A Study to Assess the Effectiveness of Information Booklet on Knowledge and Practices Regarding Rehabilitation Among Patients with Valvular Heart Diseases in Selected Hospital

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Abstract: **This paper presents, Introduction: Valvular heart problem is a self-managed disease that requires many strategies to keep it under control and a system of care to monitor the prevention and provide early treatment of complication. The provision of care in nurse directed clinics contribute to keeping patients with valvular heart problem healthy and free of complication [1]. An information booklet can be an effective an economical teaching aid. The patients can refer it whenever they require. Moreover, the information booklet can be available at all times within easy reach of the patients.**

Aim: The aim of the study was to find out the effectiveness of information booklet on knowledge and practice regarding rehabilitation among patients with valvular heart disease in selected hospitals.

Material and Method: One group pre-test post-test design was used to assess the effectiveness of information booklet on knowledge & practice regarding rehabilitation among patients with valvular heart disease. Non-probability convenience sampling were used to select 30 patients in selected hospital in Mumbai. Informed written consent was taken from selected patients. A structured questionnaire was administered to assist the knowledge & practice regarding rehabilitation among patients with valvular heart disease. The collected data was analyzed by using descriptive statistics & inferential statistics. Demographic data of the samples were analyzed in terms of frequency & percentage. "t" tests was used to find out the association between knowledge & practice with selected demographic factors.

Result: In pre-test mean knowledge score was 11.86 and in post - test mean knowledge score was 16.73 The calculated t value for knowledge regarding rehabilitation among patient with valvular heart disease before and after administration of the information booklet is 8.61. As the calculated value of "t" at 29 degree of freedom is greater than the table "t" value (2.04) at 0.05 level of significance. In pre-test mean practice score was 13.56 and in post - test mean practice score was 17.73. The calculated t value for Practice regarding rehabilitation among patient with valvular heart disease before and after administration of the information booklet is 7.50. As the calculated value of "t" at 29 degree of freedom is greater than the table "t" value (2.04) at 0.05 level of significance. Conclusion: Information booklet will be effective in improving knowledge & practice regarding rehabilitation among patients with valvular heart disease.

1. Introduction

"The best and most beautiful things in the world cannot be seen or even touched - they must be felt with the heart".

-Helen Keller

Mitral valve prolapse syndrome is one of the most common cardiac abnormalities. The possible causes of mitral stenosis include infective endocarditis, calcification of valve leaflets and systemic disorders such as lupus erythematosus and rheumatic carditis. Mitral valve prolapse, coronary artery disease & infective endocarditis are the most common causes of mitral regurgitation [2].

The major problem is with Mitral Valve Stenosis, fusion of the commissures between the Mitral Valve leaflets causes obstruction to left ventricular inflow. The leaflets also become infiltrated with fibrous tissue, which produces shrinkage, thickening and immobility, particularly at the tips of the leaflets. Over a longer period the fibrotic tissue may calcify and eventually the valve becomes damaged structure that impedes blood flow as much by its rigidity as by actual stenosis of the orifice [3].

The major cause of Valvular heart problem is Rheumatic Heart Disease (RHD) causing morbidity and mortality among children and adults. Recent reports have documented Rheumatic Fever (RF) incidence rates as high as 206/100000 and RHD prevalence rates as high as 18.6/1000 [4].

2. Need of the study

Rheumatic fever is caused by the streptococci bacteria, the fever has a way of affecting the heart's valves that control unidirectional flow of blood. The mitral valve is the most commonly affected [5].

A study was conducted to assess the prevalence & effect of valvular heart disease on general population by selecting 615 adults. There was no difference in the frequency of diseases

International Journal of Research in Engineering, Science and Management
Volume-2, Issue-9, September-2019
www.ijresm.com | ISSN (Online): 2581-5792

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between men & women. The prevalence increased with 0.7 % in 18-44 year olds to 13.3% in the 75 years & older group [6].

In 2012 a study was done on the quality of life of 191 patients with severe aortic stenosis, hypothesizing that symptomatic patients have a far worse quality of life than the general population, which could enforce the indication for surgery. Both physical and emotional problems have a major impact on normal daily life and social functioning of symptomatic patients with severe aortic stenosis, regardless of age [7].

Rehabilitation may be defined as the process of helping the patient adjust to a disability by teaching integration of all resources and concentrating more on existing abilities than on permanent disabilities. Cardiac rehabilitation is the restoration of a person to an optimal state of function in 6 areas; physiologic, psychological, mental, spiritual, economic and vocational. Returning to work and resuming all activities have long been outcome measures of cardiac rehabilitation or important in terms of cost effectiveness of cardiac care and rehabilitation [8].

Thus the investigator stresses here the importance of educating patients suffering from valvular disease, through information booklet, to enhance their knowledge about the need for modification in lifestyle and simple exercise routines to improve their health thus to have optimum quality of life with minimal problems.

A. Objectives

1) To assess the knowledge and practice regarding rehabilitation among patient with valvular disease before and after administration of the information booklet.
2) To compare the knowledge and practice regarding rehabilitation of patient with valvular disease with pre test and post test scores.
3) To determine the association of knowledge and practices with selected demographic variables.

