

Effects of Discharge Training and Counseling Service on Self-Efficacy, Care Behaviors and the Problems Experienced in Patients Who Have Undergone Coronary Artery By-Pass Grafting Surgery: An Experimental Study

Koroner Arter Baypas Greft Ameliyatı Geçiren Bireylere Verilen Taburculuk Eğitimi ve Danışmanlık Hizmetinin Öz-Etkililik, Bakım Davranışları ve Yaşanan Sorunlar Üzerine Etkisi: Deneysel Bir Çalışma

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ABSTRACT Objective: The aim of this experimental study was to examine the effects of discharge training and counseling services on self-efficacy, care behaviors, and problems experienced by patients who have undergone coronary artery bypass grafting. **Material and Methods:** The study was conducted with 100 patients (50 control, 50 experimental group), hospitalized in the adult cardiovascular surgery in a university hospital. Apart from the routine nursing care given to the control group, the patients in the experimental group were given discharge training and telephone counseling services. The patients in both groups were monitored twice after discharge: first and fourth weeks. In the study, Barnason Efficacy Expectation Scale (BEES) cardiac surgery version, forms of self-care behaviors, experienced problems, and telephone counseling were used. **Results:** At the end of the first and fourth weeks after discharge, it was found that the experimental group had more self-care behaviors (salt usage in meals $p=0.001$, exercising/walking $p=0.001$, performing activities that required physical movement $p=0.002$, and walking at least 2 to 3 days a week for 25 minutes $p=0.001$), the control group had more problems, and fewer patients being able to solve the problems experienced ($p<0.05$). At the end of the first and fourth weeks of BEES, total and subscale mean scores were found to be higher in the experimental group than in the control group ($p<0.05$). **Conclusion:** The study findings indicate that discharge training and counseling services positively affect patients' care behaviors, decrease the problems experienced after discharge, and increase self-efficacy.

ÖZET Amaç: Bu deneysel araştırmanın amacı, koroner arter baypas greft ameliyatı geçiren bireylere verilen taburculuk eğitiminin ve danışmanlık hizmetinin öz-etkililik, bakım davranışları ve yaşanan sorunlar üzerine etkisinin incelenmesidir. **Gereç ve Yöntemler:** Araştırma, bir vakıf üniversite hastanesinde erişkin kalp damar cerrahi servisinde yatan 100 hasta (50 kontrol ve 50 deney grubunda) ile yürütülmüştür. Deney grubundaki hastalara, kontrol grubuna uygulanan rutin hemşirelik bakımı dışında, taburculuk eğitimi ve telefon ile danışmanlık hizmeti verilmiştir. Her iki gruptaki hastalar taburculuktan 1 hafta ve 4 hafta sonra olmak üzere 2 kez izlenmiştir. Çalışmada Barnason Etkililik Beklenti Ölçeği (BEBÖ) Kardiyak Cerrahi Versiyonu, bakım davranışları, yaşanan sorunlar ve telefonla danışmanlık almaya ilişkin formları kullanılmıştır. **Bulgular:** Taburculuk sonrası birinci ve dördüncü haftaların sonunda, deney grubunun daha fazla öz-bakım davranışına sahip olduğu (yemeklerde tuz kullanma $p=0.001$, egzersiz/yürüyüş yapma $p=0.001$, fiziksel hareket gerektiren işleri yapma $p=0.002$ ve haftada en az 2-3 gün 25 dakika yürüme $p=0.001$), kontrol grubunun daha çok sorun yaşadığı ve daha az hastanın sorunları çözebildiği bulunmuştur ($p<0.05$). BEBÖ birinci ve dördüncü haftaların sonunda toplam ve alt ölçek puanları deney grubunda kontrol grubuna göre daha yüksek bulunmuştur ($p<0.05$). **Sonuç:** Araştırma sonucunda; taburculuk eğitimi ve danışmanlık hizmetinin bireylerin bakım davranışlarını olumlu etkilediği, taburculuk sonrası yaşanan sorunlarını azaltmada ve öz-etkililik düzeyini artırmada etkili olduğu belirlenmiştir.

