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Assessment of Illness Perception among Post Myocardial Infarction Patients

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Abstract

A descriptive study was undertaken to assess the illness perception among post Myocardial Infarction patients at Jayadeva Institute of cardiovascular sciences and research. All patients admitted with Myocardial Infarction were selected using convenience sampling technique and sample size comprised of 50 patients. A standardized tool, Illness Perception Questionnaire- Revised was used to collect self reports. The findings revealed that mean score was 166.28, standard deviation was 1.617 and mean percentage was 87.5. The results were further analyzed by correlation analysis within the categories of illness perception. Although all the categories were not correlated, there was a positive correlation with over all score of illness perception and all categories. Pertaining to association with the illness perception score and demographic variables, no association was found.

Keywords: Illness perception; Illness perception Questionnaire-Revised; Myocardial Infarction.

Assessing illness perception is important in patients with negative cardiac tests for understanding and predicting outcomes.[1] Myocardial Infarction (MI) is a major and usually sudden illness that can have serious psychological and functional impact on patients.[2] There is growing evidence corroborating that the perception of the disease plays an important role in the degree of compliance.[3] Research investigating the role of illness perceptions in medical conditions has grown rapidly in recent years. This has been spurred initially by the development of scales to reliably measure illness beliefs, such as the Illness Perception Questionnaire (IPQ), and subsequently by the strong associations found between patients' perceptions of their illness and behavioral outcomes. Research on illness perceptions has confirmed that patients' beliefs are associated with important outcomes in a broadening range of illnesses and risk factor testing.

Illness perceptions are the organized cognitive representations or beliefs that patients have about their illness. These perceptions have been found to be important determinants of behavior and have been associated with a number of important outcomes, such as treatment adherence and functional recovery. A recent study found that illness perceptions, measured in patients prior to undergoing investigations for chest pain, were important determinants of reassurance immediately following the investigation and one month later. Those patients who had already developed ideas that their illness was going to last a long time were the least reassured following exercise stress testing. Another factor that is likely to be important is the delay before the diagnostic test is undertaken. A long delay allows more time for negative illness beliefs to become established. This may include negative or catastrophic ideas about symptoms, as well as a reduction in work hours or leisure activities. All of these factors make subsequent reassurance considerably more difficult.[4]

Recent developments in treatment during the acute stage of MI have resulted in improved survival and fewer complications for patients.[5] However, these gains in the acute phase of the illness contrast with the small progress that has been achieved in understanding and improving the rehabilitation phase of the illness.[6] The assessment of illness perceptions may have a valuable role in identifying which patients are likely to benefit from rehabilitation programs as

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they are currently structured. Patients who perceive that their heart disease has little hope of being controlled may benefit from another intervention before attending a rehabilitation program. This intervention could be specifically targeted at changing this perception. Perhaps more importantly, future research should examine the efficacy of brief psychological interventions designed to elicit and if necessary modify specific illness perceptions in facilitating adaptation.

Statement of the problem

A study to assess illness perception among post myocardial infarction patients at selected cardiac hospital.

Objectives of the study

1. Assess the illness perception score among post myocardial infarction patients.
2. Correlate the scores of each category of illness perception among post myocardial infraction patients.
3. Associate the scores of each category with selected demographic variables.

Materials and Methods

Research methodology: The research design adopted for the study is descriptive explorative design.

Research setting: The setting for the study was cardiac wards at Sri Jayadeva Institute of Cardiovascular sciences and research, Bangalore.

Population

Target population: All patients diagnosed to have Myocardial Infarction.

Accessible population: Patients diagnosed with Myocardial Infarction admitted in cardiac wards of Sri Jayadeva Institute of Cardiovascular sciences and research, Bangalore.

Sampling technique: The sampling technique adopted for this study was convenience sampling of non- probability type.

Sample size: The sample size for the present study was 50.

Sampling criteria

Inclusion criteria

- Patients with the diagnosis of MI.
- Patients who can read English or Kannada .
- Patients who are willing to participate in this study.
- Patients who are available during data collection period.

Exclusion criteria

- Patients who are not oriented.
- Patients who are blind.

Tools for data collection

Section-A: Consists of demographic data

Section-B: Comprises of Illness Perception Questionnaire-Revised to assess the illness perception of post myocardial infarction patients. It is a standardized instrument. It has 38 items on view of patient's illness. Apart from this, it contains 9 items for identity category and 18 items on views of cause of illness.

