity contributes towards each dimension of HRQoL. Physical inactivity is a growing public health challenge in Saudi Arabia, affecting all age groups, also especially the elderly. Our findings support the role of self-efficacy in the relationship between physical activity and QOL as well as an expanded QOL model including both health status indicators and global QOL

Keywords: Effect of a physical activity and health-related quality of life among Older Adults living in Makkah city Saudi Arabia 2025

INTRODUCTION

Health-related quality of life (HRQOL) systematically declines with advancing age.1–4 Older adults with mobility limitations have lower HRQOL than those with fewer limitations.(1) Although some

studies have found that physical activity can produce short-term increases in HRQOL among older adults, those gains appear temporary and data on long-term HRQOL trends are limited.(2) Declining mobility measured by physical performance is associated with lower quality of life in sedentary older adults .(3)

World's elderly population is rapidly growing with estimates that the proportion of elderly population over 60 years will double from 11% to 22% in the first five decades of 21st century. The absolute number of elderly is expected to triple from 605 million to 2 billion over this period (4). Longevity is desirable, but what matters is living with satisfactory Quality of Life (QoL) . QoL is a broad multidimensional concept based on subjective measures of life, while HRQoL is a more specific aspect of QoL that is related to health (5) . Elderly are at greater risk for developing illnesses that impair HRQoL.

More than any other age group, older adults are seeking health information and are willing to make behavioral changes to maintain their health and independence into advanced old age (6). Among the most important self-care behaviors are those that involve physical activity and diet, their contribution to health and quality of life.(7)

One of possible potentially modifiable determinants of HRQoL is diet, because adequate nutrition can delay the age-related frailty and functional dependency by preserving muscle mass and immunity in elderly (8)

Malnutrition is defined as state of deficiency, excess or imbalance of a wide range of nutrients, resulting in significant adverse effects on body structure, function and clinical outcome (9). The reported prevalence of malnutrition in elderly ranged from 23-60% and 5-30% in acute care and community settings 8 respectively.(10) There are several factors that predispose elderly to malnutrition. This includes physiological, social and economic factors, often referred to as "nine D's" (dysphagia, dyspepsia, dementia, depression, diarrhea, poor dentition, disease, dysfunction and drugs) (11) .

Malnutrition has been shown to correlate with higher rates of mortality, longer length and increased cost of hospital stay in elderly (12). Malnourished elderly have two folds increased risk of long-term mortality (12) , three times longer length of hospitalization (13) , three times higher risk of infection (11) , higher costs of hospital care , greater likelihood of hospital readmission after discharge , and greater dependence in activities of daily living (ADLs) (14).

Assessment of nutritional status in elderly could be done through dietary assessment (e.g. 24 hours recall, food frequency questionnaires or diet quality indices (15) , clinical assessment for signs of malnutrition 20 , anthropometric measurements (e.g. Body Mass Index (BMI), mid-arm circumference, tricepital skin fold thickness and Biometric Impedance Analysis (BIA) (16) and biochemical markers of malnutrition (e.g. albumin, transferrin, retinol-binding proteins and thyroxine-binding pre-albumin (17).

Malnutrition has a deleterious effect on physical, mental and social functions and may reduce functional capacity and therefore HRQoL (18) .On the other hand, excessive eating and poor physical activity also may impair health and cause mental health problems, especially if obesity occurs (19) .The relationships between malnutrition and disability are interchanged. Malnourished elderly are at greater risk to be disabled, and disabled elderly are likely to have nutritional abnormalities because of their dependency on the others (20)

LITERATURE REVIEW

Several studies have shown that organized, high-intensity exercise regimens can benefit HRQL in both diseased and healthy populations (21,22) Our study extends these findings by showing that the less-structured and less-intense nature of physical activity is positively related to multiple domains of HRQL in healthy, older adults. An active lifestyle preserves physical function in older adults (23) which may possibly contribute to higher levels of HRQL scores in domains related to physical health. In a carefully selected group of sedentary older adults, habitual physical activity level was associated with less bodily pain, but not with the other domains of HRQL (13)

According to the WHO's 2016 diabetes country profile, 58.5% of the adult Saudi population were found to be physically inactive (52.1%of men and 67.7% of women) (23).