Keywords: Coronary artery bypass grafting; self-efficacy; nursing; discharge planning

Anahtar Kelimeler: Koroner arter baypas greftleme; öz-yeterlik; hemşirelik; taburculuk eğitimi

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Coronary artery bypass grafting (CABG) can cause physical, psychological, social, and economic problems, along with its positive effects that help individuals return to their normal lives and improve their quality of life. Individuals undergoing CABG may experience problems related to the respiratory and circulatory system, pain control, incision site care, medication use, nutrition, evacuation, exercise, and self-care after discharge.¹⁻³ Discharge planning, a part of nursing care, provides comprehensive training to patients and their families have many positive effects, such as preventing problems that may occur post CABG, accelerating the healing process, decreasing repetitive unplanned admissions, and increasing self-care abilities.⁴⁻⁷ Monitorization of patients who have undergone CABG by nurses after discharge can help reduce the problems and stress that these patients face during the home care process. Nurses can provide essential information to the patients and their families to aid them in adapting to their new lifestyle and self-care requirements.^{5,8,9} It has been reported that self-efficacy is important to ensure positive changes and continuity in the lifestyle and behaviors of patients who have undergone CABG.^{10,11}

Bandura defines the concept of self-efficacy belief as an individual's judgment about the capacity to organize and successfully perform the activities necessary to demonstrate a certain performance.¹² Individuals who have self-confidence and a positive attitude toward their capacity to manage their own situation are more likely to perceive diseases as controllable and manageable.¹¹

In patients who have undergone CABG, self-efficacy is an important factor in overcoming the problems that are encountered in the post-operative period. Previous studies emphasized that individuals with low levels of self-efficacy had difficulty in adopting positive behaviors, as against those with high levels of self-efficacy, who tend to choose and sustain healthy behaviors.^{10,13,14}

It has been stated that supportive education interventions increase patients' self-care behaviors and reduce the problems experienced.¹⁵ In one study, telehealth and self-management programs were applied

to patients undergoing CABG surgery to increase their self-efficacy. As a result of the study, it was determined that the cardiac self-efficacy of the patients who applied the program increased.¹⁶ In a study examining the effects of the first phase of cardiac rehabilitation training on self-efficacy among patients undergoing CABG surgery, the self-efficacy scores of the 2 groups were found to be significantly higher at discharge and 1 month afterward.¹⁰ In another study examining the effectiveness of discharge training on self-efficacy and post-discharge problems after cardiac surgery, no statistically significant difference was found between the 2 groups in terms of self-efficacy scores. In the study, it was determined that both groups experienced at least one post-discharge problem and these problems gradually decreased at 30 days of post-discharge.¹⁷ In different studies, it was found that the comprehensive discharge training and counseling service given to the experimental group were effective in reducing the patients' problems and reducing their re-admissions to the hospital.^{18,19} Self-efficacy is a potentially alterable feature. Implementation by nurses of a planned discharge program that improves self-efficacy may help individuals adopt constructive health behaviors and obtain positive results by improving self-confidence, motivation, self-care, and thus self-efficacy.²⁰⁻²²

MATERIAL AND METHODS

STUDY DESIGN

This experimental study was conducted to investigate the effects of discharge training and counseling services on self-efficacy, care behaviors and problems experienced by patients who have undergone CABG.

Hypotheses

H1: The discharge training and counseling provided to individuals who have undergone coronary artery by-pass graft surgery positively affect the care behaviors of individuals.

H2: The discharge training and counseling provided to individuals who have undergone coronary artery by-pass graft surgery are effective in reducing the problems experienced by individuals after discharge.

H3: The discharge training and counseling provided to individuals who have undergone coronary artery by-pass graft surgery are effective in increasing the level of self-efficacy.

POPULATION AND SAMPLING

This study was conducted in an adult cardiovascular surgery unit of a university hospital between January 20, 2015 and February 09, 2016. Inclusion criteria comprised those aged 18 years or older, having undergone open CABG surgery for the first time, literate, admitted to the clinic at least a day before the operation, and having assented to participate in the study. The exclusion criteria were obstacles in communicating, motor-sensory loss, and problems in mental processes.

