

A Study of the Relationship between the Levels of Satisfaction with Forgotten Nursing Care in Patients with Heart Failure

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Abstract

Nursing care tries to provide appropriate and synchronized measures by obtaining the views of patients in such a way as to improve the quality of care and maintain patient safety. This study was conducted to determine the relationship between missed nursing care and satisfaction in patients with heart failure. This descriptive correlational study was conducted on 282 heart failure patients hospitalized in the CCU. The participants were included in the study by available sampling. The study tools included a demographic and clinical information questionnaire, missed nursing care based on the patient report (MISSCARE Survey-Patient), and patient satisfaction with nursing care (Patient Satisfaction Instrument). Data were analyzed using independent t-test, ANOVA, and Pearson's correlation coefficient in SPSS 23 software. The mean \pm standard deviation of the total score of forgotten care from the patient's point of view was 60.43 ± 7.40 . The mean \pm standard deviation of the total patient satisfaction score was 56.21 ± 11.84 . Pearson's correlation coefficient showed a significant and inverse correlation between patients' satisfaction scores and forgotten care scores ($r = -0.555$, p -value < 0.001). According to patients' reports, the level of missed nursing care was above average. The satisfaction level of patients was low in all dimensions. By reducing the amount of forgotten care, the satisfaction level of patients increases. Therefore, it is recommended to pay attention to the development and improvement of the quality of nursing care in the field of reducing forgotten care and increasing patient satisfaction.

Keywords: Patients, Satisfaction, Forgotten nursing care, Heart failure, Nursing care

Introduction

Today, one of the challenges in the field of nursing is to provide quality nursing care for the safety of patients [1-3]. Safety is considered one of the important components of quality in nursing care, considering it will lead to guaranteeing the quality of care and, as a result, obtaining patient satisfaction. According to the definition of the Institute of Medicine, patient safety is equal to the absence of any possible error related to the patient [4-6]; however, errors related to patients can be caused by wrongly performing an action and duty or forgetting to perform an action and duty in front of patients [1]. Therefore, errors caused by forgetfulness in nursing care, which are not doing the right thing or delaying it, contribute as much as doing a wrong action and sometimes even more in creating adverse outcomes [4, 7-9].

Kalisch *et al.* [10] first proposed forgotten nursing care in 2006. In a definition of forgotten nursing care, he introduced any aspect of nursing care needed by patients that has been completely or partially forgotten or delayed. Kalisch *et al.* focused on patients' perspectives related to missed nursing care in their research program and found that the three main factors associated with missed nursing care are basic care, communication, and timeliness. As

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the number and frequency of forgotten nursing care increases, it will have a more negative effect on their satisfaction with the quality of care provided [1, 11-13].

According to the definition, patient satisfaction with nursing care is the degree to which the patient considers the health care service or the way it is provided by the providers to be effective or beneficial [14-16]. Romero-Garcia and colleagues have evaluated the level of patient satisfaction with the care provided in special departments in the form of four areas general care, communication methods, professional behaviors, and outcomes [11].

In connection with the examination of neglected nursing care and the satisfaction of patients in the special care department, it should be said that in these departments, due to the complexity of the patient's condition and the treatment process, the occurrence of the smallest negligence is irreparable [17-19]. Especially patients with heart failure, one of the most common debilitating and chronic heart diseases, use nursing care systems the most. Carthon *et al.* [20] in their study of patients with heart failure found that the most frequently forgotten nursing care included talking and comforting patients, updating care plans, and educating patients and their families.

In general, regarding the studies related to forgotten nursing care, it could be seen that most of the statistical population of these studies are nurses and medical staff, and the number of studies that have examined the views of patients in this regard is small. In addition, in the conducted investigations, no study was found that measured the correlation between forgotten nursing care and the level of satisfaction from the patients' point of view. Therefore, considering the prevalence of heart failure disease and the importance of measuring patients' views on care, the present study was conducted to determine the relationship between neglected nursing care and the level of satisfaction of patients with heart failure.