Studies reported that more than half of studied elderly had severe symptoms of constipation at pretest there is no symptoms in posttest.(24) This is in line with the findings of Esra, et al (2023), who

discovered that training on lifestyle adjustment led to a reduction in the intensity of constipation symptoms.(25) Highly statistically significant improvement in the intensity of constipation symptoms after a post-educational intervention on lifestyle adjustment, as measured by the Patient Assessment of Constipation Symptoms (PAC-SYM) (26)

Very few studies have explored the interrelationships among dietary measures, physical activity variables, and quality-of-life indexes in older adults or the nature of the intervening variables. As documented below, such factors as perceived mastery and control, enjoyment of the diet, or satisfaction with exercise programs may be as important to quality of life as is reduced plasma cholesterol or increased grip strength.(27)

Study, the prevalence of physical inactivity was found to be 66.6% for the overall Saudi Arabia population (60.1% for men and 72.9% for women) (28). However, it was found that 16.8% of the population engaged in a moderate level of physically active and 16.6% engaged in a high level of physical inactivity (29). The estimated population-attributable fractions (PAF) in Saudi Arabia were calculated using adjusted relative risks and were reported to be 11.4% for coronary heart disease, 14.1% for type 2 diabetes, 19.9% for breast cancer, 20.4% for colon cancer, and 18.4% for all-cause mortality associated with physical inactivity (24) The estimated gains in life expectancy by eliminating physical inactivity are years (25)

Study to spot the socio-demographic and style determinants for physical activity among urban and residential area older adults . The Persian type of International Physical Activity form utilized for evaluating physical activity level. The results of the study disclosed that 28.47% of the respondents were inactive, 27.96% were minimally active, and 43.55% had health-enhancing physical activity. Residents of residential area areas and normal-weight older adults ($P < 0.001$) were considerably a lot of doubtless to participate in an exceedingly high intense physical activity. Compared with girls, men had considerably higher odds of being physically active. As compared with residents of sub urban areas, residents of urban areas were considerably had lower odds of being physically active.(20)

RATIONALE

Healthy older adults who participated in regular physical activity of at least moderate intensity for more than one hour per week had higher values in all eight domains of HRQL than those who were less physically active. After adjustment for gender and hypertension, the group reporting higher physical activity had higher values in five of the domains of HRQL than the group with lower activity. Regular Physical Activity impacts all the HRQoL domains, improving physical and mental health. Physical inactivity is growing in Saudi Arabia, affecting mainly females and older individuals. Considering the hypothesis that higher physical activity and nutrition would be associated with better HRQoL, a focus on constructing more local sports facilities and ensuring concession packages, especially for the older individuals at the gyms, would have benefits. Despite this public health importance of physical activity, there are few studies investigating its profile among general population.

AIM OF THE STUDY:

To assess the effect of a physical activity and health-related quality of life among Older Adults living in Makkah city Saudi Arabia 2025.

OBJECTIVE:

To assess the effect of a physical activity and health-related quality of life among Older Adults living in Makkah city Saudi Arabia 2025.

METHODOLOGY:

Study design:

This study is descriptive cross-sectional study was conducted among Older Adults, age above the 50 years to participate visitors of walking tracks/fitness centres/gyms and governmental hospitals in Makkah city contacted to participate in an 8-month follow-up.

Study Area

The current study has been conducted at Saudi Arabia the study randomly sampled. They has been collected throe visitors of walking tracks/fitness centres/gyms and governmental hospitals in Makkah city and more specifically in according to the inclusion, exclusion criteria shown below. Saudi Arabia from January 2025 to August 2025, on 300 patients (111 males, 189 females). The ages ranged from $<50\text{--}\geq 70$ years, the sample size is (300) patients selected randomly, necessary permission was obtained for the data collection. This was a Cross-sectional descriptive study, a predesigned questionnaire was used that consisted of close-ended questions and specific questions on Socio demographic background (Age, gender, nationality, were married, marital status, occupation, education and income) characteristics. The questionnaire is divided impact Quality of Life, health-related quality of life measures in subjects who have lower and higher levels of physical activity, role of the physical activity.

Study Population

The study has been conducted regarding to determine the Impact Physical Activity and Quality of Life in Older Adults in the Saudi Arabia 2025, during the January 2025 to August 2025 the period of study in 2025, the sample size is (300) selected randomly .

