

Study to Assess Knowledge of Post Coronary Artery Bypass Graft (CABG) Patients Regarding Preoperative Preparation

By

Neha Joshi

*Dissertation submitted in partial fulfillment of the requirements of the degree
MBA Hospital and Health Management*

Academic year, 2018-2020



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The certificate is awarded to

NEHA JOSHI

In recognition of having successfully completed her Internship project

on

**“A Study To Assess The Knowledge And Perception Of Post CABG
Patients Regarding Pre-Operative Preparation”**

She comes across as a committed, sincere & diligent person
who has a strong drive and zeal for learning.

We wish her all the best for her future
endeavors.

Authorized Signatory

Dr. P. S. Vishnu Vardhan

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CERTIFICATE BY SCHOLAR

This is to certify that the dissertation titled **“A Study to Assess Knowledge of Post Coronary Artery Bypass Graft (CABG) Patients Regarding Preoperative Preparation”** and submitted by **NEHA JOSHI** Enrollment No. 0784 under the supervision of **Dr. Seema Mehta** for award of MBA in Hospital and Health in Health and Hospitals of the University carried out during the period from 10-02-2020 to 10-05-2020 embodies my original work and has not formed the basis for the award of any degree, diploma associate ship, fellowship, titles in this or any other institute or other similar institution of higher learning.

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ABSTRACT

Title: A Study to Assess Knowledge of Post Coronary Artery Bypass Graft (CABG) Patients Regarding Preoperative Preparation.

Background: A common feature of the preoperative preparation for most of the surgical procedures is the preoperative education. Patient education is the essential part of the quality of healthcare. With proper education and awareness of the expectations and goals of a surgery; the patient is empowered with the information to improve his/her outcome. The preoperative knowledge received is generally divided into biophysical and functional dimensions. A study was a descriptive study to assess the knowledge and perception of post Coronary Artery Bypass Graft patients regarding the preoperative preparation.

Methodology: A descriptive cross-sectional study was performed on 75 patients who underwent CABG procedure. The study population included people who are aged 18 and above, underwent CABG surgery and took services of DayToDay organization for one month. Research tool was a structured questionnaire and had sections like demographics, general section, knowledge and perception section. The data was collected from patients through telephonic interviews and later was calculated and analysed using Microsoft Excel.

Result: The study states that 89.3% respondents are male, and 10.7% respondents are female. 50-69 years of age group had the maximum number of respondents. 53.3% of the respondents were graduate and both the employed and unemployed respondents were 33% in the sample respectively. The highest level of knowledge was shown by the age group of 50-69 years with an average knowledge of 90.17. The employed respondents had 97.57% knowledge on biophysical dimension and 100% knowledge on the functional dimension. The retired respondents showed 97.57% knowledge on the biophysical dimension and 98.98% knowledge on the functional dimension. 92% of the respondents were satisfied about the explanation of the surgery in the preoperative information and considered it essential. 8% of the respondents were dissatisfied with the preoperative information provided. 88% of the respondents perceived that they were satisfied with the amount of information provided to them. 12% of the respondents perceived that they were dissatisfied with the amount of information provided in the pre-operative period by the healthcare professional.

Conclusion: Knowledge about the pre-operative information is a powerful predictor of the perception of people who have undergone CABG surgery regarding their illness and the quality of the services they receive. Significant number of patients are aware of the preoperative information and its benefits on the postoperative outcomes. They also believe that this information empowers them. The result of this study shows that there is a need of including a pre-operative teaching module in the DaytoDay application.

Keywords: Preoperative education, CABG patients, Knowledge, Preoperative preparation, Dimension of knowledge

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List of Abbreviations

CABG – Coronary Artery Bypass Graft

Preop – Preoperative

Info- Information

1. ORGANIZATION PROFILE



DaytoDay Health is a care management company focused at providing end to end patient engagement solutions. It is involved in providing step-by-step, tailored care journeys for hospitals to guide the patients throughout the preparation and recovery process.

1.1 Mission

To Become the Gold-Standard in Patient Centered Care.

The mission is to empower patients to live healthier lives by enriching their care. Everything else- WHO we are, HOW we operate, WHAT we prioritize – flows from this challenge.

1.2 What It Does?

It provides end to end holistic support.



Pre-Procedure Care

Patients are guided through all the tests, tasks, information and mental preparation they need to be fully ready for their procedure.



Seamless Registration

Onboarding patients with minimal disruption to hospital workflow and manage care journeys in step with provider- side updates.



Post- Procedure Care

After patients are discharged, guiding them on a daily, step by step basis, with nurses checking in to answer questions and look out for any concerning symptoms.



Psychological Support

Guiding patients through condition specific support modules such as mindfulness and breathing exercises and provide compassionate and open support through our nurse care coaches.



Rehabilitation

When patients need to follow a rehabilitative protocol such as physiotherapy or cardiac rehab, we continue to support them with tools tailored to their care journey needs.



Remote Care

Our treatment specific assessments and symptom monitoring equip caregiving teams to manage patients who have returned to their lives beyond hospital walls.