Materials and Methods

This study is cross-sectional descriptive-correlational research that was conducted to determine the relationship between neglected nursing care and the level of satisfaction of patients with heart failure admitted to the hospital. Considering the correlation coefficient of 0.182 from the study of Romero-García *et al.* [11], the first type error of 5%, and the statistical power of 80%, the sample size of 282 people was calculated. In this study, all eligible patients were included until the sample size was completed. In this way, after passing the acute stage of the disease, the researcher appeared at the bedside of the patients, talked with them, and explained the objectives and methods of the study to them. After obtaining written consent from him, if he could interview and communicate, the researcher explained to him the questionnaire and how to answer the questions and then completed the questionnaires. The duration of completing the questionnaire for each patient was 20 minutes.

The data collection tool included three self-report questionnaires by patients. Demographic and clinical information questionnaires included questions about gender, marital status, age, education, occupation, and duration of illness.

Kalisch developed a missed nursing care questionnaire based on patient report (MISSCARE (Survey-Patient) in 2006 in two parts A and B. Part A includes 24 nursing activities that are usually performed in the acute care environment. Part B includes 17 potential reasons for missing nursing care and includes three areas human resources, communication, and material resources. The questions of this questionnaire are based on the five-option Likert scale to measure the three areas of basic care, communication, and timeliness. In this questionnaire, obtaining a higher score indicates a higher level of nursing care.

The questionnaire on patients' satisfaction with nursing services (PSI) included 26 items. Each item has five parts based on the Likert scale, which is rated from completely agree (5) to completely disagree (1). According to this tool, a score less than 78 equals dissatisfaction, 78 to 104 equals average satisfaction, and 104 and above equals full satisfaction. The minimum patient satisfaction score is 26 and the maximum score is 130.

The reliability of two questionnaires on forgotten care and patient satisfaction was confirmed using the internal consistency method and Cronbach's alpha coefficient calculation. For this purpose, the questionnaires were given to 20 eligible patients who were not part of the samples. Cronbach's alpha coefficient was estimated to be 0.70 for the forgotten nursing care questionnaire and 0.94 for the satisfaction questionnaire. Data were analyzed using an independent t-test with a one-way analysis of variance in SPSS 23 software. A significance level of 5% was considered.

Results and Discussion

282 patients with heart failure admitted to the hospital participated in this study. The mean (standard deviation) age of patients participating in the study was 65.02 (12.41) years. The majority of participants in the study were male (72.3%), married (86.2%), illiterate (42.6%), and the duration of heart failure was less than one year (40.1%) (Table 1).

Table 1. Demographic characteristics of the participants in the study.

Variables		N	%
Gender	Female	78	27.7
	Male	204	72.3
Marital status	Married	243	86.2
	Single	39	13.8
Education level	Illiterate	120	42.6
	Elementary	102	36.2
	Diploma	48	17
	University	12	4.3
Job	Housekeeper	78	27.7
	Farmer	40	14.2
	Retired	50	17.7
	Freelance	63	22.3
	Employee	16	5.7
	Worker	10	3.5
	Unemployed	25	8.9
Duration of heart failure	< 1	113	40.1
	1-3	51	18.1
	3-5	27	9.6
	5-7	20	7.1
	7-9	20	7.1
	> 9	51	18.1

