

Research Article

Assessment of Frailty in Elderly Individuals with Heart Failure



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ABSTRACT

Aim: This descriptive and cross-sectional study assessed the frailty levels of geriatric individuals with heart failure.

Material and Methods: The study was conducted in the emergency department, cardiology polyclinic, and clinic at a State Hospital between June and August 2023. Power analysis was performed to determine the sample size, and the study was completed with 115 geriatric individuals willing to participate and meeting the inclusion criteria. Before the study, necessary permissions were obtained from the institution, the ethics committee, and participants. A questionnaire prepared by the researchers, the Standardized Mini Mental Test (SMMT), and the Edmonton Frail Scale (EFS) were used for data collection. The scores obtained from the EFS range between 0 and 17. A score of 0-4 indicates 'not frail', 5-6 indicates 'vulnerable', 7-8 indicates 'mildly frail', 9-10 indicates 'moderately frail', and a score of 11 and above indicates 'severely frail'. Descriptive statistics, Mann-Whitney U, and Kruskal-Wallis tests were used for data analysis.

Results: The mean age of the individuals was 73.12±6.48 years, 54.8% were female, 37.4% were primary school graduates, 52.2% had a disease duration of 1-5 years, and 49.6% had stage II heart failure. The mean EFS score among geriatric individuals was 8.60±4.53, with 36.5% classified in the 'severely frail' group. It was found that female, single individuals living alone, with comorbid diabetes, stage IV heart failure, and not monitoring their weight had a higher mean EFS score ($p<0.05$).

Conclusion: It was determined that the frailty score of geriatric individuals with heart failure was at a moderate level, with 36.5% classified in the 'severely frail' group. Among geriatric individuals with heart failure, frailty levels and the affecting factors should be considered during follow-up.

Keywords: Frailty, Geriatrics, Heart failure, Nursing, Patient

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INTRODUCTION

Cardiovascular diseases represent a significant burden on public health due to their serious mortality and morbidity (Singh et al. 2014). Especially prolonged life expectancy and the presence of multiple concomitant chronic diseases lead to adverse changes in the structure and functions of the heart (Chalise, 2019). Today, heart failure stands as one of the most prevalent chronic conditions in the adult population, especially in elderly individuals (Finn & Green, 2015; Enç & Öz Alkan, 2012; McMurray et al., 2012). The increasing rates of hospitalizations and mortality due to heart failure have led to the condition becoming a global epidemic. Approximately 26 million adults worldwide are living with heart failure, and with populations aging, this number is expected to increase (Çavuşoğlu et al., 2016). Presently, heart failure is reported to affect approximately 1-3% of the general population, rising to 10% in those over 70 years old and reaching rates of 15-20% in individuals over 80 years old (Go et al., 2014; Tokgözoğlu, L., 2015). The American Heart Association predicts an approximate 46% increase in heart failure cases from 2012 to 2030. By 2030, it is estimated that more than 8 million people aged 18 and older in the United States will have heart failure (Tokgözoğlu, L., 2015). According to the results of the HAPPY (Heart Failure Prevalence and Predictors in Turkey) study, reflecting the situation of heart failure in Türkiye, there are over 2 million diagnosed cases of heart failure in our country. It is emphasized that this number is significantly higher compared to Western countries (Çavuşoğlu et al., 2016; Degertekin et al., 2012). While 85% of heart failure patients in the United States and Europe are aged 65 and above, the average age of heart failure in Türkiye is lower compared to Europe. However, considering the gradual aging of the population, the incidence of heart failure is likely to increase in the coming years (Çavuşoğlu et al., 2016; Degertekin et al., 2012). Moreover, increasing age brings forth different problems that accompany heart failure. The concept of frailty, which is one of these issues, is a syndrome characterized by reduced physiological reserves in organs, impaired cognitive abilities, decreased strength, and vulnerability, all of which occur with advancing age (Aşiret & Çetinkaya, 2018; Jankowska-Polańska et al., 2019). This situation can lead to significant disruptions in the treatment and care processes. The relationship between heart failure and frailty is complex and interactive. Frailty not only worsens the prognosis in patients with heart failure but also represents a significant risk factor for the development of heart failure in older adults. The literature indicates that individuals with frailty syndrome experience increased risks of falls, healthcare needs, hospitalizations, mortality, and morbidity due to functional decline (Aşiret & Çetinkaya, 2018; Kalyoncuo, 2023). However, despite being a crucial factor in the treatment process and prognosis of heart failure patients, frailty is not routinely assessed in clinical practice. Hence, frailty represents a significant issue for geriatric individuals, and the primary goal in its management is the early identification of frailty to preserve the quality of life and functional independence of older individuals. The most basic approach to achieving this goal is to provide holistic care to the patient. Among healthcare professionals, the most important team member to facilitate this approach is the nurse. Therefore, the nurse must thoroughly take a comprehensive medical history from the individuals to assess, record, and plan the care for health problems (Kalyoncuo, 2023).

