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ASSOCIATED FACTORS OF PSYCHO-SOCIAL WITH SYMPTOMS OF ANXIETY AND/OR DEPRESSION AMONG PATIENTS SUBSEQUENT TO ACUTE MYCARDIAL INFARCTION

Dr. Ayesha Nawaz, Dr Muhammad Hasnain Mujahid, Dr Muhammad Usman
Nishter hospital Multan

Abstract:

Objective: *The research objective is to study associated factors of symptoms of anxiety/depression subsequent to Acute Myocardial Infarction.*

Methodology*: A hospital-based study of non-interventional, cross-sectional analysis performed at Allied Hospital, Faisalabad (October, 2016 to September, 2017). A subject size of 100 patients of thirty to sixty years (with no physical complications) who were diagnosed with AMI using the criteria of WHO were selected for study. Hospital Anxiety and Depression Scale (Urdu version) administered patients for five to seven days after AMI. Also, a clinical interview (semi-structured) was conducted to record demographic information, risk factors related to AMI like psycho-social factors, and psychiatric assessment. Computer software SPSS (Statistical Package for Social Sciences) was used for result analysis.*

Results*: Eighty (80.0%) among a total of hundred subjects were males and twenty (20.0%) females with thirty to sixty-year age range (50.9 ± 8.5). Patients with symptoms of anxiety and/or depression were 50% (50) with depression in fourteen, anxiety in eighteen and anxiety/depression mixed in eighteen percent. Symptoms of anxiety and/or depression had a great association following AMI and 'type A' behaviour traits (p less than 0.0010), lack of relationship confiding (p less than 0.0020), job stress (p less than 0.010), and history of AMI in family (p less than .00070). However, symptoms of anxiety and/or depression after AMI had no significant association with history of AMI.*

Conclusions: *The results highlight a serious requirement of assessment for finding symptoms of anxiety and/or depression succeeding AMI as well as factors leading to these specially among patients having 'type A' behaviour traits, stress related job, having history of AMI in family, and having lack of relationships commitment.*

Key Words: *Acute Myocardial Infarction (AMI), Post Myocardial Infarction (PMI), Hospital Anxiety and Depression Scale (HADS), Psychosocial factors (PF), Anxiety, Depression, Symptoms.*

*** Corresponding author:**
Dr. Ayesha Nawaz,
Nishter hospital,
Multan

QR code

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INTRODUCTION:

AMI is a life-threatening, widespread disease especially in industrialized countries like USA where one patient suffers every 20 seconds (1.50 million a year) due to AMI [1]. Reports show existence of AMI in countries of South Asia including Pakistan [2] reaching cases to European population estimate [3]. A 2001 report of WHO suggests that by 2020, Ischemic Heart Disease and depression would be the first and second leading causes respectively increasing global economic burden of diseases [4]. Various studies show a high co-morbidity between anxiety and depression and AMI [5 – 8]. According to an estimate, 1 in 6 people will face substantial depression episode once in life, and one in 2 people will experience heart disease [9]. Patients having AMI has an eighteen to twenty percent life-time prevalence rate of depression [10]. According to Cawley and Lloyed [11] reports, 2/3 of patients having AMI had states of depression and anxiety. The presence of depression and anxiety is not only a forecast of AMI but a risk factor itself [10 – 13]. Depression is not only dangerous for health life [14] but also develops chances of cardiac events [15]. AMI patients have 6 times more chance of dying within 6 months of AMI [16] which leads to eight-fold death increase at eighteen months [17]. Literature revealed findings show symptoms of anxiety and/or depression succeeding AMI include patients having 'type A' behaviour traits [18, 19], job stress [20], having history of Ischemic Heart Disease [18], and lack of relationships commitment etc. [21]. Previous work of ours [8] show that fifty percent of AMI patients had anxiety and/or depression. Although studies showed [5, 7] the existence of anxiety and/or depression in Pakistan's population but we are totally ignorant of any study suggesting any relationship between psycho-social factors and these symptoms of anxiety and/or depression. Our study aims at exploring association between psycho-social factors and symptoms of anxiety and/or depression following AMI which help better prevention and management of these symptoms.