A STUDY TO ASSESS KNOWLEDGE OF POST CORONARY ARTERY BYEPASS GRAFT (CABG) PATIENTS REGARDING PREOPERATIVE PREPARATION

2. INTRODUCTION

Cardiovascular Diseases are one of the major challenges for public health in the 21st century. The challenges are imposed not only in terms of human suffering but also the harm that is inflicted on the socio-economic development of the nation. Cardiovascular diseases have now become the leading cause of mortality in India. It contributes to the quarter of all mortality in the country.

Ischemic heart disease and stroke are the prime causes and are accountable for >80% of the cardiovascular disease deaths. The Global Burden of Disease study estimate of age-standardized CVD death rate of 272 per 100 000 population in India is higher than the global average of 235 per 100 000 population.

Hospitalization, regardless of any medical condition, is familiar to cause anxiety in patients admitted for surgery. A common feature of the preoperative preparation for most of the surgical procedures is the preoperative education. Patient education is the essential part of the quality of healthcare.

After the surgery, the recovery of the patient depends on both physical and psychological factors. Physical factors comprise the resumption of the heart functions, adequate pain management and the physical activity. These factors are also dependent on the patient's knowledge as well as the ability or will power to leave the hospital. The provision of adequate pre-operative information holds great importance for a shortened length of stay as well as avoidance of readmission to the hospital. (Ljungqvist et al. 2007, Varadhan et al. 2010a).

The need for adequate teaching for CABG patients directly affects the outcome. It is anticipated that this preoperative education will result in beneficial outcomes for the patient. Recent literature demonstrated that the patients who receive preoperative health education shows better postoperative pain control, decreased anxiety, more realistic expectations of surgery and a better understanding of the surgery. It is evident from the research that pre-operative information can lead to better care and faster recovery after the surgery. The pre-operative information should be provided to the patient as soon as the surgery is scheduled because the patient is more likely to absorb the information before hospitalization.

Numerous research studies support the value of pre-operative instructions in reducing both the incidence of post-operative complications and length of stay in hospital. It is important that the patient is aware of what role they should play in their own recovery (Fearon et al. 2005, Varadhan et al. 2010b).

With proper education and awareness of the expectations and goals of a surgery; the patient is empowered with the information to improve his/her outcome.

This study was conducted to assess the knowledge and perception of the post CABG patients related to pre-operative education.

2.1 LITERATURE REVIEW

- A descriptive and comparative study conducted by Sirkku Rankinen on “Expectations and Received Knowledge by Surgical Patients” on 237 patients in 2003 assessed the level of knowledge of the patients on the bio-physiological, functional and social dimensions. Knowledge received by the patients is the key component of quality improvement in patient education. For this study, the knowledge was divided into biophysical dimension, functional dimension, ethical dimension, social dimension and financial dimension. The biophysical dimension included knowledge about illness, symptoms, treatment and complications. Knowledge about individual needs was included under functional dimension. Duties, rights, participation in decision making and confidentiality were the components of ethical dimension. The study suggests that knowledge on issue related to their diagnosis, risk factors, symptoms and the causes and effects of the illness and surgical procedure is expected by most of the patients. It suggests that patient’s knowledge expectations and the knowledge they received were related to age, gender and the level of basic education.
- A descriptive study was conducted by Lissa Montin on “Total Joint Arthroplasty Patient’s Perception of Received Knowledge of Care” on 123 patients in 2010 by structured interviews. The study was related to patient’s perception of knowledge received. The study was carried out on biophysical and functional dimensions. These two dimensions were chosen because the patients expect to receive most of the knowledge on these two dimensions. It suggests that patients perceived that they had most knowledge on biophysical dimension and least on financial dimension.
- A study conducted by Nancy Kruzik on “Benefits of Preoperative Education for Adult Elective Surgery Patients” has shown that pre-operative education can improve patient outcomes and the level of satisfaction with the surgery. It states that pre-operative patient education should start from the surgeon’s office, should continue through pre-admission testing and should be completed at the admission to the hospital. The study suggests the importance of the duration of the preoperative education and the amount of the preoperative education received by the patients. The time spent by the patient with the doctor during the preoperative education gives them confidence.

- A descriptive and qualitative study conducted by Sharon Garretson on “Benefits of Preoperative Programmes” shows that the patients who received preoperative information were benefited with the decreased length of stay, less demand for analgesics after the surgery and increased patient satisfaction. When the patients arrived at the operation theatre; they were not frightened and were aware of what would happen to them. The suggests the benefits of the preoperative education given to the patients in terms of the increased satisfaction of the patients and a reduction in the length of stay at the hospital after the surgery.
- A descriptive study carried out by Suzanne Hughes on “The Effects of Giving Patients Pre-Operative Information” suggests that providing pre-operative information to the patients can reduce their anxiety and improve the outcomes. The information should be provided before the patient is admitted to the hospital. The preoperative education provided to the patients has positive effects on the recovery of the patients. The patients feel more confident after receiving the preoperative education which also helps in faster recovery.