Selection criteria:

Inclusion criteria

- Men and women who were 50 years of age and older were included in this study.
- Resident in Saudi Arabia.
- All nationalities
- Both males and females.
- Willing to give written consent to participate

Exclusion criteria :

- Participants with a history of overt cardiovascular disease (i.e., myocardial infarction, stroke, congestive heart failure, lower extremity revascularization, and peripheral arterial disease confirmed by an ankle/brachial index < 0.90) or chronic obstructive pulmonary disease were excluded because of the possible confounding influences that cardiovascular diseases may have on both physical activity and HRQL.
- Pediatric patients.
- With severe cognitive impairment such as dementia or delirium.
- Unwilling to give written consent to participate.

Sample size

Descriptive and bivariate Chi-square analyses (X^2 , P-value) were performed in SPSS, version 24.0. In order to examine the physical function physical activity, self-efficacy, health status indicators, and quality of life . The sample size has been calculated by applying Raosoft sample size calculator based on (The margin of error: 5%, Confidence level: 95%, and the response distribution was considered to be 20%) accordingly the Sample size is (300) in Saudi Arabia in 2025 (male and female) after official communication, and adding 10 more to decrease margin of error. After adding 5% oversampling, the minimum calculated sample has been 300. Computer generated simple random sampling technique was used to select the study participants.

Sampling technique:

Systematic random sampling technique is adopted. After that, by using random number generator, then simple random sampling technique has been applied to select the participant. Also, convenience sampling technique will be utilized to select the participants in the study. By using systematic sampling random as dividing the required sample size; (300).

Data collection tool

The data was collected through a questionnaire that was developed by the researchers after reviewing the related literature. It was translated into simple Arabic language to suit the understanding level of the entire study subjects. Self-administrated questionnaire was used. The questionnaire contains four sections. First section: containing items related to demographic data as age, sex, marital status, and occupation, The second section questions to assess nutrition in Quality of Life , The third section consisted of questions of measures physical function, part fourth role of the physical activity.

Data collection technique:

Researcher has been visiting the walking tracks/fitness centres/gyms and governmental hospitals in Makkah city in 2025. Each sector consists of a group of walking tracks/fitness centres/gyms and governmental hospitals in Makkah city, after getting the approval from the ministries of health , the researcher has been obtained permission from participants. After the arrival of the participants has been explained the purpose of the study to all participants attending

Data entry and analysis:

The data were coded and introduced to the Statistical Package of Social Sciences (SPSS, version 24). The data were analyzed to present the findings in descriptive and inferential statistics. The descriptive statistics include frequencies and percentages for categorical variables and standard deviations were used to summarize numerical data. The significant associations between demographic and background variables were detected at < 0.05 significance level.

Pilot study:

A pilot study has been conducted in the same sector due to the similarity to the target group using the same questionnaire to test the methodology of the study. As a feedback, the questionnaire has been clear and no defect has been detected in the methodology

Ethical considerations:

Permission from the directorate of health , verbal consents from all participants in the questionnaire were obtained. All information was kept confidential, and results will be submitted to the department as feedback. The researcher described the aim and objectives of the study for the residents. No names were required to assure confidentiality of data, and all information was kept confidential only for this study's purposes.

Budget: Self-funded

RESULT

Table 1— Distribution of Socio-Demographic Characteristics participant of elderly in the study (n=300)

	N	%
Age		
<50	54	18
60-65	93	31
65-70	66	22
≥ 70	87	29
Gender		
Male	111	37
Female	189	63
Marital status		
Married	126	42
Divorced	54	18
Widowed	120	40
Level of Education:		
Primary education	102	34
Preparatory education	84	28
Secondary (general & technical)	60	20
University graduate	54	18
Past Occupation:		
Non-working/ housewife	102	34
Employee	165	55
Technical	33	11
Family income:		
Just meet routine expenses	96	32
Able to save/invest	204	68
Physical activity		

Low	144	48
Moderate	66	22
High	90	30
Social Level		
Low	72	24
Middle	60	20
High	168	56