Aim

This study aimed to evaluate the frailty levels of geriatric individuals diagnosed with heart failure.

MATERIAL and METHODS

Study Design

This descriptive and cross-sectional study was conducted between June and August 2023 with individuals diagnosed with heart failure admitted to the emergency department, cardiology polyclinic, and clinic of a state hospital.

Study Sample

The population of the study consisted of all individuals aged 65 years and over who were admitted to the emergency department, cardiology outpatient, and inpatient clinics of a state hospital, and who were diagnosed with heart failure. The sample size was calculated as 111 ($\alpha=0.05$, $1-\beta=0.95$) with the expectation of minimum effect size ($d=0.3$) using the G* Power 3.1.7 program (Kılıç 2014; Yalınkılıç et al. 2020).

Inclusion and Exclusion Criteria

Individuals aged 65 years and older, without communication problems and symptoms that could hinder communication, who volunteered to participate in the study, who scored 24 points or more on the mini-mental test, and who were diagnosed with heart failure were included in the study (Yalınkılıç et al. 2020). Individuals who did not meet these criteria were excluded ($n=21$).

Data Collection

The study was conducted between June and August 2023 in the emergency department, cardiology outpatient clinic, and inpatient ward of a State Hospital. The sample size was determined through power analysis, and the study was completed with 115 geriatric individuals who met the inclusion criteria and agreed to participate. Prior to the study, institutional approval, ethics committee approval, and informed consent from the participants were obtained. Data were collected by the researchers through face-to-face interviews. During the interviews, a questionnaire prepared by the researchers, the Standardized Mini Mental Test (SMMT), and the Edmonton Frail Scale (EFS) were used. The questionnaire consisted of 35 questions covering the participants' socio-demographic and disease-related characteristics. Socio-demographic data were obtained from the individuals and/or their relatives, while disease-related data were retrieved from the hospital registration system. Each interview lasted approximately 10 minutes, and all data were collected by the same research team to ensure consistency throughout the implementation process.

Data Collection Tools

The data for the study were collected by the researchers through face-to-face interviews using a *questionnaire* querying socio-demographic and disease-related characteristics, the Standardized Mini-Mental Test (SMMT), and the Edmonton Frail Scale (EFS). *Questionnaire*: This form was created by the researchers in accordance with the relevant literature (Enç & Öz Alkan, 2012; Kalyoncuo, 2023; Yalınkılıç et al., 2020). It consists of 35 questions including the socio-demographic and disease-related characteristics of the participants. Socio-demographic characteristics were obtained from the individuals and/or their relatives and disease-related characteristics were obtained from the hospital registration system.