Method of data collection

Permission was obtained from the authorities of the hospital and the respondents meeting the inclusion criteria were selected using convenience sampling method. The tool was distributed to them and collected after the completion of the self reports. The data was collected in the month of May 2013. The respondents were very cooperative.

Data analysis and interpretation

The demographic characteristics of the respondents are shown in table 1.

Table 1: Percentage distribution of respondents according the demographic variables

N=50

Variable	Frequency	Percent
Age Group		
Below 40 Years	9	18.0%
41 - 50 Years	26	52.0%
Above 50 Years	15	30.0%
Gender		
Male	26	52.0%
Female	24	48.0%
Smoking		
Yes	21	42.0%
No	29	58.0%
Alcohol		
Yes	21	42.0%
No	29	58.0%
Hypertension		
Yes	45	90.0%
No	5	10.0%
DM		
Yes	44	88.0%
No	6	12.0%
Regular Exercise		
Yes	0	0.0%
No	50	100.0%
Diet		
Vegetarian	4	8.0%
Non-vegetarian	46	92.0%
Site of Myocardial infarction		
Anterior	31	62.0%
Posterior	13	26.0%
Inferior	12	24.0%

Table 2: Distribution of levels of Illness Perception Score with respective to their categories

N=50

Categories of IPR-Q	Low	Medium	High
Identity	0 (0.0%)	46 (92.0%)	4 (8.0%)
Timeline - Acute/Chronic	3 (6.0%)	41 (82.0%)	6 (12.0%)
Consequences	3 (6.0%)	40 (80.0%)	7 (14.0%)
Personal Control	4 (8.0%)	42 (84.0%)	4 (8.0%)
Treatment Control	12 (24.0%)	36 (72.0%)	2 (4.0%)
Illness Coherence	7 (14.0%)	37 (74.0%)	6 (12.0%)
Timeline - Cyclical	0 (0.0%)	49 (98.0%)	1 (2.0%)
Emotional Representations	5 (10.0%)	43 (86.0%)	2 (4.0%)
Illness Perception Score	4 (8.0%)	40 (80.0%)	6 (12.0%)

Table 1 shows the percentage distribution of respondents according to their demographic variables. With regarding to the age group 18% belonged to less than 40 years of age, 52% to 41- 50 age group and 30% were above 50 years of age. Related to gender, 52% were males and 48% were females. Pertaining to their habits of smoking and alcohol 42 % were smokers and alcoholics. With regard to risk factors, 90% were hypertensives, 88% were diabetics, none of them performed regular exercise and 92% were non-vegetarians. In relation of site of MI, 62% had anterior wall MI, 26% posterior wall MI and 24% were diagnosed to have inferior wall MI.

Table 3: Mean, Standard deviation and mean% of Illness Perception Score with respective to their categories

N=50

Categories	Mean	SD	Mean %
Timeline - Acute/Chronic	26.54	0.930	88.5 %
Consequences	28.16	0.650	93.9 %
Personal Control	24.82	0.850	82.7 %
Treatment Control	21.76	0.625	87.0 %
Illness Coherence	21.02	0.622	84.1 %
Timeline - Cyclical	19.02	0.141	95.1 %
Emotional Representations	24.96	0.450	83.2 %
Illness Perception Score	166.28	1.617	87.5 %