2.3 BACKGROUND OF THE STUDY

DayToDay Health, Bengaluru is an acute care management company. It provides support to the post-surgical patients by guiding them and tracking their health after the surgery. It provides end to end personalized care to the patients in their post-surgical journey with its care team through its care plans. The organization provides its services through its application. Currently, the application has post-surgical modules only. In this study, the knowledge of the patients who have undergone CABG surgery is assessed on the biophysical and functional dimensions. Patients feel empowered and consider it essential to receive preoperative education. Considering the knowledge of the respondents, the results will be used for the inclusion of the preoperative information module in the DayToDay Application.

2.4 RATIONALE

Several studies have shown that increasing patient knowledge regarding diseases and its complications in the pre-operative period has significant benefits regarding better postoperative outcomes and to decreasing complications associated with the disease. Taking this into consideration, the level of knowledge and perception in the sample of post CABG patients is quantified. The study will assess the knowledge of pre-operative education among the post CABG patients. Findings of this study will help the organization in designing the pre-operative information module in the DaytoDay Application to combat the increasing burden of the CABG.

2.5 RESEARCH QUESTION

What is the knowledge level of post CABG patients regarding preoperative preparation?

2.6 OBJECTIVES

- To assess knowledge related to pre-operative preparation among post CABG patients of different socio demographic profile.
- To assess the level of dimensional knowledge among employed and unemployed post CABG patients.

2.7 METHODOLOGY

The study has been conducted on 75 patients of the DaytoDay Health, Bengaluru (Karnataka) who underwent CABG surgery.

2.7.1 STUDY DESIGN – Descriptive cross-sectional study

2.7.2 STUDY POPULATION- Patients undergone CABG

2.7.3 STUDY AREA – DayToDay Health Organization, Bengaluru

2.7.4 SAMPLE SIZE – 75

Inclusion Criteria –

1. Ages above 18 years.
2. Patients undergone CABG
3. Patients who have taken services from DayToDay organization for one month.

Exclusion Criteria –

1. Patients who did not receive the call.
2. Patients who received the call but did not answer the questionnaire.

2.7.5 SAMPLING TECHNIQUE – Non-probability convenience sampling

2.7.6 DURATION OF STUDY – Three months (10-02-2020 to 10-05-2020)

2.7.8 DATA COLLECTION PROCEDURE – Through telephonic interviews

2.7.9 DATA COLLECTION TOOL – Structured questionnaire with a four-point Likert Scale.

The format of Likert Scale was as follows-

1. Strongly disagree
2. Disagree

3. Agree
4. Strongly agree

TYPE OF DATA – Primary data

DATA ANALYSIS – The analysis of data has been done using descriptive statistical methods.

2.8 OPERATIONAL DEFINITIONS

CABG: It is a surgical procedure to restore normal blood flow to an obstructed coronary artery (in heart).

Knowledge: Here knowledge refers to the awareness among the patients regarding pre-operative information about the CABG disease.

2.9 DATA ANALYSIS AND INTERPRETATION

For the purpose of this study, the knowledge has been divided into two dimensions-

- Bio-Physiological Dimension- Illness, symptoms, treatment and complications.
- Functional Dimension- Individual needs, mobility, rest, nutrition and body hygiene.

2.9.1 Characteristics of the Sample

75 patients were interviewed. It included 67 males and 8 females.

Table 2.9.1

CHARACTERISTICS OF THE SAMPLE (n = 75)		
	n	%
SEX		
Female	8	10.7
Male	67	89.3
AGE		
<30	0	0
30-49	4	5.3
50-69	60	80
>70	11	14.7
BASIC EDUCATION		
Not educated	0	0

Primary	11	14.7
Secondary	8	10.7
Senior Secondary	6	8
Graduate	40	53.3
Postgraduate	10	13.3
EMPLOYMENT STATUS		
Employed	33	44
Retired	33	44
Housework	7	9.3
Student	0	0
Unemployed	2	2.7
EMPLOYED IN SOCIAL/HEALTHCARE		
Yes	6	8
No	69	92
CHRONIC ILLNESS		
Yes	42	56
No	33	44
HOSPITAL ADMISSION		
Planned Surgery	66	88
Emergency	9	12
REASON FOR HOSPITAL STAY		
Investigation	27	36
Surgical Procedure	46	61.3
Surgical Treatment on The Ward	2	2.7
Outpatient Check Up	0	0

Table 2.9.1. Characteristics of the Sample

Interpretation- 75 patients were interviewed. The percentage of male respondents was more than the female respondents. Maximum number of the respondents belong to the age group of 50-69 years. 53.3% of the respondents were graduate. Both employed and retired respondents had an equal number in the sample i.e. 33% and 8% of the respondents were employed in social or healthcare sector.

PERCENTAGE OF SAMPLE RECEIVED PREOPERATIVE EDUCATION

Table 2.9.2

Percentage of Sample	
Received Preoperative Education	88%
Did Not Receive Preoperative Education	12%

Table 2.9.2. The table represents the percentage of the sample which received preoperative education.

Interpretation- 88% of the sample received preoperative education and 12% of the sample did not receive it.

PERCENTAGE OF SAMPLE RECEIVED PREOPERATIVE TEACHING MATERIAL

Table 2.9.3

Percentage of Sample	
Received Preoperative Teaching Material	31%
Did Not Receive Preoperative Teaching Material	69%

Table 2.9.3. The table shows the percentage of sample which received preoperative teaching material.

