

Evaluation of Self-Efficacy and Satisfaction with Post-Discharge Tele-Health Monitoring of Patients Undergoing Coronary Artery Bypass Graft Surgery

Koroner Arter Bypass Greft Ameliyatı Geçiren Hastaların Taburculuk Sonrası Tele-Sağlık İzlemi ile Öz Etkililik ve Memnuniyet Durumunun Değerlendirilmesi

ABSTRACT

Objective: This study aimed to evaluate the self-efficacy and satisfaction with post-discharge tele-health follow-up of patients after coronary artery bypass graft (CABG) surgery.

Methods: This descriptive, cross-sectional study included a sample of 102 patients who underwent CABG surgery in the cardiovascular surgery clinic of a university hospital between July 2022 and April 2023. Data were collected using a personal information form, 15th-day and 30th-day patient control forms, and the Cardiac Surgery Version of the Barnason Efficacy Expectation Scale (BEES).

Results: The mean age of the patients was 63.97 ± 9.75 years, and 75.7% were male. In terms of disease management, 95.1% had a dependent, 96.1% restricted visitors, 85.4% adhered to nutritional recommendations, 85.4% engaged in indoor and outdoor walks, 97.1% took their medication appropriately at home, 99% had their stitches removed on time, and all were satisfied with the tele-health service. There was a significant decrease in behaviors such as sleeping on the back, using the chest corset, wearing compression stockings before getting out of bed, and using the triflo ball from the 15th to the 30th day after surgery (P < 0.05). Patients demonstrated moderate self-efficacy levels, and all were satisfied with the tele-health service.

Conclusion: The study revealed two main findings: patients who underwent CABG surgery had moderate self-efficacy and were satisfied with post-discharge tele-health follow-up. Therefore, it is recommended to increase the frequency of tele-health follow-ups by nurses after discharge and to place a greater emphasis on education to improve patients' self-efficacy.

Keywords: Coronary artery bypass graft, nursing, satisfaction, self-efficacy, tele-health

Öz

Amaç: Bu çalışma koroner arter bypass ameliyatı (KABG) geçiren hastaların taburculuk sonrası tele-sağlık izlemi ile öz etkililik ve memnuniyet durumunun değerlendirilmesi amacıyla yapıldı.





Yöntem: Tanımlayıcı ve kesitsel tipte yapılan bu araştırmanın örneklemini bir üniversite hastanesinin kalp ve damar cerrahisi kliniğinde Temmuz 2022-Nisan 2023 tarihleri arasında KABG ameliyatı geçiren 102 hasta oluşturdu. Verilerin toplanmasında kişisel bilgi formu, 15. gün ve 30. gün hasta kontrol formu ile Barnason Etkililik Beklentisi Ölçeği (BEBÖ)'nin Kardiyak Cerrahi Versiyonu kullanıldı.

Bulgular: Hastaların yaş ortalaması 63,97 ± 9,75 ve %75,7'si erkekti. Hastaların %95,1'inin yanında bakmakla yükümlü olduğu bir kişi olduğu, %96,1'inin ziyaretçi kısıtlaması yaptığı, %85,4'ü diyet önerilerine uyduğu, %85,4'ü iç ve dış mekan yürüyüşleri yaptığı, %97,1'i evde ilaçlarını uygun şekilde aldığı, %99'unun dikişleri belirtilen zamanda aldırıldığı ve tamamının tele-sağlık hizmeti tarafından sağlanan aramalardan memnun olduğu bulundu. Hastalarda KABG ameliyatı sonrası sırt üstü uyuma, göğüs korsesini kullanma, yataktan kalmadan önce varis çorabını giyme ve triflo topunu kullanımı 15. günden 30. güne geldiğinde anlamlı olarak azaldığı bulundu (P < 0,05). Çalışmaya alınan hastaların öz etkililik düzeylerinin orta düzeyde olduğu ve hastaların tamamının tele sağlık hizmeti ile aranmaktan memnun olduğu belirlendi.

Sonuç: Elde edilen veriler sonucunda KABG ameliyatı geçiren hastaların taburculuk sonrası öz etkililiğin yetersiz olduğu ve tele-sağlık ile izlemenden memnun oldukları tespit edildi. Bu nedenle hemşirelerin taburculuk sonrası tele sağlık izlem sayısının artırılarak, hastaların öz etkililiklerini geliştiren bilgilere ağırlık verilmesi önerilebilir.

