

## RESILIENCE AMONG PATIENTS WITH MYOCARDIAL INFARCTION IN TERTIARY CARE HOSPITALS OF PESHAWAR

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### ABSTRACT

**OBJECTIVE:** The objective of current study was to find out the resilience level among patients with Myocardial Infarction in Tertiary care hospitals of Peshawar Khyber Pakhtunkhwa Pakistan.

**METHODS:** A descriptive cross-sectional study was conducted on 150 myocardial infarction patients in three major tertiary care hospitals of Peshawar Khyber Pakhtunkhwa Pakistan in December 2017. Data was collected through an adopted questionnaire. Data was analyzed through SPSS 22 version.

**RESULTS:** Total 150 participants were selected for the study with a response rate of 100%. Study consisted of 58% of female, 88% married, 62.7% unemployed participants. Majority of the participants (48.7%) had age greater than 55 years. In the study 82 (54%) participants represented moderate to very high degree of resilience while 51 (34%) of participants were recorded as a very low degree of resilience.

**CONCLUSION:** This study concluded that half of the individuals represented moderate to very high degree of resilience in their post myocardial infarction period. Older participants represent more resilience as compared to younger

**KEYWORDS:** Cardiac, Pain, Resilience, Myocardial Infarction,.

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### INTRODUCTION

Myocardial infarction can be defined as a condition when there is an acute injury to the myocardium with evidence of myocardial ischemia, increased Troponin level, ECG changes or angiography identified coronary thrombus (1). Cardiovascular diseases has produced a great impact worldwide as it has become the leading cause of death in the world accounting for about 30% of all deaths globally. Moreover, among cardiovascular diseases about 38%-46% ranges for ischemic heart diseases (2).

Resilience is a personality inherited attribute and psychosocial factor been studied and explored as a psychosocial protective factor related and associated with good clinical outcomes especially in the adverse outcomes in the development of chronic diseases (3). Resilience can also be seen as a way of adaptation to respond to stress, and various negative stressors like injuries, threats, tragic events, interpersonal and family problems, financial problems, work- and health-related problems, and diseases etc. The aim of resilience is to reduce the negative effects of the stressor (4). Ideally there is no general

definition of Resilience. However, several authors agreement on general features of Resilience like back to normalcy, self-care, increasing adaptation, positively overcome on stressors and enhancing psychological health (5).

Resilience is also seems to be a contextual construct that is a personal, cultural, dynamic and background-dependent phenomena. Further, it is also situation specific and goal specific and personalized traits dimensional (6). In medical perspective, resilience in patients with chronic physical diseases was associated with various factors, such as self-care, adhering to treatment programs, health-related quality of life, disease perception, pain management, adherence to physical activity, self-empowerment, increasing self-efficacy, and reducing mental problems like stress, anxiety, and depression, increasing optimism, and accelerating recovery (7). However, most of these studies in the literature on resilience have dealt with social problems or poverty, on subjects who had sustained severe trauma and victims of physical abuse. In this regard it is claimed that there is a paucity of studies on chronic disease patients. This

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wide range of resilience problematizes the outcome results which mentioned that the level ranged from 25 % - 84 %, also make difficulties in comparison of the results with other works or giving a clear-cut definition of resilience even when the subjects suffer from similar problems. Question has also been raised on how to measure this concept in different experiences? Because, a study mentioned that till-date of resilience tools, no existing tools are psychometrically standard (8).

Resilience can be acquired at any stage of life, irrespective of age and disease status, there is a need for training to improve resilience among patients through educational programs (9). Resilience among patients with coronary heart diseases also has conflicting findings. As some researches have identified that patients with Myocardial Infarction are not resilient in their Post-Infarction period (10, 11). In the present study resilience among patients with myocardial infarctions were assessed through Resilience Scale Questionnaire having 25 items with having a Likert scale like responses were recorded. The present study will help to identify first the degree of resilience among post myocardial infarction patients as well as this study will also provide base for further studies to find correlation between resilience level and myocardial infarction. It will also potentially helpful to provide resilience enhancing programs to cope the fatal consequence of myocardial infarction.

### METHODS

A descriptive cross-sectional study design was used. This study was conducted in the Cardiac units of Khyber teaching hospital, Hayatabad Medical Complex, and Lady Reading Hospital of Peshawar, Khyber Pakhtunkhwa, Pakistan within 12 weeks time. The calculated sample size

of the study was 139, so a total of 150 participants were selected by keeping the drop out in mind. The sample was calculated through Raosoft sample size calculator (considering the prevalence as 50%, 0.05 of significance level, 90% confidence level, and bound of error 05%). Consecutive sampling strategy was utilized to select the participants in proportionate amount of 50 participants each in a hospital admitted in the coronary care units of the tertiary care hospitals of Peshawar through validated and reliable questionnaire. So, a total of 150 participants were selected from the three tertiary care hospitals of Peshawar.

