

A Study to Assess the Physical Health, Social Role Quality and Psychological Wellbeing among Hospitalized Patients after Heart Surgery

Grisha Clement¹, Prof. Sajeer Ali NC^{1*}

¹Staff Nurse, Dammam Medical Complex

^{1*}Principal, Sri Sanket Patel Memorial Nursing College, Surat, Gujarat, India

*Corresponding Author: **Sajeer Ali NC**

Professor cum Principal,

Sri Sanket Patel Memorial Nursing College,

Surat-394421

Gujarat, India.

E-mail Address: sajinckareem[at]gmail.com

Tel: + 919157172046

Abstract: Background: Cardiovascular surgery is surgery on the heart or great vessels performed by cardiac surgeons. Frequently, it is done to treat complications of ischemic heart disease for example, coronary artery bypass grafting, correct congenital heart disease, or treat valvular heart disease from various causes including endocarditis, rheumatic heart disease and atherosclerosis. It also includes heart transplantation. The study attempts to assess the physical health, social role quality and psychological wellbeing among hospitalized patients after heart surgery in selected hospital of south Gujarat. The objectives of study were: To assess the physical health, social role quality and psychological wellbeing of the hospitalized patients after cardiac surgery, to find the correlation between the physical health, social role quality and psychological wellbeing of the hospitalized patients after cardiac surgery and to associate the physical health, social role quality and psychological wellbeing of the hospitalized patients after cardiac surgery with selected demographic variables. The research design used in this study is Descriptive design. The research approach used in the study is quantitative approach. The sample consisted of 60 patients after heart surgery, selected by purposive sampling technique. Data was collected by structured questionnaire composed of questionnaire to assess physical health, social role quality and psychological wellbeing. The collected data was analyzed by using descriptive and inferential statistics. Results: The result shows that the majority of the respondents are having moderate level physical health (51.67%), social role quality (51.67%) and psychological wellbeing (48.33%). In relation with physical health of the hospitalized patients after cardiac surgery mean, sd and mean percentage was 17.12, 5.57 and 57.07 respectively. In relation with social role quality of the hospitalized patients after cardiac surgery mean, sd and mean percentage was 15.70, 5.14 and 52.33 respectively. In relation psychological wellbeing of the hospitalized patients after cardiac surgery mean, sd and mean percentage was 15.42, 4.82 and 51.40 respectively. The chi-square value showing that there was an association of level of physical health, social role quality and psychological wellbeing of hospitalized patients after heart surgery with selected demographic variables.

Keywords: Physical health, social role quality, psychological wellbeing, patient, cardiac surgery

1.Introduction

The earliest operations on the pericardium (the sac that surrounds the heart) took place in the 19th century and were performed by Francisco Romero, Dominique Jean Lary, Henry Dalton and Daniel Hale Williams. The first surgery on the heart itself was performed by Norwegian surgeon Axel Cappelen on 4 September 1895 at Riks hospital in Kristiania, now Oslo. He ligated a bleeding coronary artery in a 24 year old man who had been stabbed in the left axillae and was in deep shock upon arrival. Access was through a left thoracotomy. The patient awoke and seemed fine for 24 hours, but became ill with increasing temperature and he ultimately died from what the post mortem proved to be mediastinitis on the third postoperative day. The first successful surgery of the heart, performed without any complications, was by Dr. Ludwig Rehn of Frankfurt, Germany, who repaired a stab wound to the right ventricle on September 7, 1896.

2.Materials and Methods

Research Design and Approach

The research design used in this study is Non-experimental descriptive method and the approach is quantitative in nature.

Population

Population of the study includes hospitalized patients after heart surgery in selected Hospitals.

Sample and Sampling Technique

The samples for the present study were 60 patients after heart surgery in selected Hospitals were selected by purposive convenient sampling technique.

Data Collection Instruments

Demographic profile were used to collect demographic data and Structured rating scale will be used to measure the physical health, social role quality and psychological wellbeing of the hospitalized patients after heart surgery.

3.Result

Section-A

Table 1: Socio-Demographic Variables N= 60

Characteristics	Category	Frequency	Percentage
Sex	Male	36	60.00
	Female	24	40.00
Age	Below 35 yrs	08	13.33
	35-45 yrs	24	40.00
	Above 45 yrs	28	46.67
Education	Not educated	18	30.00
	School education	22	36.67
	Degree and above	20	33.67
Marital status	Married	48	80.00
	Unmarried	12	20.00
Type of family	Nuclear	36	60.00
	Joint	24	40.00
Religion	Hindu	32	53.33
	Christian	14	23.33
	Muslim	12	20.00
	Others	2	3.00
Number of hospitalization	1 st time	14	23.33
	Occasionally	26	43.33
	Frequently	20	33.33
Monthly income	Less than 10000	19	31.67
	10000-25000	20	33.67
	More than 25000	21	35.00
Life style	Sedentary	28	46.67
	Semi-sedentary	13	21.67
	Non-sedentary	19	31.67

Section: B

Table 2: Findings related to level of physical health after heart surgery.