Interpretation- 69% of the respondents received preoperative teaching material in the form of booklets, brochures and pamphlets. 31% of the respondents did not receive any preoperative teaching material.

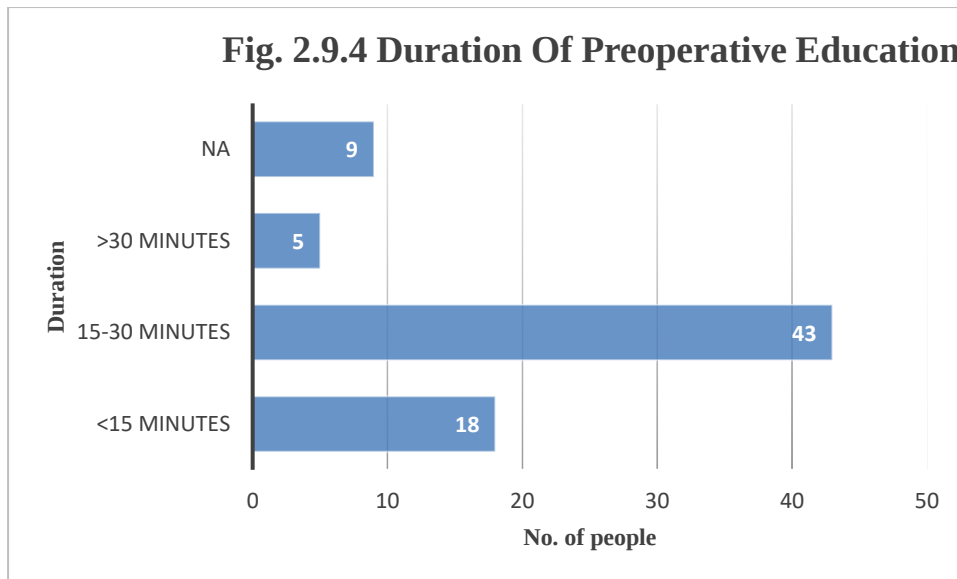


Figure 2.9.4 This figure represents the duration of the pre-operative education.

Interpretation- For 43 respondents, the duration of the preoperative education was in between 15-30 minutes. 18 respondents in the sample received it for less than 15 minutes. 9 respondents in the sample did not receive preoperative education and 5 respondents in the sample received it for more than 30 minutes.

LEVEL OF KNOWLEDGE AMONG DIFFERENT AGE GROUPS

Table 2.9.5

Age Group	Level of Knowledge (in%)
<30	-
30-49	88.88
50-69	90.17
>70	84.84

Table 2.9.5. Percentage of Knowledge Among Different Age Groups.

Interpretation- All the age groups showed a very good level of knowledge. However, the highest level of knowledge was shown by the age group of 50-69 years with an average knowledge of 90.17%.

LEVEL OF DIMENSIONAL KNOWLEDGE AMONG DIFFERENT AGE GROUPS

Table 2.9.6

Dimensions of Knowledge	Level of Knowledge of Age Groups (in%)		
	30-49 Years	50-69 Years	>70 Years
Biophysical	100	98	92
Functional	100	99.44	100

Table 2.9.6. Level of Dimensional Knowledge Among Different Age Groups.

Interpretation- The respondents in the age group of 39-49 years showed 100% knowledge on both biophysical dimension and functional dimension. The respondents in the age group of 50-69 years showed 98% knowledge on biophysical dimension and 99.44% knowledge on functional dimension. The respondents of 70 years and onward showed 92% knowledge on biophysical dimension and 100% knowledge on functional dimension.

The respondents showed higher knowledge on the functional dimension as compared to biophysical dimension.

LEVEL OF DIMENSIONAL KNOWLEDGE AMONG EMPLOYED AND RETIRED RESPONDENTS

Table 2.9.7

Dimensions of Knowledge	Level of Knowledge of Employed & Retired Respondents (in%)	
	Employed	Retired
Biophysical	97.57	97.57
Functional	100	98.98

Table 2.9.7. Level of Dimensional Knowledge Among Employed and Retired Respondents.

Interpretation- The employed respondents had 97.57% knowledge on biophysical dimension and 100% knowledge on the functional dimension. The retired respondents showed 97.57% knowledge on the biophysical dimension and 98.98% knowledge on the functional dimension.

Both employed and retired respondents showed equal knowledge on biophysical dimension but employed respondents had higher knowledge on functional dimension.

LEVEL OF DIMENSIONAL KNOWLEDGE AMONG GRADUATE AND POSTGRADUATE RESPONDENTS

Table 2.9.8

	Level of Knowledge of Postgraduate & Graduate Respondents (in%)	
Dimensions of Knowledge	Postgraduate	Graduate
Biophysical	94	98
Functional	100	100

Table 2.9.8. Level of Dimensional Knowledge Among Graduate and Postgraduate Respondents.

Interpretation- The postgraduate respondents had 94% knowledge on the biophysical dimension and 100% knowledge on the functional dimension. The graduate respondents possessed 98% knowledge on the biophysical dimension and 100% knowledge on the functional dimension.