Anahtar Kelimeler: Koroner arter bypass greft, hemşirelik, memnuniyet, öz etkililik, tele-sağlık

ORIGINAL ARTICLE

Ebru Diğrak¹ 
Adile Savsar¹ 
Filiz Ögce Aktaş¹ 
Müge Aygüler² 

¹ Department of Nursing, Faculty of Health Sciences, Izmir University of Economics, Izmir, Türkiye
² Izmir University of Economics, Medical Point Hospital, Izmir, Türkiye

Corresponding author:

Ebru Diğrak
✉ ebru.digrak@ieu.edu.tr

Received: February 12, 2024

Accepted: June 12, 2024

Cite this article as: Diğrak E, Savsar A, Ögce Aktaş F, Aygüler M. Evaluation of self-efficacy and satisfaction with post-discharge tele-health monitoring of patients undergoing coronary artery bypass graft surgery. *Turk J Cardiovasc Nurs* 2024;15(38):156-162.

DOI: 10.5543/khd.2024.34366



Copyright©Author(s) - Available online at khd.tkd.org.tr.
Content of this journal is licensed under a Creative Commons Attribution-NonCommercial 4.0 International License.

Introduction

Non-communicable diseases represent a major public health issue globally and within our country, leading to the highest number of deaths and disabilities. These diseases negatively impact quality of life and contribute to substantial healthcare expenditures. Cardiovascular diseases rank first among non-communicable diseases, accounting for an estimated 17.9 million deaths worldwide each year.^{1,2} Among cardiovascular diseases, coronary artery disease (CAD) is the leading cause of death, responsible for 7.4 million deaths annually.³ In Türkiye, the mortality rate related to cardiovascular disease in 2021 was 33.4%, with 23.3% of that figure attributed to CAD.⁴

Coronary Artery Bypass Graft (CABG) surgery, one of the treatment methods that reduces CAD mortality rates and improves quality of life, is a well-established procedure. It is considered the most common cardiac surgery, with approximately one million procedures performed worldwide each year.^{5,6} However, CABG surgery carries a high risk of complications, as it can negatively affect multiple body systems and sometimes lead to postoperative physical, social, and psychological issues. These complications typically arise within the first six weeks.⁷ If no postoperative complications develop, the patient is usually discharged from the hospital after an average stay of five days.⁸

The short hospitalization period makes it difficult for patients to adapt to their new condition after discharge and the postoperative period.⁹ Additionally, after CABG surgery, patients may experience symptoms such as chest or leg pain, numbness in the arms, dyspnea, arrhythmia, constipation, anxiety, depression, nausea, vomiting, decreased appetite, weight loss, sleep disturbances, fatigue, leg edema, weakness, dizziness, and wound infection.¹⁰ These symptoms often lead patients to neglect self-care practices and reduce their self-efficacy.¹¹ Self-efficacy is defined as adaptation and self-care behaviors, particularly in individuals with chronic diseases, and is a crucial factor in a patient's ability to adapt to the disease.¹² Therefore, it is essential for patients to receive accurate and reliable information before discharge, to improve their self-efficacy levels, ensure follow-up, prevent potential complications after surgery, and manage symptoms effectively.

Tele-health applications have become more common in recent years due to advances in technology and the costs associated with long hospital stays. Tele-health involves the sharing of health-related services between individuals, patients, and healthcare personnel using communication technologies.¹³ Tele-health follow-ups are employed to address patients' physical, psychological, and social needs in postoperative home

care, provide necessary information, improve quality of life, reduce anxiety for both patients and their relatives, decrease the number of visits to healthcare institutions, and conserve resources.¹⁴ Studies have shown that patients are satisfied with tele-health follow-ups after surgery, and that tele-health follow-ups increase treatment compliance, enhance quality of life, and improve psychosocial conditions.¹⁵⁻¹⁷ Accordingly, post-discharge tele-health follow-up for patients who have undergone CABG surgery is recommended to monitor the recovery process and provide better information. This approach can contribute to improved treatment compliance, enhanced quality of life, increased self-efficacy, and reduced complications. The aim of this study is to evaluate the self-efficacy and satisfaction levels of patients who underwent CABG surgery with post-discharge tele-health follow-up.

Methods

Study Design and Sample

This descriptive, cross-sectional study was conducted between July 2022 and April 2023 at the cardiovascular surgery clinic of a university hospital in Izmir, a city in western Türkiye. The sample size was calculated to be 82 patients, with a medium effect size (Effect size $d=0.5$), 80% power, 95% confidence interval, and a 0.05 margin of error, based on correlation analysis using the G*Power 3.1.9.7 program.¹⁸ A total of 102 patients who met the inclusion criteria were included in the study sample. The inclusion criteria were: being an inpatient who underwent CABG surgery in the cardiovascular surgery clinic, being over 18 years of age, being literate in Turkish, and having no communication or mental difficulties.

