Research Paper: The Challenges of People With Heart Failure in Activity of Daily Living Performance: A Qualitative Study in Iranian Context

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ABSTRACT

Objectives: People with Heart Failure (HF) encounter many limitations while performing their daily activities. These limitations can have adverse effects on their quality of life and self-satisfaction. Hence, to assess problems in the Activities of Daily Living (ADL) and plan effective interventions, we should properly identify people's challenges in performing daily activities. This study aimed to recognize the ADL challenges in people with HF and their effects on ADL.

Methods: Twelve people with HF (aged 38 to 65 years) recruited from Rajai Hospital participated in this study using a purposeful sampling method. They were interviewed up to data saturation. Each semi-structured interview session lasted for 20-45 minutes (average 32.5 minutes). The obtained data were analyzed using a qualitative content analysis approach.

Results: The challenges of the participants with performing ADL were summarized under two themes: "obstacles preventing normal functioning" and "disturbances in doing daily living activities as a burden". The first theme consisted of "interference of previous experience in performance" and "challenges during the performance". The second theme consisted of "personal laborious activities" and "interruption of activities performance related to family roles and outdoor tasks".

Discussion: Patients with HF have serious challenges with performing ADLs which are crucial for their living. Therefore, identifying their barriers and needs will play a major role in designing compensatory, educational, and coping programs based on the limited activities and the interrupted parameters in ADL performance.

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Highlights

- People with heart failure encounter many challenges with Activities of Daily Living (ADLs) and Instrumental Activities of Daily Living (IADLs).

- Challenging parameters such as independence, value, and safety are among those parameters that limit ADLs and Basic Activities of Daily Living (BADLs).

- Fatigue, dyspnea, pain, slow performance of ADLs, and BADLs are symptoms hindering people with HF from engaging in their desired activities.

Plain Language Summary

People who suffer from heart failure face many problems while performing their routines like dressing, grooming, bathing that among them mobility is the most challenging activity. Some parameters can prevent or provoke the patients to do their routines, including motivation (value), risk and danger (safety), and independency. Furthermore, tiredness, pain, shortness of breath, and slow doing activities are difficulties or symptoms that prevent the patients from doing their routines. Identifying the aforementioned issues can help the assessment and treatment of heart failure in these patients.

1. Introduction

Heart Failure (HF) is a condition in which the heart is unable to pump blood consistent with metabolic needs [1]. In Iran, the prevalence of chronic heart failure has been estimated at 3.337 in 10.000 [2]. Based on the available literature, the consequences of HF are cognitive problems, physical dysfunction, social isolation, and reduced endurance, that affect personal efficiency in activity performance, work, leisure, family roles, and Activities of Daily Living (ADL) [3, 4].

It is well known that the majority of people with HF encounter difficulties in ADL performance [5-7] and to optimize the satisfaction of adults with HF in all aspects of ADL performance, it is essential to have a deep understanding of their challenges. In the literature, very few problems have been mentioned. For example, Dunlay et al. using the Katz index for assessing ADL, confirmed the relationship between difficulty in ADL performance and mortality of people with HF. They introduced factors such as female sex, older age, diabetes mellitus, cerebrovascular disease, dementia, anemia, morbid obesity, and unmarried status as predictors of difficulty with ADLs [8]. Norberg et al. using the assessment of motor and process skills and the staircase of ADL for assessing the ADL ability, reported that their participants were independent in Personal Activities of Daily Living (PADL). However, at least 75% were dependent on one or more Instrumental Activities of Daily Living (IADL), usually shopping [9]. By reviewing the literature, little information is found about the effects of HF symptoms, such as dyspnea, fatigue, weakness, etc. on daily activities. This deficit may be due to the special characteristics of ADL assessments.

