

Effectiveness of Information Brochure Regarding Post Procedure Care on Knowledge and Anxiety among Patients Undergoing Coronary Angioplasty at Cath Ward, Lari Cardiology Center KGMU Lucknow

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ABSTRACT

Background: Coronary artery disease should now be considered an important public health problem characterized by changing lifestyles, casualty and attributes. The most common cause of these diseases is atherosclerotic plaque. Most of the people are unaware of these conditions due to lack of knowledge and their level of anxiety may be increased. Angioplasty is a surgical technique to open a blocked coronary artery. **Objectives:** 1. To assess the knowledge and anxiety regarding post procedural care of angioplasty among patients undergoing coronary angioplasty before the intervention. 2. To compare the knowledge and anxiety regarding post procedural care of angioplasty among patients undergoing coronary angioplasty before the intervention. 3. To assess the knowledge and anxiety regarding post procedural care of angioplasty among patients undergoing coronary angioplasty after the intervention. 4. To compare the knowledge and anxiety regarding post procedural care of angioplasty among patients undergoing coronary angioplasty after the intervention. **Method:** In this study the research approach was quasi experimental two group pre-test and post-test design was applied. Total 90 samples selected by purposive sampling technique (45 in each group). The intervention was structured information brochure was introduced to the study group just before angioplasty and for control group hospital routines were followed. Knowledge was assessed by structured questionnaire and anxiety level assessed by modified Spielberger's anxiety assessment tool before and after the intervention. **Results:** It is observed that the statistical t value (1.24) is less than the critical value (1.99) which accepts the null hypothesis that there is no significant difference in knowledge between group. For anxiety it is observed that the statistical t value (0.61) is less than the critical value (1.99) which accepts the null hypothesis that there is no significant difference in anxiety between groups. But it was observed that after the intervention there was significant change in level of knowledge as statistical t value (3.65) was more than the critical value (2.015) which rejects the null hypothesis and accepts the research hypothesis and it was also effective on reducing anxiety in study group after intervention statistical t value (3.72) was more than the critical value (2.01) which rejects the null hypothesis and accepts the research hypothesis. **Conclusion:** The study concluded that, structured information brochure is an effective way to improve the knowledge and reduce the anxiety among the patient planned for angioplasty. The study recommended that structured information brochure about the post procedural care about the angioplasty should be implemented to improve the knowledge and reduce the anxiety among the patient for providing a better care.

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KEYWORDS: Knowledge, anxiety, structured information brochure, angioplasty and post procedural care.

1. INTRODUCTION

CAD, is also called Coronary arteriosclerosis, Coronary atherosclerosis. Coronary artery disease (CAD) is the most prevailing type of heart disease. CAD happens when the arteries that supply blood to the muscles of heart become hardened and narrowed. Over time, CAD can also weaken the

heart muscle and contribute to heart failure and arrhythmias.³

An estimated 17 million people die of CVDs, per year, particularly heart attacks and strokes. A large number of

these deaths can be attributed to tobacco smoking, which increases the risk of dying from coronary heart disease and cerebrovascular disease 2–3 fold. Physical inactivity and unhealthy diet are other main risk factors which increase individual risks to cardiovascular diseases.⁴

The most prevailing cause of cardiovascular disease is atherosclerosis, an abnormal accumulation of lipid or fatty substances in the lining of arterial blood vessel walls. When the blockages are very large they lower blood supply to the heart muscle and produce angina. Various techniques have been developed to open the vessel and reinforce blood flow through the coronary arteries. One of these procedures is Percutaneous Transluminal Coronary Angioplasty (PTCA). A balloon-tipped catheter is introduced into the femoral artery and threaded under x-ray guidance into a blocked coronary artery in this surgical technique. There are presently over 500 centres with facilities for coronary angiography and coronary angioplasty in the country and these numbers are steadily increasing.⁷⁻⁸

2. Statement of the Problem

A study to assess the Effectiveness of information brochure regarding post procedure care on knowledge and anxiety among patients undergoing coronary angioplasty at cath ward, Lari Cardiology Center KGMU Lucknow s”.

