

The Care Needs and Care Dependency of Coronary Artery Bypass Graft (CABG) Patients After Hospital Discharge

Hastaneden Eve Uzanan Yolda CABG Hastalarının Bakım Gereksinimleri ve Bakım Bağımlılığı

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ABSTRACT

Aims: This study was undertaken to determine patients' care needs and levels of dependency in the first month after CABG surgery.

Methods: The sample of this descriptive and correlational designed study comprised 107 patients who had undergone CABG surgery. The data were collected using a questionnaire form developed by the researcher. The Mann-Whitney U test, Kruskal-Wallis and one-way analysis of variance, the Kolmogorov-Smirnov test, correlation analysis, and t-test were used for statistical analysis.

Results: The health problems encountered by patients upon returning home after CABG were sleep disorders, pain, respiratory issues, and gastrointestinal system and activity-related problems. Patients needed the most care with sleep problems, chest pain, cough, constipation, and the inability to maintain their sleeping position. Being female was an important variable in terms of the number of health problems that required home care ($p < .0001$) and care dependency ($p = .01$). Patients with gastrointestinal problems needed more help than patients with the other common post-CABG problems ($p = .0001$). We determined that as the problems requiring home care increased, so did care dependency ($p = .009$).

Conclusion: The study results can contribute to improving the post-hospital training and home care services of patients after CABG.

Keywords: Care dependency; care needs; coronary artery bypass graft surgery; discharge; nursing care.

ÖZ

Giriş: KABG ameliyatı geçiren bireylerin taburculuk sonrası erken dönem bakım gereksinimlerini ve bakım bağımlılıklarını belirlemek amacıyla yürütüldü.

Yöntem: Tanımlayıcı ve ilişki arayıcı türde olan araştırma örneklemini KABG ameliyatı olan 107 hasta oluşturdu. Araştırma verileri araştırmacılar tarafından geliştirilen soru formu ile toplandı. Verilerin değerlendirilmesinde; SPSS (Statistical Package for Social Sciences) 20.0 programında Mann Whitney U, Kruskal Wallis Varyans Analizi, tek yönlü varyans analizi, Kolmogorov-smirnov testi, korelasyon ve bağımsız gruplarda iki ortalama arasındaki farkın önemlilik testi kullanıldı.

Bulgular: Evde yaşanan sağlık sorunlarının görülme sıklıklarının; uyku, ağrı, solunum sistemi, gastrointestinal sistem ve aktiviteye ilişkin sorunlar şeklinde sıralandığı belirlendi. Uyuyamama, göğüs ağrısı, öksürük, kabızlık ve uyku sırasında yatak içi pozisyonun korunamamasının hastaların evde en çok bakım gereksinimi duydukları sorunlar olduğu bulundu. Kadın olmanın, evde bakım gerektiren sağlık sorunu sayısı ($p < .0001$) ve bağımlılık için ($p = .01$) önemli bir değişken olduğu bulundu. Gastrointestinal sisteme ilişkin sorun yaşayanların diğer sistemlere ilişkin sorun yaşayanlara göre daha bağımlı oldukları belirlendi ($p = .0001$). Hastaların evde bakım gerektiren sorunları arttıkça bağımlılıklarının da arttığı ($p = .009$) saptandı.

Sonuç: Çalışma sonuçları KABG sonrası hastaların taburculuk eğitimlerinin ve evde bakım hizmetlerinin planlanmasında yol gösterici olabilir.

Anahtar kelimeler: Bakım bağımlılığı; bakım gereksinimi; hemşirelik bakımı; koroner arter bypass greft cerrahisi; taburculuk eğitimi.

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Each year cardiovascular diseases are responsible for seventeen million deaths throughout the world and 50% of deaths in Europe.⁽¹⁾ According to the TEKHARF (Turkish Adult Risk Factor) study by the Turkish Society of Cardiology, which was conducted over twenty-one years, 42.6% of all deaths were caused by cardiovascular diseases (CVD).⁽²⁾ One of the World Health Organization's 2020 objectives is to decrease the cardiovascular disease death rate by 40%.⁽³⁾ In order to reach these objectives, patients need information to change dietary habits, restrict some of their physical activities, quit smoking, avoid activities and situations which create stress, and take their medications regularly.⁽⁴⁾