To check the normal distribution of quantitative data, scores of forgotten nursing care, and satisfaction scores, the Kolmogorov-Smirnov test was used. The test results showed that the patient satisfaction variable (p -value = 0.082, statistic = 0.05, $df = 282$) and the forgotten care variable (p -value = 0.20, statistic = 0.028, $df = 282$) have a normal distribution. The mean (standard deviation) of the total score of nurses' forgotten care from the patient's point of view was equal to 60.44 (7.41). In addition, in terms of neglected nursing care areas, the mean and standard deviation related to the communication area is equal to 19.39 (3.70), the mean and standard deviation related to the basic care area is equal to 29.15 (4.71) and the mean and standard deviation of the punctuality area was 11.89 (4.53). A comparison of the average score of forgotten nursing care based on marital status showed a statistically significant difference ($P = 0.038$). The mean (standard deviation) score of the forgotten care based on the type of job in the patients with labor jobs had the lowest value 52 (7.18) and in the patients with housework jobs, 61.82 (6.89) had the highest value. Based on the results of a one-way analysis of variance, the score of forgotten cares showed a statistically significant difference based on the type of job (p -value < 0.001). A comparison of the average score of forgotten nursing care based on other demographic characteristics did not show a statistically significant difference ($P > 0.05$) (**Table 2**).

Table 2. Comparison of the average score of forgotten nursing care based on the demographic characteristics of the participants

Variables		N	Mean	Standard deviation	p-value
Gender	Female	78	61.82	6.89	0.052
	Male	204	59.91	7.55	
Marital status	Married	243	60.07	7.58	0.038
	Single	39	62.72	5.81	
Education level	Illiterate	120	60.09	7.05	0.120
	Elementary	102	60.70	6.69	

Job	Diploma	48	61.79	8.59	< 0.001
	University	12	56.25	10.45	
	Housekeeper	78	61.82	6.89	
	Farmer	40	60.73	6.08	
	Retired	50	61.12	8.25	
	Freelance	63	61.37	7.58	
	Employee	16	59.13	7.75	
	Worker	10	52	7.18	
	Unemployed	25	56.16	5.14	
Duration of heart failure	< 1	113	60.30	7.24	0.537
	1-3	51	61.20	7.85	
	3-5	27	60.48	8.38	
	5-7	20	62.45	10.22	
	7-9	20	58.15	5.88	
	> 9	51	60.02	5.97	

The mean (standard deviation) of the total patient satisfaction score was 56.21 (11.84). **Table 3** shows the mean and standard deviation of the satisfaction score in its dimensions.

Table 3. Mean and standard deviation of the satisfaction score in its dimensions.

Patient satisfaction and its dimensions	Number	Minimum	Maximum	Mean	Standard deviation
Trust	282	15	41	24.18	5.02
Teaching the patient	282	9	26	15.89	3.75
Technical-professional care	282	7	25	14.10	3.52
Religious	282	1	4	2.05	0.59
Patient Satisfaction	282	36	92	56.22	11.84

Based on the one-way analysis of variance in **Table 4**, it can be seen that the satisfaction score based on the level of education was the lowest in patients with a diploma and the highest in patients with a university degree. Based on the results, there was a statistically significant difference between the degree and the satisfaction score (p-value = 0.002). Also, the satisfaction score based on the type of job was the lowest in patients with employee jobs and the highest in patients with labor jobs, so based on the results of one-way variance analysis, there was a statistically significant difference between the patients' job type and the satisfaction score (p-value = 0.026). On the other hand, the comparison of the average satisfaction score based on the duration of heart failure showed that patients with a history of more than 9 years had the lowest score, and patients with a history of 7-9 years had the highest score. Based on the results of a one-way analysis of variance, there was a statistically significant difference between the duration of heart failure and the satisfaction score (p-value = 0.039).

Table 4. Comparison of the average satisfaction score based on the demographic characteristics of the participants.