Data Collection Instruments

The data were collected using a descriptive questionnaire, a 15th-day patient control form, a 30th-day patient control form, and the Barnason Efficacy Expectancy Scale Cardiac Surgery Version.

Descriptive Questionnaire

The descriptive questionnaire consisted of nine questions covering age, gender, marital status, education level, employment status, place of residence, presence of chronic disease, and smoking and alcohol use. The questionnaire was administered to patients preoperatively during hospitalization after obtaining their consent.

15th-Day Patient Control Form

The form, prepared by the researchers, consists of 14 questions addressing the presence of a dependent, restriction of visitors, timely removal of stitches, adherence to nutritional recommendations, walking inside and outside the home, compliance with medication recommendations, attending postoperative check-ups, awareness of the control examination date, level of satisfaction with tele-health, presence of redness and discharge at the wound site, sleeping on the back, use of a chest corset, wearing anti-embolic socks before getting out of bed, and the frequency of breathing exercises with a triflo ball. The questionnaire was administered to patients on the 15th postoperative day.

30th-Day Patient Control Form

The form, created by the researchers, consisted of five questions focusing on the presence of redness and discharge

MAIN POINTS

- Patients who underwent CABG surgery were satisfied with post-discharge tele-health monitoring.
- There was a decrease in patients' adherence to lying on the back, using a chest corset, wearing compression stockings before getting out of bed, and using a triflo ball between the 15th and 30th days after surgery.

at the wound site, sleeping on the back, use of a chest corset, wearing compression stockings before getting out of bed, and the frequency of using the triflo ball. The questionnaire was administered to patients on the 30th postoperative day.

Barnason Efficacy Expectancy Scale Cardiac Surgery Version

The Barnason Efficacy Expectancy Scale (BEES) Cardiac Surgery Version was developed by Barnason and colleagues in 2002 to identify risk factors associated with recovery after CABG surgery and assess patients' self-efficacy in adapting their lifestyle.¹⁹ The Turkish validity and reliability of the scale were established by Avcı and Karahan in 2013.²⁰ The Cronbach's alpha reliability coefficient of the scale is 0.83. The scale consists of 15 items across five subscales: physical function, psychosocial function, diet modification, exercise-activity modification, and self-care management. Each item is rated on a 1-4 point Likert scale (1=strongly disagree, 4=strongly agree), with a total score ranging from 15 to 60. A higher score indicates a greater expectation of efficacy in behaviors during the postoperative recovery and rehabilitation process. In this study, the Cronbach's alpha reliability coefficient of the scale was calculated as 0.72. The questionnaire was administered on the 30th postoperative day.

Data Collection

Before data collection, patients scheduled for surgery in the cardiovascular surgery clinic were informed about the purpose of the study, and those who met the inclusion criteria were included. After obtaining written and verbal consent, the patients completed a preoperative descriptive questionnaire. Following discharge, data were collected by the researchers through telephone calls from the hospital on the 15th and 30th postoperative days.

Data Analysis

Statistical analysis was performed using IBM SPSS v.23 (IBM Corp, Armonk, NY, USA). Compliance with normal distribution was assessed using the Kolmogorov-Smirnov test. Descriptive data were presented as numbers, percentages, means, standard deviations, medians, and minimum and maximum values. Categorical variables were compared using the chi-square test. A p-value of less than 0.05 was considered statistically significant throughout.

Ethical Consideration

Ethics committee approval for this study was obtained from the Health Sciences Research Ethics Committee of İzmir University of Economics (Approval Number: 13.30.2.İEÜSB.0.05.05-20-169, Date: 19.07.2022). Written permission was also secured from the institution where the study was conducted. Informed written consent was obtained from all participants. The study adhered to the principles outlined in the Declaration of Helsinki. No artificial intelligence (AI)-assisted technologies were used in the production of the submitted work.