There are several ADL assessments [10]. Mainly, there are two kinds of ADL assessments for people with HF, including general and specific. But based on evidence, general assessments such as Barthel index [11, 12], Klein-bell index [13], functional independent measurement [14], and PULSES profile [15] are too general and do not consider the effects of dyspnea, fatigue, weakness, swelling, and persistent cough on activities performance [10]. Furthermore, some specific tests such as Performance Measure for Activity of Daily Living-8 (PMADL-8) [16] and Daily Activity Questionnaire in Heart Failure (DAQIHF) [17] do not cover all areas of IADL and BADL as well as aforementioned parameters [10]. Since, based on the perspective of occupational performance in occupational therapy, the performance of clients is influenced by the interactions of person-task-environment, and the impression factors through evaluation and intervention are essential [18]. Some of the impression factors on a person's performance are independence, safety, and adequacy (difficulty, pain, fatigue, dyspnea, societal standards, satisfaction, aberrant behaviors, and experience with the activity). Task demands based on task analysis include materials, tools, and equipment parameters. Moreover, the demands of

the environments in which the task takes place are the physical, temporal or cultural characters of the context [19]. To conclude, there is a lack of available ADL assessments that clarify the influence of parameters such as dyspnea or fatigue on performing daily activities in HF.

Performing ADL is affected by lifestyle, context, and cultural characteristics [20] and to the best of our knowledge, there are no reports about the challenges of people with HF during ADL performance in an Iranian population. As a result, this study aims to identify the performance challenges and limitations while performing ADLs and the relationship between these challenges and HF symptoms.

2. Methods

Study design

This paper is a part of a more extensive study carried out through the exploratory sequential mixed method (qualitative-quantitative). In this stage, to explore the personal experiences of people with HF during performing their routine ADL, a qualitative content analysis was performed using continuous comparative analysis. Content analysis was used for the participant's clarification of the content of the interview made through a systematic classification process of coding and identification of concepts or patterns [21, 22]. Data in the qualitative phase of the study were gathered by semi-structured in-depth interviews. The participants were selected by purposeful sampling method.

Study participants

In this study, 12 individuals with HF participated (Table 1). The inclusion criteria consisted of having heart failure diagnosed by a cardiologist, having no neurological, psychiatric, or orthopedic diseases that affect heart function and ADL performance, MMSE (The Mini-Mental State Examination) score >21, being 36-65 years old and having Ejection Fraction (EF) >45% [23]. If any participant cannot provide the desired information, they were excluded from the study.

Data collection

The interviews were held in a quiet room in Rajai Hospital from June 2015 to December 2016 between 9 -12 AM. The selection of participants was with maximum diversity in culture, custom, age, level of education, and duration of heart failure to gather more extensive data. The first author recorded all interviews and transcribed verbatim. The beginning of all sessions accompanied by the designed guideline questions such as "What is your daily schedule?" "Are there any changes after your disease in the quality of your ADL performance?" "What are your limited activities?" and " What factors have limited your activities?" The research team and expert panel created the interview guide. The expert panel consisted of four occupational therapists, two physical therapists, and one physician. The interviews ended with this question: Do you want to add more information? Finally, all participants were requested to review the transcript and confirm it. The interviews continued until data saturation. Sampling continued until no further information to extract.

Data analysis

The data were analyzed using the Graneheim and Lundman method [22]. The first (F.Z) and fourth (A.B) authors were engaged in data analysis by reading the interviews several times line by line. Then the data were explored for meaning units. After abstracting the meaning units, codes, subcategories, and categories were extracted. At last, the underlying meanings were interpreted as themes. To achieve trustworthiness, the Lincoln and Guba approach was applied [24]. Through prolong engagement, the researcher spent enough time gathering data, and presenting the meaning units and initial codes to the research team for verification and feedback. Besides, investigator triangulation was utilized. One expert in qualitative research and one in occupational therapy checked data (expert check). Moreover, two colleagues who were involved in some other qualitative projects, commented on the emerged data as well (peer check). Finally, the transcriptions and codes were reviewed by the participants (member check).

Ethical approval

All participants signed informed consent before the interview and were aware of the aims of the project. The participants were permitted to withdraw from the study at any time and were guaranteed the confidentiality of their conversations. The ethical code of this study was approved by the Iran University of Medical Sciences (IR.IUMS.REC 1395.95-03-32- 28606).