Edmonton Frail Scale: Edmonton Frail Scale was developed by Rolfson et al. to assess frailty status in the elderly. The Turkish validity and reliability study for EFS was conducted by Aygör et al. The scores obtained from the EFS range between 0 and 17. A score of 0-4 indicates 'not frail', 5-6 indicates 'vulnerable', 7-8 indicates 'mildly frail', 9-10 indicates 'moderately frail', and a score of 11 and above indicates 'severely frail' (Aygör et al., 2018; Rolfson et al., 2006). In the present study, Cronbach's Alpha value of the scale was found to be 0.870.

Standardized Mini-Mental Test (SMMT): It is a commonly used screening test for evaluating cognitive impairments in individuals. SMMT was developed by Folstein et al. in 1975. It comprises five main categories: orientation, registration, attention and calculation, recall, and language. It consists of a total of 19 questions and is evaluated on a scale of 30 points. Turkish validity and reliability study for SMMT was performed by Güngen et al. in 2002, and the cut-off value was found to be 24 (Folstein et al., 1975; Güngen et al., 2002).

Data Analysis

Data were evaluated using the SPSS 25.0 (Statistical Package for Social Sciences) program. Descriptive statistics (number, percentage, mean, standard deviation) were used in the analysis of the data, and the Shapiro-Wilk test was used to check the conformity of continuous variables to normal distribution. Mann-Whitney U test and Kruskal-Wallis test were used to examine the differences between categorical variables. $p < 0.05$ was accepted as statistically significant in all analyses.

Ethical Considerations or Ethical Approval

This study was conducted in accordance with the "Declaration of Helsinki" and the necessary permissions were obtained from the ethics committee (124/2023), the provincial health directorate, and the individuals for data collection. Disease-related characteristics were obtained from the hospital registration system.

Limitations

The most important limitation of this study is that fragility was assessed with only one scale.

RESULTS

Investigation of Sociodemographic Characteristics and Mean Frailty Scores of Individuals

Table 1. Comparison of Socio-Demographic Characteristics of individuals and Mean Edmonton Frailty Scores (n=115)

Characteristics	n (%)	Edmonton Mean $\pm$ SD	p/Z
Age (years)	73.12 $\pm$ 6.48		
Gender			0.001/-3.28*
Female	63 (54.80)	9.87 $\pm$ 4.32	
Male	52 (45.20)	7.05 $\pm$ 4.34	
Education level			0.001/10.80**
Illiterate	29 (25.20)	12.31 $\pm$ 3.66	
Literate	24 (20.90)	10.00 $\pm$ 3.82	
Primary School	43 (37.40)	7.18 $\pm$ 3.58	
High School	19 (16.50)	4.36 $\pm$ 3.51	
Employment status			< 0.001/-3.91*
Employed	13 (11.30)	3.92 $\pm$ 2.53	
Non-employed	102 (88.70)	9.19 $\pm$ 4.39	
Profession			< 0.001/25.76**
Worker	13 (11.30)	4.30 $\pm$ 3.17	
Retired	50 (43.50)	7.50 $\pm$ 4.15	
Unemployed	52 (45.20)	10.73 $\pm$ 4.07	
Marital status			0.003/-2.95*
Married	88 (76.50)	7.89 $\pm$ 4.44	
Single	27 (23.5)	10.88 $\pm$ 4.11	
Cohabitant			0.003/-2.94*
Alone	28 (24.30)	10.82 $\pm$ 4.03	
With family	87 (75.70)	7.88 $\pm$ 4.47	
Income level			<0.001/28.29**
Good	18 (15.70)	5.11 $\pm$ 3.61	
Moderate	71 (61.70)	8.15 $\pm$ 4.22	
Poor	26 (22.60)	12.23 $\pm$ 3.46	

Table 1. Comparison of Socio-Demographic Characteristics of individuals and Mean Edmonton Frailty Scores (n=115) (continue)