SAMPLE SIZE AND POWER ANALYSIS

Sample size was determined as 90 patients (45 each in the control and experimental groups), with 5% error and 80% statistical power, when calculated using G*Power 3.1.3 (Heinrich-Heine-University, Düsseldorf, Germany).²³ This study included 100 patients (50 each in the control and experimental groups).

DATA COLLECTION FORMS

All data were collected with 6 forms.

1. Patient Demographic and Clinical Characteristics Form

This form consists of 3 parts. The first part of the form includes the demographic characteristics of the patients (11 questions), the 2nd part clinical characteristics of the patients (14 questions), and the 3rd part health-maintaining behaviors (30 questions). The form was applied to the individuals (control group-experimental group) by the researcher on the day they were hospitalized.

2. Barnason Efficacy Expectation Scale Cardiac Surgery Version

Barnason Efficacy Expectation Scale (BEES) Cardiac Surgery Version developed by Barnason in 2002 was used to determine patients' self-efficacy levels.²⁴ The validation and reliability of Turkish version was conducted by Avci and Karahan in 2013.²⁵ The BEES Cardiac Surgery Version consists of 15

items and the following 5 subscales: Physical function, psychosocial function, diet modification, exercise-activity modification, and self-care management. Each item was scored on a 4-point Likert scale (1="strongly disagree" and 4="strongly agree") based on the patient's perception of confidence in his/her ability to perform the specified behavior. The numbers for each answer received from the scale were collected and the total score was attained. The entire scale's scores ranged from 15 to 60. The higher scores indicate the expectancy of recovery and effective rehabilitation behavior after CABG surgery. Cronbach's alpha reliability coefficient of the scale was 0.837.²⁵

3. Self-Care Behaviors Form (1 Week and 4 Weeks Later)

The data collection form on self-care behaviors was prepared under the headings of physical behaviors, psycho-social behaviors, dietary behaviors, exercise-activity behaviors and behaviors in other situations.^{1,4-6,10} The form was applied by the researcher when the individuals (control group-experimental group) were called 1 week later and when they came to the outpatient clinic 4 weeks later.

4. Experienced Problems Form (1 Week and 4 Weeks Later)

This form includes was used to determine the problems experienced by individuals undergoing CABG surgery in their home life after discharge.^{1,2,4,5} The form was applied to all individuals (control group-experimental group) who underwent CABG when they were called in the first week after discharge and when they came to the outpatient clinic at the 4th week.

5. Telephone Counseling Form (Experimental Group)

In this form, information such the date and time of their calls, the purpose of their calls, implemented/suggested applications and results. If the purpose of counseling was pain, the evaluation of the patient before and after pain was made using the "Visual Analog Scale." The patient/family was taught in the hospital how to use the pain scale. After each phone call, the details of the call were recorded in this form.

6. Unplanned Admission to the Hospital Form

This form includes information such as the patient's unplanned admission to the hospital, the purpose for admission, the length of hospital stay and the result. The details of the application were recorded on this form each time the patients applied to the hospital except for the control appointment. The data were collected from the hospital's information system "nucleus", where all the clinical information of the patients is available.

INTERVENTION

DISCHARGE TRAINING BOOKLET FOR PATIENTS WHO HAVE UNDERGONE CABG SURGERY AND THEIR FAMILIES

For patients who had undergone CABG, the researcher developed a training plan based on the literature such as the complications of the surgery and their management; home care, recovery, adaptation to their new lifestyle, pain, wound care, edema, infection, constipation, anorexia, medications, nutrition, exercise, work and occupation, sleeping and resting, hygienic care, sex life, change in moods/coping with stress, alcohol/smoking, and emergency situations.^{1-6,8-11,13} This material was presented in a booklet entitled "Discharge training booklet for patients who have undergone CABG surgery and their families." After this booklet's first publication, along with an evaluation form based on the literature, it was presented to 13 experts, who were asked to evaluate its features such as intelligibility, reliability, content, order of information, and the appropriateness of materials. The required changes were made according to the experts' recommendations, and the booklet was finalized.²⁶ Its finalized version was used in this study.