3. Objectives of the Study

- A. To assess the knowledge and anxiety regarding post procedural care of angioplasty among patients undergoing coronary angioplasty before the intervention
- B. To compare the knowledge and anxiety regarding post procedural care of angioplasty among patients undergoing coronary angioplasty before the intervention.
- C. To assess the knowledge and anxiety regarding post procedural care of angioplasty among patients undergoing coronary angioplasty after the intervention.
- D. To compare the knowledge and anxiety regarding post procedural care of angioplasty among patients undergoing coronary angioplasty after the intervention.

Hypothesis

H0 : There will be no significant difference in knowledge and anxiety regarding post procedural care of angioplasty among patients undergoing coronary angioplasty before the intervention.

H1 : There will be significant difference in knowledge and anxiety regarding post procedural care of angioplasty among patients undergoing coronary angioplasty after the intervention

4. Methodology

Research approach: An evaluative research approach

Research design: Was Quasi experimental two group pre-test post-test design.

Setting of the study: Study was conducted in cath ward tertiary care hospital in Lucknow.

Research variables:

- A. Independent variables: In this study Structured information brochure was independent variable.

B. Dependent Variables: Knowledge and Anxiety.

Demographic variables: This includes age, gender, job profile, education, monthly income.

Target population: The population of this study was patients planned for coronary angioplasty

Accessible population: In this study assessable population is all the patients who are available on the day.

Sample size: It consisted of 90 patients. Samples were selected from cath wards of Lari cardiology Center at King George’s Medical University

Sampling Technique

In this study a purposive sampling was used. Purposive sampling is a type of non-probability sampling method in which the researcher used his or her own judgment in the selection of sample members. It is sometimes called a judgmental sample Available patients were entered into the study on the day of data collection. 90 patients were selected by non-probability purposive sampling technique from cath wards of Lari cardiology Center at King George’s Medical University.

Criteria for Samples Selection:

A. Inclusion criteria

- Patient who are willing to participate
- Posted first time for planned coronary angioplasty.

B. Exclusion Criteria

- Patients who do not know to read and write in Hindi.
- Patients who are critically ill.

Description of Tool

Part I: Assessment of demographic variables- 8 items

Demographic variables include age, gender, educational status, occupational status, monthly income, place of residence, previous knowledge about angioplasty, sources of previous knowledge.

Part II: Assessment of level of knowledge on post procedural care of angioplasty.

Knowledge – 20 items. It consists of 5 aspects. Which include Care for the Catheter Insertion Site, Activity, Medications, Diet modifications, and Importance of a Heart-Healthy Lifestyle. Each item has 1 correct response and each correct response carries ‘1’ mark and each wrong answer carries ‘0’ mark.

Part III: Assessment of level of anxiety with modified Spielberger’s State-Trait Anxiety Inventory among patient planned for angioplasty

It consists of 20 ‘mild’, ‘moderately’ and ‘very much’ items to assess the anxiety among patients planned for angioplasty. Twenty items are positive Items so the scoring will be positive and ten items are negative so the scoring will be reversed. Correct answer carries 1, 2 and 3 marks respectively.

Reliability

The reliability of the tool was established by test retest method for knowledge questionnaire and anxiety. The reliability score for tool of knowledge assessment was $r =$

0.74 and for modified Spielberger State-Trait Anxiety Inventory $r = 0.87$ for anxiety. The 'r' value indicated the highly positive correlation, which showed that the tool is reliable, feasible and practicable to conduct the main study.

Data collection procedure

Data was collected by using following tools. Informed consent was taken from patients going for angioplasty. The data collection was done between 15th November 2018 to 14th Feb 2019. The Samples were taken by purposive sampling technique. Control group followed by hospital routines whereas in study group structured information brochure was introduced. Post-test data were collected from

both group within 24 hours of angioplasty before the discharge of patient.

Plan for data analysis

Statistical analysis is the organization and analysis of quantities data using statistical procedures including both descriptive and inferential statistics.

Ethical consideration

Ethical approval obtained from the institutional ethic committee and permission was taken from the departmental HOD's. Informed consent was taken from the subjects. Confidentiality and anonymity of information was maintained.

5. Result

Section A: Distribution of the demographic characteristics among study and control group.