All the Myocardial infarction male and female patients who were willing to fill resilience scale questionnaire were included in the study. All those patients who have less than 24 hrs of having Myocardial infarction, and symptomatic

patients of Myocardial infarction who had unsettled disease status were excluded from the study. Permission was granted from the ethical review committee and heads of the nursing departments. All the respondents were taken an Informed consent for data collection. Purpose of the study was clarified to all the respondents along with study information. The nature of participation was voluntary and the right of anonymity and confidentiality ensured. Data was collected through primary investigator in the field. Adopted and validated questionnaire was filled by the participant or the investigator in the English / Urdu languages medium.

The process which was applied systematically, statistically and reasonable techniques to define and demonstrate abbreviate, summarize and estimate data (Data Analysis). Field data was collected

for this project; SPSS 22. Version was used for data analysis.

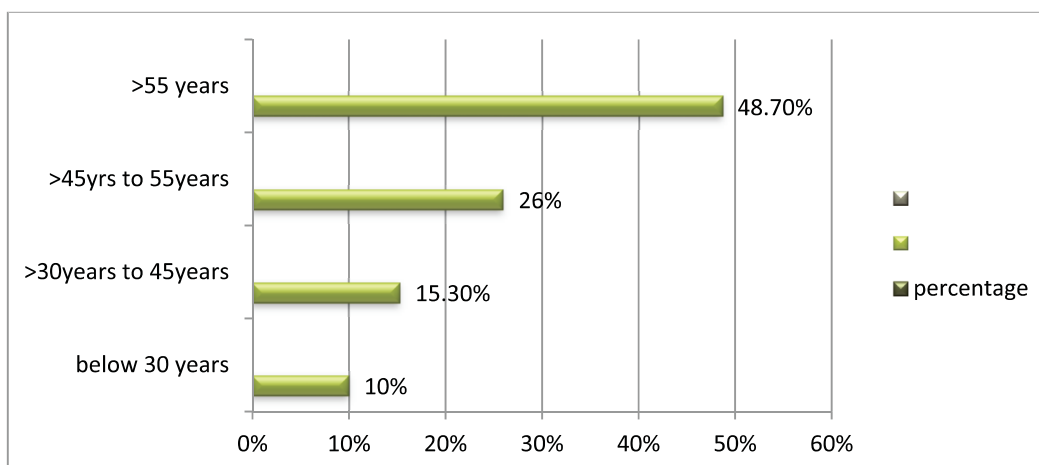
## RESULTS

A sample size 139 participants was needed but considering attrition and missing data so a sample of 150 was taken. Our sample consist of 87 (58%) of female. Majority of the participants 73 (48%) were from age group greater than 55 years, 39 (26%) aged 45-55 years and only 15 (10%) were below 30 years.

The study consisted of Muslims 141 (94%), married 132 (88%) and unemployed 94(62.7%) participants. 74(49.3%) participants were uneducated, 59 (39.3%) were either matric or above and 17 (11.3%) were having education of primary level.

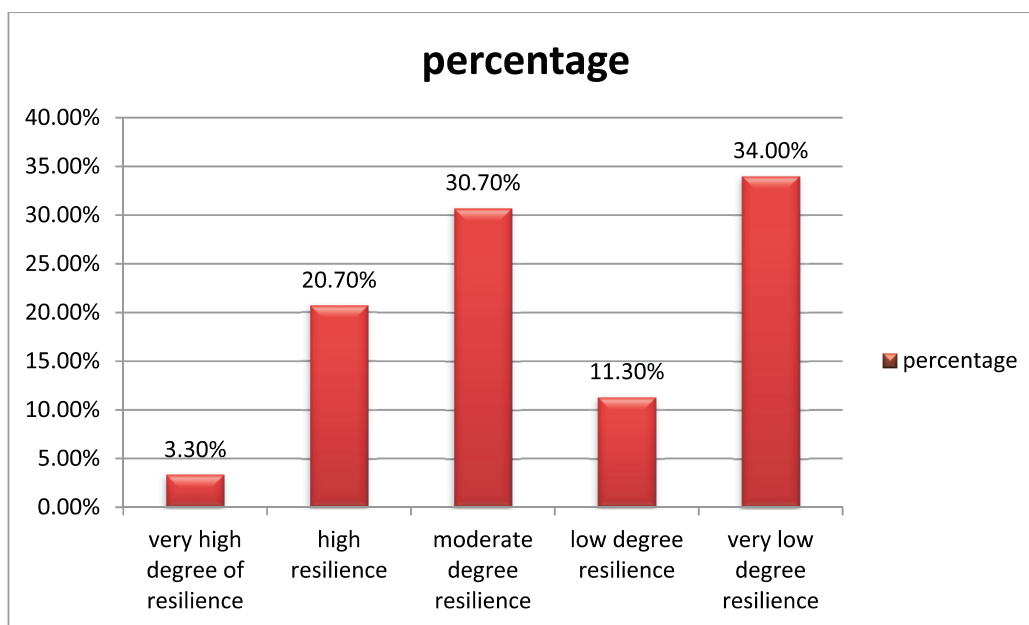
**Table I: Demographic characteristics of participants**

