doi: 10.31674/mjmr.2020.v04i03.009

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A STUDY TO ASSESS THE ILLNESS PERCEPTION AMONG POST MYOCARDIAL INFARCTION PATIENTS IN CARDIOLOGY WARDS OF TERTIARY CARE HOSPITALS KOLKATA

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ABSTRACT

Background: Illness perceptions are the organized cognitive representations or beliefs that patients have about their illness and medical conditions. **Objectives:** The objective was to assess the illness perception of Myocardial Infarction patients. **Research Method:** A descriptive survey design was adopted to assess the illness perception among patients with Myocardial Infarction at Cardiology Wards of Tertiary Care Hospitals, Kolkata. The conceptual framework was based on Leventhal's Self regulatory model of illness cognition. Hundred (100) patients were recruited by non-probability purposive sampling technique. A semi-structured interview schedule and IPQ-R (by Moss-Morris, Weinman, Petrie, Horne, Cameron & Buick, 2002) were applied for collection of data. **Results:** Result showed that majority of MI patients were male (80%), married (76%), rural habitat (62%) and age group of 50-59 years (48%). 99% patients perceived chest pain as related symptom. Among seven areas, perception in treatment control area was found high (10.50±1.40). Significant positive relationship was found among Timeline (acute / chronic) and Timeline cyclical; Consequences and Personal control, Illness coherence, Emotional representations; Personal control and Illness coherence, Emotional representations; Illness coherence and Emotional representations. There was significant association between Illness perception and Habitat, Educational status, Per capita income. **Conclusion:** In this study positive perception was found in Treatment control area. This study has important implication in nursing service and research. Further studies are required in large number of samples for generalization.

Keywords: Illness Perception, Myocardial Infarction, Leventhal's Self regulatory Model, IPQ-R.

INTRODUCTION

Illness perceptions are the organized cognitive representations or beliefs that patients have about their illness and medical conditions. Illness perceptions are the important predictor of patients' behaviour during the experience of illness. These perceptions are found to be important determinants of behaviour and are associated with the outcomes like, treatment adherence and functional recovery. In addition, illness perception includes patients' belief about the consequences of the illness condition for the patient as well as their family, and also the extent to which the illness is manageable to personal control or to control by treatment (Petrie, Jago & Devcich, 2007).

Myocardial infarction (MI) is a major illness which usually attacks suddenly and it has serious psychological as well as functional impact on the patients and their families (Huber, Henriksson, Jakobsson, Stenfors & Mooe, 2019). In the case of Myocardial infarction (MI) it is an established fact that proper diagnosis and treatment may reduce mortality and improve the prognosis. It is therefore impertinent that patients with MI must go for medical care and treatment as soon as the onset of symptoms (De Luca, 2019). Several studies were conducted to assess Illness Perception of different disease conditions. However in West Bengal; no study has yet been conducted on this topic. So the researcher felt the need and urgency to assess the Illness Perception among Myocardial Infarction patients.

METHODOLOGY

Research approach and design: In this study

descriptive research approach and descriptive survey design was adopted. The settings of the study were in Cardiology Wards of selected Tertiary Care Hospitals, Kolkata.

Sample and Sampling technique: From Cardiology Wards of selected Tertiary Care Hospitals, Kolkata, hundred (100) Myocardial Infarction patients were recruited by Non-probability purposive sampling technique.

Data collection tools and technique: A semi-structured interview schedule was used for demographic variables and Modified Illness-Perception Questionnaire-Revised (by Moss-Morris, Weinman, Petrie, Horne, Cameron, & Buick, 2002) was used for collecting data regarding Illness-perception of MI patients. Data collection was done by interviewing.

Data analysis: The data were analyzed in terms of the objectives of the study using both descriptive and **inferential statistics.**

RESULTS

In this research study majority (80%) of the MI patients were Male, only (20%) were Female (Figure 1).

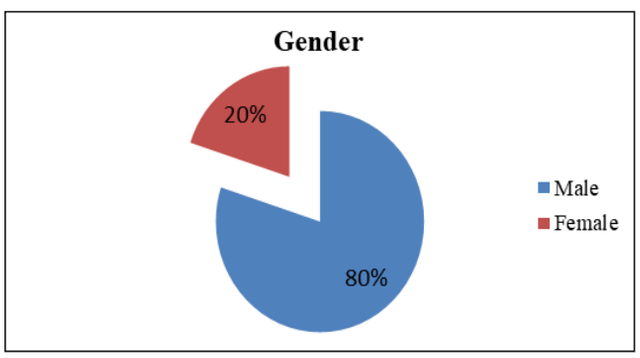

Figure 1: Pie diagram showing percentage distribution of Myocardial Infarction patients in terms of Gender. n=100

It was determined that half of the male (50%) and (40%) of the female MI patients belong to the age group of 50-59 years. Only (1.25%) of the male and (5%) of the female patients belong to the age group of 80-89 years (Table 1). The mean age of the samples was 56.3 years.