Smoking			0.086/4.89
Yes	35 (30.40)	7.85±4.33	
No	40 (34.80)	9.90±4.34	
Quit smoking	40 (34.80)	7.95±4.71	
Alcohol Consumption			0.550/1.19**
Yes	9 (7.80)	7.11±3.40	
No	92 (80.0)	8.78±4.66	
Quit smoking	14 (12.2)	8.35±4.37	
Edmonton Frailty Category			
Not frail	26(22.6)		
Vulnerable	17(14.8)		
Mildly frail	15(13.0)		
Moderately frail	15(10.0)		
Severely frail	42(36.5)		
Total	115 (100)	8.60±4.53	

SD: Standard deviation, *Mann-Whitney U test, **Kruskal Wallis test

The mean age of the individuals was 73.12±6.48 years, 54.8% were female, 37.4% were primary school graduates, 76.5% were married, and 30.4% were smokers. It was found that 22.6% of geriatric individuals were 'not frail,' 14.8% were 'vulnerable', 13.0% were 'mildly frail', 13.0% were 'moderately frail', and 36.5% were 'severely frail'. The mean frailty score was determined to be 8.60±4.53. It was observed that the average frailty scores were higher among females, illiterate, non-employed, single, individuals living alone, and individuals with poor income status ($p<0.05$) (Table 1).

Investigation of Disease-Related Characteristics and Mean Frailty Scores

Table 2. Comparison of Disease Characteristics and Mean Edmonton Frailty Score (n=115)

Characteristics	n (%)	Edmonton Mean±SD	p/Z
Presence of comorbidities			0.005/14.84 **
No comorbidities	19 (16.50)	5.42±4.76	
Hypertension	51 (44.30)	8.68±4.70	
Diabetes	25 (21.70)	10.40±3.55	
COPD	16 (13.90)	9.68±3.68	
Kidney Failure	4 (3.50)	7.00±2.70	
Duration of Heart Failure diagnosis			< 0.001/22.139**
Less than 1 year	19 (16.50)	4.21±3.45	
1-5 years	60 (52.20)	9.00±4.39	
More than 5 years	36 (31.30)	10.25±3.84	
Heart failure stage			< 0.001/71.83**
Stage I	20 (17.40)	3.35±2.64	
Stage II	57 (49.60)	7.36±3.17	
Stage III	35 (30.40)	13.00±2.27	
Stage IV	3 (2.60)	15.66±2.30	
Pacemaker			0.249/-1.18*
Yes	3 (2.60)	11.66±2.30	
No	112 (97.40)	8.51±4.55	
Stent			< 0.001/3.94*
Yes	64 (55.70)	10.07±4.00	
No	51 (44.30)	6.74±4.52	
Cardiac intervention status			
Coronary angiography	64 (91.40)	10.10±4.03	< 0.001/17.32**
By pass	6 (8.60)	8.83±4.26	
No intervention	45 (39.10)	6.42±4.44	
Number of hospital admissions in the last year			< 0.001/47.93**
1-2	31 (27.00)	5.03±3.91	
3-4	31 (27.00)	7.93±2.99	
5-6	47 (40.90)	11.85±3.59	
None	6 (5.20)	5.00±2.82	
Number of medicines used			< 0.001/41.71**
1-4	38 (33.00)	4.84±3.40	
5-8	65 (56.50)	10.04±3.93	
9 and above	12 (10.40)	12.66±2.26	

Table 2. Comparison of Disease Characteristics and Mean Edmonton Frailty Score (n=115) (continue)

Characteristics	n (%)	Edmonton Mean±SD	p/z
Regular use of medications			0.021/-2.31*
Yes	100 (87.00)	8.20±4.34	
No	15 (13.00)	11.26±5.04	
Experiencing side effects due to medications			0.283/-1.07*
Yes	12 (10.40)	9.91±4.31	
No	103 (8.44)	8.44±4.55	
Family history of heart disease			0.006/-2.77*
Yes	74 (64.30)	9.47±4.42	
No	41 (35.70)	7.02±4.35	
Gathering information about the disease			0.930/-0.08*
Yes	67 (58.30)	8.65±4.20	
No	48 (41.70)	8.52±5.00	
Regularly attending check-ups			0.038/2.07
Yes	77 (67.00)	8.00±4.07	
No	38 (33.00)	9.81±5.19	
Total	115 (100)	8.60±4.53	