Variable	Frequency	Percentages
<b>Gender</b>		
Female	63	42%
Male	87	58%
<b>Age</b>		
Below 30 years	15	10%
>30yrs to 45yrs	23	15.3%
>45yrs to 55yrs	39	26%
>55yrs	73	48.7%
<b>Religion</b>		
Muslim	141	94%
Christian	8	5.3%
Others	1	0.7%
<b>Marital Status</b>		
Never Married	18	12%
Ever Married	132	88%
<b>Educational level</b>		
Uneducated	74	49.3%
Primary level	17	11.3%
Matric	21	14%
Intermediate	24	16%
Others	14	9.3%
<b>Occupational level</b>		
Unemployed	94	62.7%
Employed	56	37.3%



**Resilience among participants:** In this study 82 (54%) participants represented moderate to very high degree of resilience while 51 (34%) of participants were recorded as in a very low degree of resilience.

Total score of patients			
Level of Resilience	Frequency	Percentages	Cumulative percent (%)
Very high degree resilience	5	3.3%	3.3%
High resilience	31	20.7%	24.0%
Moderate degree resilience	46	30.7%	54.7%
Low degree resilience	17	11.3%	66.0%
Very low degree of resilience	51	34.0%	100%



The cross tabulation of resilience score with age showed that in female gender 53 (60.9%) out of 87 (100%) were resilient from moderate to very high degree. While in male gender 29 (46%) out of 63 (100%) were resilient from moderate to very high degree.

Considering the participants' marital status unmarried represented 13 (72%) out of 18 (100%), while in married 69 (52.2%) out of 132 (100%) were resilient from moderate to very high degree. The highest number 23 (59%) of resilience ranging from moderate to very

high level were found in age group 45 years to 55 years and the lowest number 6 (40%) were found in the age group below 30 years. Employed persons showed greater resilience 39 (69.6%) compared to unemployed 43 (45.7%).

Variable		Very high degree of resilience	High resilience	Moderate degree resilience	Low degree resilience	Very low degree resilience	Total
Gender	Male	2	9	18	9	25	63
	Female	3	22	28	8	26	87
Age	Below 30 years	0	0	6	3	6	15
	>30yrs to 45yrs	0	1	12	2	8	23
	>45yrs to 55yrs	1	14	8	2	14	39
	>55yrs	4	16	20	10	23	73
Marital status	Never Married	0	2	11	1	4	18
	Ever Married	5	29	35	16	47	132
Occupation	Unemployed	2	17	24	12	39	94
	Employed	3	14	22	5	12	56

**DISCUSSION**

In the present study we recruited a sample of 150 participants from three different tertiary care hospitals to find out the degree of resilience in patients with myocardial infarction in their post attack days. In the current study the majority of population (74.6%) was from age group more than 45 years and among them about 67% was more than 55 years old. Similarly study in Brazil has notified that the mean age of their participants was 58.3 years which means that this study population was almost the same with that family (3). Another study by Liu et al. has shown that about 63% of the participants were more than 60 years of age (9). The results showed that female gender represents more resilience 69% compared to male 46%. The age group or maturity level shown to be having some impact on the resilience level of the patients as age group 45-55 represented good resilience 59% and the lowest resilience percent 40% represented by age group below 30 years. Similarly a study conducted in Australia has shown that patient aged greater than 65 years shows greater resilience as compared to younger ones (12). Employment might also have some influence on the resilience among individuals as employed persons represented more resilience 69.6% than non-employed individuals 45.7%. This study showed that a total of 54% participants was resilient from moderate to very high degree. A study conducted in Iran has notified that all patients with cardiovascular symptoms shows less resilience ranging from low to very low degree (13). Likewise a study conducted in Brazil has given approximately the same results as compare to this study by showing resilience of about 67% of

participants in their post myocardial infarction days represents resilience with the remaining consistency with anxiety or depression (3). Similarly a study conducted in china has reported the resilience score is below 100 (70.08) in post myocardial infarction period which means that majority patients are in low to very low degree of resilience (9). But contrast to it, another study in Brazil has identified that 81% of patients shows resilience in their post Myocardial Infarction period (14).

**CONCLUSION**

Resilience is a person’s inherited attribute which is associated with good clinical outcomes especially in the adverse outcomes in the development of chronic diseases. Resilience helps the person deal with the stressors of life. About half of the individuals represented moderate to very high degree of resilience in their post myocardial infarction period. Older participants represent more resilience as compared to younger. Studies are suggested to find out other factors that help older individuals in having great resilience. Similarly studies are needed to find out the outcome of resilience score on the disease outcomes of patient over the long run. Some resilience enhancing strategies can be developed to increase the resilience in patients experiencing low resilience and thus they can be potentiated to recover fast.

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