CABG is an accepted surgical treatment for coronary artery diseases (CAD), and it is used to extend and enrich patients' quality of life. However, since many systems are negatively affected by CABG, it is a surgical intervention with a complication rate. Despite the advanced technology, the morbidity rate is nearly ten deaths per one hundred thousand CABG surgeries, and the post-operative complication rate is over thirty per one hundred thousand.⁽⁵⁾

Nurses are responsible for providing their patients with optimal care at all times. They aim to deliver care which is coordinated with the medical team in a collaborative effort and specifically designed to fit the needs of each patient.⁽⁶⁾ Nursing interventions for patients who will undergo coronary artery bypass graft surgery include preparing patients for surgery, providing care during and after surgery, and giving information and education to patients and family members about home care after hospital discharge.⁽⁷⁾

Although the length of the hospital stay varies depending on patient status and type of surgery, patients are discharged from hospital when they are ready to maintain their care at home.⁽⁶⁾ The average hospital stay throughout the world for patients who do not develop post-surgery complications is seven days.⁽⁸⁾ In Turkey, patients who have had CABG surgery are discharged between four and seven days if their laboratory values and general status are stable, but performing daily activities independently takes nearly six weeks.⁽⁹⁾ In our country, patients are discharged and go back to home with only general post-operative care instructions which are not necessarily suited to their individual medical status or care needs. Consequently, patients try to solve health problems alone or with the help of family members after they leave the hospital. A program which includes planned discharge education and rehabilitation services with supportive staff members can help patients solve any problems which might arise. The Elitoğ and Erkuş study (2010) reported that patients experienced problems during the first week at home after CABG, but these problems decreased by 50% during the fourth week.⁽⁴⁾ In the study of Yılmaz et al. (2010), problems experienced by patients following hospital discharge were incision pain, anxiety, sleep disorders, lack of appetite, edema, angina, depression, and tachycardia. Another study done on problems experienced by patients identified that patients needed healthcare personnel at home because any

problems prolonged the post-surgery recovery process and affected the frequency of returning to hospital.⁽¹⁰⁾

Self-care is defined as all the activities performed by individuals in order to maintain life, health, and wellness.⁽¹¹⁾ Care dependency is defined as "a decrease in the ability of patients to answer self-care needs and as being in need of care to a certain degree depending on dependency level".⁽¹²⁾ Coronary artery bypass graft causes changes in patients' lives, unpredicted ambiguity in outcomes of these changes, inability to resume pre-surgery life styles, a decline in ability to perform self-care, and care dependency. Therefore, it is crucial that patients regain their active lifestyles and independence as soon as possible. Doing so will reduce repeat hospitalization and care costs and would positively impact the country's economy. Developing a post-hospital discharge plan personalized to a patient's needs would not only increase quality of life but also reduce the care burden on a patient's family.

Aims

The current study aimed to determine the care needs and dependency requirements of patients during the first month after CABG surgery and discharge from hospital.

Methods

Participants

This descriptive and correlational study was undertaken at three hospitals in a city of the eastern Black Sea region of Turkey where CABG surgeries were performed. Patients who were over eighteen years old, cognitively intact, able to perform activities of daily living (before CABG surgery), had undergone heart surgery for the first time, and had returned home after surgery were recruited for the study.

All patients (422 patients) who had undergone surgery between June and December 2014 were contacted. Those who had required emergency surgery were excluded from the study (47 patients). Due to a lack of contact information, 44 of 164 patients were not interviewed. Two patients declined interviews and eleven patients passed away during the study period. The study was completed with a total of 107 patients.

Data Collection

Using the hospital surgical records, patients were contacted by phone, informed of the study, and their oral informed consent was obtained. The data regarding duration of anesthesia, duration patients spent connected to the heart-lung machine, and complication status were taken from patient records, while other data were gathered from patients who agreed to participate in the study by answering questions by telephone. The interviews were made on about the 16.1 (± 5.1) day following hospital discharge (min: 8, max: 27) and each patient was contacted once. Interviews lasted on average thirty-five minutes

(min: 25 min., max: 45 min.).

The data were gathered using a three-part questionnaire developed by the researchers. The first part included twenty-seven questions about patients' demographic characteristics, the surgery process, and information about the post-surgery period. The second part had forty-four questions that clustered the problems that patients experienced at home into eight main groups. The third part defined care dependency as "being completely dependent, being partly dependent, being independent" in relation to nine activities according to patients' statements. This part was scored with three different points ranging from zero to two with two points as completely dependent, one point as partly dependent, and zero as independent). The dependency scores obtained from each activity were added and total dependency scores were calculated. According to the scoring system, the lowest score possible was zero, while the highest score was eighteen. Before using the questionnaire forms, the expert opinions of six surgical nurses, two academicians, and four doctorate students were obtained and necessary corrections were made upon their recommendations. After this, the questionnaire forms were tested by interviewing ten patients undergoing CABG surgery, and these patients were excluded from the scope of the study.