3. Results

Twelve people with HF (4 females and 8 males) took part in this study. Each participant was interviewed to the point that data saturation was attained. The average interview time was 32.83 minutes ranging from 20 to 45 minutes. The demographic characteristics of participants are presented in Table 1.

Table 1. Demographic characteristics of the participants with heart failure

ID	Gender	Age, y	NHYA	Duration of Interview, Min	Level of Education	Time Since HF, y
1	Female	60	2	45	Academic	5
2	Female	65	2	40	Academic	7
3	Female	38	2	30	Academic	5
4	Female	58	2	38	Academic	10
5	Male	50	1	35	Academic	6
6	Male	65	3	20	Analphabet	15
7	Male	42	3	27	Academic	7
8	Male	38	4	32	Academic	5
9	Male	57	3	43	Illiterate	8
10	Male	60	3	38	Illiterate	9
11	Male	42	2	40	Middle school	8
12	Male	54	3	42	Middle school	12

* NHYA: New York Heart Association Functional Classification; **HF: Heart Failure.

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The participants explained their challenges during performing ADL. Based on the data analysis, 2 themes and 4 categories were extracted. The themes consisted of "obstacles preventing normal functioning due to HF" and "disturbances in doing daily living activities as a burden due to HF". The first theme consisted of 2 categories and 8 subcategories. The categories of the first theme include interference of previous experience in performance (4 subcategories) and challenges during the performance (4 subcategories). The second theme consisted of 2 categories and 13 subcategories. The categories of the second theme are entitled to personal laborious activities due to HF (7 subcategories) and interruption of activities performance related to family roles and outdoor tasks (6 subcategories) (Table 2).

Obstacles preventing normal functioning due to HF

Interference of previous experience in performance

During the interview, the participants mentioned that their bad experiences interfere with their current performance and it scares them from doing it again. For instance, they did not do some activities at all because they are difficult, they have not to value for them, or they are frightened because of a lack of safety during performance-based on physician prescription, previous experience, or so on. Some of their claims are as follow:

"I don't iron because I'm not interested in doing it" (P-3).

"To feel safe I prefer not to do vacuuming but I can do it" (P-2).

"I don't trip more because I fear to experience breath shortness" (P-9).

Doing some activities, which are important for participants should be done by others or give them up because of their problem due to HF.

"I need someone to help me in all activities" (P-8).

"I can't do some of my tasks and my children should help me" (P-2).

The participants stated that performing some activities are difficult for them and they try to substitute it or give up it.

"It is difficult for me to go up the stairs" (P-4)

Challenges during the performance

The participants complained of the recurrence of symptoms of HF during ADL. They pointed to pain, dyspnea,

Table 2. Data derived from interviews with the participants with heart failure during the performance of activities of daily living