Variables	N	Mean	Standard deviation	p-value	
Gender	Female	78	56.85	9.97	0.58
	Male	204	55.98	12.51	
Marital status	Married	243	56.23	11.97	0.97
	Single	39	56.15	11.24	
Education level	Illiterate	120	58.03	10.43	0.002
	Elementary	102	54.75	11.41	
	Diploma	48	52.67	13.15	

Job	University	12	64.75	16.92	0.026
	Housekeeper	78	56.85	9.97	
	Farmer	40	57.90	6.63	
	Retired	50	53.06	13.78	
	Freelance	63	55.62	12.82	
	Employee	16	50.69	13.01	
	Worker	10	62.70	17.12	
	Unemployed	25	60.32	11.91	
Duration of heart failure	< 1	113	57.08	12.85	0.039
	1-3	51	54.47	8.88	
	3-5	27	55.63	8.08	
	5-7	20	57.85	13.11	
	7-9	20	62.75	9.61	
	> 9	51	53.16	13.17	

The results of the Pearson correlation coefficient between the patients' satisfaction score and the forgotten care score showed that there is a statistically significant and inverse relationship between the two variables ($r = -0.555$, $p\text{-value} < 0.001$).

The present study was conducted to determine the relationship between neglected nursing care and the level of satisfaction of heart failure patients hospitalized in the cardiac intensive care unit. The results showed that the amount of forgotten nursing care in the cardiac intensive care unit under study from the point of view of heart failure patients is average. In the study of Diab and Ebrahim [21] in Egypt, the amount of forgotten nursing care from the point of view of nurses was reported to be lower than average, which is in contradiction with our findings. Among the reasons for the difference in the results, we can mention the difference in the context of the study and the point of view of the statistical population under study towards forgotten care.

According to our findings, from the point of view of patients with heart failure, among the areas of forgotten nursing care, the areas of basic care, communication, and timeliness had the highest to the lowest average respectively. In Kalisch *et al.*'s research [22], the results showed that forgotten nursing care in the field of basic care is more than in the field of establishing communication and being on time, which is in line with the results of the present study.

The findings of the present study showed that the score of forgotten nursing care from the point of view of heart failure patients who are single and have housework is higher than other people. Contrary to our findings, in the study of Diab and Ebrahim [21], the highest frequency of high levels of forgotten nursing care was related to married nurses. Among the reasons for the difference in our findings with the above studies, we can mention the difference in the views of nurses and patients regarding forgotten care, as well as the difference in the distribution of study participants based on marital status.

The findings of the present study showed that the level of satisfaction of heart failure patients in all aspects of trust, education, technical-professional care, and religion from the nursing care provided in the heart special care department under study is at a low level. Patient satisfaction with nursing care is considered an important indicator of the effectiveness of the health care system and is one of the most important indicators that measure the quality of nursing care. Patient satisfaction can be interpreted as a state where patients not only receive necessary treatment and care during hospitalization but also are satisfied with the existing conditions and services provided by the staff and the entire care system [23-25]. However, these findings are not consistent with the results of many other studies in this field; in some studies such as Mrayyan [26] in Jordan, and Karaca and Durna [27] in Turkey, the level of satisfaction with nursing care was medium to high from the point of view of the majority of patients. Differences in results may be due to differences in the study environment.

Our findings showed that the highest level of satisfaction of patients with heart failure from the nursing care provided was related to participants with university education with a history of 7 to 9 years of suffering from heart failure and having a working job. In the study of Karaca and Durna [27], the comparison of the level of satisfaction based on the level of education showed a statistically significant difference. So illiterate people with primary education had the highest level of satisfaction with the quality of nursing care provided. In the aforementioned study, the difference in the level of satisfaction based on employment status was not significant, which was contrary to our findings. Among the reasons for this difference in the results, we can mention the difference in the distribution of participants in the studies. In the Karaca and Durna study [27], only 30 (4.7%) of the patients under study were illiterate or had elementary education, on the other hand, there is a difference in the tools used to

measure the level of satisfaction, the study environment, and the working conditions of the nurses of the gynecological internal surgery departments and Delivery in private hospitals in Turkey can also affect the difference in results. In addition, the results of the correlation between satisfaction with nursing care provided and forgotten nursing care from the perspective of patients with heart failure showed that with a decrease in the level of forgotten nursing care, the level of patient satisfaction with nursing care increases. Romero-García *et al.* [11] showed that there is no correlation between the level of satisfaction and the demographic and social variables of the patients. The higher level of patients' satisfaction with nursing care is strongly influenced by their understanding of their health status. Lake *et al.* [28] reported that patients in hospitals where the amount of forgotten care was higher had a poor care experience and therefore had a lower level of service satisfaction.