Both the graduate and postgraduate respondents showed equal knowledge on functional dimension, but the graduate respondents had higher knowledge on the biophysical dimension.

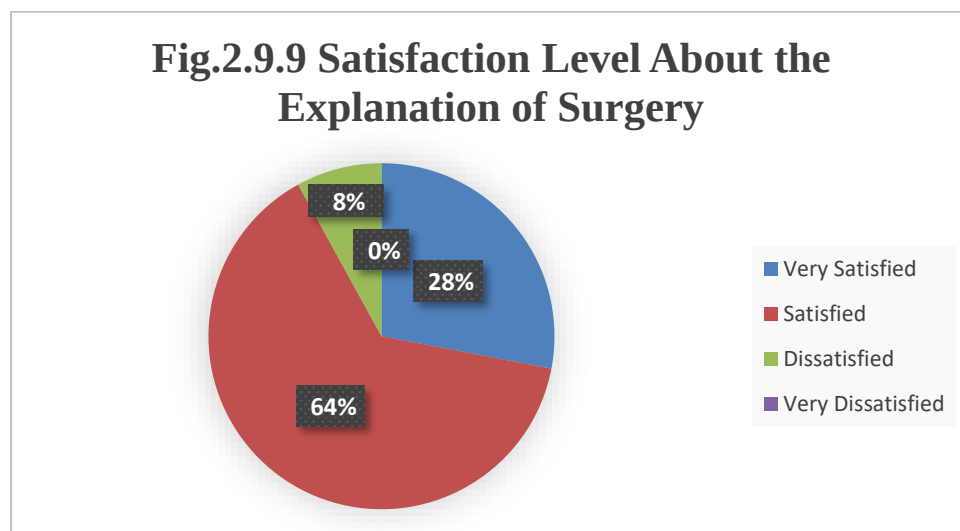


Fig. 2.9.9 The figure represents the satisfaction level of the sample with the explanation of the surgery.

Interpretation- 92% of the respondents were satisfied about the explanation of the surgery in the preoperative information and considered it essential. 8% of the respondents were dissatisfied with the preoperative information provided.

Fig.3 Satisfaction Level With The Amount of Information Provided

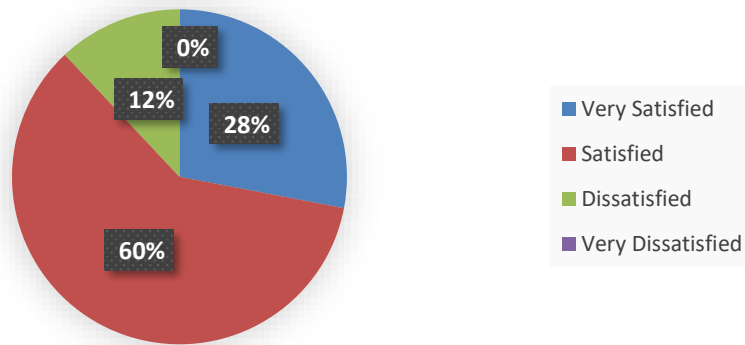


Fig. 3 The figure represents the satisfaction level of the sample with the amount of preoperative information.

Interpretation- 88% of the respondents perceived that they were satisfied with the amount of information provided to them.12% of the respondents perceived that they were dissatisfied with the amount of information provided in the pre-operative period by the healthcare professional.

Fig.3.1 Satisfaction Level With the Explanation About Hospital Stay

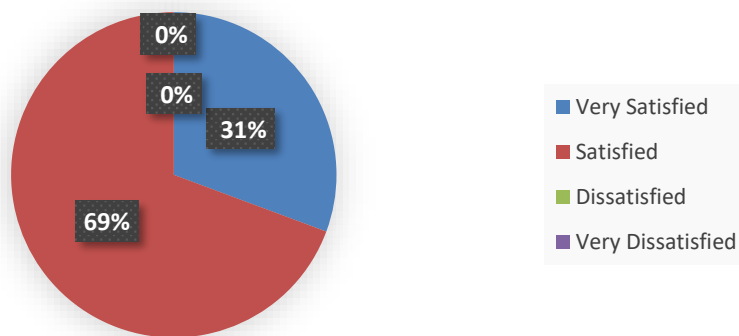


Fig.3.1 The figure represents the satisfaction level of the respondents with the explanation about hospital stay.

Interpretation- 100% of the respondents were satisfied with the explanation about the hospital stay.

Fig. 3.2 Duration Of Preoperative Information Helps in Building Confidence

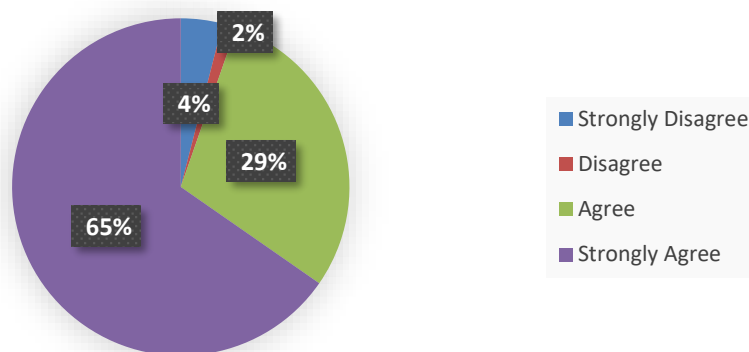


Fig. 3.2 This figure shows the percentage of the sample that agrees with the relation between duration of pre-operative education and the confidence build-up.