DATA COLLECTION PROCESS

Pre-application was administered to 10 patients. Since the patients were able to communicate with each other while accessing services at the hospital and because the trained patients who were discharged could be readmitted to the same clinic in case of complications, the first 50 participants were assigned to

the control group. To prevent any communication, the remaining 50 participants were subsequently assigned to the experimental group. The first interviews with participants of the control and experimental groups were performed on the day of admission to the clinic. The control group received only routine nursing care, whereas the experimental group was given comprehensive discharge training in addition to routine nursing care; moreover, participants were also provided the researcher's phone number for telephone consultations. All participants were interviewed at the end of the first and 4th week after discharge (Figure 1). The application of all forms and trainings were carried out by the researcher. During the application of the forms and the training, when the patients suffered from severe pain, data collection, training was interrupted, and they were allowed to rest. The trainings were held in the patient rooms and/or in the meeting rooms with the patient's relatives.

STATISTICAL ANALYSIS

For analyzing the research data, IBM SPSS version 20 software (IBM Corp., Armonk, NY, USA) having license number 5f551afac84a24ad7a95 was used. The Shapiro-Wilks test was used to analyze variables that deviated from the normal distribution due to unit numbers. When analyzing the differences between the groups, the Mann-Whitney U test was used because the variables were not derived from the normal distribution. The chi-squared test was used to examine the correlation between the groups of nominal variables. In cases where the expected values of the cells in the 2x2 charts did not have sufficient volume, Fisher's exact test was used. In the RxC charts, since 20% of the expected value in the cells was less than 5, Pearson's chi-squared analysis was applied with the help of the Monte Carlo simulation. When examining the differences between the 2 dependent variables, the Wilcoxon test was used because the variables did not come from the normal distribution. In the interpretation of the results, 0.05 was used as the level of significance.

ETHICAL CONSIDERATIONS

This study was approved by the Başkent University Institutional Review Board for Medicine and Health