N=60

Level of physical health	Score	Respondents	
		Frequency	percentage
low	< 50%	17	28.33%
Moderate	50-75%	31	51.67%
High	>75 %	12	20.00%
Total		60	100.00%

The above table 3 denotes that among the respondents, 51.67% had moderate level of physical health including 28.53% of low and 20% of high level of physical health.

Section C

Table 3: Findings related to level of social role quality after heart surgery N=60

Level of social role quality	Score	Respondents	
		Frequency	Percentage
Low	< 50%	24	40.00
Moderate	50--75%	31	51.67
High	>75%	05	08.33
Total		60	100.00

The above table 3 denotes that among hospitalized patients after heart surgery, 51.67% had moderate level of social role quality including 40% low level and 8.33% high level of social role quality.

Section D

Table 4: Findings related to level of Psychological Wellbeing after heart surgery

N=60

Psychological Wellbeing	Score	Respondents	
		Frequency	percentage
Poor	< 50%	27	45.00
Moderate	50-75%	29	48.33
Good	>75 %	04	6.67
Total		60	100.00

The above table 4 denotes that among the patients 48.33% had moderate level of psychological health including 45% of poor and 6.67% of high level psychological wellbeing.

Section E

Table 5: Mean, Standard deviation, Mean % of level of physical health, social role quality and psychological wellbeing among hospitalized patients after heart surgery N=60

Domain	Max Score	Scores			
		Range	Mean	SD	Mean%
Physical health	30	6-27	17.12	5.57	57.07 %
Social role quality	30	7-26	15.70	5.14	52.33%
Psychological wellbeing	30	7-26	15.42	4.82	51.40%

In relation with physical health of the hospitalized patients after cardiac surgery mean, sd and mean percentage was 17.12, 5.57 and 57.07 respectively. In relation with social role quality of the hospitalized patients after cardiac surgery mean, sd and mean percentage was 15.70, 5.14

and 52.33 respectively. In relation psychological wellbeing of the hospitalized patients after cardiac surgery mean, sd and mean percentage was 15.42, 4.82 and 51.40 respectively.

Section F

Table 6: Association between levels of physical health and selected demographic Variables

Demographic variables				Level of physical health				Chi square
				<median		>median		
Characteristics	Category	NO	%	NO	%	NO	%	
Sex	Male	36	60.00	13	21.67	23	38.33	6.949 1df S
	Female	24	40.00	17	28.33	07	11.67	
Age	Below 35 yrs	08	13.33	02	3.33	06	10.00	9.80 2df S
	35-45 yrs	24	40.00	08	13.33	16	26.67	
	Above 45 yrs	28	46.67	20	33.33	08	13.33	
Education	Not educated	18	30.00	08	13.33	10	16.67	0.602 2df NS
	School edu	22	36.67	12	20.00	10	16.67	
	Degree & above	20	33.67	10	16.67	10	16.67	
Marital status	Married	48	80.00	25	41.67	23	38.33	0.424 1df NS
	Unmarried	12	20.00	05	8.33	07	11.67	
Type of family	Nuclear	36	60.00	17	28.33	19	31.67	0.278 1df NS
	Joint	24	40.00	11	18.33	24	40.00	
Religion	Hindu	32	53.33	15	25.00	17	28.33	0.745 3df NS
	Christian	14	23.33	08	13.33	06	10.00	
	Muslim	12	20.00	07	11.67	05	8.33	
	Others	2	3.00	01	1.67	01	1.67	
Number of hospitalization	1 st time	14	23.33	04	6.67	10	16.67	15.06 2df S
	Occasionally	26	43.33	10	16.67	16	26.67	
	Frequently	20	33.33	16	26.67	14	23.33	
Monthly income	<10000	19	31.67	12	20.00	07	11.67	1.944 2df NS
	10000-25000	20	33.67	09	15.00	11	18.33	
	> 25000	21	35.00	09	15.00	12	20.00	
Life style	Sedentary	28	46.67	13	21.67	15	25.00	8.091 2df S
	Semi-sedentary	13	011121.67	03	5.00	10	16.67	
	Non-sedentary	19	31.67	14	23.33	05	8.33	

N. S-Not Significant S-Significant at P<0.05 level

The chi-square value showing that there was an association of level of physical health of hospitalized

patients after heart surgery with age, gender, number of hospitalization and life style of the patient.