Results

The mean age of the patients who participated was 63.97 ± 9.75 years. Of the participants, 75.7% were male, 96.1% were married, 50.5% were high school graduates, and 40.8% were

Table 1. Distribution of Descriptive Characteristics of Patients

Descriptive characteristics	n	%
Age ($\bar{x} \pm SD$)	63.97 ± 9.75 (Min: 35, Max: 87)	
Gender		
Male	78	75,7
Female	25	24,3
Marital Status		
Married	99	96,1
Single	4	3,9
Education Level		
Illiterate	6	5,8
Primary Education	27	26,2
High School	52	50,5
University or Higher	18	17,5
Occupation Status		
Retired	42	40,8
Housewife	21	24,3
Private Sector Employee	26	21,4
Public Employee	14	13,6
Place of Residence		
Urban Area	19	18,4
Rural Area	84	81,6
Presence of Chronic Disease		
Diabetes	20	19,4
Hypertension	25	24,3
Diabetes + Hypertension	18	17,5
Other*	14	13,6
None	26	25,2
Cigarette Use		
Yes	35	34,0
No	68	66,0
Alcohol Use		
Yes	11	10,7
No	92	89,3

*Other: Chronic Obstructive Pulmonary Disease, Chronic Renal Failure.

retired. Additionally, 81.6% lived in an urban area, 74.8% had a chronic disease, 34% smoked, and 10.7% consumed alcohol (Table 1).

The patients' characteristics regarding postoperative disease management are presented in Table 2. It was found that 95.1% of the patients had a dependent, 96.1% restricted visitors, 85.4% followed nutritional recommendations, and 85.4% took walks both inside and outside the house. Additionally, 97.1% adhered to their medication regimen at home, 99% had their

Table 2. Distribution of Characteristics Regarding Postoperative Disease Management of Patients

Presence of a Companion		
Yes	98	95,1
No	5	4,9
Visitor Restriction		
Yes	99	96,1
No	4	3,9
Timely Removal of Stitches		
Yes	102	99,0
No	1	1,0
Compliance with Nutrition Recommendations		
Yes	88	85,4
No	15	14,6
Walking Inside and Outside the Home		
Yes	88	85,4
No	15	14,6
Adhering to Medication Recommendations		
Yes	100	97,1
No	3	2,9
Postoperative Doctor Examination		
Yes	103	100,0
Knowledge of Next Doctor Examination Date		
Yes	102	99,0
No	1	1,0
Satisfaction with Tele-Health Services		
Yes	103	100,0

stitches removed on time and were aware of the dates of their control examination, and all patients expressed satisfaction with the tele-health service.

According to the findings of the study, when comparing postoperative care behaviors between the 15th and 30th days, there was a significant decrease in the following behaviors: sleeping on the back, using the chest corset, wearing compression stockings before getting out of bed, and using the triflo ball (Table 3).

The total score of the patients was 40.65 ± 5.97. Given that the highest possible score on the scale is 60, this indicates a moderate level of self-efficacy. The highest score was achieved in the self-care management sub-dimension (12.19 ± 1.28), while the lowest score was in the physical function sub-dimension (6.20 ± 2.93) (Table 4).

Discussion

Longer life expectancy and the increasing incidence of cardiovascular diseases with advancing age have contributed to the growing number of elderly patients undergoing cardiac surgery.²¹ Additionally, studies indicate that the majority of

Table 3. Distribution of Characteristics Regarding Postoperative Care of Patients

Characteristics	15 th day		30 th day		Test Value
	n	%	n	%	
Redness and Discharge at the Wound Site					
Yes	4	3,9	6	5,8	$\chi^2 = 0,420$
No	99	96,1	97	94,2	$P = 0,517$
Sleeping on Your Back					
Always	88	85,4	69	67,0	$\chi^2 = 9,667$
Sometimes	15	14,6	34	33,0	$P = 0,002$
Using Your Chest Corset					
Always	89	86,4	69	67,0	$\chi^2 = 10,865$
Sometimes	14	13,6	34	33,0	$P = 0,001$
Wearing Compression Stockings					
Always	86	83,5	71	68,9	$\chi^2 = 6,025$
Sometimes	17	16,5	36	31,1	$P = 0,014$
Triflo Ball Usage					
Regular	91	86,9	80	77,7	$\chi^2 = 4,165$
Sometimes	12	13,1	23	22,3	$P = 0,041$

cardiac surgery patients are male. Similarly, in this study, the mean age of the patients was 63.97 ± 9.75 years, and most were male.²²⁻²⁷ The etiology of cardiovascular diseases often involves chronic conditions such as hypertension and diabetes. In this study, 74.8% of the patients had a chronic disease, which aligns with findings in the literature. Smoking and alcohol consumption are also known risk factors for coronary artery diseases.^{28,29} In this study, 34% of the patients smoked and 10.7% consumed alcohol. Ampatzidou et al²⁹ examined whether CABG surgery serves as a motivator for smoking cessation and found that quitting smoking is challenging for patients. Therefore, it is likely that the patients in this study also face difficulties in quitting smoking and alcohol.