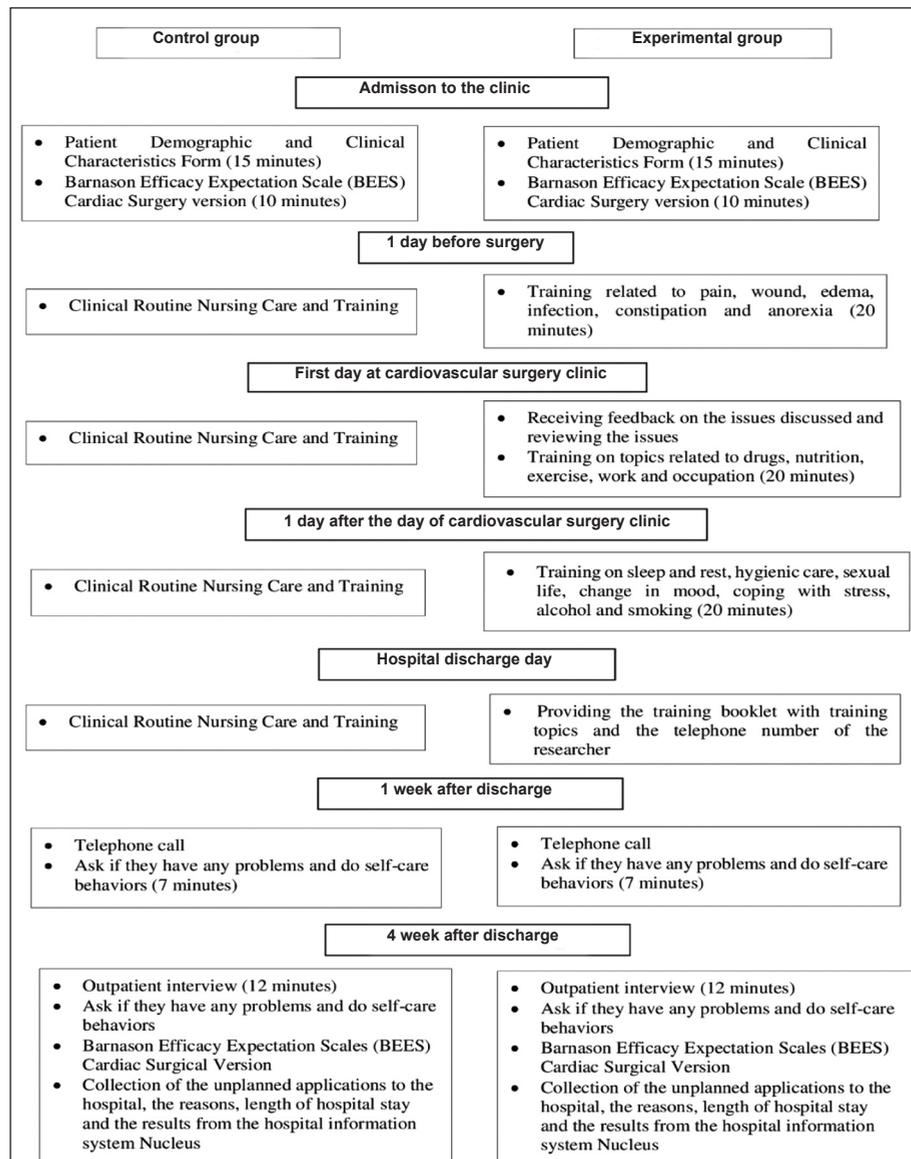


FIGURE 1: Data collection and training process.

Sciences and Ethics Committee (no: KA14/302, date: December 17, 2014). The required approval was obtained from the chief physician and administration of the hospital at which the study was performed. Prior written informed consent was obtained from all the participants, who were given both written and verbal information on the study. They were also made aware of their participation being voluntary and that their names would be kept confidential. The study complies with the provisions of the Helsinki Declaration (as revised in Brazil 2013).

RESULTS

The average age of the participants in the control and experimental groups was 62.64 ± 9.109 and 63.72 ± 8.278 years, respectively. Moreover, in the control and experimental groups, 74% and 82%, were males; 86% and 84% were married; 52% and 38% had graduated either from primary school or university and above; 44% and 50% had defined the support of the social environment as insufficient and good; and 70% and 72% had spent most of their lives in 1 province, respectively. With regard to the control and experimental groups' de-

scriptive characteristics, there were no significant differences statistically ($p>0.05$), except for the support level of the social environment ($p<0.05$). Most patients included in the study (control 68%-experimental 70%) had 4 or more vessels changed. The vessels used are the saphenous vein, the radial artery, and the internal mammarian artery. There were no significant differences statistically ($p>0.05$).

Table 1 shows the comparison of the total item and subscale mean scores of the BEES (Cardiac Surgery Version) at the hospitalization and 4th week of the patients. The mean exercise-activity modification subscale score of the control group at hospitalization was significantly higher than the experimental group ($p<0.05$). At the 4th week, the mean scores of the physical function, self-care management, diet modification, psycho-social function, exercise-activity modification subscales and total BEES item of the experimental group were significantly higher ($p<0.05$) (Table 1).

With regard to self-care behaviors of patients at the end of the 4th week after discharge, there were statistically significant differences between the control and experimental groups in terms of salt usage in meals ($p=0.001$), exercising/walking ($p=0.001$), performing activities that required physical movement ($p=0.002$), and walking at least 2 to 3 days a week for 25 minutes ($p=0.001$). It was determined that these differences were caused by the experimental group's adoption of more desired behaviors (Table 2).

The distribution of the problems experienced by both groups at the end of the first and 4th week after discharge are shown in Table 3. There was a statistically significant difference between the groups in terms of muscle pain, pain in the operative field, constipation, debility/ fatigue, insomnia problems in the first week ($p<0.05$) and this difference is due to the experimental group. There was a statistically significant difference between the groups in terms of chest pain, leg pain, muscle pain, edema in the operative field, pain in the operative field, debility/fatigue, insomnia in the 4th week ($p<0.05$) and this difference was due to the experimental group. It was observed that the control group experienced more problems than the experimental group.

