# Effect of Post-Discharge Telephone Follow-up on Social Dignity of Patients with Heart Failure: A Parallel Randomized Controlled Trial

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#### **Abstract**

Background: Heart failure is a malignant and perilous disease as such palliative care is of great importance for patients suffering from this failure. One of the main components in offering specialized palliative care is to respect human rights and dignity. This study aimed to determine the effect of post-discharge telephone follow-up on the social dignity of heart failure patients.

Methods: A randomized control trial study was used. 70 patients with heart failure referring to the cardiology ward of general Hospital were included. Patients were randomly assigned into two experimental and control groups. In the experimental group, the patients had telephone followed-ups concerning medication, disease symptoms, daily activities, and their diet during one-month post-discharge (once a week). Social dignity of patients before and one month after the intervention was measured using the social dignity questionnaire.

**Results:** In this study, patients were compared in experimental (aged  $65\pm10.6$  years) and control (aged  $67\pm13.3$  years) groups. According to the statistical tests, there was a significant difference between the mean scores of social dignity in the experimental and control groups  $(0.8\pm0.2)$  and  $0.06\pm0.2$  before and after the intervention (Pvalue<0.001).

Conclusions: Use of programmed post-discharge telephone follow-up to enhance social dignity of patients with heart failure, is suggested.

**Keywords:** Telephone follow-up, Dignity, Dignity in care, Social dignity, Heart failure, Nursing.

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# Introduction

Cardiovascular diseases account for the highest mortality rates worldwide and will be the leading cause of death by 2020. In Iran, cardiovascular diseases are reported to as the leading cause of 46% of deaths (above one-third of the total mortality rate).

Due to the heart failure in blood supply, HF patients experience several symptoms such as dyspnea, dizziness, angina pectoris, edema, and ascites, thus limiting their sexual, occupational, familial, and social functions. Such limitations would result in their social isolation and depression and ultimately affect the quality of their life and satisfaction.<sup>3</sup> Among chronic diseases, heart failure disrupts one's roles in social, familial, and marital relations and decreases his

professional function more devastatingly. In comparison to cancer patients, HF patients live with disease-induced inability longer and have to cope with unpredictable death.4 If the unpredictability of HF diagnosis is compared with some common cancers, HF can be considered a malignant and perilous disease.5 Accordingly, palliative care is of great importance for patients suffering from this failure. One of the main components in offering specialized palliative care is to respect human rights and dignity. HF patients experience some changes in their identity, social roles, and life status<sup>8</sup> along with some limitations caused by their physical and functional disabilities. Such limitations may result in the loss of social relations and support for the patients<sup>9</sup> as they frequently state that they have lost their social dignity and status because of HF-induced physical limitations.<sup>10</sup> To provide a proper care service, care delivery professionals need to establish honest relations with these patients, respect their rights and personal and professional values (e.g. patients' dignity) and be sensitive to their differences.11

Post-discharge HF patients are prone to problems in their daily activities, unawareness of the disease symptoms and complications, and unawareness of medication side-effects and diets, and these may influence their quality of life. <sup>12</sup> A study documented that HF patients' low awareness of diseases had negative consequences such as hypertension, pregnancy, non-observance of diet and medication regimens, fever, severe physical activity, improper use of drinks, obesity, and anemia. <sup>13</sup> Mangolian Sharaki et al, also found out that HF patients are required to be trained in terms of the disease diagnoses (85%), diet (92.5%), medication (95%), resting and sexual activity (82.5%), and follow-ups (85%). <sup>14</sup>

Research has revealed that HF patients tend to be independent as such they can defend themselves. <sup>15</sup> They expect to be treated as a perfect human being, not a patient, and to take care of themselves and receive the necessary information from the care staff; otherwise, they will feel forgotten and eliminated. <sup>16</sup> According to the literature, care professionals, unfortunately, provide the patients with no sufficient information and are often concerned with their routine tasks not talking to the patients. <sup>17</sup> Accordingly, the main measures to reduce their problems in different aspects and improve their care services are to provide them with sufficient communication, training, and necessary post-discharge followups. In this regard, the most essential measures are providing

the patients with information about the disease, the factors with negative impacts on the disease, and factors leading to the disease recurrence, emphasis on the correct and timely use of post-discharge prescribed medication, putting an emphasis on self-care aspects, raising knowledge and awareness of the risk factors, and setting timely visits for the treatment follow-ups. Training and motivating HF patients can lead to behavioral changes, resulting in a decrease in hospital stays, improved quality of life, declined mortality rate, and reduced costs. 19