Table 1: Frequency and percentage distribution of demographic variables of patients planned for angioplasty, n=90

Variable	Study group n1=45		Control group n2=45	
	f	%	f	%
Age (in years)				
35-45	9	20	4	8.88
46- 55	12	26.66	17	37.77
56-65	15	33.33	19	42.22
66-75	9	20	5	11.11
Gender				
Male	36	80	34	75.55
Female	9	20	11	24.44
Education				
Primary	2	4.44	1	2.22
Secondary	15	33.33	7	15.55
Higher secondary	16	35.55	20	44.44
Graduate	9	20	11	24.44
Post graduate	3	6.66	6	13.33
Occupation				
Government	7	15.55	5	11.11
Private	18	40	9	20
Daily wages	6	13.33	9	20
Retired	6	13.33	12	26.66
Business	5	11.11	3	6.66
Housewife	3	6.66	4	8.88
Other	0	0	2	4.44
Family income				
5000-10000	6	13.33	3	6.66
10-15000	12	26.66	12	26.66
15-20000	13	28.88	11	24.44
20 and above	14	31.11	19	42.22
Residence				
Urban	30	66.66	27	60
Semi urban	3	6.66	1	2.22
Rural	12	26.66	17	37.77
Previous knowledge				
No	37	82.22	37	82.22
Yes	8	17.77	8	17.77
Source				
Hospital staff	3	6.66	4	4.44
Television	2	4.44	2	4.44
Internet	1	2.22	1	2.22
Others	2	4.44	1	2.22

Section B: Analysis and interpretation of pre-test score of knowledge and anxiety.

Table 2: Assess the level of knowledge between study and control group regarding post procedural care after angioplasty before the intervention,

n=90

Level of knowledge		Study n1=45		Control n2=45	
Score key		f	%	f	%
Good	15-20	6	13.33	5	11.11
Average	10-15	19	42.22	24	53.33
Poor	<10	20	44.44	16	35.55

Table no. 2 shows that in study group, majority 20(44.44%) had poor knowledge, 19(42.22%) had average knowledge and in control group majority 24(53.33%) had average knowledge, 16(35.55%) had poor knowledge.

Table 3: Compare the knowledge between study and control group regarding post procedural care after angioplasty before the intervention.

n90

Knowledge	n	Mean	Standard deviation	df	t- value	Critical value
Study group	45	11.37	3.1858	88	1.24	1.99
Control group	45	12.17	2.8864			

Level of significance (α)= <0.05

Table no. 3 Shows that the mean of study group was 11.37 ± 3.18 and the mean of control group was 12.17 ± 2.88 . It is observed that the statistical t value (1.24) is less than the critical value (1.99) which accepts the null hypothesis that there is no significant difference in knowledge between study and control group regarding post procedural care after angioplasty before the intervention.

Table 4: Assess the anxiety between study and control group regarding post procedural care after angioplasty among patients before the intervention.

n90

Level of anxiety		Study group n1=45		Control group n2=45	
		f	%	f	%
No anxiety	46-60	8	17.77	8	17.77
Moderate anxiety	31-45	25	55.55	32	71.11
Severe anxiety	< 30	12	26.66	5	11.11

Table no. 4 shows that in study group, majority 25(55.55%) had moderate anxiety, and in control group majority 32(71.11%) had moderate anxiety.

Table 5: Compare the anxiety between study and control group regarding post procedural care after angioplasty before the intervention.

n90

Knowledge	n	Mean	Standard deviation	df	t- value	Critical value
Study group	45	40.66	7.055	88	0.61	1.99
Control group	45	39.75	6.95			

Level of significance (α)= <0.05

Table no. 5 Shows that the mean of study group was 40.6667 ± 7.055 and the mean of control group was 39.7556 ± 6.9549 . It is observed that the statistical t value (0.61) is less than the critical value (1.99) which accepts the null hypothesis that there is no significant difference in anxiety between study and control group regarding post procedural care after angioplasty before the intervention.

So, from the above findings it is revealed that there are no significant changes found in knowledge regarding post procedural care after angioplasty and anxiety among study and control group before the intervention.