Table 1: Frequency and percent distribution of Myocardial Infarction patients in terms of Age Group.

	Male		Female		Total
Sample Characteristics	**Frequency**	**Percent (%)**	**Frequency**	**Percent (%)**	**Frequency & Percent (%)**
Age Group (Years)					
30-39	3	3.75	0	0	3
40-49	11	13.75	3	15	14
50-59	40	50.00	8	40	48
60-69	18	22.50	6	30	24
70-79	7	8.75	2	10	9
80-89	1	1.25	1	5	2

Note: n_m= Number of Male samples, nf = Number of Female samples n=100 (nm+nf = 80+20)

Majority (61.25%) of the Male and (65%) of the female MI patients were habitat of rural areas. Majority (36.25%) of the male MI patients had Secondary level of education; majority of the female MI patients (60%) had Educational level Below Primary. Majority (42.50%) of the Male MI patients and only (10%) female MI patients were daily labour. Majority (90%) of the female MI patients and (21.25%) of the male patients belonged to Others group (i.e. Home maker, retired, incapable to do work due to old age). Maximum (80%) of the male and (60%) of the female Myocardial Infarction patients were married; only (5%) male patients were unmarried (Table 2).

Table 2: Frequency and percent distribution of Myocardial Infarction patients in terms of Habitat, Educational status, Occupation and Marital status.

	Male		Female		Total
Sample Characteristics	**Frequency**	**Percent (%)**	**Frequency**	**Percent (%)**	**Frequency & Percent (%)**
Habitat					
Urban	31	38.75	7	35	38
Rural	49	61.25	13	65	62
Educational Status					
< Primary	23	28.75	12	60	35
Primary	12	15.00	3	15	15
Secondary	29	36.25	4	20	33
>Secondary	16	20.00	1	5	17

Occupation					
Daily labour	34	42.50	2	10	36
Business	18	22.50	0	0	18
Service	11	13.75	0	0	11
Others	17	21.25	18	90	35
Marital Status					
Unmarried	4	05.00	0	0	4
Married	64	80.00	12	60	76
Widow/ Widower	12	15.00	8	40	20

Note: n_m= Number of Male samples, n_f = Number of Female samples n=100 (n_m+n_f= 80+20)

Data presented in Figure 2 showed that majority (48%) of the MI patients' Per Capita Income was within Rs. 3287-6573. Only (10%) MI patients' Per Capita Income was within Rs.986-1971

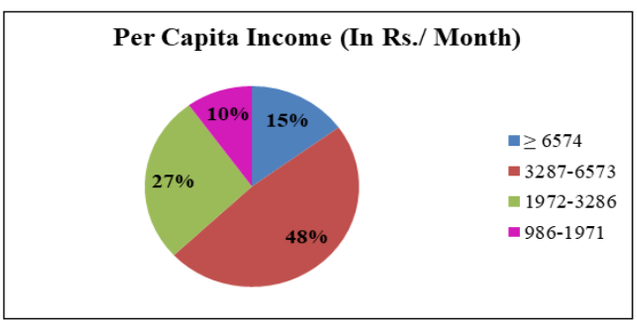

Figure 2: Pie diagram showing percentage distribution of Myocardial Infarction patients in terms of Per Capita Income. n=100

Majority (67.5%) of the male and (55%) of the female MI patients habit was to take spicy food occasionally. 57.5% of the male and 70% of the female patients had no chronic illness, 15% of the male and 5% of the female patients had only Hypertension as Chronic illness. 13.8% of the male 10% of the female MI patients had only Diabetes Mellitus as Chronic illness (Table 3).

Table 3: Frequency and percent distribution of Myocardial Infarction patients in terms of habit of taking spicy and fatty food and chronic illness.

Sample Characteristics	Male		Female		Total
	Frequency	Percent (%)	Frequency	Percent (%)	Frequency & Percent (%)
Habit of Taking Spicy and fatty Food					
Always	26	32.5	9	45	35
Occasionally	54	67.5	11	55	65
Chronic Illness Hypertension	12	15.0	1	5	13
DM	11	13.8	2	10	13
DM & HTN	10	12.5	3	15	13
DM, HTN & Hypothyroidism	1	1.3	0	0	1
None	46	57.5	14	70	60

Note: n_m= Number of Male samples, n_f = Number of Female samples n=100 (n_m+n_f= 80+20)

70% of the male and 85% of the female patients had no Family history of Coronary Artery Disease. Most of the male MI patients (38.8%) had habit of only smoking. 35% female MI patients had habit of only tobacco chewing. 37.7% of the male and 65% of the female MI patients had no habit of Substance Abuse. Only 1.2% male MI patient had habit of smoking, tobacco chewing and alcohol intake (Table 4).