In this study, it was found that at least 85% of the patients restricted visitors, followed dietary recommendations, walked inside and outside the home, took their medication

Table 4. Descriptive Statistics of BEES Cardiac Surgery Version and Subscales

BEES and subscales	X ± SD	Min-Max	Cronbach's Alpha
Physical function	6.20 ± 2.93	3-12	0.668
Self-care management	12.19 ± 1.28	4-16	0.766
Diet modification	5.93 ± 0.67	2-8	0.790
Psychosocial function	7.32 ± 1.79	3-12	0.691
Exercise-activity modification	8.98 ± 1.06	3-12	0.756
Total BEES cardiac surgery version	40.65 ± 5.97	18-60	0.722

appropriately at home, had their stitches removed on time, and were aware of the follow-up examination dates. Given these high rates of compliance, it is somewhat surprising that the patients' self-efficacy levels were only moderate. Nearly all patients had a dependent individual, and this responsibility may explain their readiness to engage in health-promoting behaviors such as visitor restriction, proper nutrition, and walking.³⁰ Cardiac surgery is one of the most challenging procedures, requiring patients to adapt to physical, emotional, and social changes. Self-efficacy is an important indicator of a patient's ability to cope with these changes during the cardiac surgery rehabilitation process.³¹ Self-efficacy refers to the individual's perception of their ability to adapt to necessary health behavior changes, including physical activity. Similarly, another study also reported moderate levels of self-efficacy among patients.²³ However, findings vary, with some studies reporting lower self-efficacy levels among cardiac surgery patients,^{11,32} while others report higher levels.^{22,33,34} For instance, the self-efficacy level in this study was lower than that found in the study validating the Turkish version of the scale (47.26 ± 7.58).³³ This difference may be due to the fact that patients in this study were contacted during the early recovery process, specifically on the 15th and 30th days after discharge.

In this study, the lowest subscale score on the self-efficacy scale was in Physical Function, while the highest score was in the Self-Care Management subscale, similar to findings by Eşlik and Çetinkaya.²² Kaya and Dal Yılmaz²⁵ found that patients who received home care education and counseling services after discharge had better self-care outcomes. In this study, calling patients on the 15th day may have contributed to improving their self-care skills. Additionally, as noted earlier, the majority of patients had dependent relatives, which may have had a positive influence on their self-care practices. Patients with strong self-care abilities and an effective coping and adaptation process are better equipped to manage their health. Nurses should play a guiding role in helping patients take responsibility for their health by providing discharge education and telephone counseling, ensuring continued support for recovery.^{25,32}

Despite the high scores in the Self-Care Management subscale, this study found a significant decline between the 15th and 30th days in behaviors such as sleeping on their backs, using the chest corset, wearing compression stockings before getting out of bed, and using the triflo ball. After cardiac surgery, patients are required to make lifestyle changes to effectively manage the recovery process. With the introduction of early recovery protocols, hospital stays have shortened, and patients are expected to continue lifestyle modifications at home soon after discharge, with support from their families.³⁵ During this period, patients need close follow-up to ensure they are adhering to expected care practices.³⁶ Telephone follow-up after discharge can promote self-care and serve as a reminder of patients' responsibilities, potentially improving their physical, psychological, social, and daily functioning.^{32,35}

Previous studies have shown that mobility issues and the use of compression stockings are among the most common problems

faced by patients at home.²⁵ The fact that many patients in this study already had chronic diseases may have increased their overall disease burden.³⁷ This increased burden may have made it more difficult for patients to maintain behaviors such as sleeping on their backs, using the chest corset, wearing compression stockings before getting out of bed, and using the triflo ball, leading to a decline in adherence by the 30th day.