Section G

Table 7: Association between Level of social role quality and selected demographic Variables

Demographic variables				Level of social role quality				Chi square
Characteristics	Category	NO	%	<median		>median		
				NO	%	NO	%	
Sex	Male	36	60.00	13	21.67	23	38.33	5.253 1df S
	Female	24	40.00	15	25.00	09	15.00	
Age	Below 35 yrs	08	13.33	02	3.33	06	10.00	11.219 2df S
	35-45 yrs	24	40.00	08	13.33	16	26.67	
	Above 45 yrs	28	46.67	20	33.33	08	13.33	
Education	Not educated	18	30.00	13	21.67	05	8.33	7.851 2df S
	School education	22	36.67	10	16.67	12	16.67	
	Degree and above	20	33.67	05	8.33	15	25.00	
Marital status	Married	48	80.00	23	38.33	25	41.67	0.150 1df NS
	Unmarried	12	20.00	05	8.33	07	11.67	
Type of family	Nuclear	36	60.00	22	36.67	26	43.33	0.07 1df NS
	Joint	24	40.00	06	10.00	06	10.00	
Religion	Hindu	32	53.33	15	25.00	17	28.33	0.139 3df NS
	Christian	14	23.33	06	10.00	08	13.33	
	Muslim	12	20.00	06	10.00	06	10.00	
	Others	2	3.00	01	1.67	01	1.67	
Number of hospitalization	1 st time	14	23.33	04	6.67	10	16.67	6.96 2df S
	Occasionally	26	43.33	10	16.67	16	26.67	
	Frequently	20	33.33	14	23.33	06	10.00	
Monthly income	<10000	19	31.67	13	21.67	06	10.00	6.392 2df S
	10000-25000	20	33.67	09	15.00	11	18.33	
	> 25000	21	35.00	06	10.00	15	25.00	
Life style	Sedentary	28	46.67	13	21.67	15	25.00	0.004 2df NS
	Semi-sedentary	13	21.67	06	10.00	07	11.67	
	Non-sedentary	19	31.67	09	15.00	10	16.67	

N. S-Not Significant S-Significant at P<0.05 level

The chi-square value showing that there was an association of level of social role quality of hospitalized

patients after heart surgery with age, sex, education, number of hospitalization and monthly income.

Section H

Table 8: Association between levels of psychological wellbeing and selected demographic Variables

N=60

Demographic variables				Level of psychological wellbeing				Chi square
Characteristics	Category	NO	%	<median		>median		
				NO	%	NO	%	
Sex	Male	36	60.00	12	20.00	24	40.00	6.43 1df S
	Female	24	40.00	16	26.67	08	13.33	
Age	Below 35 yrs	08	13.33	03	5.00	05	8.33	6.32 2df S
	35-45 yrs	24	40.00	09	15.00	15	25.00	
	Above 45 yrs	28	46.67	18	30.00	10	16.67	
Education	Not educated	18	30.00	08	13.33	10	16.67	1.095 2df NS
	School education	22	36.67	12	20.00	10	16.67	
	Degree and above	20	33.67	08	13.33	12	20.00	
Marital status	Married	48	80.00	22	36.67	26	43.33	0.067 1df NS
	Unmarried	12	20.00	06	10.00	06	10.00	
Type of family	Nuclear	36	60.00	20	33.33	16	26.67	4.117 1df S
	Joint	24	40.00	08	13.33	16	26.67	
Religion	Hindu	32	53.33	17	28.33	15	25.00	1.521 3df
	Christian	14	23.33	06	10.00	08	13.33	

	Muslim	12	20.00	06	10.00	06	10.00	NS
	Others	2	3.00	01	1.67	01	1.67	
Number of hospitalization	1 st time	14	23.33	03	5.00	11	18.33	12.47
	Occasionally	26	43.33	07	11.67	19	31.67	2df
	Frequently	20	33.33	18	30.00	02	3.33	S
Monthly income	<10000	19	31.67	10	16.67	09	15.00	1.582
	10000-25000	20	33.67	10	16.67	10	16.67	2df
	> 25000	21	35.00	08	13.33	13	21.67	NS
Life style	Sedentary	28	46.67	15	25.00	13	21.67	1.288
	Semi-sedentary	13	21.67	06	10.00	7	11.67	2df
	Non-sedentary	19	31.67	07	11.67	12	20.00	NS

N. S-Not Significant S-Significant at $P < 0.05$ level

The chi-square value showing that there was an association of level of psychological wellbeing of hospitalized patients after heart surgery with age, sex, type of family and number of hospitalization religion.