TABLE 1: Comparison of total and subscale score means in the hospitalization of patients with CABG surgery and 4th-week BEES (Cardiac Surgery Version).

			Hospitalization							4 th week							
	n	Mean	Median	Minimum	Maximum	SD	Mean Rank	Z	p ^a value	Mean	Median	Minimum	Maximum	SD	Mean Rank	Z	p ^a value
Physical function	Control	9.2	9	3	12	2.67	49.28	-0.435	0.664	8.34	9	3	12	2.31	34.3	-5.791	0.001
	Experimental	9.36	9	3	12	2.77	51.72			10.9	12	8	12	1.4	66.7		
Self-care management	Control	13.06	13	7	16	2.33	50.54	-0.014	0.989	13.08	13	7	16	2.07	34.77	-5.684	0.001
	Experimental	13.24	13	9	16	1.33	50.46			15.18	15	13	16	0.56	66.23		
Diet modification	Control	6.62	7	2	8	1.75	49.64	-0.318	0.751	6.86	7	3	8	1.25	38.62	-4.98	0.001
	Experimental	6.82	7.5	2	8	1.44	51.36			7.84	8	6	8	0.55	62.38		
Psychosocial function	Control	9.22	10	3	12	2.12	46.74	-1.319	0.187	9.4	10	4	12	1.98	38.57	-4.239	0.001
	Experimental	9.86	10	6	12	1.44	54.26			10.88	11	7	12	0.98	62.43		
Exercise-activity modification	Control	7.36	7	3	12	2.41	56.36	-2.052	0.04	8.24	8.5	4	12	1.94	28.45	-7.865	0.001
	Experimental	6.34	6	3	11	1.78	44.64			11.58	12	9	12	0.84	72.55		
Total BEES score	Control	45.46	45	32	59	7.36	48.53	-0.68	0.496	45.82	46	30	58	6.41	28.84	-7.481	0.001
	Experimental	45.62	47	28	56	6.05	52.47			56.38	57	46	60	3.15	72.16		

^a $p<0.05$ significant; SD: Standard deviation; BEES: Bamason Efficacy Expectation Scale.

Although it has not been presented in the table, when the solutions applied to the problems experienced by the patients and their relatives were examined, it was observed that there was a statistically significant difference between the groups ($p < 0.05$); with the experimental group solving more problems than the control group.

Moreover, 22% and 32% from the control and experimental groups, respectively, made an unplanned visit to the hospital within 1 month after discharge. There were no statistically significant differences between the 2 groups with regard to unplanned visits to the hospital ($p > 0.05$) since only 9.09% (1 participant) and 6.25% (1 participant) from the control and experimental groups, respectively, were advised to stay in hospital.

The number of participants from the experimental group who called to get information on in the following topics was as follows: Anti-embolism socks (5); pain management (3); sleep/rest (3); activity/exercise (2); diet and nutrition (2); medication use (1); anorexia (1); wound care (1); edema (1); hygienic care (1); and others (1). During the phone calls, nurses offered advice and directions based on the complaints of the patients and their family members. The results of the outcomes were obtained on phone and recorded.

TABLE 2: Patient self-care behavior at home at the end of the first and 4th week after discharge.