Conclusion

Based on the findings of the present study, it can be concluded that the level of neglected nursing care is average. Among the dimensions of neglected nursing care, basic care, communication, and timeliness were the most important to the least important. The score of forgotten care for single patients and patients with housework was higher than other people. The level of satisfaction of heart failure patients with the nursing care provided in the cardiac intensive care unit was low. By reducing the level of forgotten nursing care, the satisfaction score of patients increases. It is suggested that nursing managers and policymakers pay the necessary attention to their strategies to increase the motivation of nurses for proper and proper care and management of nurses' workload.

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References

1. Kalisch BJ, Xie B. Errors of omission: Missed nursing care. *West J Nurs Res.* 2014;36(7):875-90. doi:10.1177/0193945914531859
2. Gustafsson N, Leino-Kilpi H, Prga I, Suhonen R, Stolt M; RANCARE consortium COST Action – CA15208. Missed care from the patient's perspective - A scoping review. *Patient Prefer Adherence.* 2020;14:383-400. doi:10.2147/PPA.S238024
3. Chaboyer W, Harbeck E, Lee BO, Grealish L. Missed nursing care: An overview of reviews. *Kaohsiung J Med Sci.* 2021;37(2):82-91. doi:10.1002/kjm2.12308
4. Dabney BW. Patient reports of nursing care and the relationship to nurse staffing. PhD thesis, University of Michigan; 2013.
5. Cho SH, Mark BA, Knafelz G, Chang HE, Yoon HJ. Relationships between nurse staffing and patients' experiences, and the mediating effects of missed nursing care. *J Nurs Scholarsh.* 2017;49(3):347-55. doi:10.1111/jnu.12292
6. Winter V, Dietermann K, Schneider U, Schreyögg J. Nurse staffing and patient-perceived quality of nursing care: A cross-sectional analysis of survey and administrative data in German hospitals. *BMJ Open.* 2021;11(11):e051133. doi:10.1136/bmjopen-2021-051133
7. Zhu X, Zheng J, Liu K, You L. Rationing of nursing care and its relationship with nurse staffing and patient outcomes: The mediation effect tested by structural equation modeling. *Int J Environ Res Public Health.* 2019;16(10):1672. doi:10.3390/ijerph16101672
8. Rochefort CM, Rathwell BA, Clarke SP. Rationing of nursing care interventions and its association with nurse-reported outcomes in the neonatal intensive care unit: A cross-sectional survey. *BMC Nurs.* 2016;15:1-8. doi:10.1186/s12912-016-0169-z
9. Witczak I, Rypicz Ł, Karniej P, Młynarska A, Kubiela G, Uchmanowicz I. Rationing of nursing care and patient safety. *Front Psychol.* 2021;12:676970. doi:10.3389/fpsyg.2021.676970
10. Kalisch BJ, Landstrom G, Williams RA. Missed nursing care: Errors of omission. *Nurs Outlook.* 2009;57(1):3-9. doi:10.1016/j.outlook.2008.05.007
11. Romero-García M, Delgado-Hito P, de la Cueva-Ariza L, Martínez-Momblan MA, Lluch-Canut MT, Trujols-Albet J, et al. Level of satisfaction of critical care patients regarding the nursing care received: Correlation with sociodemographic and clinical variables. *Aust Crit Care.* 2019;32(6):486-93. doi:10.1016/j.aucc.2018.11.002