Table 1 shows that most of the participants (31.0%) were in the age group 60-65 years follow by the (29.0%) were in the ≥ 70 years while 65-70 years were (22.0%), regarding the gender the majority of them were female (63.0%) while male were (37.0%), regarding marital status the majority of participant are marital were (42.0%) while widowed were (40.0%) while divorced were (40.0%), regarding level of education the majority of participant are primary education were (34.0%) followed by preparatory education were (28.0%) while secondary (general & technical) were (20.0%) but university graduate were (18.0%), regarding past occupation the majority of participant are employee were (55.0%) while Non-working/ housewife were (34.0%) but technical were (11.0%), regarding the family income (SR) the majority of participant save/invest were (68.0%) follow by just meet routine expenses were (32.0%), regarding physical activity the majority of participant low were (48.0%) while high were (30.0%) while moderate were (22.0%), regarding the social level the majority of participant high were (56.0%) follow by low were (24.0%) while middle were (20.0%)

Table 2 Distribution of Socio-Demographic Characteristics participant

Social Level	N	%
Living with:		
- Alone	93	31
- With their family	207	69
Location		
Gym/Walking tracks	156	52
Malls	66	22
Hospital visitors	78	26
Body mass index (BMI)		
Normal	126	42
Overweight	111	37
Obese	63	21

Table 2 shows regarding the living with that most of the participants with their family were (69.0%) follow by alone were (31.0%), regarding the location the majority of them were Gym/Walking tracks were (52.0%) while hospital visitors were (26.0%) while malls were (22.0%), regarding body mass index (BMI) the majority of participant normal were (42.0%) followed by overweight were (37.0%) while obese were (21.0%) .

Table 3: Distribution of the health-related quality of life measures in subjects who have lower and higher levels of physical activity

Physical Function	Higher Physical Activity group		Lower Physical Activity group		Chi-square	
	No	%	No	%	X ²	P-value
Dependence on medicines and medical aids	219	73	81	27	63.480	<0.001*

Energy and fatigue	198	66	102	34	30.720	<0.001*
Mobility	147	49	153	51	0.120	0.729
Pain and discomfort	207	69	93	31	43.320	<0.001*
Sleep and rest	186	62	114	38	17.280	<0.001*
Work capacity	219	73	81	27	63.480	<0.001*

Table 3 Regarding distribution of the health-related quality of life measures in subjects who have lower and higher levels of physical activity in the study show regarding dependence on medicines and medical aids a significant relation between the physical function and dependence on medicines and medical aids while P-value <0.001 and X^2 63.480 the majority of participant in higher Physical Activity group were (73.0%) followed by Lower Physical Activity group were (27.0%), regarding the Energy and fatigue a significant relation between the physical function and Energy and fatigue while P-value <0.001 and X^2 30.720 the most of participant in higher Physical Activity group were (66.0%) followed by Lower Physical Activity group were (34.0%), regarding mobility no significant relation between the physical function and mobility while P-value <0.729 and X^2 0.120 the majority of participant in lower Physical Activity group were (51.0%) followed by high Physical Activity group were (49.0%), regarding the pain and discomfort a significant relation between the physical function and Pain and discomfort while P-value <0.001 and X^2 43.320 the most of participant in higher Physical Activity group were (69.0%) followed by lower Physical Activity group were (31.0%), regarding Sleep and rest a significant relation between the physical function and Sleep and rest while P-value <0.001 and X^2 17.280 the majority of participant in higher Physical Activity group were (62.0%) followed by Lower Physical Activity group were (38.0%), regarding the work capacity a significant relation between the physical function and work capacity while P-value <0.001 and X^2 63.480 the most of participant in higher Physical Activity group were (73.0%) followed by Lower Physical Activity group were (27.0%),

Table 4: Distribution the role of the physical activity in the health-related quality .

Variables	Yes		No		I don't know		Chi-square	
	No	%	No	%	No	%	X^2	P-value
Role emotional	96	32	171	57	33	11	95.460	<0.001*
Energy fatigue	228	76	63	21	9	3	260.340	<0.001*
Emotional well being	111	37	132	44	57	19	29.940	<0.001*
Social functioning	171	57	93	31	36	12	91.860	<0.001*
Bodily pain	195	65	30	10	75	25	145.500	<0.001*
General Health	225	75	36	12	39	13	234.420	<0.001*
Physical component summary (PCS))	111	37	162	54	27	9	92.940	<0.001*
Mental component summary (MCS)	36	12	225	75	39	13	234.420	<0.001*