Interpretation - 94% of the respondents are of the perception that the amount of time spent in providing the pre-operative information gives them confidence and strength before and after the surgery.

Fig.3.3 Prior Information About Pain Management Helps in Pain Management

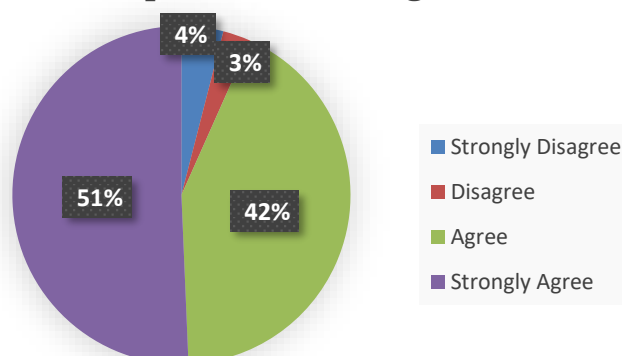


Fig. 3.3 The figure represents the perception of the sample about pain management.

Interpretation- 93% of the respondents perceive that if they had been told about the pain management in the pre-operative period; it would have been effective in managing the pain in the postoperative period and 7% of the respondents did not think so.

Fig.3.4 Reminders for Medications Help in Better Outcomes

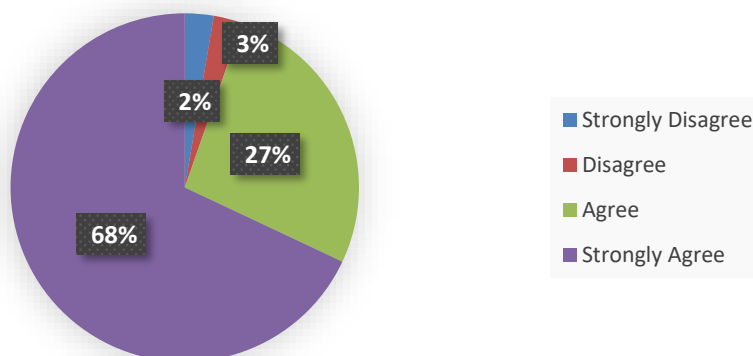


Fig. 3.4 The figure shows the perception of the sample about medication reminders.

Interpretation – 95% of the respondents have the perception that reminders for medications can help in better recovery after the surgery while 5% of the respondents did not perceive the same.

Fig.3.5 Preoperative Information Assist in Surgical Treatment

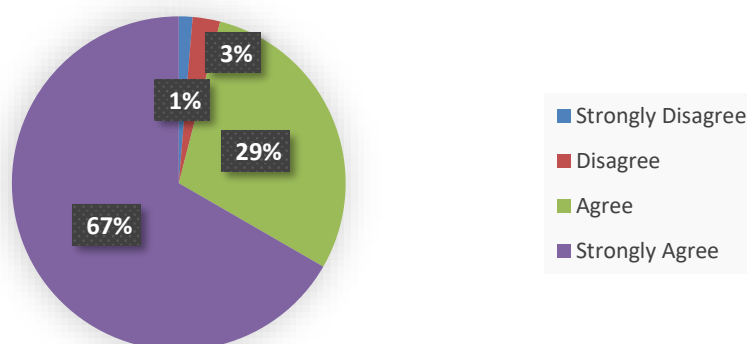


Fig. 3.5 The figure shows the perception of the sample about the pre-operative information and the treatment.

Interpretation - 96% of the respondents believe that the information provided in the pre-operative period assists them in their surgical treatment. 4% of the respondents did not perceive the same.

Perception about being benefited by Inclusion of Preoperative Information Module in the DaytoDay Application

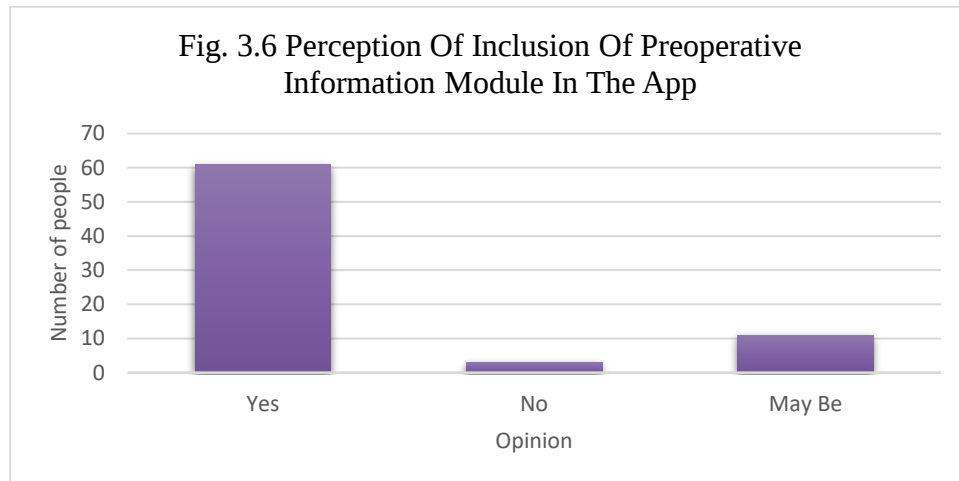


Fig. 3.6 This figure represents the perception of the sample about being benefited by inclusion of preoperative information modules in the application.