The training interventions for HF patients include in-person training sessions, writing training tools, home follow-ups, and telephone follow-ups (remote nursing), 20-22 which can not only improve patients' knowledge of the disease but also influence the self-care of the disease. The use of training interventions and follow-ups by the care professionals can effectively increase HF patients' knowledge in the long term and enhance their functional potentials. Accordingly, the behavioral change programs and long-term follow-up interventions by care professionals and families seem to be of the essence for such patients. Among the interventions, nurse-led telephone followup (NLFU) is applied as a useful tool for exchanging information, controlling the disease symptoms, providing a quick diagnosis of the disease complications, 23 improving clinical conditions, promoting quality of life, 24 and reassuring the patients and their families. Compared to the conventional methods (i.e., training with no telephone follow-up), this approach as a low-cost and desirable strategy would bring some useful clinical outcomes in HF patients. <sup>23</sup> HF patients feel comfortable and are hopeful and confident when they receive continuous support as well as the required information from the well-behaved care professionals concerned with the patients' dignity.16

Since the nurses are in charge of training patients at discharge time and post-discharge follow-ups, this low-cost and useful method can guide the treatment and care professionals, including physicians and nurses, towards paying attention to the patient right charter and help the patients to increasingly receive high-quality and ethical care based on human rights. The novelty of this study is that no other national/international research has examined the effect of post-discharge telephone follow-ups on HF patients' dignity.

The present study thus aimed to investigate the impact of post-discharge telephone follow-ups on HF patients' dignity.

### **Materials and Methods**

In this parallel randomized clinical trial study, 54 HF patients referring to post-CCU/CCU and cardiac wards were selected based on the previous studies. <sup>25</sup> Subsequently, the patients were assigned into two experimental groups (n=35) and a control group (n=35) using block randomization with a block size of 4. Randomization was performed through concealed allocation by preparing 70 closed opaque envelopes each containing A and B codes. Random allocation sequences were developed using the software by a statistician. Eligible patients were enrolled by the first author (Figure 1).

Inclusion criteria were passing at least one month from the diagnosis of the disease, ejection fraction of 40% and less and

aged 40 and over, able to understand and speak Farsi, and possibility of receiving phone contacts. Patients suffering from psychological disorders and consuming any medication were excluded from the study.

After selecting the patient and after explaining the purpose of the research, and obtaining written informed consent from the patients, a demographic questionnaire (like sex, marital status, occupation, and the level of education) and social dignity questionnaire (SDQ), was completed. SDQ, developed by Bagheri et al.<sup>26</sup>, consists of 77 questions and has two scales, namely communication and support (with subscales of communication and family support, communication and community support, communication and support by healthcare professionals) and burden to others (with subscales of physical, psychological, social, and economic burden). SDQ has a 6point Likert scoring scale (completely agree, agree, slightly agree, slightly disagree, disagree, and completely disagree), and the scores range from 1-6 for each item. Most of the items are scored positively, with 1 and 6 assigned to "completely disagree" and "completely agree", respectively. Only items 7, 8, 9, 13, 15, 17, 31, 32, 33, 34, 38, 40, 50, 51, 52, 53, 59, 62, 69, 70, 71, 72, 73, 74, 75, 76, and 77 are scored negatively. In these items, options 1 and 6 refer to "completely agree" and "completely disagree", respectively. The total score of the questionnaire was calculated based on the mean score of the items, with a higher score showing greater social dignity. The SDQ reliability was estimated to be 0.97 using Cronbach's alpha and r=0.99 using split-half method.<sup>26</sup>

After one month of intervention, the patients in both the experimental and control groups were asked via phone calls to refer to the cardiac ward of the hospital for the completion of the questionnaires. The SDQ questionnaire was re-completed for the patients in the two groups.

Before being discharged, the patients received on-discharge verbal training including information such as physician examination date, necessary recommendations on medication and disease symptoms, daily activities, and their diets. In the experimental group, post-discharge patients were followed up in terms of medication use, disease symptoms, daily activities, and the diet via phone calls during one month (once a week), and their questions were responded. The control group received no intervention and was provided with regular discharge and post-discharge measures. Before and after the intervention, the subjects were assessed using the research tools.

This research was supported and approved under the ethical code of IR.SHMU.REC.1397.177 by Shahroud university of medical sciences and was registered in the clinical trial system by the code of IRCT20100114003064N14.

The data were analyzed using descriptive statistics (mean, standard deviation, and frequency) and inferential statistics (independent t-test, chi-square, and Pearson's correlation coefficient) by the SPSS software.