Ethical considerations: This study received ethics approval from the Ethics Board for Clinical Studies in the region and official permission from the hospitals. Patients provided oral informed consent.

Data Analysis

The study data were processed using the SPSS (Statistical Package for Social Sciences) version 20.0. Data assessment was conducted using percentages, Mann-Whitney U test, Kruskal-Wallis and one-way analysis of variance (ANOVA), correlation analysis, t-test and the Kolmogorov-Smirnov test to determine whether or not data followed a normal distribution. Results were considered significant at $p < .05$ and confidence interval was set at 95%.

Results

The average age of study participants was 61.8 ± 8.7 (min: 42, max: 82) years; 76.6% were male patients. After surgery, the average hospital stay of patients was 6.4 ± 2.7 (min: 2, max: 21) days.

Table 1 shows the three most frequently encountered problems by patients at home. According to prevalence, patients suffered from sleep disorders (86%), pain (75.7%) and respiratory problems (64.5%). Difficulties falling asleep were experienced by 92.3% of patients. Chest pain was an issue for 55.5% of CABG patients, and back pain was suffered by 43.2% of patients after returning home. The most prevalent respiratory problem experienced by patients was coughing (55.5%). In addition, more than half of the patients complained of gastrointestinal

problems in the form of constipation (55.9%).

Table 1. Distribution of Problems Experienced by Patients at Home

	S	%
Sleep disorders		
Those suffering from sleep problems	92	86.0
Inability to sleep	85	92.3
Frequent wake up	72	78.2
Wake up being/feeling tired	3	3.2
Pain problems		
Those suffering from pain problems	81	75.7
Chest pain	45	55.5
Back pain	35	43.2
Surgery site pain	30	37.0
Respiratory problems		
Those suffering from respiratory problems	69	64.5
Cough	40	57.9
Expectoration	31	44.9
Short of breath	27	39.1
Gastrointestinal system problems		
Those suffering from gastrointestinal problems	68	63.6
Constipation	38	55.9
Lack of appetite	34	50.0
Nausea	19	27.9
Activity problems		
Those suffering from activity problems	53	49.5
Maintaining fixed bed position	26	49.1
Walking	23	43.4
Maintaining respiratory exercises	13	24.5
Adaptation problems		
Those suffering from adaptation problems	40	37.4
Position	15	37.5
Use of compression socks	14	35.0
Medicine treatment	9	22.5
Emotional status		
Those suffering from emotional problems	39	36.4
Irritability	19	48.7
Fear	18	46.1
Anxiety	9	23.0
Problems related to wound healing		
Those suffering from problems related to wound healing	17	15.9
Wound infection	17	100.0

Figure 1 shows the distribution of care dependency of patients according to activities. We found that 80.4% of patients were completely dependent in bathing while 75.7% of the subjects

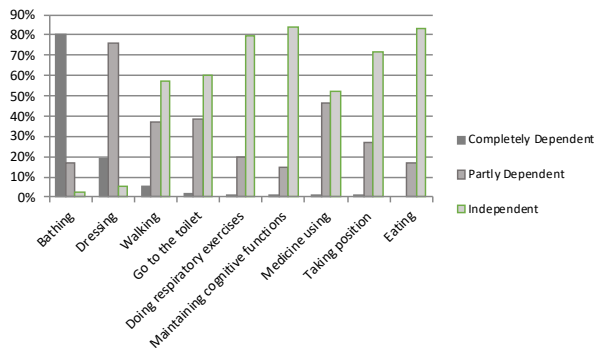


Figure 1. Distribution of care dependence of patients according to activities (n=107)

were partly dependent in dressing. Study results revealed that participants were completely independent in the following activities: maintaining cognitive functions (remembering exercises and communicating with others), 84.1%; eating, 83.2%; doing respiratory exercises, 79.4%; and maintaining their position while sleeping, 72%. Our results also showed that 52.3% of the subjects were completely independent, whereas 46.7% of the subjects were partly dependent.