PATIENTS AND METHODS:

The research method was a hospital-based study of cross-sectional analysis performed at A hospital-based study of non-interventional, cross-sectional analysis performed at Allied Hospital, Faisalabad (October, 2016 to September, 2017). Subject size of 100 (both male and female) patients diagnosed with AMI by a cardiologist using criteria of WHO [23] with age range of thirty to sixty years (having no physical complications) was selected. Patients with other than AMI medical problem were excluded from study. HADS [24] (Urdu version) was performed to examine symptoms of anxiety and depression after informed consent of each patient was taken. HADS internal consistency range was 0.410 to 0.75 and 0.30 to 00.61 for anxiety and depression respectively. Validity of 0.701 and 0.740 for depression and anxiety items respectively.

Also, a clinical interview (semi-structured) was conducted to record demographic information, risk factors related to AMI like psycho-social factors meaning 'type A' behaviour traits, confiding relationships, job stress etc. Ladwig et al. [18] criteria were used to assess type 'A' behaviour traits, which includes aspects like aggression, hostility, time urgency and competitive drive. A Social Support Questionnaire, intended to measure social support satisfaction and availability, was used to assess lack of confiding relationship or social support [25]. The interview of patients was taken for thirty to forty-five minutes, five to seven days following AMI, along their bedside in full privacy. SPSS and Chi-Square computer software were used for statistical analysis and categorical variables respectively.

RESULTS:

Eighty (80.0%) among a total of hundred subjects were males and twenty (20.0%) females with thirty to sixty-year age range (50.9 ± 8.5). Sample size was divided into two groups: Group I (n=50) having patients experiencing symptoms of anxiety and depression with 18 and 14 percent respectively, and 18 percent having mixed depression and anxiety (Table – I). Group II (n=50) included patients with no symptoms. Distribution of anxiety, depression and mixed of both of Group-I is shown in Table – II. A significant association found in age (more than 45 years), female sex (p less than 0.020) (Table – I) and history of AMI in family (p less than (0.0070) and symptoms of anxiety and/or depression succeeding to AMI. No association with smoking and MI history was observed however (Table – III). According to psycho-social risk factors, 53% (53) of the total subject size (n=100) among them, 80% of patients (40) were from Group-I (n=50) who reported with type 'A' behaviour traits which shows significant association (p less than 0.0010) with symptoms of anxiety and/or depression in following AMI (Table – IV). Lack of relationship confiding (p less than 0.0020) and job stress (p less than 0.010) were also observed with great associated between symptoms of anxiety and/ or depression in patients following AMI (Table – IV).

Table – I: Age and Sex distribution (n=100)

Age and Gender		Group-1 (50)		Group-II (50)		Total patients (100)		P-value
		No	Percentage	No	Percentage	No	Percentage	
Age (years)	30-40	9	18	10	20	19	19	>0.10
	41-50	18	36	11	22	29	29	
	51-60	23	46	29	58	52	52	
Gender	Male	35	70	45	90	80	80	<0.02
	Female	15	30	5	10	20	20	
Mean age ± SD		50.2±7.9		51.82±9.11		50.92±8.53		

Group I – Patients experiencing symptoms of anxiety and/or depression.
Group II – Patients with no symptoms