Section C: Analysis and interpretation of post -test score of knowledge and anxiety

Table 6: Assess the level of knowledge between study and control group regarding post procedural care after angioplasty after intervention.

n90

Level of knowledge		Study group n1=45		Control group n2=45	
		f	%	f	%
Good	15-20	21	46.66	7	15.55
Average	10-15	24	53.33	26	57.77
Poor	<10	00	00	12	26.66

Table no. 6 shows that in study group, majority 24(53.33%) had average knowledge, 21(46.66%) had poor knowledge and in control group majority 26(57.77%) had average knowledge.

Table 7: Compare the knowledge between study and control group regarding post procedural care after angioplasty after the intervention.

n90						
Knowledge	N	Mean	Standard deviation	df	t-value	Critical value
Study group	45	14.95	4.97	44	3.65	2.01
Control group	45	13.15	2.82			

Level of significance (α)= <0.05

Table no. 7 Shows that the mean of study group was 14.95 ± 2.37 and the mean of control group was 13.15 ± 2.82 . It is observed that the statistical t value (3.65) is more than the critical value (2.015) which rejects the null hypothesis and accepts the research hypothesis there will be significant difference in knowledge regarding post procedural care of angioplasty among patients undergoing coronary angioplasty after the intervention

Table 8: Assess the level of anxiety between study and control group regarding post procedural care after angioplasty after the intervention.

n90					
Level of anxiety		Study group n1=45		Control group n2=45	
		f	%	f	%
No anxiety	46-60	23	51.11	10	22.22
Moderate anxiety	31-45	20	44.44	23	51.11
Severe anxiety	< 30	2	4.44	12	26.66

Table no. 8 shows that in study group, majority 23(51.11%) had no anxiety, and in control group majority 23(51.11%) had moderate anxiety

Table 9: Compare the anxiety between study and control group regarding post procedural care after angioplasty after the intervention.

n90						
Knowledge	n	Mean	Standard deviation	df	t-value	Critical value
Study group	45	45.40	6.57	44	3.72	2.01
Control group	45	40.55	6.69			

Level of significance (α)= <0.05

Table no. 9 Shows that the mean of study group was 45.40 ± 5.57 and the mean of control group was 40.55 ± 6.69 . It is observed that the statistical t value (3.72) is more than the critical value (2.01) which rejects the null hypothesis and accepts the research hypothesis there will be significant difference in anxiety regarding post procedural care of angioplasty among patients undergoing coronary angioplasty after the intervention.

So, from the above findings it is shown that there is significant change in knowledge and anxiety in study and control group after the intervention.

Nursing Implications

The findings of the study has implication in different field of nursing that is nursing practice, nursing education, nursing administration and nursing research.

Nursing Education

The investigator had drawn the following implication for nursing education.

- Nursing educator can encourage the student’s nurses to provide knowledge regarding post procedural care after angioplasty.
- Health education should be imparted regularly based on evidenced based practice in all nursing curriculum.
- The faculty members in nursing education can motivate the students to arrange health programs for parents regarding the nutritional diet in attractive way, to enhance their knowledge.
- Nursing curriculum should prepare nurses to motivate the teachers to improve the student’s knowledge, practice and attitude regarding angioplasty.

Nursing Administration

- Nurse administrators should motivate the sub-ordinates to participate in various programs and improve their knowledge and regarding the angioplasty.
- Nurse administrators can organize seminars to improve their knowledge and regarding the post procedural care after angioplasty.
- Nurse administrators can motivate the nurses to organize health camps and quiz program regarding the post procedural care after angioplasty.
- Nurse administrators can create awareness among patients regarding the post procedural care after angioplasty.
- Nurse administrators can encourage the nurses to conduct the health awareness programs regarding the post procedural care after angioplasty.

Nursing Research

- Extensive research can be conducted to find out the health problems that occur in patients after angioplasty.

- The impact of knowledge regarding angioplasty should be subjected to research and findings can be communicated and utilized in the practice.

Nursing practice

- The nurses should take an initiate and imparting knowledge regarding post procedural care after angioplasty to reduce the anxiety among patients
- The nurses have major role in creating awareness about angioplasty and its care after procedure.

6. Conclusion

The study was a good learning experience for, investigator. The result of this study showed that Structured Information Boucher was effective on knowledge and anxiety regarding patients undergoing angioplasty.

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