4. Discussion

A descriptive design with quantitative approach study was conducted on 60 patients admitted in hospital after heart surgery to assess the physical health, social role quality and psychological wellbeing among hospitalized patients after heart surgery. Collected data were analyzed by using descriptive and inferential statistics and presented in the form of tables and figures. Among the respondents, 51.67% had moderate level of physical health including 28.53% of low and 20% of high level of physical health. Among hospitalized patients after heart surgery, 51.67% had moderate level of social role quality including 40% low level and 8.33% high level of social role quality. Among the patients 48.33% had moderate level of psychological health including 45% of poor and 6.67% of high level of psychological wellbeing. The chi-square value showing that there was an association of level of physical health of hospitalized patients after heart surgery with age, gender, number of hospitalization and life style of the patient, there was an association of level of social role quality of hospitalized patients after heart surgery with age, sex, education, number of hospitalization and monthly income. And there was an association of level of psychological wellbeing of hospitalized patients after heart surgery with age, sex, type of family and number of hospitalization religion.

5. Conclusion

From the findings of the present study based on the findings it can be concluded that most of the patients admitted in hospital after heart surgery were males in the age group of above 45 years, Findings reveals that there is a correlation between the physical health, social role quality and psychological wellbeing of patients after heart surgery. There was significant association found between physical health, social role quality and psychological wellbeing of patients after heart surgery with some selected demographic variables

Conflict Of Interest

The authors have no conflicts of interest regarding this investigation.

Acknowledgments

The authors would like to thank Prof. Paulraj .S for his Guidance and support during the study.

References

- [1] Linda S Williams, Paula D Hopper. Understanding Medical surgical Nursing. 2nd edition. FA Davis Company.2009: 345-361.
- [2] Basavanthappa BT. Medical surgical nursing.2nd edition. Jaypee brothers medical publishers.2007: 658-661.
- [3] Lijiya Jose, Larisa Martha Sams, International Journal of Nursing Education and Research 3 (4): October – December 2015; 419-422.
- [4] Tincymol George1, Dr. Larissa Martha Sams, International Journal of Nursing Education and Research 2 (3): July-September 2014; 218-220.
- [5] Sateesh Biradar1, Ashwini Patil, International Journal of Nursing Education and Research.8 (4): October – December, 2020; 450-453.
- [6] Girija Kumari Stalin, R. Adlin Pon Joy, International Journal of Nursing Education and Research.6 (3): July-September, 2018; 283-287.
- [7] Sonia, Paul Dinakaran, Navreet Kaur Saini, Asian Journal of Nursing Education and Research.9 (3): July-September, 2019; 429-433.
- [8] Mustafa Flayyih Abdulrdha, Kalida Alwan Mansour, Asian Journal of Nursing Education and Research.9 (1): January-March, 2019; 35-42.
- [9] Ms. Pooja Maru, Mr. Suneesh P. M, Mr. Jeenath Justin Doss. K, Asian Journal of Nursing Education and Research.9 (4): October-December, 2019, 542-545.
- [10] Andal P, Nalini Jeyavanth Santha, International Journal of Advances in Nursing Management 2 (2): April-June 2014; 71-75.
- [11] Mrs. Rajashree Vikas Khedekar, International Journal of Nursing Education and Research 3 (2): April-June 2015; 143-148.
- [12] B. Sasirekha, S. Kamala, International Journal of Advances in Nursing Management 4 (3): July-September 2016; 183-186.
- [13] Cameron A, Davis KB, Green G, et al. Coronary bypass surgery with internal-thoracic-artery grafts: effects on survival over a 15-year period. N Engl J Med.1996; 334: 216–19.
- [14] Coronary Artery Surgery Study (CASS) Principle Investigators. Coronary artery surgery study (CASS): Randomized trials of coronary artery bypass surgery.

- Quality of life in patients randomly assigned to treatment groups. *Circulation*.1983; 68: 951–60
- [15] Chocron S, Etievent JP, Viel JF, et al. Prospective study of quality of life before and after open heart operations. *Ann Thorac Surg*.1996; 61 (1) 153–7.
- [16] Chocron S, Tatou E, Schjoth B, et al. Perceived health status in patients over 70 before and after open-heart operations. *Age Ageing*.2000; 29 (4) 329–34. Jul.
- [17] Fruitman DS, MacDougall CE, Ross DB. Cardiac surgery in octogenarians: can elderly patients benefit? Quality of life after cardiac surgery. *Ann Thorac Surg*.1999; 68 (6) 2129–35. Dec.
- [18] Coursin DB. Perioperative management of the diabetic patient.55th ASA Annual Refresher Course Lectures.2004: 210.