12. Haave RO, Bakke HH, Schröder A. Family satisfaction in the intensive care unit, a cross-sectional study from Norway. *BMC Emerg Med.* 2021;21:1-2. doi:10.1186/s12873-021-00412-8
13. Arofiati F, Apriliyanti P. The family satisfaction on nursing services at the intensive care unit. *Open Access Maced J Med Sci.* 2021;9(T4):61-4. doi:10.3889/oamjms.2021.5776
14. Meadows C, Bastin A, Kaul S, Finney S. Family satisfaction on the intensive care unit. *Crit Care.* 2010;14(Suppl 1):P597. doi:10.1186/cc8829
15. Ferrando P, Gould DW, Walmsley E, Richards-Belle A, Canter R, Saunders S, et al. Family satisfaction with critical care in the UK: A multicentre cohort study. *BMJ Open.* 2019;9(8):e028956. doi:10.1136/bmjopen-2019-028956
16. Lyes S, Richards-Belle A, Connolly B, Rowan KM, Hinton L, Locock L. Can the UK 24-item family satisfaction in the intensive care unit questionnaire be used to evaluate quality improvement strategies aimed at improving family satisfaction with the ICU? A qualitative study. *J Intensive Care Soc.* 2020;21(4):312-9. doi:10.1177/1751143719883563
17. Xu X, Zhang H, Ding J, Liu Y, Zhang J. Nursing resources and patient outcomes in intensive care units: A protocol for systematic review and meta-analysis. *Medicine (Baltimore).* 2021;100(6):e24507. doi:10.1097/MD.00000000000024507
18. La Sala R, Galfrè E, Bertani L, Mingolla V, Murelli S, Messina G. The quality of nursing in intensive care: A development of a rating scale. *Acta Biomed.* 2017;88(1S):61-8. doi:10.23750/abm.v88i1-S.6284
19. Fasoi G, Patsiou EC, Stavropoulou A, Kaba E, Papageorgiou D, Toyliia G, et al. Assessment of nursing workload as a mortality predictor in intensive care units (ICU) using the nursing activities score (NAS) scale. *Int J Environ Res Public Health.* 2021;18(1):79. doi:10.3390/ijerph18010079
20. Carthon JM, Lasater KB, Sloane DM, Kutney-Lee A. The quality of hospital work environments and missed nursing care is linked to heart failure readmissions: A cross-sectional study of US hospitals. *BMJ Qual Saf.* 2015;24(4):255-63.
21. Diab GH, Ebrahim RMR. Factors leading to missed nursing care among nurses at selected hospitals. *Am J Nurs Res.* 2019;7(2):136-47.
22. Kalisch BJ, Xie B, Dabney BW. Patient-reported missed nursing care correlated with adverse events. *Am J Med Qual.* 2014;29(5):415-22. doi:10.1177/1062860613501715
23. Wardah, Usman S, Wardani E. An evaluation of patient satisfaction with nursing care: A qualitative study in an Indonesian hospital. *Ethiop J Health Sci.* 2020;30(6):1011-6. doi:10.4314/ejhs.v30i6.20
24. Farzianpour F, Byravan R, Amirian S. Evaluation of patient satisfaction and factors affecting it: A review of the literature. *Health.* 2015;7(11):1460-5. doi:10.4236/health.2015.711160
25. Usman S, Wardani E. An evaluation of patient satisfaction with nursing care: A qualitative study in an Indonesian hospital. *Ethiop J Health Sci.* 2020;30(6):1011. doi:10.4314/ejhs.v30i6.20
26. Mrayyan M. Jordanian nurses' job satisfaction, patients' satisfaction and quality of nursing care. *Int Nurs Rev.* 2006;53(3):224-30. doi:10.1111/j.1466-7657.2006.00439.x
27. Karaca A, Durna Z. Patient satisfaction with the quality of nursing care. *Nurs Open.* 2019;6(2):535-45. doi:10.1002/nop2.237
28. Lake ET, Germack HD, Viscardi MK. Missed nursing care is linked to patient satisfaction: A cross-sectional study of US hospitals. *BMJ Qual Saf.* 2016;25(7):535-43. doi:10.1136/bmjqs-2015-003961