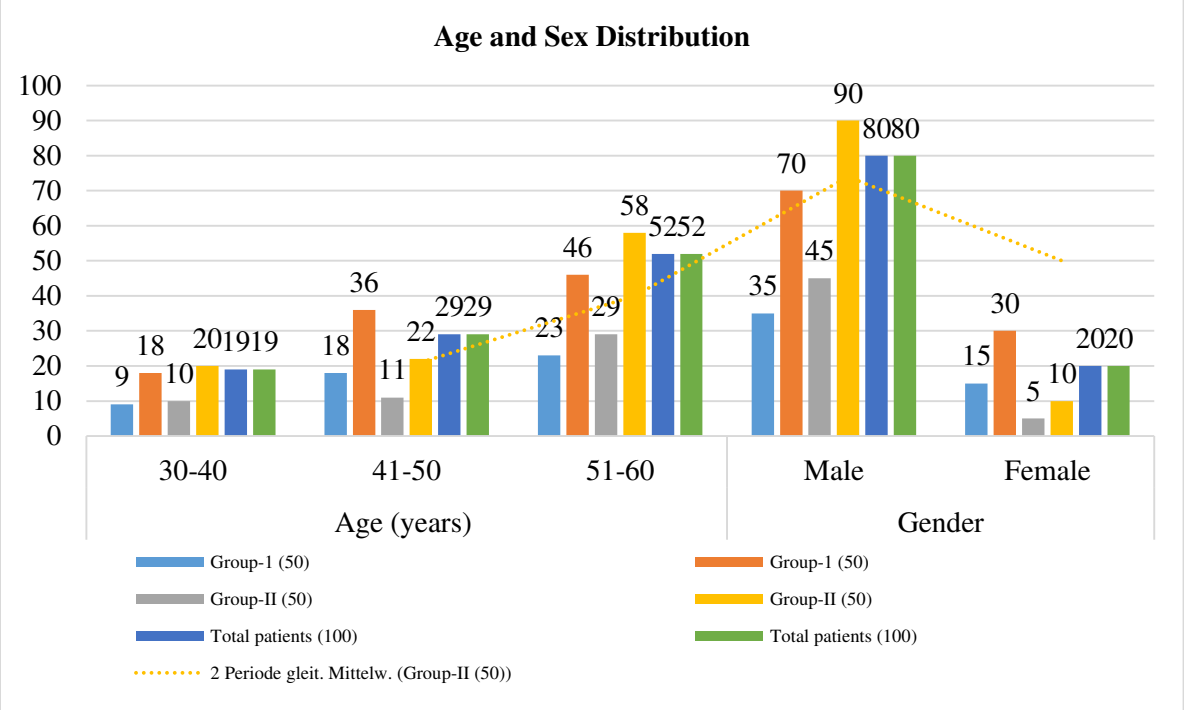


Table – II: Symptoms' distribution of anxiety, depression and mixed depression/anxiety Group-1 (n=50)

Symptoms Distribution		Depressive Symptoms (14)		Anxiety Symptoms (18)		Mixed Anxiety & Depressive Symptoms (18)	
		No	Percentage	No	Percentage	No	Percentage
Age (Years)	30-40	1	7.14	3	16.7	5	27.8
	41-50	7	50	7	38.9	4	22.2
	51-60	6	42.86	8	44.4	9	50
Gender	Sex Male	8	57.1	13	72.2	14	77.8
	Female	6	42.29	5	27.8	4	22.2
Mean age ± SD		51.29±6.29		50.0±8.36		49.06±8.81	