CABG involves complications that require long-term follow-up and nursing care. If not managed properly, these complications can lower the quality of life and increase the likelihood of postoperative complications.¹⁶ A systematic review suggested that patients with coronary artery disease should receive education, support, and continuous home follow-up after discharge. Continuous follow-up has been shown to facilitate lifestyle changes, reduce risk factors, and improve mental health, self-efficacy, and self-care capacity.³⁸ Cardiac surgery patients often believe that the specialized nursing services they receive in the hospital will end upon discharge.¹¹ However, the literature recommends telephone counseling as a means of improving follow-up after discharge.^{25,32} Studies indicate that discharge education and counseling services improve the quality of life for patients who undergo CABG surgery.³⁹ In this study, all patients expressed satisfaction with the tele-health service calls, a finding that aligns with similar levels of satisfaction reported in other studies.^{17,36}

Limitations

This study has some limitations. First, as it is cross-sectional, establishing a true cause-and-effect relationship is not possible. Additionally, the study was limited to patients who underwent surgery in the cardiovascular surgery clinic of a university hospital in İzmir province, so the results cannot be generalized. Finally, the sample consisted only of volunteer participants, and the data were based on self-reports, which may have influenced the study's outcomes.

Conclusion

The findings of this study provide important implications for clinical nursing practice. The results revealed a decline in adherence to recommended behaviors—such as lying on their backs, using a chest corset, wearing compression stockings before getting out of bed, and using a triflo ball—between the 15th and 30th days after CABG surgery. Additionally, patients reported high satisfaction with tele-health follow-up after discharge, underscoring the importance of such follow-up. Increasing the frequency of tele-health follow-ups and encouraging patients to enhance their self-efficacy during these follow-ups may improve postoperative outcomes. Future research should explore the reasons why patients neglect their health responsibilities after discharge.

Ethics Committee Approval: Ethics committee approval for this study was obtained from the Health Sciences Research Ethics Committee of İzmir University of Economics (Approval Number: 13.30.2.İEÜSB.O.05.05-20-169, Date: 19.07.2022).

Informed Consent: Informed written consent was obtained from all participants.

Peer-review: Externally peer-reviewed.

Author Contributions: Concept – E.D., A.S., F.Ö.A., M.A.; Design – E.D., A.S., F.Ö.A., M.A.; Supervision – E.D., A.S., F.Ö.A., M.A.; Resource – E.D., A.S.; Materials – E.D., A.S.; Data Collection and/or Processing – E.D., A.S., M.A.; Analysis and/or Interpretation – E.D., A.S.; Literature Review – E.D., A.S.; Writing – E.D., A.S., F.Ö.A., M.A.; Critical Review – E.D., A.S.

Use of AI for Writing Assistance: Artificial-assisted technologies were not used in this article.

Declaration of Interest: The authors have no conflicts of interest to declare.

Funding: The authors declared that this study received no financial support.

Etik Komite Onayı: Bu çalışma için etik kurul onayı İzmir Ekonomi Üniversitesi Sağlık Bilimleri Araştırma Etik Kurulu'ndan alınmıştır (Onay Numarası: 13.30.2.İEÜSB.O.05.05-20-169, Tarih: 19.07.2022).

Bilgilendirilmiş Onam: Tüm katılımcılardan bilgilendirilmiş yazılı onam alındı.

Hakem değerlendirmesi: Dış bağımsız.

Yazar Katkıları: Konsept – E.D., A.S., F.Ö.A., M.A.; Tasarım – E.D., A.S., F.Ö.A., M.A.; Denetleme – E.D., A.S., F.Ö.A., M.A.; Kaynak – E.D., A.S.; Malzemeler – E.D., A.S.; Veri Toplanması ve/veya İşleme – E.D., A.S., M.A.; Analiz ve/veya Yorumlama – E.D., A.S.; Literatür Taraması – E.D., A.S.; Yazım – E.D., A.S., F.Ö.A., M.A.; Eleştirel İnceleme – E.D., A.S.

Yazma Yardımı için Yapay Zeka Kullanımı: Bu makalede yapay zeka destekli teknolojiler kullanılmamıştır.

Çıkar Çatışması: Yazarların beyan edecekleri herhangi bir çıkar çatışması yoktur.

Finansal Destek: Yazarlar bu çalışmanın finansal destek almadığını beyan etmişlerdir.