COPD: Chronic obstructive pulmonary disease, SD: Standard deviation, *Mann-Whitney U test, **Kruskal Wallis test

It was determined that 52.2% of the individuals had a disease duration of 1-5 years, 30.4% were diagnosed with stage III heart failure, 56.5% used 5-8 medications daily, and 58.3% received information about heart failure. When mean frailty scores were compared concerning disease-related characteristics, it was found that individuals with a disease duration of five years or more, with stage IV heart failure, individuals who had undergone stent implantation individuals using nine or more medications per day, individuals who did not use their medications regularly, with family history of coronary artery disease, and those who did not regularly attend check-ups were more frail ($p<0.05$) (Table 2).

Investigation of Other Disease-Related Characteristics and Mean Frailty Scores

It was found that 98.3% of geriatric individuals experienced fatigue during the day, and among those reporting fatigue, it was found that 'nighttime' fatigue was the most prevalent. It was determined that 58.3% of the individuals experienced shortness of breath, 73.0% did not monitor their weight, 59.1% did not follow a salt-free diet, and 90.4% did not exercise. Those who did not exercise and monitor their weight had higher mean frailty scores ($p<0.05$). In addition, it was found that individuals who felt fatigued during the day and experienced fatigue mostly at night, individuals with peripheral edema, and individuals who were not on a salt-free diet had higher mean frailty scores, but there was no statistically significant difference (Table 3).

Table 3. Comparison of Edmonton Frailty Scores with Certain Disease-related Characteristics of individuals (n=115)

Characteristics	n (%)	Edmonton Mean±SD	p/z
Feeling tired during the day			0.083/-1.75*
Yes	113 (98.30)	8.69±4.50	
No	2 (1.70)	3.00±2.82	
Time when fatigue is most frequently experienced (n=113)			0.109/6.05**
Morning	21(18.60)	8.74±3.48	
Noon	9 (8.00)	6.55±3.81	
Evening	24 (21.20)	7.58±4.39	
Night	59 (52.20)	9.55±4.83	
Other symptoms experienced with the disease			0.063/7.29**
Shortness of breath	67 (58.30)	8.77±4.73	
Peripheral edema	18 (15.70)	10.55±3.94	
Easy fatigue	25 (21.70)	6.92±3.88	
Palpitations	5 (4.30)	7.60±4.82	
Weight tracking			0.005/-2.79*
Yes	31 (27.00)	6.67±4.11	
No	84 (73.00)	9.30±4.50	
Salt-free diet			0.140/-1.47*
Yes	47 (40.90)	7.85±4.16	
No	68 (59.10)	9.11±4.73	
Exercise			0.002/-3.12*
Yes	11 (9.60)	4.63±3.17	
No	104 (90.40)	9.01±4.46	
Total	115 (100)	8.60±4.53	

SD: Standard deviation, *Mann-Whitney U test, **Kruskal Wallis test

Investigation of Disease Impact on Certain Situations and Mean Frailty Scores

Table 4. Relationship between Mean Edmonton Frailty Score and the impact of the disease on certain situations (n=115)

Characteristics	n (%)	Edmonton Mean±SD	p/z
Impact on activities of daily living			< 0.001/66.66**
High	38 (33.00)	12.86±2.41	
Moderate	44 (38.30)	8.27±3.37	
Low	31 (27.00)	4.12±3.03	
None	2 (1.70)	4.00±2.82	
Impact on quality of life			< 0.001/71.95**
High	40 (34.80)	13.00±2.40	
Moderate	40 (34.80)	8.05±3.06	
Low	34 (29.60)	4.14±2.95	
None	1 (0.90)	6.00±0.0	
Impact on nutrition			< 0.001/46.50**
High	19 (16.50)	13.15±2.75	
Moderate	50 (43.50)	9.84±3.81	
Low	42 (36.50)	5.21±3.21	
None	4 (3.50)	7.00±6.05	
Impact on sleep			< 0.001/58.28**
High	49 (42.60)	12.04±3.38	
Moderate	43 (37.40)	7.20±3.46	
Low	20 (17.40)	4.25±2.19	
None	3 (2.60)	1.33±0.57	
Impact on fulfilling responsibilities			< 0.001/-6.53*
Yes	70 (60.90)	10.81±3.76	
No	45 (39.10)	5.15±3.34	
Total	115 (100)	8.60±4.53	