Theme	Categories	Subcategories	Code	Meaning Unit
Obstacles preventing normal functioning due to HF	Interference of previous experience in performance	Value diminish due to HF	Devaluation of daily activities	I used to care a lot about throwing and going to a party but now, I do not mind.
			Decreased motivation to performance	I do not care my appearance and home decorate as before. Nothing matters to me.
		Failure to perform activities due to lack of safety	Fear of recurrence of symptoms while doing activities	While showering, I am scared to break my breath like last month.
			Prohibiting from certain activities ordered by a physician	I would never use crowded public transport in hot weather and fasting, both were prohibited for me.
		Dependence in activities to varying degrees due to HF	Total dependence due to lack of safety	I never go out alone because I get tired very quickly and fall down.
			Needing help to prevent symptoms manifestation	I always clean the house with the help of my daughter so I get tired later.
	Challenges during performance	Failure to perform activities due to difficulty	Difficulty in performing activities due to weakness	Doing all activities for me is kind of hard because I suffer from a lack of energy.
			Avoiding hard works due to limitation effect on performing others	I prioritize my works; I cannot do other activities if I do a hard one.
		Early onset of fatigue due to HF	Fatigue regardless of activity type	It makes no difference, any activities light or heavy, I get tired sooner than others do.
			Reduced safety due to fatigue	When I get tired, my safety is at risk.
		Slow execution of activities due to HF	Runtime Prolonged the for doing	To get out, I have to start two hours early to get ready because it takes me a lot of time to get ready.
			Having anxiety due to delay	I am always late because I am too slow. This makes me nervous.
		Dyspnea due to HF restricted all activities	Having trouble with shortness of breath	I can't do anything I get short of breath in any activity even in sleep
			Fear of dyspnea affecting my life	I am afraid of being lonely because I need somebody to help me when my breaths get short.
		Pain complaints due to HF	Having trouble with chest pain	I can't bend and straighten up because I feel pain in my chest.
			Having trouble with a swollen abdomen	Ever since I got ill, my belly gets fatter and it has always been a painful feeling.
Disturbance in doing daily living activities as a burden due to HF	Personal laborious activities due to HF	HF interfering with Defecation	Challenging with maintaining full squat position in toilet	I cannot sit for defecation on ground toilet properly. I get a little breathless.
			Having problem with straining while excreting feces	Because of constipation, I have to force more and I can't.
		Dressing barrier due to HF	Having trouble with wearing trousers and socks	I cannot bend and straighten up to wear my clothes.
			Having trouble with putting on shoes	Putting on shoes is overwhelmed, because of my swollen feet.
		Trouble in grooming due to HF	Having a problem with shaving and caring for legs and feet	My belly swollen inhibits me to bend and shaving my legs.
			Disability to cut the toenail	I cannot cut my nails properly.
		Bathing disruption due to HF	Having a challenge with washing myself	Washing my body is so hard because after a short time I get exhausted and give up.
			Getting distressed with a stay at the bathroom	It has been unbearable for me to breathe in a bath because of water vapor.

Theme	Categories	Subcategories	Code	Meaning Unit
Disturbance in doing daily living activities as a burden due to HF	Personal laborious activities due to HF	Serious sexual activity restriction after HF	Disappointment in marital relationships	My marital relationship is broken. Tiredness does not let me think about it.
			Having a problem in maintaining a desire position	I cannot stand sex.
		Limitation in religious duties due to HF	Discarding praying despite being interested in them	I always feel tired I cannot pray or read Quran, God bless me.
			Having problems with desired position while praying	Bowing and prostrate is impossible for me, I pray in sitting position.
		Barriers in health management due to HF	Reduced hope of recovery	I do not care to take my medicine on time or visit my doctor regularly, I will never be cured.
			Difficulty with doing exercise	I know I should do exercise regularly but I have short of breath and I get tired very soon.
		Elimination of using public transport due to HF	Decreasing endurance of crowded places	I am scared to get short of breath in the crowded places such as bus or subway, so I do not go there.
			Having problems due to low agility	I usually get in and off the bus or taxi slowly and it makes the driver nervous.
		Functional mobility disruptions due to HF	Stairs climbing as a main problem	Going up and down the stairs outside or at home is frustrating for me.
			Reduced walking tolerance	Going to bank or other places for doing my duties is annoying because I cannot walk comfortably even in short distance.
			Having challenges with public and private transportation	Getting in and out of any car bothering me because I have to bend.
	Interruption of activities performance related to family roles and outdoor tasks	Trouble in traveling due to HF	Having problem with carrying	I like to shop and I can do it but carrying what I bought even very light is impossible for me.
			Fear of symptoms manifestation	I like to travel, but may be my symptoms recur and I do not have access to my doctor.
			Swollen feet due to prolonged seated position	I can't sit a long time on the plane, my legs swell when sitting up
		Discarding driving due to possible dangerous of HF	Stress during driving	I am afraid of driving; it makes me nervous and is harmful to others and me.
			Reduced endurance and visual attention	I cannot tolerate traffic. Sitting for a long time without changing my position and staring outside is annoying to me.
		Limitation of child-caring due to HF	Reduced time allocated to take care of children	Since I work so slowly and get tired very quickly, I no longer have time to be with my children.
			Having trouble with training and monitoring	I loved them but I cannot help them, I need to help myself.
		Having problem with doing housekeeping	Overwhelmed with kitchen managements	Chopping and crushing the vegetables, cooking, and preparing food make me, really tired. Doing them is impossible for me.
			Having trouble with house cleaning	Cleaning the home, dusting, and vacuuming are beyond my power.

prolongation of doing the activities, and the most frequently the fatigue.