Our study results determined that women experienced more problems at home than men (11.8 ± 2.5) ($p < .0001$) (Table 2). Except for the gender variable, there were no significant differences in the mean number of problems in terms of other variables (age, hospital discharge information/instruction status, duration of hospitalization, and whether patient's length of stay in hospital was adequate prior to discharge). These independent variables did not significantly affect the number of problems and dependency scores ($p > .05$).

We determined that, compared to men, women were more dependent (6.3 ± 2.8) and the difference between the two groups was statistically significant ($p = .01$). It was identified that age, hospital discharge information/instruction status, duration of hospitalization, and whether a patient's length of stay in hospital prior to discharge was adequate did not statistically affect dependency ($p > .05$).

No statistically significant differences were found between age, duration of hospital stay and length of time since hospital discharge vs. both health problems experienced at home and dependency status ($p > .05$). However, there was a significant correlation between the number of problems that required care and dependency scores, and as the number of the patients' problems increased, so did their dependency status ($r = .253$, $p = .009$).

Dependency status of patients was evaluated in terms of the various problems they experienced at home (Table 3). It was found that patients with gastrointestinal system problems (5.7 ± 2.6) and respiratory system problems (5.4 ± 2.7) were more dependent than those without these problems. The

Table 2. The Distribution of the Number of the Problems that Required Care at Home and of Mean Care Dependence Scores in Terms of Some Variables

Variables	N	%	Mean number of problems (min.-max.) $\bar{x} \pm SD$	Mean dependence scores (min.-max.) $\bar{x} \pm SD$
Age (year)				
42–57	34	31.8	9.5(5-13) \pm 2.0	4.5(1-10) \pm 2.4
58–67	44	41.1	9.6(5-17) \pm 2.7	4.9(2-11) \pm 2.3
68–82	29	27.1	10.5(6-18) \pm 3.0	6.1(1-11) \pm 2.9
			F= 1.28 $p = .282$	F= 3.08 $p = .05$
Sex				
Women	25	23.4	11.8(6-17) \pm 2.5	6.3(2-11) \pm 2.8
Men	82	76.6	9.2(5-18) \pm 2.3	4.7(1-11) \pm 2.4
			t= 4.59 p < .0001	U= 678.5 p = .01
Status of receiving hospital discharge training				
Those receiving	43	40.2	10.1(5-15) \pm 2.4	5.4(1-11) \pm 2.9
Those not receiving	64	59.8	9.6(5-18) \pm 2.7	4.9(2-11) \pm 2.4
			t= 0.99 $p = .322$	U= 1179.0 $p = .377$
Hospital stay (days)				
2–4	22	20.6	9.9(7-13) \pm 1.9	4.5(2-10) \pm 1.9
5–7	61	57.0	10.1(5-18) \pm 2.8	5.2(1-11) \pm 2.7
8–21	24	22.4	9.1(5-14) \pm 2.6	5.5(2-11) \pm 2.8
			F= 1.29 $p = .28$	KW $\chi^2 = 1.02$ $p = .59$
Post-hospital discharge time (days)				
5–15	15	14.0	9.2 (6-13) \pm 2.2	5.6(2-9) \pm 2.2
16–20	39	36.4	10.1(5-18) \pm 2.9	5.2(2-11) \pm 2.8
21–25	26	24.3	9.9(6-17) \pm 2.6	4.8(1-10) \pm 2.3
26–30	27	25.2	9.7(5-14) \pm 2.2	4.9(1-11) \pm 2.7
			F= 0.5 $p = .68$	KW $\chi^2 = 1.37$ $p = .71$

dependency scores of patients with sleep disorders (5.1 ± 2.6), pain (5.1 ± 2.7), adaptation problems (5.2 ± 2.8), and emotional problems (5.4 ± 2.9) were similar to the patients without these problems. Conversely, dependency scores of patients with problems related to wound healing (5.2 ± 2.5) and activity problems (5.3 ± 2.4) were higher than those without these problems. Additional results showed that patients suffering from gastrointestinal system problems had a higher level of care dependency than those without them ($p = .0001$). As far as other problems experienced at home were concerned, in terms of care dependency, there was no significant difference between patients with or without these problems ($p > .05$).