Table 4 Regarding Distribution the role of the physical activity in the health-related quality the study show regarding role emotional a significant relation while P-value <0.001 and X^2 95.460 the majority of participant in No were (57.0%) followed by Yes were (32.0%) while I don't know were (11.0%), regarding the Energy fatigue a significant relation while P-value <0.001 and X^2 260.340 the most of participant in Yes were (76.0%) followed by No were (21.0%) while I don't know were (3.0%), regarding the Emotional wellbeing a significant relation while P-value <0.001 and X^2 29.940 the most of participant in No were (44.0%) followed by Yes were (37.0%) while I don't know were (19.0%),

regarding the Social functioning a significant relation while P-value <0.001 and X^2 91.860 the most of participant in Yes were (57.0%) followed by No were (31.0%) while I don't know were (12.0%), regarding the Bodily pain a significant relation while P-value <0.001 and X^2 145.500 the most of participant in Yes were (65.0%) followed by I don't know were (25.0%), while No were (10.0%), regarding the General Health a significant relation while P-value <0.001 and X^2 234.420 the most of participant in Yes were (75.0%) followed by I don't know were (13.0%), while No were (12.0%), regarding the Physical component summary (PCS) a significant relation while P-value <0.001 and X^2 92.940 the most of participant in No were (54.0%) followed by Yes were (37.0%) while I don't know were (9.0%), regarding the Mental component summary (MCS) a significant relation while P-value <0.001 and X^2 234.420 the most of participant in No were (75.0%) followed by I don't know were (13.0%), while Yes were (12.0%) .

DISCUSSION

The purpose of this study was to assess the effect of a physical activity and health-related quality of life among Older Adults living in Makah city Saudi Arabia 2025 which hypothesized mediation through self-efficacy and health status indicators and applying it to community dwelling older men and women. The proposed model specified that physical activity would indirectly influence global QOL across time via more proximal outcomes of physical activity including self-efficacy and health status indicators (i.e., disability limitations and physical self-worth). (The test of this model resulted in a good model data fit controlling for baseline associations, stability measures over time, and demographic variables. However, further testing of cross-lagged reciprocal relationships suggested the model fit could be improved by adding a path from baseline self-efficacy to 8-month physical activity.

If health-related quality of life and not longevity is the key goal for health promotion, then it is captured only partly by the existing mortality and morbidity indexes (30) . Researchers now urge that government agencies and health care providers begin collecting quality-of-life data on the populations they serve (31) In the present study shows that most of the participants (31.0%) were in the age group 60-65 years, the gender the majority of them were female (63.0%) while male were (37.0%), marital status the majority of participant are marital were (42.0%) regarding level of education the majority of participant are primary education were (34.0%), regarding past occupation the majority of participant are employee were (55.0%) while Non-working/ housewife were (34.0%) regarding the family income (SR) the majority of participant save/invest were (68.0%) regarding physical activity the majority of participant low were (48.0%) while high were (30.0%) while moderate were (22.0%) (See table 1)

Adding life to years, not years to life, is the current agenda for productive and successful aging (32). Policies and programs on aging are increasingly focused on identifying ways to improve quality of life and health status, nutrition, Physical Activity and Quality of Life rather than just extending life span (33). In the Healthy People report, the chief goal of health promotion was to increase the span of healthy life (30). The focus was on mortality and morbidity data and symptom checklists as the principal measures of ill health (22)

In contrast, the new emphasis in the Healthy People report is on quality of life, nutrition, Physical Activity overall well-being (27). Helping people to increase life expectancy and improve their quality of life is the primary goal of the Healthy People report. The authors of this special issue of the Journals of Gerontology: Biological Sciences and Medical Sciences are united in the belief that optimal nutrition and physical activity make a significant contribution to the overall quality of life at any age and especially for older adults.(20)The key research challenge lies in deciding which aspects of improved fitness, nutrition, and diet contribute the most to quality-of life measures. We have attempted to provide a comprehensive review of research on exercise, nutrition, diet, and health in elderly adults .(29). In our study regarding the living with that most of the participants with their family were (69.0%) follow by alone were (31.0%), regarding the location the majority of them were Gym/Walking tracks were (52.0%) while hospital visitors were (26.0%) while malls were (22.0%), regarding body mass index (BMI) the majority of participant normal were (42.0%) followed by overweight were (37.0%) while obese were (21.0%) (see table2)