Pain: "When I want to bend I feel a sharp pain in my chest" (P-4)

Dyspnea: "I can't go up the stairs because of difficulty in breathing" (P-11).

"When it gets cold or warm I can't breathe properly" (P-12).

Time duration: "If I want to go outside it takes me a long time to get ready" (P-10).

Fatigue: "I want to vacuum and do my home duties but I become exhausted after a short time" (P-10).

"I am exhausted and get out of the bathroom soon. My bathing lasts for 2 minutes because I fear to find myself in a dangerous situation \ I feel something bad happens"(P-12).

Disturbance in doing daily living activities as a burden due to HF

The results of this study revealed that daily living disturbances due to HF have two main categories. The participants suffer from doing several activities and complain of some interfering factors related to HF during doing their daily activities.

Personal laborious activities due to HF

Performing activities of daily living, which are essential for survival is a basic need for all human beings. However, the participants of the current study encounter difficulties in defecation, dressing, grooming, bathing, doing religious duties, health management, and sexual activities. For example, descriptions of 4 participants were as follows:

"Toileting is difficult for me because of sitting and I suffer from defecation problems" (P-4).

"Due to abdominal swelling, one must help me get dressed and tying shoelaces "(P-8).

"I can't see some part of my body in terms of personal hygiene (body grooming) during bending due to abdominal swelling and pressure" (P-6).

"Bathing is challenging for me because I can't stand and move so I need to sit down on a chair" (P-7).

"I say my prayer in a sitting position because I feel chest pain during bending" (P-4).

Sexual activities are a problem and maintaining the desired posture is frustrating.

"Overall, I have no marital relationship with my wife. From the day, I was ill because it is difficult for me to maintain the desire position. I have no sense in this regard so that I have the energy to do this activity" (P-11).

Interruption of activities performance related to family roles and outdoor tasks

The participants stated mobility limitation in the community for doing activities such as shopping, financial management in the bank, and so on due to lack of energy and walking or carrying. Depending on one's level of performance, simple activities like sitting in different vehicles or average levels activities such as transferring to the car, walking, fast walking, and complicated activities such as going up and down the stairs are disrupted. These problems limited them to participate in the community for doing outdoor family roles. In this regard, 3 participants' descriptions were as follows:

"I cannot lift heavy things and I suffer from shortness of breath. My walking is very limited. I would rather go by car. When climbing the stairs, my heart starts pounding and I have to take a rest for half an hour. Shopping is difficult for me to buy 5 kg of fruit and take them home as if my heart is collapsed when it becomes heavy" (P-7).

" If I want to walk fast, chest pain is started, I cannot carry heavy things, I want to be like a normal person, I love to go hiking, but if I want to be in a rush, I can't and must walk slowly " (P-5).

"Going up and down the stairs is hard, I can't walk long" (P-4).

Besides, using public transportation such as bus and subway is overwhelming because of sitting or standing for a long time and staying in a crowded space.

"I got on the subway train once, but I couldn't stay any longer "(P-10).

Travelling is impossible for these individuals due to the need to sit for long hours.

"I used to go to the north for two or three days, but now I cannot do that. It is difficult for me now. I do not know what will happen in the way during traveling and I

worried that if I get sick what will happen. For example, once I wanted to go to the north and I became sick along the way and the ambulance came...". (P-9).

Driving with a personal car is a code with low frequency.

"I cannot drive. I cannot do that now" (P-1).

Devoting some time of day for the interests of the children and accompanying them are among the things that are lost in these individuals.

"I become reticent and isolated. I cannot communicate very much with my children; I do not have any energy" (P-11).