#### **Results**

In this study, 70 HF patients, with a mean age of  $65.6\pm6$  and  $67\pm13.3$ , were compared in terms of demographic and clinical characteristics in the experimental and control groups

(Table 1). As shown in this Table, the variables were not significantly different between the two groups.

To compare social dignity status and its dimensions, the

mean differences of pre-and post-intervention scores were calculated and compared between the experimental and control groups (Table 2). The results indicated a significant increase in dignity scores of the experimental group (Pvalue<0.001).

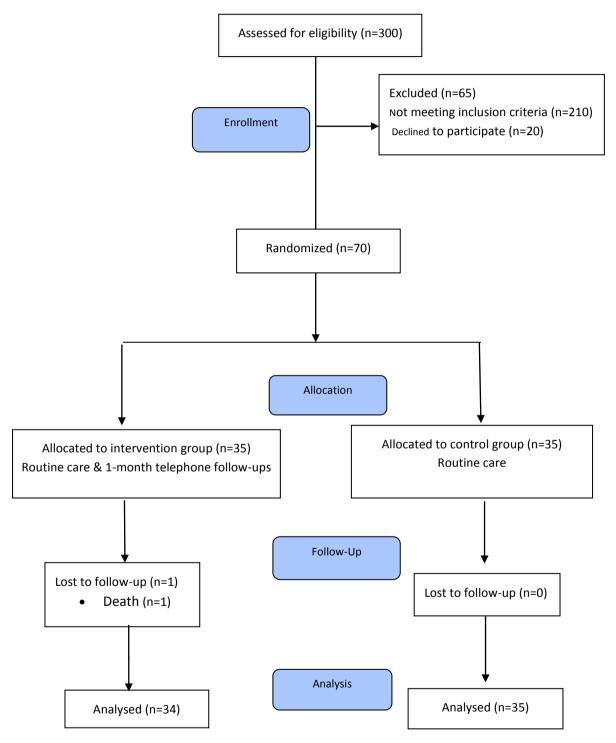


Figure 1. Schematic presentation of the research design

Table 1. Comparison of absolute and relative frequencies in experimental and control groups

Control variables	·	Intervention group, F (%)	Control group, F (%)	Pvalue
Gender	Female	6(17.1)	11(31.4)	0.16
	Male	29(82.9)	24(68.6)	
Marital status	Married	32(91.4)	28(80)	0.17
	Single	3(8.6)	7(14)	
	Housekeeper	6(17.1)	10(28.6)	0.08
Occupation	Employee	17(48.5)	29(54.3)	
	Retired	12(34.3)	6(17.1)	
	Elementary education	29(82.8)	32(91.4)	
Level of education	Diploma	2(5.7)	2(5.7)	0.38
	University education	4(11.4)	1(2.9)	
11 15 P 25 1	Yes	30(85.7)	34(97.1)	0.08
Hospitalization record	No	5(14.3)	1(2.9)	
Economic status	Weak	19(54.3)	21(60)	
	Moderate	6(17.1)	7(14)	0.7
	Good	10(28.6)	7(14)	

Table 2. Comparison of the mean scores of social dignity and its dimensions in experimental and control groups

Variable	Experimental group (change score pre & post)	Control group (change score pre & post)	t-test	Pvalue
Communication & support by family	0.7±0.4	0.6±0.26	7.34	<0.001
Communication & support by community	0.8±0.3	0.1±0.2	9.4	< 0.001
Communication & support by care professionals	0.9±0.2	0.06±0.2	14.2	< 0.001
Burden to others (Physically, psychologically & socially)	0.8±0.5	0.04±0.4	7.32	< 0.001
Burden to others (Economically)	0.9±0.5	-0.16±0.9	6.2	< 0.001
Social dignity	0.8±0.2	0.06±0.2	13.05	< 0.001

#### **Discussion**

This study aimed to determine the effect of post-discharge telephone follow-ups on HF patients' dignity. The intervention and control groups were significantly different in terms of the mean scores of family support and communication as a dimension of social dignity. In other words, the mean score of social dignity significantly increased in the dimension 'family support and communication' in the intervention group, implying the high significance of family communications to promote patients' dignity. In this regard, Sampaio et al. (2019)<sup>27</sup> concluded that HF patients had devastating symptoms such as psychological stress which affected both the patients and their families, and that family caregivers are required to be involved in planning and training to implement the patient health care program. As Safa Delavar et al. 13 stated, when HF patients feel a lack of support, communication, care, and help, they feel like losers and thus have a sense of frustration due to their dependence on others. HF patients feel comfortable, hopeful, and confident when they receive continuous support as well as the required information from the well-behaved care professionals concerned with the patients' dignity. 13 Therefore, various interventions such as training, communication to examine the patient's condition, and post-discharge follow-up for the disease treatment would influence the patient's dignity concerning their family support and communication. Previous studies indicate that these approaches are useful to reduce HF patients' concerns in order to support them<sup>28</sup> and improve their social dignity.29