Table 3. Mean Dependence Scores of Patients According to Type of Problems Experienced at Home

Results	Mean dependence scores $\bar{x} \pm SD$		
	Those experiencing	Those not experiencing	Results of Analyses
Sleep	5.1 (± 2.6)	4.9 (± 2.6)	U= 644.5 p= .680
Pain	5.1 (± 2.7)	5.0 (± 2.3)	U= 1044.0 p= .947
Respiratory system	5.4 (± 2.7)	4.5 (± 2.1)	t= 1.77 p= .78
Gastrointestinal system	5.7 (± 2.6)	4.1 (± 2.2)	U= 840.5 p= .0001*
Activity	4.8 (± 2.7)	5.3 (± 2.4)	U= 1212.0 p= .168
Adaptation	5.2 (± 2.8)	5.0 (± 2.5)	U= 1292.5 p= .757
Emotional status	5.4 (± 2.9)	4.9 (± 2.4)	U= 1225.5 p= .511
Wound healing	4.4 (± 2.7)	5.2 (± 2.5)	U= 610.0 p= .182

*p<.001

Discussion

After patients are discharged from hospital following CABG surgery, they face a long recovery period at home. If patients are released without a comprehensive post-surgery plan, they feel ill-prepared and unable to cope with any problems which might develop. The current study aimed to determine the care needs of patients during their first month spent at home after CABG surgery and to identify their care dependency.

Since nearly all newly-discharged patients will face at least one health issue at home, it is extremely important to provide them with accurate and up-to-date information and training to effectively deal with any issue that arises. Our study results determined that nearly three-fifths of the patients were not provided with training when they were discharged from hospital. Patients who did receive instructions obtained them from nurses. We also found that family members, who would be responsible at home for the care of the patient, were given very inadequate patient care information. The Demirkıran and Uzun study (2012) stated that only about 50% of the patients and 35% of those providing care to patients had received training or instruction.⁽¹³⁾ These findings suggest that patients and caregivers did not receive adequate post-CABG training and education.

This current study also showed that most of the patients suffered from sleep disorders and pain. In addition, more than half of them had respiratory and gastrointestinal problems, and half of them had activity-related problems. The study of Gallagher et al. (DATE?) reported that patients experienced sleep disorders, lack of appetite, and chest and leg pain,

respectively.⁽¹⁴⁾ The Elitoğ and Erkuş study (2010) with patients who had CABG surgery noted that patients had post-hospital discharge problems related to medicine use, pain control, wound care, and activities of daily living.⁽⁴⁾ Results of these studies differed from the results of the current study in terms of problems experienced. Differences may possibly be attributed to the different individual characteristics of the sample.

Most of the studies that examined patients' problems after CABG indicated sleep disorders as the most frequently seen problem.^(10,14,15) The current study identified that sleep disorders, inability to fall asleep, and waking often at night were the most frequently seen problems at home. The study of Direk and Şenol (2012) also pointed out that all of the patients experienced sleep disorders.⁽¹⁵⁾ Status of sleep disorders in these studies was supported by these studies as the most frequently seen problem among CABG patients.

As reported in the Lahtinen et al. study (2006), after sleep disorders, the most commonly encountered problem was pain.⁽¹⁶⁾ This current study found that patients experienced most of their pain in the chest, back, and surgery site. The study by Sethares et al.⁽¹⁷⁾ (DATE?)_discovered that CABG patients suffered from pain mostly during sleep, and their cough and pain decreased after twelve weeks following surgery. Back pain was reported by 54% of the patients in the study of Elitoğ and Erkuş (2010)⁽⁴⁾ and in 8.6% of the patients in the Sidar et al. study (2013).⁽¹⁸⁾ Many earlier studies have shown that most patients suffered from pain but the types of pain were different. Because the data for this study were gathered within six weeks after surgery, it is to be expected that patients would still be experiencing pain, but these results clearly indicate that they should be given a personalized pain-management plan upon hospital discharge.

Our study also determined that three-fifths of the patients had respiratory system problems with cough, expectoration, and shortness of breath. The study of Direk and Şenol (2012)⁽¹⁵⁾ reported that 43.4% of the patients suffered from problems related to the respiratory system. On the other hand, the study of Dal et al. (2012)⁽³⁾ reported that just 15.8% of the patients experienced respiratory problem. The differences in study results may have been caused by individual factors.