Housekeeping was an important activity for most participants and is particularly impaired in some cases. They stated the problems with cleaning activities like sweeping, tidying up the beds, doing laundry, washing the floor, and ironing, as well as kitchen-related activities such as washing the dishes, cutting, and chopping vegetables, meat, cooking, and so on.

"I used to vacuum clean, but now I can't. I get short of breath and my heartbeat doesn't allow me to do so" (P-3).

"Chopping is unbearable for me" (P-2).

4. Discussion

The results of the current study demonstrated some common challenges of people who suffer from heart failure during performing their daily living activities. The participants clarified the type of involved activities and the form of these challenges, which clarify some new perspective of the extent of influence of HF on their lives and maybe on their wellbeing. To the best of our knowledge, there has been no qualitative study on this issue and current questionnaires do not address these challenges for Iranian people with HF. As an occupational therapist with a top-down approach, investigating the problematic activities of daily living is essential. The participants of the current study complained about the distributing effect of HF on their ADLs. It is worth noting that our participants did not have any challenges with cognitive functions (MMSE > 21) and their NHYA (New York Heart Association Functional Classification) ranged between I to IV. Therefore, their major challenges were due to physical problems caused exclusively by HF, and the people who suffer from dementia or other cognitive disorders with the secondary complication of all heart disease were not included in the current study.

Based on their perspective, 2 themes were extracted: obstacles preventing normal functioning due to HF, and disturbance in doing daily living activities as a burden due to HF.

Obstacles preventing normal functioning due to HF have 2 categories: interference of previous experience in performance and challenges during the performance. It can be realized that HF affects all aspects of the participant's life. For example, the participants did not have any challenges with eating but they declared that the quality of performance of all daily activities has had changed.

In some cases, the participants preferred not to perform some daily activities based on unsuccessful experiences of performance in the past, such as falling, chest pain, and fatigue. They declared that after HF, some activities have lost their value for them. The most frequent devalued activities, in this case, were driving and caring for others. It seems that deprivation from doing something that was once valued and now should not be done due to the complication of HF causes people to become depressed and disappointed.

Difficulty and safety are recognized as interlinked performance parameters. Difficulty in doing activities was another complaint of participants that lead them to seek help or giving up activities. In the current study, the most frequent difficult activities to perform were housekeeping, bathing, and functional mobility. These findings in some way are consistent with Dunlay et al. study results which introduced eating, toileting, and dressing as the easiest activities and stair climbing, walking, and housekeeping as the hardest ones [8]. Norberg et al. introduced that bathing in PADL and transportation and shopping in IADL were the hardest activities to perform in their study population [9].

Challenges during the performance of activities is another category in the obstacles preventing normal functioning due to HF. The chief complaint of the participants during the performance of all activities of daily living was the manifestation of chest pain, the prolonged time duration of activity performance, early onset of fatigue, and dyspnea. According to the most frequent comments of the participants, the greatest confounder performing activities in HF was fatigue and dyspnea. This finding is consistent with other studies that show the relationship between fatigue, shortness of breath, and chest pain with physical activities in people with HF [9]. However, fatigue and cognitive impairments are the most common complaint in a variety of diseases such as multiple sclerosis and stroke [25-27], which usually the common in-

tervention is assistive devices prescription and teaching energy conservation techniques [9]. Therefore, empowering people with HF with these educations and helping them to coach performance problems due to fatigue is essential.

Regarding the second theme extracted from the interviews, in two categories, two types of challenging activities were explored: having personal laborious activities due to HF and interruption of activities performance related to family roles and outdoor tasks. Although all ADLs were recognized as meaningful activities, frequently performed, and as the most important view, they are essential for survival, our participants declared that personal activities are much more challenging than family role-related and outside home activities. They justified it in two dimensions. In one sight, while personal activities such as defection and bathing have more private nature, seeking help from others is embarrassing. In the other view, the independent performance of personal activity is strongly linked to the ability to live independently at home alone. However, efficient implementation of family roles and outside home activities are much more related to well-being. Therefore, the effort to carry out personal activities independently is greater in their view.