Fig 1: Bar diagram of mean percentage of illness perception score of respondents

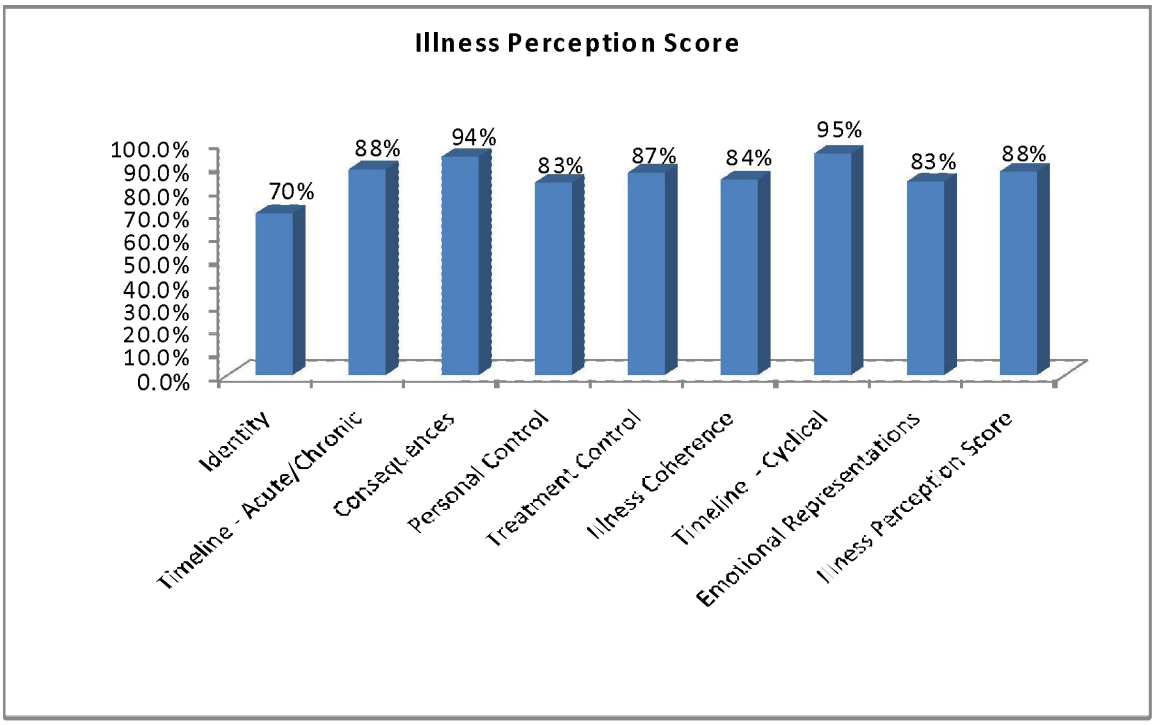

Table 2 reveals the level of illness perception score with respective to their categories. The levels were classified as low, medium and high. The percentage of low, medium and high level of identity was 0%, 92% and 8%; timeline – acute/ chronic was 6%, 82% and 12%; consequences was 6%, 80% and 14%; personal control was 8%, 84% and 8%; treatment control was 24%, 72% and 2%; illness coherence was 14%, 74% and 12%; timeline- cyclical was 0%, 49% and 1%; emotional representations was 5%, 43% and 2% and illness perception score was 8%, 80% and 12% respectively.

Table 3 shows the mean, standard deviation and mean % of illness perception score corresponding to their categories. The scores of mean, standard deviation and mean percentage for timeline- acute/ chronic was 26.54, 0.930 and 88.5%; consequences was 28.16, 0.650 and 93.9%; personal control was 24.82, 0.850 and 82.7%; treatment control was 21.76, 0.625 and 87%; illness coherence was 21.02, 0.622 and 84.1%; timeline- cyclical was 19.02, 0.141 and 95.1%; emotional representations was 24.96. 0.450 and 83.2%; the total illness perception score was 166.28, 1.617 and 87.5% respectively. The mean percentages are represented in the form of graph in Fig 1.

Table 4 displays the correlation analysis within categories of illness perception questionnaire- revised. The category identity has positive correlation with

Table 4: Correlation analysis within categories of illness perception questionnaire- revised

N=50

Categories	1	2	3	4	5	6	7	8	9
1. Identity									
2. Timeline - Acute/Chronic	0.27								
3. Consequences	0.47**	0.23							
4. Personal Control	-0.39**	-0.16	-0.43**						
5. Treatment Control	0.10	-0.33*	0.05	0.42**					
6. Illness Coherence	0.35*	0.02	0.14	-0.19	0.01				
7. Timeline - Cyclical	0.55**	0.07	0.19	-0.14	0.06	0.46**			
8. Emotional Representations	0.03	0.30*	-0.26	-0.07	-0.25	0.00	0.01		
9. Illness Perception Score	0.37**	0.55**	0.33*	0.32*	0.37**	0.40**	0.33*	0.21	

*P< 0.05 level of significance ** P< 0.01 level of significance

Table 5: Association of illness perception score and selected demographic variables