SD: Standart deviation, *Mann-Whitney U test, **Kruskal Wallis test

33.0% of the individuals indicated that their activities of daily living, 34.8% their quality of life, 16.5% their nutritional status, and 42.6% their sleep quality were 'severely affected' by the disease. Individuals whose activities of daily living, quality of life, nutritional status, and sleep quality were severely affected by the disease were found to have higher mean frailty scores ($p < 0.001$) (Table 4).

DISCUSSION

Aging is a process accompanied by a decrease in physiological capacity, a reduced response to environmental stresses, increased susceptibility to diseases, and an increase in frailty (Clegg et al., 2013). In the literature, it is emphasized that frailty is an important determinant of mortality and hospitalization related to heart failure (Uchmanowicz et al., 2020). In line with this, the aim of this study was to evaluate the level of frailty in geriatric individuals with heart failure and to contribute to the clinical management of these individuals.

It is emphasized that frailty is an independent risk factor for older people with heart failure and that there is a bidirectional interaction between frailty and heart failure (Salmon et al., 2022; Shinmura, 2016). According to a study conducted in Türkiye in 2020, the average age of geriatric patients with heart failure was 71.6 ± 6.38 years (Yalınkılıç et al., 2020). Leong et al. (2023) found that female patients were more frail than males and there was a negative relationship between educational level and frailty. In their systematic review, Mehrabi and Béland (2020) reported that 65% of the studies found a relationship between social isolation, loneliness, and frailty. Another systematic review reported that the prevalence of frailty may vary depending on the population studied, the study setting, and the measurement used to quantify the severity of frailty (Jha et al., 2015). Moreover, it was reported that the prevalence of frailty varies between 18% and 54% in patients with heart failure (Jha et al., 2015). In this study, similarly to the literature, 36.5% of the individuals were categorized as 'severely frail', and it was determined that frailty scores were higher among female, illiterate individuals, unemployed individuals, single individuals, individuals living alone, and those with poor income status. Particularly, geriatric individuals with frailty who live alone and have low income may experience difficulties in monitoring and managing their health. Loneliness, on the other hand, can bring about risk factors such as lack of social support, isolation, and challenges in coping with health issues. Therefore, providing social support in the care of frail elderly individuals living alone may be beneficial. Also, these findings indicate that these characteristics should be taken into consideration in the planning of clinical follow-ups for geriatric individuals with heart failure.

In the literature, it has been reported that comorbidities, high chronic disease burden, and polypharmacy increase the prevalence of frailty in elderly individuals (Dovjak, 2022). In a study examining the comorbidity profiles of patients hospitalized for heart failure nationwide in the United States in 2014, it was reported that hypertension, renal diseases, chronic lung diseases, and diabetes were the most common comorbidities identified (Lee et al., 2014). It was emphasized that polypharmacy, which is one of the consequences of comorbidities, is a condition that should be considered in the management of frailty in individuals with