Interpretation- 61 respondents in the sample believe that if DaytoDay comes up with a preoperative information module in its application; it would be beneficial for them and their family members. 11 respondents in the sample think it may be beneficial for them.

4. FINDINGS

- 88% of the respondents received preoperative education and 12% of the respondents did not receive it. Though 12% of the respondents did not receive the preoperative education, but it was found that they possessed a good knowledge about the same. The altered knowledge level of this 12% sample might be because of the use of the information available across various platforms like the internet, etc. and the information received by them during their hospital stay.
- 69% of the respondents received preoperative teaching material in the form of booklets, brochures and pamphlets. 31% of the respondents did not receive any preoperative teaching material.
- For 57.3% of the respondents, the duration of the preoperative education was in between 15-30 minutes. 24% of the respondents received it for less than 15 minutes. 12% of the respondents did not receive preoperative education and 6.7% of the respondents received it for more than 30 minutes.

- The highest level of overall knowledge was shown by the age group of 50-69 years with an average knowledge of 90.17%.
- Both employed and retired respondents showed equal knowledge on biophysical dimension but employed respondents had higher knowledge on functional dimension.
- Both the graduate and postgraduate respondents showed equal knowledge on the functional dimension, but the graduate respondents had higher knowledge on the biophysical dimension.
- 81.3% of the respondents believed that if DaytoDay comes up with a pre-operative information module in its application; it would be beneficial for them and their family members. 14.7% of the respondents think it may be beneficial for them.
- 96% of the respondents perceived that the information provided in the pre-operative period assists them in their surgical treatment while 4% of the respondents did not perceive the same.
- 95% of the respondents have the perception that reminders for medications can help in better recovery after the surgery while 5% of the respondents do not perceive the same.
- 93% of the respondents perceived that if they had been told about the pain management in the pre-operative period; it would have been effective in managing the pain in the postoperative period. 7% of the respondents did not perceive the same.
- Majority of the respondents agreed that the incentive spirometry started in the preoperative period is more effective in the post-operative period.

Even though the knowledge was on the higher side; still respondents felt that certain components from the management aspect were missing. The sample perceived that the information provided in the preoperative period about pain management, incentive spirometry and reminders for medications would have been effective in comforting them in the post-operative period.

Perception can be compared with demographic variables in further studies.

5.RECOMMENDATIONS

As it is evident from the research that preoperative education can improve the entire peri-operative care process and potentially influences the post-operative patient outcomes; the knowledge about the same becomes the genesis of the care trajectory for the surgical patient.

Majority of the respondents are aware of the necessary components of preoperative education. But knowledge alone is not important. According to the patient's perspective, preparing them for what to expect and after care with the information; it empowers them and helps them make sound decisions.

Even though the sample possessed good knowledge about the content; it still felt that certain components from the management aspect were missing. There is a need for ongoing education for the patients as well as it satisfies the patient's immediate expectations and desire for the information.

Patients value accurate and comprehensive information. It can be delivered or made available by **incorporating a preoperative teaching module in our comprehensive clinical pathway.**

It will

- **Help to achieve maximum patient satisfaction.**
- Help in being a catalyst for delivering customer service excellence.
- Increase customer retention and loyalty.
- Ensure sustainable customer service improvement.
- Assist in benchmarking.

6.CONCLUSION

It is seldom questioned, if information delivered to a patient produces knowledge. Knowledge about the pre-operative information is a powerful predictor of the perception of people who have undergone CABG surgery regarding their illness and the quality of the services they receive. Significant number of patients are aware of the preoperative information and its benefits on the postoperative outcomes. They also believe that this information empowers them. The result of this study shows that there is a need of including a pre-operative teaching module in the DaytoDay application.

APPENDIX

Questionnaire to Assess Knowledge of Post Coronary Artery Bypass Graft (CABG) Patients
Regarding the Preoperative Education

DEMOGRAPHIC DETAILS

Name-

Sex-

Female

Male

Prefer Not to Say

Age-

<30 years

30-49 years

50-69 years

70> years

Basic education-

Illiterate

Up to Primary

Secondary

Senior Secondary

Graduation

Post-Graduation

Employment status –

Employed

Retired

Housework

Student

Unemployed

Employed in social or health care-

Yes

No

Chronic illness-

Yes

No

Hospital admission-

Elective

Emergency

Reason for hospital stay-

Investigation

Surgical procedure

Surgical treatment on the ward

Out-patient check-up

GENERAL

1. Did you receive preoperative education before surgery?
Yes
No
2. Who gave you the preoperative education?
Doctor
Nurse
3. Did you receive any preoperative teaching material?
Yes
No
4. If yes, please specify.
5. What was the duration of the preoperative education?
<15 minutes
15-30 minutes
>30 minutes
Not applicable
6. How many times chlorhexidine bath is to be taken before the surgery?
One
Two
Three
Four

KNOWLEDGE

(BIOPHYSIOLOGICAL)

What do you think of the following statements?