Table 4: Frequency and percent distribution of Myocardial Infarction patients in terms of family history and substance abuse.

Sample Characteristics	Male		Female		Total
	Frequency	Percent (%)	Frequency	Percent (%)	Frequency & Percent (%)
Family History					
Yes	24	30.0	3	15	27
No	56	70.0	17	85	73
Substance Abuse					
Only Smoking	31	38.8	0	0	31
Only Tobacco Chewing	10	12.5	7	35	17
Smoking & Tobacco Chewing	6	7.5	0	0	6
Smoking & Alcohol Intake	2	2.5	0	0	2
Smoking, Tobacco Chewing & Alcohol Intake	1	1.2	0	0	1
None	30	37.5	13	65	43

Note: n_m= Number of Male samples, n_f = Number of Female samples n=100 (nm+n_f= 80+20)

Almost all (99%) patient perceived chest pain and only 7% patient perceived Upset of stomach as related symptom of MI (Figure 3).

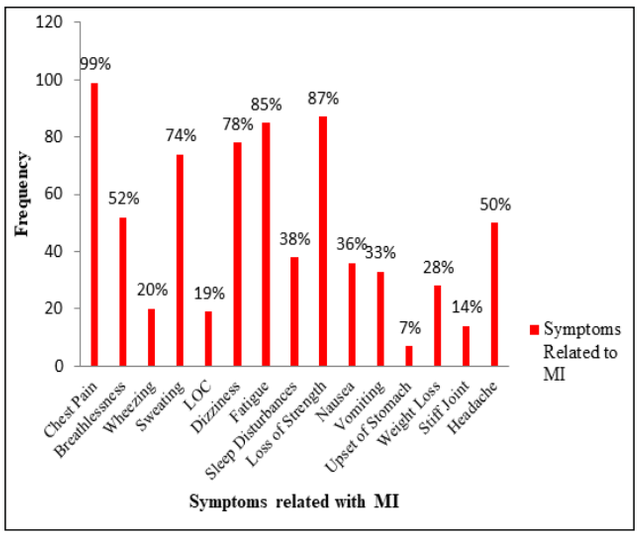

Figure 3 Bar diagram showing percentage distribution of MI patients in terms of Perception of Symptoms (Related with MI) n=100.

Among seven areas of Illness Perception, in the area of Treatment control, obtained mean score was 10.5±1.40 (highest), mean percent was 87.50% and in the area of Timeline (Acute/ Chronic) obtained mean score was 2.75±1.44 (lowest), mean percent was 45.80%. The overall obtained mean score was 47.06±5.89, mean percent was 78.43 (Table 5).

Table 5: Area wise possible score (range), obtained mean score, standard deviation and mean percentage of Illness perception.

Sl. No.	Content Area	Possible score (Range)	Obtained mean score ± SD	Mean percent (%)
1.	Timeline(Acute/ Chronic)	2-6	2.75±1.44	45.80
2.	Timeline cyclical	2-6	4.67±0.76	77.83
3.	Consequences	4-12	10.31±1.69	85.92
4.	Personal control	2-6	4.40±1.09	73.30
5.	Treatment control	4-12	10.50±1.40	87.50
6.	Illness coherence	2-6	4.59±1.39	76.50
7.	Emotional representations	4-12	9.84±2.24	82.00
8.	Overall score	20-60	47.06±5.89	78.43

Note: n=100

Table 6 showed correlation analysis within areas of Modified Illness Perception Questionnaire- Revised.

Table 6: Correlation analysis within areas of Modified Illness Perception questionnaire-revised.

	1	*2*	*3*	*4*	*5*	*6*	*7*
1.Timeline (Acute/Chronic)							
2.Timeline cyclical	*0.30**						
3.Consequences	*0.19*	*0.19*					
4.Personal control	*0.15*	*0.11*	*0.37**				
5.Treatment control	*0.12*	*0.17*	*0.18*	*0.13*			
6.Illness coherence	*0.14*	*0.11*	*0.43**	*0.29**	*0.16*		
7.Emotional representations	*0.04*	*-0.01*	*0.40**	*0.32**	*0.13*	*0.47**	

*Note: 't' df(98)=2.58 *p<0.01 n=100*

The area Timeline (acute/ chronic) had positive correlation with Timeline- cyclical; the area Consequences had positive correlation with Personal control, Illness coherence, and Emotional representations; the area Personal control had positive correlation with Illness coherence and emotional representations; the area Illness coherence had positive correlation with Emotional representations; which were significant at the 0.01 level of significance.

There was significant association between Illness perception score and Habitat, Educational status, Per capita income at 0.05 level of significance (Table 7).

Table 7: Association between the Illness Perception score (< Median and ≥ Median, Median of Illness Perception Score was 48) and selected variables.