Our study results also detected that most of the participants had gastrointestinal problems. The most commonly seen problems were constipation and lack of appetite. The Gallagher study (2004)⁽¹⁴⁾ reported that 35% of patients suffered from lack of appetite. We believe that the surgery setting and anesthesia may cause lack of appetite, and we also know that patients who are on long-term bed rest experience constipation. Other studies done in Turkey also emphasized lack of appetite and constipation, but the prevalence was low.^(3,15)

Dijkstra (2005)⁽¹⁹⁾ defined care dependency as a situation in which patients' self-care ability declines, and they become dependent on others to meet these needs. Inability of patients to maintain self-care at home causes care dependency. Our

study results found that patients became dependent on others in taking showers and dressing. However, we were unable to compare this finding because no studies about care dependency of CABG patients could be found in scientific sources. Furthermore, fewer than half of the patients in our study were found to have problems related to activity, adaptation, emotional status, and wound healing. Participants who experienced activity-related problems had the most difficulty in keeping their position in bed and going on a walk. Other studies in our country demonstrated that most of the patients suffered from activity-related problems.^(10,15)

The current study identified that women had more problems, especially emotional problems, and were more dependent than men after CABG. It can be thought that the physiological problems of women negatively affect their emotional states. It is a normal result that women are more dependent on men than men because of both physiological and emotional problems. In fact, increased dependency is an expected outcome for aging patients dealing with physiological changes in the body.

Additional study results showed that patients with only gastrointestinal problems were more dependent than those who did not have these problems. Women exhibited these problems more often, but other problems did not affect their care dependency.

Limitations of the study

Health problems that patients had at home were explored without using any research-tool; we relied on patient self-reporting. The limitations of the study were that no measurement scales were used to define problems that required care, and the study was conducted in one geographical region. Conducting a study with larger samples and in other geographical regions may produce different outcomes. Our findings and results will contribute to the planning of hospital discharge informational trainings of CABG patients.

Conclusion

This is the first study in our country to examine the care dependency needs of CABG patients. It is crucial for nurses to plan and implement an effective hospital discharge training in order to reduce problems that patients may encounter. In order to ascertain problems early and to maintain continuity of care, patients need accurate, helpful, and up-to-date information upon discharge from hospital. Studies emphasize that home-discharge training by nurses, which can be supplemented with visual aids and emergency telephone numbers, produces positive outcomes in CABG patients who encounter problems while at home. These measures should help increase patient awareness of possible future problems they might face, and the information provides a plan to help decrease patient dependency on others.

Effective hospital discharge plans are an indicator of quality

healthcare. In order to provide the highest quality healthcare possible to patients, our recommendation calls for the development of a discharge plan for CABG patients which would provide patient training using various educational methods and materials. With this goal in mind, we also recommend that similar studies as this one be replicated with more patients in different geographical regions and facilities.

Implications for Practice

- More attention should be given to the hospital discharge informational trainings and at-home care dependency needs of women.
- Dependency levels of patients should be assessed, and hospital discharge training should be planned accordingly and implemented both for patients and their significant others.
- Educational materials should be developed to provide patients with recommendations about possible problems that they may encounter at home.
- Emergency telephone numbers to obtain help in case of problems should be given to patients prior to their discharge from hospital.