In the current study, challenging personal activates were defecation, dressing, grooming, bathing, sexual activity, religious duties, and health management. However, the challenging family role-related and outside home activities were using public transportation, functional mobility, traveling, driving, child caring, and housekeeping. Since there is no other qualitative research in this regard, we compared the limited activities of the result of the current study with two existing questionnaires PMADL-8 and DAQIHF developed for assessing the functional outcome of all types of HF.

The development of PMADL-8 was based on the ICF model and the items extracted from the review of other ADL questionnaires. The original version consisted of 40 activities (13 BADLs and 27 IADLs); the number of items was reduced by experts. The final version consisted of 8 activities, in which the psychometric characteristics were confirmed by 130 people with HF in Japan. The items included 1- getting up and off from the floor without instruments, 2- washing your body and hair, 3- going up a flight of stairs without a handrail, 4- vacuuming your room, 5- pulling and closing a heavy sliding door, 6- getting into and out of a car, 7- walking at the same speed with someone of the same age, and 8- walking up a slight slope for 10 min [16]. Although these items are the same as some activities of the challenging activities in the current study, nearly all items seem to focus on mobility and two items were dedicated only to walking. However, important positions such as squatting and bending, which are more frequently used in activities such as dressing, bathing, and toileting in the Iranian lifestyle were ignored. Besides some activities such as praying, grooming, or caring for others had not been included.

DAQIHF is another questionnaire for HF patients. This questionnaire like PMADL-8 was designed by reviewing the acceptable questionnaires and consisted of 82 activities in 7 dimensions, including problems in sleep and resting periods, washing, meals, toilet, household, and related activities, sport and non-sport leisure time activities [17]. These activities are not limited to ADL and other occupational domains were included and mainly were based on physical activity, so and they did not consider other aspects of performance outcomes of ADLs such as pain, safety, and so on.

The evidence in the present study confirms that the challenging activities in our participants are much broader than those mentioned in these two specialized questionnaires. For instance, spiritual issues and the need to do religious activities were noteworthy for many people suffering from debilitation diseases [28] and frequently mentioned by present participants but in these two special questionnaires for people with HF as a chronic disease, these activities were not included. Also, they announced that despite the need to have sex with their spouse they suppress themselves because of the HF problems.

5. Conclusion

HF is a chronic disease in which people with this problem should live with a wide spectrum of limitations in daily activities and tolerate some distributing factors that interfere with their performance. Therefore, exploring their needs and limitations for proper interventions to keep up their ability to perform ADL and live independently is essential. Previous studies confirm their limitations and two available assessments exist to evaluate the occupations of HF. However, some diversity of lifestyle and the effect of culture on ADL performance made us design this qualitative research for better understanding the special needs of people with HF in Iran. According to the findings of this study, people with HF experienced challenges during the performance of all areas of ADL related to themselves or their family roles and outside home duties. Their experiences of insecurity, dependency, and having difficulty strongly influenced their performances in new tasks or different situations. The per-

formance outcomes such as pain, dyspnea, fatigue, and prolonged-time duration were the main confounder of performance in HF. Having a convenient assessment of ADLs for special disorders is fundamental [29]. It seems that developing a questionnaire for assessing ADL in people with HF with considering their special needs and all the performance outcomes is essential.

One limitation of this study like other qualitative studies is an inability to generalize the findings of activity performance challenges in Iranian people with HF in the current study to other contexts and cultures. Another limitation is that the meaning units and codes could not be abstracted more than we did, because our purpose was to elaborate on activity performance with proper details.

Ethical Considerations

Compliance with ethical guidelines

The Ethical Code and standard of this article are based on the Declaration of Helsinki; also Ethical Committee of Iran University and Medical University approved the article (IR.IUMS.REC 1395.95-03-32-28606)

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Authors' Contributions

Conceptualization, investigation, writing – original draft: Malahat Akbarfahimi and Zeinab Fathipour-Azar; Methodology, funding, and supervision: Malahat Akbarfahimi; Writing – review & editing: All authors.

Conflict of interest

The authors declared no conflict of interest.

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