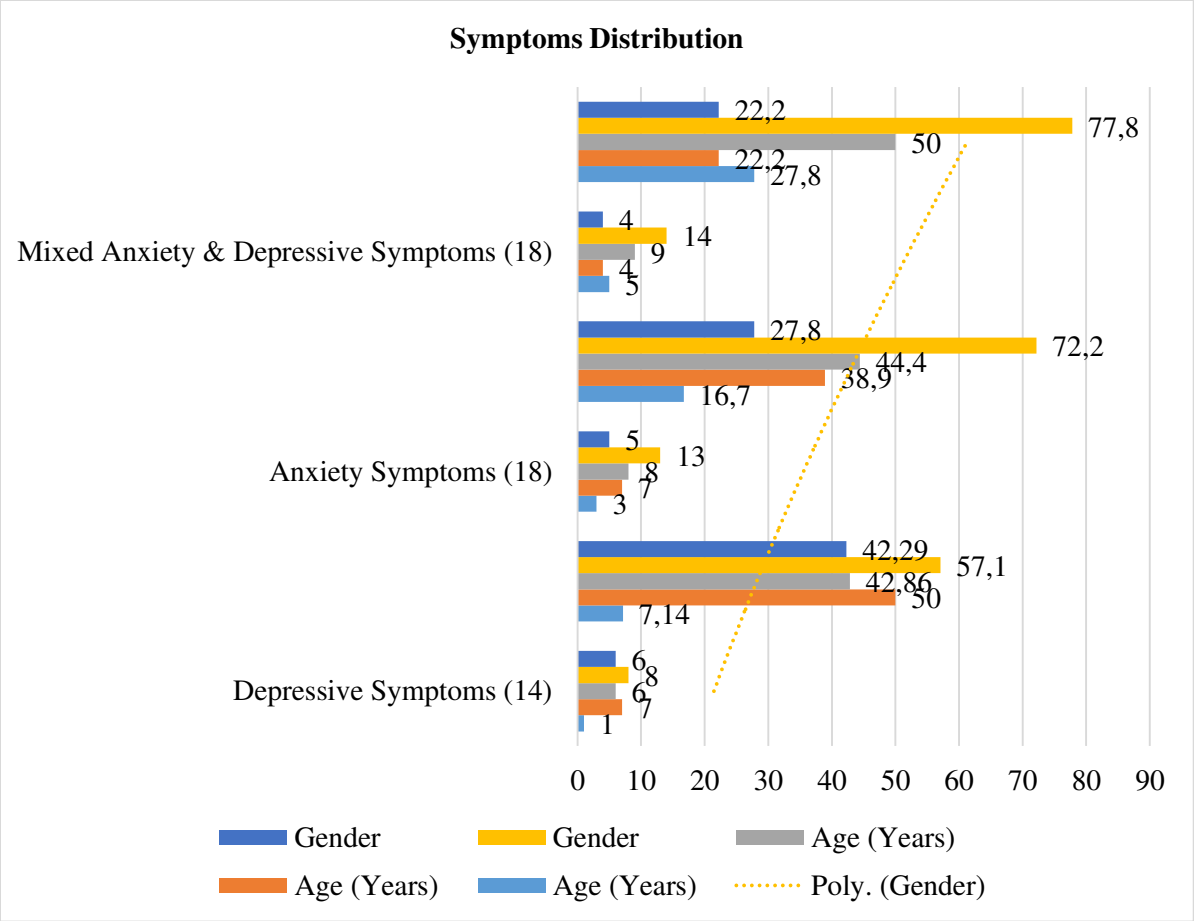
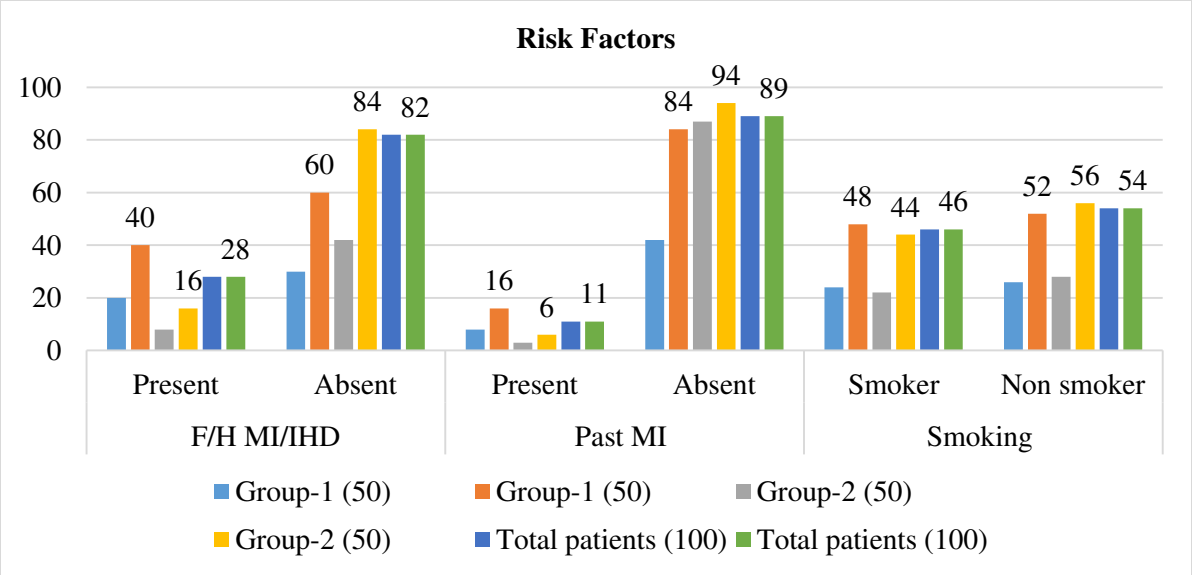


