

# A Study to Assess the Effectiveness of Structured Teaching Program (STP) on Knowledge Regarding Preventive Precaution of Percutaneous Transluminal Coronary Angioplasty (PTCA) Procedure Complications among Patients Completed (PTCA) Procedure in selected Cardiac Hospitals at Guntur

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**Abstract:** ***Background:** A study to assess the effectiveness of structured teaching program on knowledge regarding post-operative complications among PTCA clients at selected hospitals, Guntur, A.P. It was conducted at SIMS College of Nursing, Guntur, Andhra Pradesh in partial fulfillment of the requirement for the degree of M.Sc. Nursing from Dr.NTR University of Health Sciences, Vijayawada, Andhra Pradesh. **Aim:** To provide awareness of post-operative complications of PTCA patients. **Research Design:** Independent variables and observation of a type of statistical method to be used to interpret the data. The selection of the design depends upon the purpose of the study, the research approach, and the variables to be studied. **Sample and sample size:** The total sample size was 60, (30 PTCA clients for the experimental group and 30 for the control group). **Result:** The pre-test findings of the knowledge were, that the mean score of the control group was 11.2, for the experimental group was 12.46 and the standard deviation for the control group was 2.38 and for the experimental group was 2.15 whereas the post-test knowledge mean was 12.9 and 25.6 and standard deviation was 1.73 and 2.12 for control and experimental groups respectively. The obtained t value with regard to the knowledge ( $t=25.39$ ) was highly significant at 0.01 level in the experimental group. **Conclusion:** From the data of statistical findings, the structured teaching programme was found to be effective in improving the knowledge regarding post-operative complications among PTCA clients.*

**Keywords:** PTCA (Percutaneous Transluminal Coronary Angioplasty), complications

## 1. Introduction

*Longer life can be a penalty as well as a prize".*

(Bernard Edmond)

The human body has a vast number of organs that all work together only in a divine way. No scientist in the past, present or future has had or will have the ability to unlock all of the secrets that are so cleverly hidden inside the amazing work of the human body. So, out of all the organs in the beautifully designed human body, which is the most important? Every organ has its own unique responsibility, but perhaps the most important organ in the human body is the human heart. It carries necessities to the body, gets rid of waste in the body, and last, in the Bible no organ is deemed as more important than the heart itself. The heart carries and pumps necessities to other various parts of the body. Without the workings of the heart, multiple other organs would fail. For example, the brain is in constant need of a supply of oxygen from blood. The brain receives this constant flow of oxygen when the heart does its job of pumping blood to particular parts of the body. Also, "Muscles need oxygen, glucose and amino acids, as well as the proper ratio of sodium, calcium and potassium salts in order to contract normally" so without the heart, these functions would fail. Essentially, if the heart was to fail, the entire body would shut down in a matter of minutes.

The heart is a muscular organ that beats approximately 60-100 beats per minute and almost 3 billion times during the life of a human being. The primary purpose of the heart is to pump 24 hours a day. During each beat, the heart pumps blood that delivers life-sustaining oxygen and nutrients to 300 trillion cells. The heart is supplied with arterial blood by the coronary arteries, which snake across the surface of the heart delivering a constant supply of blood and oxygen to the heart muscle.

When one or more coronary arteries become narrowed or blocked, blood and oxygen supply are reduced and heart muscle is damaged. Coronary artery diseases like arteriosclerosis and atherosclerosis interrupt blood supply into coronary arteries supplying myocardium. Smoking, a sedentary lifestyle, obesity, a competitive aggressive personality, and a high-fat diet are the leading causes of coronary artery diseases (CAD). Various techniques have been developed to open the vessels and restore blood flow through the coronary arteries. Sometimes, these interventional cardiology techniques are less effective for some patients and they need to undergo cardiac surgery for their survival.

## 2. Methodology

The methodology of the research includes the steps, procedures, and strategies for gathering and analyzing data in research design, variables, setting of the study,

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population, sample, sample size, sampling technique, criteria of sample selection, development, and description of the tool, content validity and reliability of the tool, ethical considerations, pilot study, data collection procedure and plan for statistical data analysis.

### 3. Materials and methods

The conceptual framework of the study was based on integrated concepts of "Daniel Stuffle Beams Model General Systems Model", 2001. A purposive sampling technique to select the sample, with a pre-test and post-test control group design was used to conduct the study, with the structured teaching programme as the independent variable and knowledge as the dependent variable. The study was conducted in Lalitha multi-specialty hospital and Katurimulti-specialty hospital, Guntur district. A total of 60 samples were obtained. Structured knowledge questions were prepared with the help of literature from textbooks, journals, and expert guidance. The feasibility of the study was confirmed by a pilot study, which was conducted at Karumuri multispecialty hospital and katuri cardiac and multispecialty hospital, Guntur District. The data obtained was analyzed and interpreted with the help of descriptive and inferential statistics and the level of significance was set at 0.05 level.

### 4. Results

The pre-test findings of the knowledge were, that the mean score of the control group was 11.2, for the experimental group was 12.46 and standard deviation for the control group was 2.38 and for the experimental group was 2.15 where the test knowledge mean was 12.9, and 25.6 and standard deviation was 1.73 and 2.12 for control and experimental groups respectively. The obtained t value with regard to the knowledge ( $t=25.39$ ) was highly significant at 0.01 level in the experimental group.

### 5. Discussion

The analysis of pre and post-test levels of knowledge on PTCA post-operative complications. It shows that 86.7% of PTCA clients had inadequate knowledge in the experimental and 93.3% in the control group respectively. 13.3% in the experimental and 6.7% in the control group had moderately adequate knowledge. No client was found with adequate knowledge in a pre-test. In the post-test, it was quite the opposite in the experimental group. Over 93.3% of PTCA clients had adequate knowledge and 6.7% had moderate knowledge hence none of the experimental group clients were having inadequate knowledge. In the post-test test, the control group did not show much difference with 93.3% inadequate knowledge, and 6.7% moderate knowledge, and none of them had adequate knowledge.

### 6. Conclusion

The study was conducted to evaluate the effectiveness of Structured teaching on knowledge regarding post-operative complications among PTCA clients.

The present study assessed the effectiveness of Structured teaching on knowledge regarding PTCA post-operative complications among PTCA clients. The study findings revealed that there was a significant improvement in the level of knowledge among PTCA clients regarding post-operative complications and concluded that Structured teaching was an effective method to improve the knowledge regarding post-operative complications with the following of preventive precautions among PTCA clients.

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#### References

- [1] Brunner and Suddarth's, The text book of Medical and Surgical nursing 11<sup>th</sup> edition, Newyork, Lippincott publishers. P-788, 715, 650.
- [2] Basavanthappa BT. "Nursing Research" jaypee Brothers; Medical publishers 2 TD New Delhi 1998.
- [3] B. Shrager, "The vineberg procedure: the immediate forerunner of coronary artery bypass grafting," Annals of Thoracic Surgery, vol. 57, no. 5, pp. 1354–1364, 1994.
- [4] Clochesy M. John et al "Critical Care Nursing" 2nd edn. W.B. Saunders Company Philadelphia 1996.
- [5] C. A. Milano, K. Kesler, N. Archibald, D. J. Sexton, and R. H. Jones, "Mediastinitis after coronary artery bypass graft surgery: risk factors and long-term survival," Circulation, vol. 92, no. 8, pp. 2245–2251, 1995.
- [6] D. K. C. Cooper, Open Heart: The Radical Surgeons Who Revolutionized Medicine, Kaplan, New York, NY, USA, 2010.