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Exercise Self-Efficacy, Body Image, and Perception of Health-Related Quality of Life in Older Adults

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Keyword

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ABSTRACT

This study aims, aimed to determine the relationships between exercise self-efficacy and body image and HRQOL in older adults and to investigate their effects on HRQOL. Methods: The study was a population-based cross-sectional survey of 166 people aged 60 and over (96 male and 70 female). The data were collected using participants who completed a Health-Related Quality of Life (HRQOL), Exercise Self-Efficacy Scale (ESS), and Body Image Scale (BIS) which consisted. The data were analyzed using descriptive statistics. Age, gender, monthly income, marital status, education level, occupation, and smoking Categorical data such as alcohol use and congenital diseases were compared using independent samples t-test, coefficient, and analysis of variance (ANOVA). Results: The Male respondents had higher HRQOL (89.55 ± 9.05) than the female respondents. The age group 80 and over years had the lowest ESS (62.65 ± 13.4), HRQOL (82.27 ± 11.24) and BIS (165.1 ± 21.7). The lowest income group (<1,000/month) had the lowest ESS (60.13 ± 14.4), HRQOL (80.59 ± 14.97) and BIS (168.0 ± 22.9). There were significant differences between gender, education, occupation, age, monthly income status, BIS, and ESS ($p < 0.01$, $p = 0.001$, $p = 0.05$, respectively). The associations between Overall HRQOL and gender, age, education level, marital status, and were found statistically significant ($p < 0.01$, $p = 0.001$, $p = 0.05$, respectively). Conclusion it shows that BIS, ESS, and health-promoting behaviors are important for HRQOL of individuals aged 60 and over. This suggests that individuals with higher levels of ESS may experience better overall health and BIS.

1. INTRODUCTION

The elderly group is the fastest-growing segment of the population and is predicted to grow from 15.7% in 2020 to 25.0% in 2030 [1]. Cognitive and psychosocial factors have been shown to determine survival, use of medical services, health-promoting behavior, and health-related quality of life (HRQOL) in older individuals [2].

HRQOL is a comprehensive concept that includes subjective assessments of physical, psychological, social, and functional aspects of health, encompassing both positive and negative aspects of an individual's life [3]. Measuring HRQOL is important to support public health measures of morbidity and mortality, especially in the elderly population [3,4]. It is important to conduct research to identify key factors that contribute to health problems in this age group and can significantly impact their quality of life. There are several factors associated with the HRQOL of older people, including socioeconomic status, lifestyle behaviors, and health conditions [5-7]. as has been extensively researched. However, it is worth noting that self-esteem also plays a very important role in influencing HRQOL. Self-esteem is a psychological dimension that can affect the overall quality of life. Exercise Self-Efficacy plays an important role in increasing health-related quality of life (HRQoL) among older adults and improving aging health. Quality of Life

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(QoL) is defined as the measure adjusted according to the impairments, functional conditions, and intuition determined for the life span [8,9]. HRQoL generally consists of many dimensions, including quality of life, general health, symptoms, biological and functional states, not only the 5 mentioned dimensions but also environmental and individual dimensions. Each dimension directly affects the next variable. However, environmental and individual variables directly affect the measurement of all dimensions except the biological dimension [10]. Exercise Self-Efficacy appears to be associated with improved functional performance and HRQoL [11].

In health and sports psychology research, body image is considered an important factor associated with Exercise Self-Efficacy and healthy behavior [12]. Body image is a multidimensional construct that reflects attitudinal and perceptual dimensions regarding a person's physical function and appearance. The cognitive dimension evaluates thoughts about one's body function and appearance, while the perceptual dimension involves how one describes and views body function and appearance [13]. While the emotional dimension consists of the individual's feelings and emotions regarding body function and appearance, the behavioral dimension focuses on behaviors resulting from thoughts, perceptions, and feelings regarding the body's function and appearance [14]. Body dissatisfaction and body image are gendered phenomena. Previous studies have shown that low levels of body dissatisfaction are common among young people.

They found that 22% of men and 24% of women reported being dissatisfied with their bodies. Similarly, results from these studies show that negative attitudes towards body function and appearance, which occur frequently in young men and women, are associated with increased risk of eating disorders and depression, and decreased quality of life, health, and life satisfaction [15]. HRQOL, exercise self-efficacy, and body image are important factors for individuals over 65. Exercise, on the other hand, is vital for physical and mental health in this age group [16]. These factors may shape an individual's quality of life. Regular exercise, in a broad sense, refers to any planned, structured, repetitive, and purposeful physical exercise performed to improve or maintain one or more aspects of physical fitness and health. While the specific type, intensity, duration, and frequency of the exercise can vary greatly depending on the individual's age, physical condition, and specific health goals, regular exercise typically implies a consistent, long-term commitment to an active lifestyle. The relationship between regular exercise and HRQOL and body image in older individuals is complex and may depend on various variables [17].