REFERENCES

1. World Health Organization. Cardiovascular Diseases. 2015. Available from: <http://www.euro.who.int/en/health-topics/noncommunicable-diseases/cardiovascular-diseases>
2. Onat A, Aydın M, Köroğlu B, Örmek E, Altay S, Çelik E, Karagöz A. TEKHARF 2011 taraması: Ölümler ve uzun vadeli takipte performans. Türk Kardiyoloji Derneği. 2012;40(2):117–121. doi: 10.5543/tkda.2012.01885.
3. Dal Ü, Bulut H, Güler Demir S. Cerrahi girişim sonrası hastaların evde yaşadıkları sorunlar. Bakırköy Tıp Dergisi. 2012;8(1):34–40. doi: 10.5350/BTDMJB201208106.
4. Elitoğ N, Erkuş B. CABG operasyonu geçirmiş olan hastaların taburculuk sonrası en sık yaşadıkları problemlerin tanımlanması. 2010. Available from: http://www.acibademhemsirelik.com/e-dergi/yeni_tasarim/files/Tab_prob_bil_pdf
5. Bakalım T. Açık kalp cerrahisi sonrası sık karşılaşılan komplikasyonlar. In: Duran E, (ed.) Kalp ve damar cerrahisi. İstanbul; 2005. p. 1151–1162.
6. Dressler DK. Management of patient with coronary vascular disorders. In: Smeltzer S, Bare B, Hinkle J, Cheever K. (eds.) Brunner and Suddarth's Textbook of Medical-Surgical Nursing. Wisconsin; 2010. p. 775–779.
7. Pieper B, Sieggren M, Freeland B, et al. Discharge information needs of patients after surgery. Journal of Wound Ostomy & Continence Nursing. 2006;33(3):281–291. Available from: <https://pdfs.semanticscholar.org/b2ac/71dada01432acfa8d6bc4c038858c3e6020.pdf>
8. Poole L, Leigh E, Kidd T, Ronaldson A, Jahangiri M, Steptoe A. The combined association of depression and socioeconomic status with length of post-operative hospital stay following coronary artery bypass graft surgery: Data from a prospective cohort study. Journal of Psychosomatic Research. 2014;76:34–40. doi: 10.1016/j.jpsychores.2013.10.019.
9. Özcan H. Kalp ameliyatı sonrası hemşireler tarafından verilen taburculuk eğitiminin hastalar tarafından kullanılma oranları [master's thesis], Edirne: Trakya Üniversitesi, Sağlık Bilimleri Enstitüsü; 2008.
10. Yılmaz M, Çiftçi S. Açık kalp ameliyatı geçirmiş bireylerin evde bakım gereksinimlerinin belirlenmesinde bir model: Fonksiyonel sağlık örüntüleri. Türk Göğüs Kalp Damar Cerrahisi Dergisi. 2010;18(3):183–189. Available from: http://tgkdc.dergisi.org/uploads/pdf/pdf_TGKDC_1308.pdf

11. Erdil F, Elbaş ÖN. Cerrahi Hastalıkları Hemşireliği. Ankara: Aydoğdu Ofset; 2012. p. 306–328.
12. Demir F. Cerrahi Bakım ve Yaşam Kalitesi Sempozyumu. In: Kalp Damar Cerrahisinde Yaşam Kalitesi. Manisa; 2012:52–59. Available from: <https://drive.google.com/file/d/0BxJbFB3ZdB4hTmFmRS1wRzIMRE0/view>
13. Demirkıran G, Uzun Ö. Koroner arter bypass greft ameliyatı geçiren bireylerin taburculuk sonrası öğrenim gereksinimleri. Ege Üniversitesi Hemşirelik Fakültesi Dergisi. 2012;28(1):1–12. Available from: <http://dergipark.gov.tr/download/issue-file/8830>
14. Gallagher R, McKinley S, Dracup K. Post discharge problems in women recovering from coronary artery bypass graft surgery. Australian Critical Care. 2004;17(4):160–165. doi: 10.1016/S1036-7314(04)80021-3.
15. Direk F, Şenol Çelik S. Postoperative problems experienced by patients undergoing coronary artery bypass graft surgery and their self-care ability after discharge. Türk Göğüs Kalp Damar Cerrahisi Dergisi. 2012;20(3):530–535. doi: 10.5606/tgkdc.dergisi.2012.101.
16. Lahtinen P, Kokki H, Hynynen M. Pain after cardiac surgery: A prospective cohort study of 1-year incidence and intensity. Anesthesiology. 2006;105(4):794–800. Available from: <http://anesthesiology.pubs.asahq.org/article.aspx?articleid=1931287>
17. Sethares AK, Chin E, Costa I. Pain intensity, interference and patient pain management strategies the first 12 weeks after coronary artery bypass graft surgery. Applied Nursing Research. 2013;26(4):174–179. doi: 10.1016/j.apnr.2013.07.005.
18. Sidar A, Dedeli Ö, İşkesen A. Açık kalp cerrahisi öncesi ve sonrası hastaların kaygı ve ağrı distressi: Ağrı düzeyi ile ilişkisinin incelenmesi. Dahili ve Cerrahi Yoğun Bakım Dergisi. 2013;4(1):1–8. Available from: https://www.researchgate.net/profile/Ozden_Dedeli2/publication/279489278_The_Relationship_Between_Anxiety_Pain_Distress_and_Pain_Severity_Before_and_After_Open_Heart_Surgery_in_Patients/links/5593ab0e08ae5af2b0eb965d.pdf
19. Dijkstra A, Tiesinga J, Plantinga L, Veltman G, Dassen W. Diagnostic accuracy of the care dependency scale. Journal of Advanced Nursing. 2005;50(4):410–416. doi: 10.1111/j.1365-2648.2005.03406.x.