Physical activity improved HRQL measures regardless of age, activity status, or health of participants (31). However, the relationship between physical activity and quality of life largely

depended on what outcome was of greatest concern to the elderly individual. The effect of fitness on HRQL was less dramatic when the person was already functioning above the norm. Furthermore, there was a much closer link between performance dysfunction and HRQL than between fitness and HRQL. (22) In other words, disability and dysfunction were far more salient and far more detrimental to quality-of-life measures than were reductions in the general level of fitness. Similar my study show distribution of the health-related quality of life measures in subjects who have lower and higher levels of physical activity in the study dependence on medicines and medical aids a significant relation between the physical function and dependence on medicines and medical aids while P-value <0.001 and X2 63.480 the majority of participant in higher Physical Activity group were (73.0%) followed by Lower Physical Activity group were (27.0%), regarding the Energy and fatigue a significant relation between the physical function and Energy and fatigue while P-value <0.001 and X2 30.720 the most of participant in higher Physical Activity group were (66.0%) followed by Lower Physical Activity group were (34.0%), regarding mobility no significant relation between the physical function and mobility while P-value <0.729 and X2 0.120 the majority of participant in lower Physical Activity group were (51.0%) followed by high Physical Activity group were (49.0%) (See table 3)

In addition to the physical health measures of HRQL, a physically active lifestyle is positively associated with components of health in older adults as well (13) The present investigation found that the group with higher physical activity levels had higher values in all of the domains of HRQL related to mental health (i.e., vitality, social functioning, role limitations due to emotional health, and mental health) than their more sedentary counterparts. After adjusting for group differences in gender composition as well as the prevalence of hypertension, the mental health domains of vitality and social functioning remained higher in the more physically active group, whereas the role-emotional and mental health domains were no longer different between the two groups. Thus, higher levels of physical activity are related to higher scores of vitality and social functioning independent of hypertension and gender. The association between physical activity on mental health domains of vitality and social functioning may be mediated through differences in maximal oxygen uptake and in body fat percentage (32).

In our study reported that distribution the role of the physical activity in the health-related quality the study show regarding role emotional a significant relation while P-value <0.001 and X2 95.460 the majority of participant in No were (57.0%) followed by Yes were (32.0%) while I don't know were (11.0%), regarding the Energy fatigue a significant relation while P-value <0.001 and X2 260.340 the most of participant in Yes were (76.0%) followed by No were (21.0%) while I don't know were (3.0%), regarding the Emotional wellbeing a significant relation while P-value <0.001 and X2 29.940 the most of participant in No were (44.0%) followed by Yes were (37.0%) while I don't know were (19.0%), regarding the Social functioning a significant relation while P-value <0.001 and X2 91.860 the most of participant in Yes were (57.0%) followed by No were (31.0%) while I don't know were (12.0%) (See table 4)

CONCLUSION

Elderly people are a fast-growing group that is at greater risk of high prevalence of comorbidities and limited resources available for them, elderly are more prone to negative effects of unphysical activity on quality of life and health outcomes due to their vulnerable nature and this is often preventable. Investing in innovative strategies and establishing targeted health education programs for academic institutions and communities are required to enhance healthy habits. Additionally, constructing more local sports facilities and concession packages, especially for the females at the gyms, can motivate individuals and promote physical activity. Physical activity has been consistently associated with enhanced quality of life (QOL) in older adults.

REFERENCES

1. Malicka, B., Skośkiewicz-Malinowska, K., & Kaczmarek, U. (2022). The impact of socioeconomic status, general health and oral health on health-related quality of life, oral health-related quality of life and mental health among Polish older adults. *BMC geriatrics*, 22(1), 2.
2. Elhag, S., Niechcial, M. A., Potter, L., & Gow, A. J. (2024). Exploring the impact of real-world interventions on healthy older adults' physical health, psychological wellbeing, and social connections: A systematic review.