According to the above-described background, the research question of this study was whether HRQOL, exercise self-efficacy, and body image perceived by older adults were associated with their health-related quality of life, and to find answers to the research question, a cross-sectional design survey was conducted. We hypothesized that the higher HRQOL, exercise self-efficacy, and body image perceived by older adults have a positive effect on their health-related quality of life. Therefore, this study aimed to determine the relationships between exercise self-efficacy and body image and HRQOL in older adults and to investigate their effects on HRQOL.

2. MATERIALS AND METHODS

2.1.Study Design, Population, And Sampling

Study participants were composed of people aged 60 and over. Participants were informed about the study and asked whether they agreed to participate. Participation in the study was voluntary and initially, 166 participants were included. Subjects who gave written consent were asked to fill out the questionnaire section including questions regarding inclusion and exclusion criteria. Inclusion criteria were individuals aged ≥60 years. Exclusion criteria were individuals who could not communicate verbally or had neuropathy.

2.2. Data Collection Tools

2.2.1. Sociodemographic Characteristics

Sociodemographic characteristics of the participants included in the study were age, gender, education level, occupation, marital status, monthly income, and health data. Participants were categorized as 60-69, 70-79, and 80 years and over.

2.2.2. Body Image Scale (BIS)

Developed by Secard & Jurard in 1953. The scale used in our country is a five-point Likert-type scale consisting of 40 items. The most positive statement is 1 point, and the most negative is 5 points. Accordingly, the lowest possible total score is 40 and the highest total score is 200.

The increase in the total score means that the person's satisfaction decreases and the scores decrease, that is, the person's satisfaction increases [18].

2.2.3. Exercise Self-Efficacy Scale (ESS)

It was developed by Bandura and its validity and reliability studies were conducted in Turkey by Bozkurt. The test-retest reliability coefficient was found to be 0.968 [19,20]. The IOM Scale consists of 18 items that can be scored between 0% and 100%. Participants are given 10-unit scores ranging from 0 to 50 ("Moderately able to do it") and 100 ("Absolutely able to do it") according to their level of self-efficacy or confidence. intervals with 100 points. Internal consistency reliability was found to be 0.94 [20].

2.2.4. Health-Related Quality of Life (HRQOL)

The WHOQOL-BREF scale was used for HRQOL [21]. This scale includes four areas: physical health, psychological, social relationships, and environment, 26 questions on QOL, health, or other areas of life with a score of 1 to 5 on a Likert scale. Within these four areas, physical health addresses daily living activities, dependence on medical treatment, fatigue, sleep disturbance, mobility, and malleability.

The psychological domain includes emotions, spirituality, body image, thinking, concentration, beliefs, and memory. The social relationships domain includes social support, personal relationships, and sexual activity, and the environment domain describes health and social care, financial resources, recreation, physical environment, freedom, and physical safety. The 26-item WHOQOL-BREF scale was analyzed by calculating all domain scores. Quality of life scores were evaluated by dividing them into three categories: low, medium, and high. A higher score indicates improved Health-Related Quality of Life (HRQOL).

2.2.5. Ethical Approval

Data is pre-tested and validated using face-to-face interview techniques with structured questionnaires. This study complied with ethical standards. The participant provided informed consent with a voluntary form covering the research details, risks, benefits, confidentiality, and participant rights. The research strictly adhered to the ethical principles of the Declaration of Helsinki and the participant prioritizes their rights and well-being design, procedures, and privacy measures.

2.2.6. Statistical Analysis

Frequency, percentage, mean and SD are defined as the characteristics of sample populations, self-esteem, and HRQoL. Mean and standard deviation are used in the presentation of findings. Age, gender, monthly income, marital status, education level, occupation, and smoking Categorical data such as alcohol use and congenital diseases were compared using independent samples t-test coefficient and analysis of variance (ANOVA).