N=50

Demographic variables	Illness Perception Score			Fisher's Exact Value	p - value
	Low	Medium	High		
Age Group					
Below 40 Years	1 (11.1%)	7 (77.8%)	1 (11.1%)	2.112	0.838
41 - 50 Years	1 (3.8%)	22 (84.6%)	3 (11.5%)		
Above 50 Years	2 (13.3%)	11 (73.3%)	2 (13.3%)		
Gender					
Male	2 (7.7%)	20 (76.9%)	4 (15.4%)	0.709	0.870
Female	2 (8.3%)	20 (83.3%)	2 (8.3%)		
Smoking					
Yes	2 (9.5%)	17 (81.0%)	2 (9.5%)	0.458	0.999
No	2 (6.9%)	23 (79.3%)	4 (13.8%)		
Alcohol					
Yes	2 (9.5%)	17 (81.0%)	2 (9.5%)	0.458	0.999
No	2 (6.9%)	23 (79.3%)	4 (13.8%)		
Hypertension					
Yes	4 (8.9%)	35 (77.8%)	6 (13.3%)	0.524	0.999
No	0 (0.0%)	5 (100%)	0 (0.0%)		
DM					
Yes	3 (6.8%)	35 (79.5%)	6 (13.6%)	1.461	0.510
No	1 (16.7%)	5 (83.3%)	0 (0.0%)		
Exercise					
Yes	0 (0.0%)	0 (0.0%)	0 (0.0%)	--	--
No	4 (8.0%)	40 (80.0%)	6 (12.0%)		
Diet					
Vegetarian	0 (0.0%)	4 (100%)	0 (0.0%)	0.436	0.999
Non-vegetarian	4 (8.7%)	36 (78.3%)	6 (13.0%)		

consequences, and timeline- cyclical and has negative correlation with personal control at P<0.01 level of significance. The second category timeline- acute/ chronic has positive correlation with emotional representations and negative correlation with treatment control at P<0.05 level of significance. The third category consequences has negative correlation with personal control at P<0.01 level of significance. The fourth category personal control has positive correlation with treatment control. And the sixth

category illness coherence has positive correlation with timeline- cyclical at P< 0.01 level of significance.

Table 5 shows association between demographic variables and level of illness perception score and it was found that there was no association.

Discussion

Assessment of illness perception score

The total scores of illness perception with regard to mean, standard deviation and mean percentage was 166.28, 1.617 and 87.5% respectively. The mean percentage of illness perception in all categories were more than 80%; of which timeline-cyclical was highest (95.1%) and lowest being personal control (82.7%).

Correlation of illness perception scores

The correlation analysis among the illness perception scores was computed using Karl Pearson's coefficient of correlation. The analysis revealed that the category identity has positive correlation with consequences, and timeline-cyclical and has negative correlation with personal control at P<0.01 level of significance. The category timeline-acute/chronic has positive correlation with emotional representations and negative correlation with treatment control at P<0.05 level of significance. The category consequences has negative correlation with personal control at P<0.01 level of significance. The fourth category personal control has positive correlation with treatment control. And the sixth category illness coherence has positive correlation with timeline - cyclical at P< 0.01 level of significance. The findings of the study are supported by a study that examined illness perception and their correlates in coronary heart disease. Results revealed men attributed their coronary heart disease more often to risk behaviors and internal factors while women perceived stress as the cause of their coronary heart disease more often. Stronger perceived competence was related to weaker illness identity, strong control cure and less severe consequences.[7]

Association of illness perception scores with selected demographic variables

It is quite evident from the findings that there was no significant association between the demographic variable sand scores of illness perception.

Conclusion

Patients' illness perceptions influence health outcomes after MI. Supporting MI patients in increasing their perception of personal control could be a primary nursing strategy in rehabilitation programs aimed at facilitating health behavior, decreasing experiences of fatigue, and increasing health related quality of life.

Negative perceptions about heart disease in the days following admission to hospital with first MI are associated with the development of subsequent new episodes of depression. The need for cardiac rehabilitation program that encompass the understanding of the disease arise. The finding of a study also reveals intervention (cardiac rehabilitation) caused significant positive changes in patients' views of their MI and intervention group has a faster rate (within 3 months after MI) of return to work than control group.[8]

Implications of the study

- An in-hospital intervention designed to change patients' illness perceptions can result in improved functional outcome after MI.
- The early identification of illness perceptions could improve the outcome of cardiac rehabilitation programs.
- The examination of how individuals perceive MI may help health-care professionals individualize secondary preventive strategies, thereby improving adherence to health-care regimens.

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