7. There is a need for you to know about the purpose of the CABG surgery.
Strongly disagree
Disagree
Agree
Strongly agree
8. You should know about the common risk factors and complications of the CABG surgery prior to the surgery.
Strongly disagree
Disagree
Agree
Strongly agree
9. You should have information from the anaesthesiologist before the surgery.
Strongly disagree
Disagree
Agree
Strongly agree
10. You should be informed about the lab investigations to be done prior to the surgery.
Strongly disagree
Disagree
Agree
Strongly agree
11. You should know about the medications to be started/ continued/ stopped before the surgery.
Strongly disagree
Disagree
Agree
Strongly agree

(FUNCTIONAL)

12. Certain precautions can reduce the chance of infection before the surgery.
Strongly disagree
Disagree
Agree
Strongly agree

13. Information about incentive spirometry exercise before the surgery helps after the surgery.
Strongly disagree
Disagree
Agree
Strongly agree
14. Preoperative information given to you acts as a psychological support for you.
Strongly disagree
Disagree
Agree
Strongly agree
15. Who do you think should provide the preoperative education?
Doctor
Nurse
Both
16. To what degree were you satisfied with the explanation about the surgery?
Very satisfied
Satisfied
Dissatisfied
Very dissatisfied
17. How satisfied are you with the amount of information you get by your healthcare professional?
Very satisfied
Satisfied
Dissatisfied
Very dissatisfied
18. To what degree were you satisfied with the explanation about your stay at the hospital?
Very satisfied
Satisfied
Dissatisfied
Very dissatisfied

What do you think of the following statements?

19. The amount of time spent in providing the preoperative information gives you confidence and strength before and after the surgery.
Strongly disagree
Disagree
Agree

Strongly agree

20. If you had been told about the pain management in the preoperative period, it would have been effective in managing pain in the postoperative period.

Strongly disagree

Disagree

Agree

Strongly agree

21. The reminders for medications can help in better outcomes.

Strongly disagree

Disagree

Agree

Strongly agree

22. The information provided in the preoperative period will assist you in your surgical treatment.

Strongly disagree

Disagree

Agree

Strongly agree

23. The information provided in the preoperative period can reduce your hospital stay after the surgery.

Strongly disagree

Disagree

Agree

Strongly agree

24. How would you rate your satisfaction with the preoperative experience?

Very satisfied

Satisfied

Dissatisfied

Very dissatisfied

1. What else do you think can be beneficial for making the postoperative journey smoother?

2. Would it be beneficial for you/ family members if we come up with a preoperative information module in our application?

Yes

No

May be

REFERENCES

<https://www.nhp.gov.in/healthyliving/ncd2019>

Dorairaj Prabhakaran, Panniyammakal Jeemon, Ambuj Roy. Global Burden of Cardiovascular Disease in India: Current Epidemiology and Future Directions [Internet]. Available from : <http://dcp-3.org/resources/global-burden-cardiovascular-disease-india-current-epidemiology-and-future-directions>

<https://onlinelibrary.wiley.com/doi/abs/10.1111/j.1479-6988.2005.00021.x>

Anderson, E. A. (1987). Preoperative preparation for cardiac surgery facilitates recovery, reduces psychological distress, and reduces the incidence of acute postoperative hypertension. Journal of Consulting and Clinical Psychology, 55(4), 513–520. <https://doi.org/10.1037/0022-006X.55.4.513>

Nancy Kruzik. Benefits of Preoperative Education for Adult Elective Surgery Patients [Internet]. 2009 Sep 6. Available from: <https://pubmed.ncbi.nlm.nih.gov/19735761/>

Sharon Garretson. Benefits of Pre-operative Information Programmes [Internet]. 2004 Aug 4. Available from: <https://pubmed.ncbi.nlm.nih.gov/15357551/>

[Lissa Montin, Kirsi Johansson, Jykri Kettunen, Jouko Katajisto, Helena Leino Kilpi. Total Joint Arthroplasty Patient's Perception of Received Knowledge of Care \[Internet\]. 2010 Aug. Available from: https://pubmed.ncbi.nlm.nih.gov/20664463/](https://pubmed.ncbi.nlm.nih.gov/20664463/)

[Sirkku Rankinen, Sanna Salanterä, Katja Heikkinen, Kirsi Johansson, Anne Kaljonen, Heli Virtanen, Helena Leino-Kilpi. Expectations and Received Knowledge by Surgical Patients \[Internet\]. 2007 Apr. Available from: https://academic.oup.com/intqhc/article/19/2/113/1804653](https://academic.oup.com/intqhc/article/19/2/113/1804653)