3. RESULTS

Table 1. Demographic and characteristic characteristics of participants

Variables	n (%)
Gender	
Male	96 (57.8)
Female	70 (42.2)
Age Ggroup (mean±SD)	69.5 ± 7.2
60–69	84 (50.7)
70–79	56 (33.7)
>80	26 (15.6)
Income, mean±SD	4379.2 ± 4037.3
Monthly income	
<10,000	16 (9.7)
10,000–17,000	124 (74.7)
>17,000	26 (15.6)
Education	
Primary school	38 (22.8)
Middle school	74 (44.6)
High school completed	29 (17.5)
College/University completed	25 (15.1)
Marital status	
Single	55 (33.1)
Married	95 (57.2)
Other	16 (9.7)
Occupation	
Private sector	8 (4.8)
Public	17 (10.3)
My own business	34 (20.5)
Retired	107 (64.4)

The mean (± SD) age of all respondents was 69.5 ± 7.2 years, with the majority being males 96 (57.8). It was also observed that the majority of the participants were secondary school graduates 74 (44.6), married 95 (57.2), and Retired 107 (64.4) (Table 1).

Table 2. HRQOL, ESS, and BIS among older adults with socio-demographic variables

Variables	HRQOL (Mean±SD)	ESS (Mean ±SD)	BIS (Mean ±SD)	P-value
Gender				
Male	89.55 ± 9.05	76.41 ± 10.12	141.2 ± 19.1	<0.020*
Female	84.26 ± 9.2	69.22 ± 11.30	162.3 ± 21.4	
Age Group				
60–69	91.48 ± 8.71	77.11 ± 9.21	144.1 ± 20.3	
70–79	88.60 ± 9.11	66.34 ± 11.2	151.3 ± 21.4	<0.013*
>80	82.27 ± 11.24	62.65 ± 13.4	165.1 ± 21.7	
Education				
Primary school	86.13 ± 10.92	63.43 ± 12.2	166.3 ± 22.3	
Middle school	87.69 ± 10.46	63.24 ± 12.3	165.2 ± 21.6	
High school completed	91.21 ± 9.32	65.25 ± 10.1	145.1 ± 20.3	<0.001**
College/University completed	94.66 ± 8.75	70.13 ± 9.77	135.3 ± 19.3	
Marital status				
Single	83.50 ± 14.64	65.03 ± 11.7	145.5 ± 20.4	
Married	92.28 ± 8.29	68.34 ± 10.5	165.4 ± 21.1	<0.005**
Other	88.53 ± 8.16	64.15 ± 12.2	155.4 ± 21.6	
Occupation				
Private sector	87.22 ± 10.35	64.33 ± 12.1	164.2 ± 22.8	
Public	90.33 ± 8.82	65.43 ± 11.7	157.3 ± 20.3	<0.018*
My own business	91.73 ± 9.17	66.55 ± 10.4	155.2 ± 20.1	
Retired	82.26 ±11.29	60.10 ± 14.6	167.6 ± 22.5	
Monthly income				
<10,000	80.59 ± 14.97	60.13 ± 14.4	168.0 ± 22.9	
10,000–17,000	81.45 ± 11.76	63.73 ± 12.2	152.1 ± 20.5	<0.032*
>17,000	88.44 ± 9.61	65.11 ± 10.6	135.4 ± 19.3	

*p < 0.05, **p < 0.01**,** Health-Related Quality of Life (HRQOL), Exercise Self-Efficacy Scale (ESS), Body Image Scale (BIS)

The Male respondents had higher HRQOL (89.55 ± 9.05) than the female respondents. The age group 80 and over years had the lowest ESS (62.65 ± 13.4), HRQOL (82.27 ± 11.24) and BIS (165.1 ± 21.7). The lowest income group (<1,000/month) had the lowest ESS (60.13 ± 14.4), HRQOL (80.59 ± 14.97) and BIS (168.0 ± 22.9). Similarly, primary school education years had the lowest ESS (86.13 ± 10.92), HRQOL (63.43 ± 12.2) and BIS (166.3 ± 22.3) (Table 2).

There were significant differences between gender, education, occupation, age, monthly income status, BIS, and ESS ($p < 0.01$, $p = 0.001$, $p = 0.05$, respectively) (Table 2). The associations between Overall HRQOL and gender, age, education level, marital status, and were found statistically significant ($p < 0.01$, $p = 0.001$, $p = 0.05$, respectively) (Table 2).

4. DISCUSSION

Researchers in this study examined the status of HRQOL, ESS, and BIS among older adults' associations with HRQOL, ESS, BIS, and sociodemographic characteristics towards concerns in older adults men and women. Our findings support the relationship between ESS and HRQOL among older adults aged 60 years and above. The study found that ESS levels were lower among the elderly and lower in those aged 80 years and above (62.65 ± 13.4). It can be explained that age is an important factor affecting ESS, HRQOL, and BIS levels. As mentioned above, the importance of ESS, BIS, and HRQOL for successful aging, which significantly affects older adults' QOL, is well documented [1,22,23]. These are modifiable variables that can affect health status and QOL.