Sl. No.	Variables	<Median	≥ Median	χ^2	df
1.	**Age**				
	< 55 Years	18	23	0.47	1
	≥ 55 Years	30	29		
2.	**Gender**				
	Male	36	44	1.44	1
	Female	12	8		
3.	**Habitat**				
	Urban	13	25	4.67*	1
	Rural	35	27		
4.	**Educational Status**				
	Upto Primary	32	18	10.26*	1
	Above Primary	16	34		

5.	**Occupation** Working Not Working	 27 21	 38 14	3.11	1
6.	**Per Capita Income (Rs.)** ≥ 6574 32876573 9863286	 6 18 24	 9 30 13	6.67*	2
7.	**Marital Status** Single Married	 15 33	 9 43	2.66	1
8.	**Substance Abuse** No Yes	 25 23	 18 34	3.11	1
9.	**Habit of taking Spicy and fatty food** Always Occasionally	 18 30	 17 35	0.25	1
10.	**Family History** No Yes	 37 11	 36 16	0.78	1
11.	**Chronic Illness** No Yes	 31 17	 29 23	0.81	1

*Note: $\chi 2$ value at df (1) = 3.84, $\chi 2$ value at df (2) =5.99, *P <0.05 n=100*

DISCUSSION

The present study showed that the mean age of samples was 56.3 years. Majority of them were male (80%), married (76%). 33% patients had secondary educational level. Mean percent(%) in the areas including Treatment control, Personal control and Consequence were 87.50, 73.30 and 85.92 respectively. Higher perception in Treatment control over the illness might increase adherence with the treatment. Lower perception of Personal control and higher perception of Treatment control may limit behavioural changes of MI patients. Higher perception in Consequences refers to increased understanding of the illness. In the Timeline area mean percent was 45.80% which indicates negative perception about the chronicity of the illness.

The findings were supported by the study done by (Paryad, Balasi, Kazemnejad & Booraki, S. 2017) 'To assess the Predictors of Illness Perception in Patients Undergoing Coronary Artery Bypass Surgery'.

In the present study, researcher used IPQ-R after modifying it as per the patient's understanding and relevance with the setting. In correlation analysis within the areas of illness perception, there was a significant positive correlation between Timeline (acute / chronic) and Timeline cyclical (r = 0.30); Consequences and Personal control (r = 0.37); Consequences and Illness coherence (r = 0.43); Consequences and Emotional representations (r = 0.40); Personal control and Illness coherence (r = 0.29); Personal control and Emotional representations (r =0.32); Illness coherence and Emotional representations (r = 0.48) areas. Pertaining to association with the illness perception score and selected variables, there was significant association between Illness perception score and Habitat, Educational status & Per capita income at 0.05 level of significance. With other variables there was no significant association.

The findings were supported by a descriptive study, undertaken by (Pramila, 2013) to Assess the Illness perception among post-myocardial infarction patients.

CONCLUSION

Purpose of this study was to assess the illness perception of post MI patients. The findings related to the perception of symptoms (presence or absence) revealed that 99% patients perceived chest pain in relation with MI. There was significant positive correlation among Timeline (acute / chronic) and Timeline cyclical; Consequences and Personal control, Illness coherence, Emotional representations; Personal control and Illness coherence, Emotional representations; Illness coherence and Emotional representations. The Illness Perception score was significantly associated with Habitat, Educational status & Per capita income of the MI patients. So, the research findings should become a part of the quality assurance evaluation to enhance the perception of the MI patients.

However, large population based study is required for the generalization of the findings.

ACKNOWLEDGEMENT

Researcher expresses her thanks and gratitude to The West Bengal University of Health Sciences, Kolkata, for granting permission to conduct the study. The researcher will remain grateful forever as she acquired the basic knowledge about research, valuable opinion and suggestions throughout the study from the Honourable Principal, Govt. College of Nursing, N.R.S. Medical College and Hospital, Kolkata. The research project has been accomplished under the expert guidance and supervision of Mrs. Susmita Sengupta, Senior Lecturer, Govt. College of Nursing, N.R.S. M.C. & H. Kolkata and Dr. Manoranjan Mandal, Professor, Department of Cardiology, N.R.S. M.C. & H. Kolkata. Researcher expresses her sincere gratitude and appreciation for their expert guidance, valuable suggestion and proper planning and execution of study. The researcher is thankful to John Weinman, Rob Horne, Keith J. Petrie and Rona Moss-Morris, developer of the Illness Perception Questionnaire – Revised from which she took help to prepare the questionnaire. The researcher is thankful to all the participants for their kind co-operation and help in completing the study successfully. Lastly researcher would like to express her gratitude to all the teachers, family members and well wishers though not mentioned by name but nonetheless have been instrumental in successful completion of this dissertation.

CONFLICT OF INTERESTS

The authors declare that they have no conflict of interest.

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