B. Hypothesis

H01: There will be no significant difference in the pre-test and post-test knowledge scores regarding rehabilitation among patients with valvular disease.

H02: There will be no significant difference in the pre-test and post-test practice scores regarding rehabilitation among patients with valvular disease.

C. Research methodology

- *Research approach:* Descriptive evaluatory approach
- *Research design:* One group pre-test, post-test design.
- *Independent variable:* Information booklet on rehabilitation.
- *Dependant variable:* Patients knowledge and practices regarding rehabilitation of valvular heart diseases.
- *Setting of the study:* Selected hospital in Mumbai.
- *Population:* Patients admitted with cardio vascular diseases in selected hospital.

- *Sample:* Patients diagnosed with valvular heart diseases.
- *Sample size:* 30
- *Sampling technique:* Non probability convenience sampling.

Criteria for sample selection:
Inclusion criteria:

- Patients diagnosed with valvular heart disease.
- Patients who underwent Valvular Heart Surgery
- Patients who are present at the time of data collection.
- Patients who are willing to participate in this study.
- Patients who can understand English, and Hindi.

Exclusion criteria:

- Patients who are admitted in ICU.
- Tool for data collection:

The tool has 3 sections,

Section A: This part of Questionnaire schedule includes the Demographic data. The Demographic variables like age, gender, marital status, educational status, occupation & habits etc.

Section B: This part consisted of 20 questions to assess the knowledge about Rehabilitation of patient with Valvular heart disease using structured questionnaire.

Section C: This part consists of 20 questions to assess the practices of Rehabilitation of patient with Valvular heart disease using self-reporting structured questionnaire. The practices include, Dietary Modifications, Regular Medications & Check Ups, Stress Reduction, Exercise & Relaxation techniques & Life style modifications

3. Finding of the study

A. Analysis of Demographic data

Most of samples were from age group of 51 - 65 yrs (33.33%). Majority of samples were females 21(70%). Majority of samples were married 23 (76.66%). Educational data shows that 3 (10%) of the samples were illiterate, Majority of samples were in <10th 18 (60%). Majority of sample that is 11 (36.67%) were in service category. Majority of samples 21(70%) had no bad habits. Majority of samples were 19 (63.33) Non - vegetarian. Majority of samples 16 (53.33%) were not aware about the problem with heart valve. Majority of the sample 15 (50%) were suffering from the disease since 6months to 3 years.

B. Assessment and comparison of the knowledge before and after administration of the information booklet

The post-test mean score (16.7) higher than the pre-test mean score (11.86) for knowledge. As the calculated value of "t" (8.61) greater than the table "t" value (2.04) at 0.05 level of significance, so null hypothesis rejected. And hence the findings conclude that information booklet was effective for improving knowledge of patients regarding rehabilitation among patient with valvular heart disease.

International Journal of Research in Engineering, Science and Management
Volume-2, Issue-9, September-2019
www.ijresm.com | ISSN (Online): 2581-5792

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Table 1
Mean score of knowledge in pretest and post test

Section B	Pre test	Post test	't' value	dF	Table value	Significance
N	30	30	8.61759	29	2.045231	p<0.05
Mean	11.86667	16.73333				
SD	3.50	1.92				

Table 2
Mean score of practice in pre and post test

Section C	Pre test	Post test	't' value	df	Table value	significance
N	30	30	7.504919	29	2.045231	p<0.05
Mean	13.56667	17.73333				
SD	3.820844	2.132399				

C. Assessment and comparison of the practice before and after administration of the information booklet

In pre - test mean Practice score (13.56) is less than the post - test mean score 17.73. As the calculated value of "t" (7.50) is greater than the table "t" value (2.04) at 0.05 level of significance. so null hypothesis rejected. And hence the findings conclude that information booklet was effective for improving practice of patients regarding rehabilitation among patient with valvular heart disease.

4. Implication of the study

Nurses are in prime condition to stimulate individuals, families, communities, and nation in the prevention and treatment. Conducting nursing research is one way of improving the existing body of knowledge in field of nursing. The change could be brought about by using the data of research and utilizing it in improving the quality of care.

5. Recommendations for further studies

On the basis of the present study following recommendations for conducting further studies are made:
- The study can be replicated on larger sample of different areas so that the findings can be generalized.
- Similar study can be conducted in experimental approach i.e., pre-test and post-test experimental and control group.
- Similar study can be conducted using other teaching methods.
- A similar study can be conducted to compare effectiveness of planned teaching program with other teaching methods.

6. Conclusion

During the study, it was observed that from patients who had been diagnosed many years back had good knowledge and practice. Recently diagnosed patients had inadequate knowledge and poor practices about selected aspects of rehabilitation. Patients are confused due to different opinions given by different information sources.

The reviews given also prove that there is need for information in above areas, considering the objectives that were laid down the information booklet was developed. The finding of the study also revealed that information provided in the information booklet was found to be effective in improving the knowledge of the sample which would further help in improving daily practices for managing the valve disease and avoid complication.

Overall, the study revealed that the information booklet is an effective method for improving the knowledge and practice regarding rehabilitation among patients with valvular heart disease.

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