3. Petnehazy, N., Barnes, H. N., Newman, A. B., Kritchevsky, S. B., Cummings, S. R., Hepple, R. T., & Cawthon, P. M. (2024). Muscle mass, strength, power and physical performance and their association with quality of life in older adults, the Study of Muscle, Mobility and Aging (SOMMA). *The Journal of Frailty & Aging*, 13(4), 384-390.
4. Grinin, L., Grinin, A., & Korotayev, A. (2023). Global Aging: An Integral Problem. Reconsidering the Limits to Growth: A Report to the Russian Association of the Club of Rome, 117.
5. Maiuolo, M. L., Giorgini, R., Vaccaro, M. G., Facchin, A., Quattrone, A., & Quattrone, A. (2024). Assessments scales for the evaluation of health-related quality of life in Parkinson's disease, progressive supranuclear palsy, and multiple system atrophy: a systematic review. *Frontiers in Psychology*, 15, 1438830.
6. Suasnabar, J. M. H., Finch, A. P., Mulhern, B., & van den Akker-van, M. E. (2024). Exploring the measurement of health related quality of life and broader instruments: A dimensionality analysis. *Social Science & Medicine*, 346, 116720.
7. Elsayed, N. A., Aleppo, G., Bannuru, R. R., Beverly, E. A., Bruemmer, D., Collins, B. S., ... & American Diabetes Association Professional Practice Committee. (2024). 5. Facilitating Positive Health Behaviors and Well-being to Improve Health Outcomes: Standards of Care in Diabetes—2024. *Diabetes Care*, 47.
8. Sciacchitano, S., Carola, V., Nicolais, G., Sciacchitano, S., Napoli, C., Mancini, R., ... & Coluzzi, F. (2024). To be frail or not to be frail: this is the question—a critical narrative review of frailty. *Journal of clinical medicine*, 13(3), 721.
9. Zubair, M., Mishra, M., Kumar, U., & Mishra, P. K. (2024). The Effects of Protein-Energy Malnutrition On Children Under Five Years of Age.(2024). *Int J Pharm Sci*, 15(1), b39-53.
10. Homchampa, P. (2023). Malnutrition in the older patients: Constructing knowledge, perceptions, and solutions for an intensive Care setting in Vietnam (Doctoral dissertation, Mahasarakham University).
11. Gupta, A., Pandey, A., Bansal, P., Kaur, A., & Prakash, P. (2023). Healthcare systems during pandemic: Role of government and regulatory authorities. *Journal of the Indian Medical Association*, 121(8), 88-90.
12. Dos Santos, T. A., Luft, V. C., Souza, G. C., de Albuquerque Santos, Z., Jochims, A. M. K., & de Almeida, J. C. (2023). Malnutrition screening tool and malnutrition universal screening tool as a predictors of prolonged hospital stay and hospital mortality: A cohort study. *Clinical nutrition ESPEN*, 54, 430-435.
13. Widhalm, H. K., Keintzel, M., Ohrenberger, G., & Widhalm, K. (2023). The urgent need for nutritional medical care in geriatric patients—malnutrition in nursing homes. *Nutrients*, 15(20), 4367.
14. O'Brien, M. W., Mallery, K., Rockwood, K., & Theou, O. (2023). Impact of hospitalization on patients ability to perform basic activities of daily living. *Canadian Geriatrics Journal*, 26(4), 524.
15. Norde, M. M., Bromage, S., Marchioni, D. M., Vasques, A. C., Deitchler, M., Arsenaut, J., ... & Geloneze, B. (2024). The global diet quality score as an indicator of adequate nutrient intake and dietary quality—a nation-wide representative study. *Nutrition Journal*, 23(1), 42.
16. Hu, Y., Zhang, C., Zou, C., Yang, H., Chen, Y., & Liang, T. (2023). Anthropometric measures and physical examination could be used to assess phenotypic GLIM (Global leadership initiative on malnutrition) criteria in heart failure patients. *Nutrition, Metabolism and Cardiovascular Diseases*, 33(12), 2419-2427.
17. Hegazi, R., Miller, A., & Sauer, A. (2024). Evolution of the diagnosis of malnutrition in adults: a primer for clinicians. *Frontiers in Nutrition*, 11, 1169538.
18. Ammar, A., Trabelsi, K., Hermassi, S., Kolahi, A. A., Mansournia, M., Jahrami, H., ... & Bragazzi, N. (2023). Global disease burden attributed to low physical activity in 204 countries and territories from 1990 to 2019: Insights from the Global Burden of Disease 2019 Study. *Biology of Sport*, 40(3), 835-855.
19. Grandes, G., García-Alvarez, A., Ansorena, M., Sánchez-Pinilla, R. O., Torcal, J., Arietealeanizbeaskoa, M. S., & Sánchez, A. (2023). Any increment in physical activity reduces mortality risk of physically inactive patients: Prospective cohort study in primary care. *British Journal of General Practice*, 73(726), e52-e58.