Self-care behaviors	1 st week						4 th week							
	Control		Experimental		Total		Control		Experimental		Total		Evaluation	
	n	%	n	%	n	%	n	%	n	%	n	%	Chi-square	p value
Use of salt in meals														
Uses	15	30	1	2	16	16	18	36	0	0	18	18		
Cannot use	22	44	31	62	53	53	16	32	31	62	47	47	23.044	0.001
Sometimes uses	13	26	18	36	31	31	16	32	19	38	35	35		
Exercise/walking situation (5-min warm-up, 15-min walk, 5-min cool-down)														
Performs	31	62	42	84	73	73	20	40	42	84	62	62		
Does not perform	11	22	3	6	14	14	8	16	2	4	10	10	20.549	0.001
Sometimes performs	8	16	5	10	13	13	22	44	6	12	28	28		
Minimum 2-3 days per week 25 minutes of walking per week														
Does	31	62	41	82	72	72	19	38	42	84	61	61		
Does not	11	22	5	10	16	16	16	32	2	4	18	18	23.418	0.001
Sometimes does	8	16	4	8	12	12	15	30	6	12	21	21		
Doing work that requires physical movement														
Performs activities of daily living by himself or herself (e.g., going to the toilet, eating, dressing, and walking).	28	56	41	82	69	69	37	74	47	94	84	84	Fisher's	0.002
Performs all activities of daily living with support.	10	20	5	10	15	15	3	6	3	6	6	6	exact test	
Performs some activities of daily living with support (e.g., getting out of bed and dressing), and performs others on his or her own.	12	24	4	8	16	16	10	20	0	0	10	10		

p<0.05 significant.

TABLE 3: Problems experienced by patients at the end of the first and 4th week after discharge.

Problems	1 st week						4 th week						Evaluation Chi-square p value	
	Control		Experimental		Total		Control		Experimental		Total			
	n	%	n	%	n	%	n	%	n	%	n	%		
Chest pain	Occurred	33	66	24	48	57	57	52	11	22	37	37	9.653	0.002
	Not occurred	17	34	26	52	43	43	48	39	78	63	63		
Leg pain	Occurred	13	26	5	10	18	18	28	2	4	16	16	9.003	0.003
	Not occurred	37	74	45	90	82	82	72	48	96	84	84		
Muscle pain	Occurred	15	30	6	12	21	21	26	1	2	14	14	10.05	0.002
	Not occurred	35	70	44	88	79	79	74	49	98	86	86		
Surgery area pain	Occurred	19	38	9	18	28	28	38	3	6	22	22	13.112	0.001
	Not occurred	31	62	41	82	72	72	62	47	94	78	78		
Surgery area edema	Occurred	8	16	4	8	12	12	26	4	8	17	17	4.536	0.033
	Not occurred	42	84	46	92	88	88	74	46	92	83	83		
Constipation	Occurred	23	46	8	16	31	31	18	5	10	14	14	0.748	0.387
	Not occurred	27	54	42	84	69	69	82	41	82	86	86		
Debility/fatigue	Occurred	38	76	22	44	60	60	68	11	22	45	45	21.374	0.001
	Not occurred	12	24	28	56	40	40	32	39	78	55	55		
Insomnia	Occurred	36	72	22	44	58	58	56	14	28	42	42	8.046	0.005
	Not occurred	14	28	28	56	42	42	44	36	72	58	58		

p<0.05 significant.

DISCUSSION

It was observed that they had higher self-efficacy scores at the end of the 4th week after discharge compared with the control group. Individuals tend to make attempts where they feel they are most competent, suggesting that self-efficacy beliefs are linked to the preferences of individuals. Previous studies have found that training given to patients and their families increased their self-care abilities and self-efficacy.^{7,27,28} Comprehensive discharge training along with training materials and counseling services provided by nurses are important for patients who have undergone CABG since it enables them to perform self-care during the post-discharge period, make positive changes in their lives, and prevent problems that may emerge.²⁰⁻²² In this study, it was found that the experimental group performed more desired care behaviors at home during the post-operative period and that their ability levels to perform activities requiring physical movement on an individual basis increased from the first to the 4th week after discharge, which was significantly higher than that of the control group. In several studies, discharge training and counseling services given to patients who had undergone cardiac surgery increased their functional independence and self-care levels and positively affected their behaviors.^{20,28,29} In another study, self-efficacy and health behavior scores of participants in the experimental group who were given discharge training were found to be higher at 4 weeks after discharge, as compared with the control group.³⁰

Individuals who undergo CABG might experience many problems after discharge.¹⁻³ In this study, it was observed that both the control and experimental group participants experienced problems such as debility/fatigue, insomnia, chest pain, back pain, constipation, and edema in the legs at the end of the first and 4th week after discharge (although their percentages decreased) and that the control group experienced these problems more than the experimental group. Similar to our study, several other studies have observed that patients who had undergone CABG experienced fatigue, insomnia, chest pain, back pain, constipation, edema, and wound site problems in the post-operative period.^{19,31-33} It is, therefore, believed

that discharge training together with a comprehensive discharge training booklet and counseling services enabled the experimental group's participants to manage and cope with problems more effectively, which contributed to less problems and positively affected problem solving among them and their families.