heart failure (Shinmura, 2016). Furthermore, Unlu et al. (2020) reported that 95% of heart failure patients used ≥ 5 medications, and 55% used ≥ 10 medications upon discharge. Size et al. (2019) found that frailty was associated with worse symptoms, having more comorbidities, and severity of heart failure. In a meta-analysis on this subject, it was shown that frailty related to heart failure was associated with an increase of 48% in mortality and 40% in hospital admissions (Uchmanowicz et al., 2020). In the present study, confirming previous reports, diabetic individuals and those with COPD had the highest frailty scores, and frailty scores increased significantly as the duration, stage of heart failure, and the number of medications used increased. This suggests that these characteristics should be taken into account in the follow-up of geriatric individuals with diabetes in addition to heart failure, who use multiple medications, and who are at advanced stages. As a result, the treatment and care processes of geriatric heart failure individuals with comorbidities, advanced stages, and complex treatments can be managed more effectively. Taking these conditions into account may contribute to the development of individualized treatment approaches, better management of frailty, and improvement of overall health outcomes.

Challenges arising from frailty in patients with heart failure can vary depending on the severity of both frailty and heart failure. At the same time, it is reported that distinguishing between clinical symptoms, aging, chronic health conditions, and their impact on quality of life, as well as symptoms associated with frailty, can be challenging (Uchmanowicz et al., 2019). In the literature, it is reported that patients with heart failure often experience fatigue (Schjoedt et al., 2016), and many symptoms such as pain, physical functioning, weakness, and loss of appetite are associated with fatigue (Hoch et al., 2023). In addition, it has been reported that symptoms and signs of heart failure significantly affect the quality of life of patients (Gastelurrutia et al., 2013), lead to self-care problems and difficulties in leaving home, reduce access to health services, and all these lead to inadequate treatment follow-up, delayed responses, and untimely treatment modifications (Uchmanowicz et al., 2019). Dunlay et al. (2015) reported that 59.4% of patients with heart failure had problems with one or more activities of daily living, while 24.1% experienced moderate and 12.9% experienced severe difficulties. Furthermore, the lives of patients with heart failure are negatively affected, with significant limitations in many activities and social functions, leading to a decrease in perceived quality of life (Major et al., 2024). Uchmanowicz et al. (2015) identified a significant negative correlation between quality of life and frailty and reported that frailty harmed the quality of life of elderly patients with heart failure. In the study by Zengin et al., (2012) it was found that only 10.8% of the patients were able to exercise, and those who could not exercise regularly had a worse quality of life. In the present study, in line with the literature, it was found that 98.3% of individuals experienced fatigue during the day, and those who did not exercise, and those who reported that their activities of daily living, quality of life, nutritional status, and sleep quality were 'severely' affected were more frail. These results suggest that variables that may affect frailty, such as fatigue, exercise, daily activities, sleep, and quality of life, should be assessed by healthcare professionals in geriatric individuals with heart failure, and individuals' education should be planned accordingly. These results demonstrate that geriatric individuals with heart failure are negatively affected in many aspects, while also highlighting the importance of adopting a multidisciplinary team approach and patient-centered strategies.

CONCLUSION

In this study, it was determined that the average frailty score of geriatric individuals with heart failure was moderate, and the majority of the individuals were in the 'severely frail' group. In addition, it was found that female, illiterate, unemployed, single, individuals living alone, individuals with poor income, diabetic individuals, with a diagnosis of more than five years, individuals with a stent, individuals who visited the hospital 5-6 times in the last year, individuals using nine or more medications, and individuals with a family history of heart disease were more frail. Furthermore, it was found that those who did not attend regular check-ups, who did not monitor their weight, and who reported that their activities of daily living, quality of life, nutritional status, and sleep were severely affected by the disease had higher mean frailty scores.

In line with these results, a holistic and multidisciplinary approach should be adopted in the evaluation of frailty and the influencing factors among geriatric individuals with heart failure. Frailty should be monitored regularly, and treatment and care plans should be made in light of these data.

Ethics Committee Approval: This study was conducted in accordance with the Declaration of Helsinki, and the necessary approvals were obtained from the Ethics Committee (124/2023) and the institution, and informed consent was obtained from the patients.

Conflict of Interest

The authors declare that there is no conflict of interest.

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Author contributions

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Literature search: SA, SS

Drafting manuscript: SA,ÖÖ,SS,AA

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