20. Al Zahib, Y. H., & Baarimah, H. (2020). Physical activity profile among Saudi adults in Abha City, Saudi Arabia. *Middle East J Family Med*, 7(37), 10-5742.
21. AlTamimi, J. Z., Alagal, R. I., AlKehayez, N. M., Alshwaiyat, N. M., Al-Jamal, H. A., & AlFaris, N. A. (2022). Physical activity levels of a multi-ethnic population of young men living in Saudi Arabia and factors associated with physical inactivity. *Frontiers in Public Health*, 9, 734968.
22. Ramamoorthy, T., Kulothungan, V., & Mathur, P. (2022). Prevalence and correlates of insufficient physical activity among adults aged 18–69 Years in India: findings from the national noncommunicable disease monitoring survey. *Journal of Physical Activity and Health*, 19(3), 150-159.
23. Khalil, S. H. A., Megallaa, M. H., Rohoma, K. H., Ismael, H., AbouSeif, M., Kharboush, I., ... & Sallam, H. (2018). Prevalence of type 2 diabetes mellitus in a sample of the adult population of Alexandria, Egypt. *Diabetes research and clinical practice*, 144, 63-73.
24. Ragab, A. G., Kotb, S. A. M., Hassanein, R. H., & Ibrahim, H. M. (2021). Effect Of Educational Program About Dietary And Physical Activity On Functional Constipation For Elderly People At Assiut Geriatric Clubs. *The Malaysian Journal Of Nursing (Mjn)*, 13(2), 90-101.
25. Esra, U. S. T. A., Akkaş, Ö. A., & Bayram, S. (2023). Determining The Constipation Status And Associated Factors In The Elderly People Receiving Institutional Care. *Online Türk Sağlık Bilimleri Dergisi*, 8(1), 31-38.
26. Mohamed, A. G., Abouelala, F. M., & Elesawy, F. M. (2020). Effect of an Educational Module on Knowledge, Symptoms Severity and Quality of Life in Patients with Irritable Bowel Syndrome. *Assiut Scientific Nursing Journal*, 8(23), 166-175.
27. Brinkhof, L. P., Huth, K. B., Murre, J. M., de Wit, S., Krugers, H. J., & Ridderinkhof, K. R. (2021). The interplay between quality of life and resilience factors in later life: a network analysis. *Frontiers in Psychology*, 12, 752564.
28. Pano-Espinola, O. (2022). A quantitative measure of lifestyle and well-being based on health related quality of life.
29. Hershey-de-la-Cruz, M. S. (2022). The Mediterranean diet and physical activity: interaction analysis and assessment of a mediterranean lifestyle score for the prevention of chronic diseases and premature.
30. Kanumilli, N., Butler, J., Makrilakis, K., Rydén, L., Vallis, M., Wanner, C., ... & Cheng, A. (2023). Guardians For Health: A Practical Approach to Improving Quality of Life and Longevity in People with Type 2 Diabetes. *Diabetes Therapy*, 1-18.
31. Permanyer, I., Villavicencio, F., & Trias-Llimós, S. (2023). Healthy lifespan inequality: morbidity compression from a global perspective. *European Journal of Epidemiology*, 38(5), 511-521.
32. Deutschbein, J., Lindner, T., Möckel, M., Pigorsch, M., Gilles, G., Stöckle, U., ... & Schenk, L. (2023). Health-related quality of life and associated factors after hip fracture. Results from a
33. Sharma, S. (2022). Physical Activity, Cognitive Function, Psychological Well-Being, and Quality of Life in Adolescents and Young Adults Treated for Cancer (Doctoral dissertation, Université d'Ottawa/University of Ottawa).
34. Kokić, I. Š., Duvnjak, I., & Kuna, D. (2022). Establishing physical functioning, quality of life and well-being during the first wave of the COVID-19 pandemic in Croatia. *Primenjena psihologija*, 15(2), 149-178.