Individuals with high levels of self-efficacy tend to resolve the problems they encounter by using appropriate coping methods and by adapting well to the situations and conditions they face. Other studies have found that problem-solving skills were better in experimental groups that had been provided training, as compared with control groups.^{18,34}

In this study, although the control group encountered more problems at the end of the first and 4th week after discharge, the experimental group had made more unplanned visits to the hospital within 1 month of discharge. Individuals with low self-efficacy due to complaints of cardiovascular diseases may have more difficulty visiting the hospital for a diagnosis or follow-up and avoid taking responsibilities for coping with the disease.^{11,35} It should be taken into account that patients in the experimental group who had high self-efficacy might have been more aware of their problems and may have made more visits to the hospital to find solutions.

STRENGTHS AND LIMITATION

The strength of this study is the creation of a discharge training booklet, the content of which has been prepared with a systematic approach, its suitability, reliability and information quality have been evaluated by experts and published. The development discharge training booklet was used by nurses in the clinic for patient training. It is thought that the discharge education given with this booklet will increase the quality of nursing care as it is effective in increasing the self-efficacy level of individuals, positively affecting their care behaviors, and reducing the problems experienced after discharge.

The limitation of this study is the inability to perform a randomization. Patients who will undergo CABG surgery are usually admitted to the adult cardiovascular surgery service one or 2 days before. After the surgery, patients are sent to the adult cardiovascular surgery service if no occurrence of com-

plications after staying in the intensive care unit for about three days. Patients who are followed up in the service for an average of 3 days are discharged later. Since the patients were able to communicate with each other while accessing services at the hospital and because the trained patients who were discharged could be readmitted to the same clinic in case of complications, the first 50 participants were assigned to the control group. To prevent any communication, the remaining 50 participants were subsequently assigned to the experimental group.

CONCLUSION

This study found that discharge training given to the experimental group, which begins while they are in the hospital and continues through telephone counseling services after discharge, increases their self-efficacy levels. Moreover, increased self-efficacy is accomplished by improving patients' self-confidence, which positively affects care behaviors at home after discharge.

In line with these findings;

- Nurses' evaluation of general and situation-specific self-efficacy perceptions of individuals who will undergo CABG surgery,

- Continuing telephone counseling services to increase self-care behaviors and reduce the problems experienced by individuals after discharge training given to individuals who have undergone CABG surgery,

- The situations that cause repeated admission to the hospital should be examined, and these issues should be included more comprehensively in patient training, and patient training materials should be developed in this direction,

- It is recommended to carry out studies in which other methods are used together with training materials to improve the self-efficacy of individuals.

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Conflict of Interest

No conflicts of interest between the authors and / or family members of the scientific and medical committee members or members of the potential conflicts of interest, counseling, expertise, working conditions, share holding and similar situations in any firm.

Authorship Contributions

Idea/Concept: Sevcan Avcı Işık, Süreyya Karaöz; **Design:** Sevcan Avcı Işık, Süreyya Karaöz; **Control/Supervision:** Süreyya Karaöz; **Data Collection and/or Processing:** Sevcan Avcı Işık; **Analysis and/or Interpretation:** Sevcan Avcı Işık, Süreyya Karaöz; **Literature Review:** Sevcan Avcı Işık, Süreyya Karaöz; **Writing the Article:** Sevcan Avcı Işık, Süreyya Karaöz; **Critical Review:** Süreyya Karaöz; **References and Fundings:** Sevcan Avcı Işık; **Materials:** Sevcan Avcı Işık.

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