According to a study conducted; to find the relationship between physical fitness, the role of self-efficacy in physical exercise and physical exercise, and quality of life in the middle-aged population, the systematic review analyzed in detail works published on physical fitness, self-efficacy, and quality of life from 1997 to July 2020. The minimum age of the subjects was 30 years and the maximum age was 80, since there were studies whose age is between these values, even though the average age of the subjects studied was between 40 and 70 years old. A systematic search of the literature was carried out and 37 articles focusing on explaining these relationships were

identified. Our results allow us to confirm that there is a relationship between the three explored constructs (physical fitness, quality of life, and self-efficacy in terms of improved health and healthy habits, although the relationship between the three variables in a related way is not entirely clear [24]. Therefore; In the group of individuals over 65 years of age, the effect of physical exercise is seen mainly in its contribution to general health and quality of life [25]. Aging involves various physical and mental changes, but these changes can be reduced with regular physical exercise. Empirical evidence has demonstrated the positive impact of regular physical exercise on health-related quality of life, especially in individuals over 65 years of age [26]. Therefore, the research results confirm the benefits of exercise self-efficacy on quality of life, especially in older individuals, and emphasize its importance.

In our study, the Male respondents had higher HRQOL than female respondents. The age group 80 and over years had the lowest ESS, HRQOL, and BIS (*p<0.05, **p<0.01). The lowest income group (<1,000/month) had the lowest ESS, HRQOL and BIS. Similarly, primary school education years had the lowest ESS, HRQOL, and BIS (*p<0.05, **p<0.01). In some studies conducted; 18 articles assessed self-efficacy for physical exercise; these focus primarily on the assessment of pre-behavioral processes such as behavioral change towards exercise [27], confidence in established change towards exercise behavior [28,29], and self-perceived capacity to improve sport. behavior [28,30], confidence in identified changes for exercise behavior [29], social support for exercise behavior, and self-perceived barriers to exercise behavior [31]. Specifically, these outcomes all relate to their contribution to linking healthy behavior to the likelihood of engaging in that behavior and one's sense of self-efficacy. It suggested that self-efficacy for physical exercise has a decisive influence on health behavior, perceived barriers, and adherence to an action plan. During adulthood, there is a slight decline in levels of self-efficacy and mastery, which influence the perception of barriers to achieving new goals. Therefore, it is important to develop beliefs about the effectiveness of physical exercise and promote healthy behaviors in the long term.

Evidence supports the link between exercise self-efficacy and various health-related quality-of-life behaviors [24]. The importance of physical inactivity for public health in the population aged 60 years and over underscores the importance of identifying mediators and moderators of physical activity that can be targeted for interventions to increase physical activity levels [32], with self-efficacy being a powerful mediator between physical abilities and physical abilities. According to our findings, older adult men had higher overall body image than women. In some studies, most participants reported being more afraid of receiving negative appearance and fitness evaluations and having a greater attitude toward thinness. Most studies on body image have shown that a significant number of adult men and women are also concerned about body shape and weight [33,34]. However, several studies have shown that women, whether normal weight or overweight, are at greater risk for eating disorders and body dissatisfaction than men [35].

5. Conclusion

In conclusion, it shows that BIS, ESS, and health-promoting behaviors are important for HRQOL of individuals aged 60 and over. This suggests that individuals with higher levels of ESS may experience better overall health and BIS. It highlights the importance of promoting ESS and BIS as a way to improve HRQOL. More research is needed to identify effective strategies to improve the overall quality of life in individuals aged 60 years and older. These findings demonstrated that behaviors that promote ESS, BIS, and HRQOL levels in older adults are important factors in improving older adults' levels of ESS, BIS, and HRQOL.

Conflict of Interest

No conflict of interest is declared by the authors. In addition, no financial support was received.

Ethics Committee

The study protocol was approved by the Ethics Committee of the Social Sciences (Ethics Committee Approval).

Author Contributions

Study Design, ND, SK; Data Collection, ND, MJ; Statistical Analysis, ND, DS; Data Interpretation, AK; Manuscript Preparation, ND, SK, MJ, DS; Literature Search, ND, SK, MJ, DS. All authors have read and agreed to the published version of the manuscript.

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