References

- World Health Organization. Cardiovascular diseases (CVDs). 2023. Accessed January 25, 2024. https://www.who.int/health-topics/cardiovascular-diseases/#tab=tab_1.
- Üner S, Balçılar M, Ergüder T. Türkiye Hanehalkı sağlık araştırması: bulaşıcı olmayan Hastalıkların risk Faktörleri Prevalansı 2017 (STEPS). Ankara:2018.
- World Health Organization. Cardiovascular diseases (CVDs). 2021. Accessed September 04, 2023. [https://www.who.int/en/news-room/fact-sheets/detail/cardiovascular-diseases-\(cvds\)](https://www.who.int/en/news-room/fact-sheets/detail/cardiovascular-diseases-(cvds)).
- Turkish Statistical Institute. Ölüm ve ölüm nedeni İstatistikleri 2021. (45715). Accessed June 19, 2023. <https://data.tuik.gov.tr/Bulten/Index?p=Ölüm-ve-Ölüm-Nedeni-İstatistikleri-2021-45715&dil=1>.
- Oshvandi K, Pakrad F, Mohamadi Saleh R, Seif Rabiei MA, Shams A. Post-operative symptoms and complications in patients having undergone coronary artery bypass graft in Hamadan: a descriptive cross-sectional study. *Jundishapur J Chronic Dis Care*. 2020;9(4):e104180. [CrossRef]
- Afflu DK, Seese L, Sultan I, et al. Very early discharge after coronary artery bypass grafting does not affect readmission or survival. *Ann Thorac Surg*. 2021;111(3):906-913. [CrossRef]
- Aydın A, Gürsoy A. The care needs and care dependency of CABG patients after hospital discharge. *Hemşirelikte Eğitim Araştırma Derg*. 2019;16(1):8-14. [CrossRef]
- Halm MA. Specific needs, concerns, strategies and advice of caregivers after coronary artery bypass surgery. *Heart Lung*. 2016;45(5):416-422. [CrossRef]
- Fenske RF. Validating effective interventions in patient/family education using tablet computers. *J Hosp Librariansh*. 2020;20(1):38-55. [CrossRef]
- Tuna A, Emre Ö. The effect of tele-nursing to care results after discharged to patient with coronary arter bypass graft. *JOPEHS*. 2020;2(1):44-53.
- Eghbali T, Tirgari B, Dehghani Z, Forouzi MA. Planned discharge program effectiveness on cardiac self-efficacy and hope in patients undergoing coronary artery bypass graft surgery: a quasi-experimental study. *Proc Singapore Healthc*. 2022;31. [CrossRef]
- Bandura A. Self-efficacy: toward a unifying theory of behavioral change. *Psychol Rev*. 1977;84(2):191-215. [CrossRef]
- Aston G. TELEHEALTH reshaping your world and your patients'. *Hosp Health Netw*. 2015;89(3):22-26.
- Chen LM, Norton EC, Banerjee M, Regenbogen SE, Cain-Nielsen AH, Birkmeyer JD. Spending on care after surgery driven by choice of care settings instead of intensity of services. *Health Aff (Millwood)*. 2017;36(1):83-90. [CrossRef]
- Yu M, Chair SY, Chan CW, Choi KC. A health education booklet and telephone follow-ups can improve medication adherence, health-related quality of life, and psychological status of patients with heart failure. *Heart Lung*. 2015;44(5):400-407. [CrossRef]
- Bikmoradi A, Masmouei B, Ghomeisi M, Roshanaei G. Impact of tele-nursing on adherence to treatment plan in discharged patients after coronary artery bypass graft surgery: a quasi-experimental study in Iran. *Int J Med Inform*. 2016;86:43-48. [CrossRef]
- Bikmoradi A, Masmouei B, Ghomeisi M, Roshanaei G, Masiello I. Impact of telephone counseling on the quality of life of patients discharged after coronary artery bypass grafts. *Patient Educ Couns*. 2017;100(12):2290-2296. [CrossRef]
- Faul F, Erdfelder E, Lang AG, Buchner A. G*Power 3: a flexible statistical power analysis program for the social, behavioral, and biomedical sciences. *Behav Res Methods*. 2007;39(2):175-191. [CrossRef]
- Barnason S, Zimmerman L, Atwood J, Nieveen J, Schmaderer M. Development of a self-efficacy instrument for coronary artery bypass graft patients. *J Nurs Meas*. 2002;10(2):123-133. [CrossRef]
- Avcı Işık S, Karahan A. The reliability and validity of Barnason efficacy expectation scale cardiac surgery version for Turkey. *Türk Göğüs Kalp Damar Cerrahisi Derg*. 2013;21(3):691-698. [CrossRef]
- Nicolini F, Agostinelli A, Vezzani A, et al. The evolution of cardiovascular surgery in elderly patient: a review of current options and outcomes. *BioMed Res Int*. 2014;2014:736298. [CrossRef]
- Eşlik M, Çetinkaya A. Self-efficacy Perceptions in coping of the patients' post-coronary artery bypass graft surgery. *Turk J Card Nur*. 2019;10(22):41-49. [CrossRef]
- Kara D, Yılmaz E. Prevalence of Helicobacter pylori infection in children underwent endoscopy. *Firat Univ Sağlık Bilimleri Tıp Derg*. 2020;34(1):55-62.
- Gök F, Yeşilyaprak T. Relationship between the perception of self-efficacy and early post-operative symptoms in patients undergoing coronary artery bypass graft surgery with median sternotomy. *J Appl Sci*. 2022;4:910-921. [CrossRef]
- Kaya U, Dal Yılmaz Ü. Ideal suggestions for discharge training and telephone counseling of patients with coronary artery bypass graft surgery: a randomized controlled and experimental study. *J Korean Med Sci*. 2022;37(35):e269. [CrossRef]
- Gingele AJ, Ramaekers B, Brunner-La Rocca HP, et al. Effects of tailored telemonitoring on functional status and health-related quality of life in patients with heart failure. *Neth Heart J*. 2019;27(11):565-574. [CrossRef]