In the present study, the mean score of the 'community support and communication' dimension as another dimension of social dignity was significantly different before and after the intervention. Kane et al. (2017) argue that dignity is a status possessed by all humans, which can change by promotion,

training, and community.<sup>30</sup> Borji et al. (2018) studied the relationship between spirituality, social dignity, and quality of life in HF patients. They found that most of the participants had moderate spiritual health, moderate social dignity, and rather acceptable quality of life and that their social dignity improved through promoting their spiritual health and quality of life.<sup>31</sup>

As Oosterveld et al. (2014) noted, concerning the dignity of patients who receive care services at nursing homes, is of great importance since they will feel depression and frustration when others disregard their dignity. This would influence all personal aspects and social dignity of such patients.<sup>32</sup> Tauber-Gilmore et al. (2018) also highlighted the importance and necessity of training for personnel to implement accurate care programs observing the patient's dignity.<sup>33</sup>

Our findings also demonstrated significant differences between the experimental and control groups in terms of the pre-and post-test scores of the communication and support provided by care professionals, as another social dignity dimension. In this respect, the existing evidence (Kyle et al. 2017) suggests that empirical training strategies such as listening to patients, sympathy with patients, and the personnel's sympathy with patients are important factors in understanding and observing patients' dignity. The positive characteristics of the personnel (Gazarian et al. 2017) are being friendly, polite, and respectful; however, the negative behaviors include loud voices, improper non-verbal communication, and negative attitudes towards patients. All the features suggest the significance of personnel behaviors in the promotion of dignity and a sense of valuableness in the patients. 35

In this study, the differences between the experimental and control groups in terms of the pre-and post-test scores of communication and burden to others (physically, mentally, socially, and economically), as the other social dignity dimension, indicated the positive effect of telephone follow-ups on the reduction of the above dimension and their improved communication with others. Vehling et al. (2014) believe that the patients' lack of dignity is associated with their being under pressure due to their physical problems and concerns and distress and the patients suffer from such conditions. Early interventions to observe patients' dignity would reduce the abovementioned problems and affect their morale.<sup>36</sup>

Iavazzo et al.'s study aimed to determine the impact of telephone care on HF patients' quality of life and reported improved quality of life in these patients.<sup>37</sup> Another research by Yu et al. (2015) was to explore the effects of training and telephone follow-ups on HF patients' adherence to medication prescriptions and their quality of life. They found the effectiveness of health training and telephone follow-up interventions and concluded that telephone follow-up could effectively improve patients' therapeutic outcomes and maintain some degrees of physical, mental, and social welfare in these patients.<sup>38</sup> Their findings are in line with those of this study.

Other similar studies also confirm the present findings. Oscalices et al. (2019) investigated the effect of a discharge and telephone follow-up guide on the treatment of HF patients. They reported that the subjects observed drug consumption prescriptions more and that telephone follow-up could effectively progress treatment, decrease re-hospitalization, and decline the death rates in HF patients.<sup>39</sup> Farazmand et al. (2017) also demonstrated that post-discharge telephone follow-up resulted in patients' improved hopefulness and quality of life.<sup>25</sup> Najafi et al. (2016) reported similar findings.<sup>40</sup>

In addition to being innovative, a positive aspect of this research was the patients' considerable tendencies to follow up their problems remotely via phone calls. In the case of delays in the researcher's telephone follow-up, the patients themselves contacted the researcher by phone to consult about their problems and receive proper solutions. On the other hand, one of the limitations of our study was the lack of pre-discharge training and care assessment, which might have affected the outcomes of post-discharge telephone care. Similar studies in the future are, therefore, recommended to consider this issue to develop and provide post-discharge remote follow-up and care based on the patients' needs.

According to the findings, the post-discharge telephone follow-up of the chronic HF patients would improve their social dignity; therefore, planned and systematic post-discharge telephone follow-ups are recommended to observe and promote the patients' social dignity.

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#### **Conflict of Interest**

The authors declare that they have no conflict of interest.

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