27. Shea MG, Farris SG, Hutchinson J, Headley S, Schilling P, Pack QR. Effects of exercise testing and cardiac rehabilitation in patients with coronary heart disease on fear and self-efficacy of exercise: a pilot study. *Int J Behav Med.* 2023 Aug 9:1-10. doi: 10.1007/s12529-023-10207-9 [Epub ahead of print]. [\[CrossRef\]](#)
28. Duggan JP, Peters AS, Trachiotis GD, Antevil JL. Epidemiology of coronary artery disease. *Surg Clin North Am.* 2022;102(3):499-516. [\[CrossRef\]](#)
29. Ampatzidou F, Ioannidis R, Drosos O, Mavromanolis C, Vlahou A, Drossos G. Smoking behavior after coronary artery bypass surgery: quit, relapse, continuing. *Ann Card Anaesth.* 2021;24(1):56-61. [\[CrossRef\]](#)
30. Murphy K, Williamson H, Sargeant E, McCarthy M. Why people comply with COVID-19 social distancing restrictions: self-interest or duty? *Aust N Z J Criminol.* 2020;53(4):477-496. [\[CrossRef\]](#)
31. Cybulski M, Cybulski L, Krajewska-Kulak E, Cwalina U. The level of emotion control, anxiety, and self-efficacy in the elderly in Bialystok, Poland. *Clin Interv Aging.* 2017;12:305-314. [\[CrossRef\]](#)
32. Gohari F, Hasanvand S, Gholami M, Heydari H, Baharvand P, Almasian M. Comparison of the effectiveness of home visits and telephone follow-up on the self-efficacy of patients having un-dergone coronary artery bypass graft surgery (CABG) and the burden of their family caregivers: a randomized con-trolled trial. *Invest Educ Enferm.* 2022;40(1):e14. [\[CrossRef\]](#)
33. Avcı S, Karahan A. The reliability and validity of Barnason efficacy expectation scale cardiac surgery version for Turkey. *Turk J Thor Cardiovasc Surg.* 2013;21:691-698. [\[CrossRef\]](#)
34. Çağlar M, Yeşiltepe Oskay Ü, Arıcan E, Akyol E. Relationship between self-efficacy and sexual function after open heart surgery. *Eur J Cardiovasc Nurs.* 2021;20(4):376-382. [\[CrossRef\]](#)
35. Bahramnezhad F, Sanaie N, Jackson AC, Shariati E, Atashzadeh-Shoorideh F. The of effect of partnership-based education on adherence to the treatment plans in open heart surgery. *J Educ Health Promot.* 2021;10:353. [\[CrossRef\]](#)
36. Emre Ö, Tuna A. The effect of tele-nursing to care results after discharged to patient with coronary arter bypass graft. *JOPEHS.* 2021;2(1):44-53.
37. O'Donovan MR, Gapp C, Stein C. Burden of disease studies in the WHO European Region-a mapping exercise. *Eur J Public Health.* 2018;28(4):773-778. [\[CrossRef\]](#)
38. Posadas-Collado G, Membrive-Jiménez MJ, Romero-Béjar JL, et al. Continuity of nursing care in patients with coronary artery disease: a systematic review. *Int J Environ Res Public Health.* 2022;19(5):3000. [\[CrossRef\]](#)
39. Akbari M, Şenol Çelik S. The effects of discharge training and postdischarge counseling on quality of life after coronary artery bypass graft surgery. *Nurs Midwif Stud.* 2018;7(3):105-110. [\[CrossRef\]](#)