Table – III: Anxiety and/or depression's risk factors in patients of AMI (n=100)

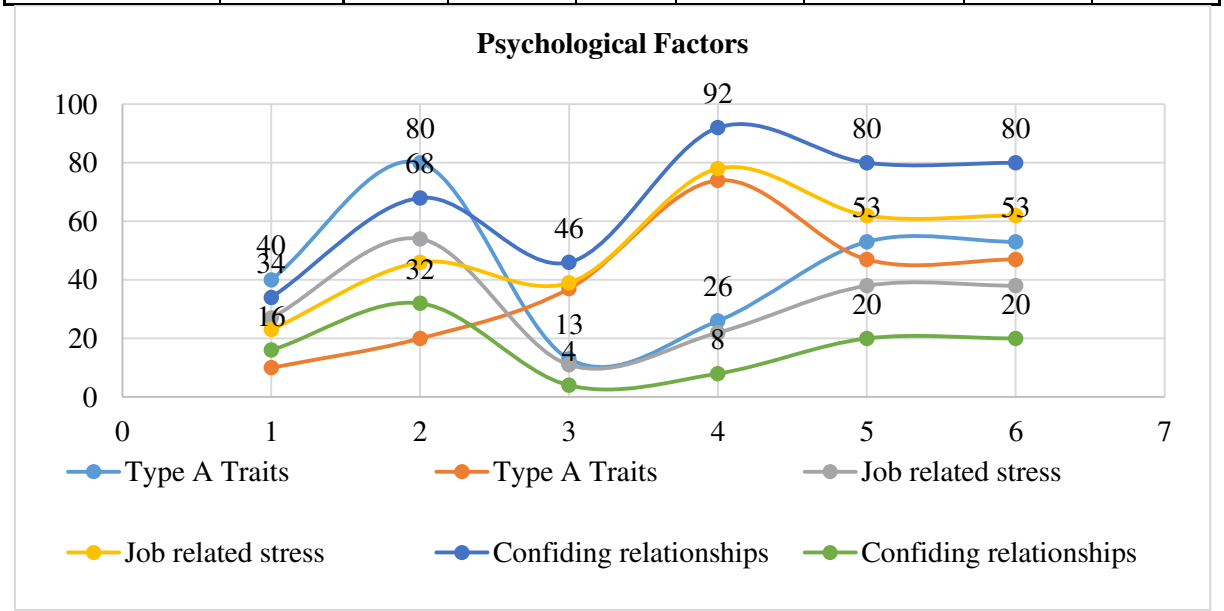
Risk Factors		Group-1 (50)		Group-2 (50)		Total patients (100)		P-value
		No	Percentage	No	Percentage	No	Percentage	
F/H MI/IHD	**Present**	20	40	8	16	28	28	0.007
	Absent	30	60	42	84	82	82	
Past MI	**Present**	8	16	3	6	11	11	0.1
	Absent	42	84	87	94	89	89	
Smoking	**Smoker**	24	48	22	44	46	46	0.688
	Non smoker	26	52	28	56	54	54	



Group I – Patients experiencing symptoms of anxiety and/or depression.
Group II – Patients with no symptoms

Table – IV: Psycho-social factors for anxiety and/or depression's symptoms in patients of AMI (n=100)

Psychosocial Factors		Group-1 (50)		Group-2 (50)		Total patients (100)		P-value
		No.	%	No.	%	No.	%	
Type A Traits	Present	40	80	13	26	53	53	<0.001
	Absent	10	20	37	74	47	47	
Job related stress	Present	27	54	11	22	38	38	0.011
	Absent	23	46	39	78	62	62	
Confiding relationships	Present	34	68	46	92	80	80	0.002
	Absent	16	32	4	8	20	20	



DISCUSSION:

Our study found symptoms of anxiety and/or depression following AMI among fifty percent patients. Both physical and psychological factors have been considered [18 – 22]. Finding no association of symptoms of anxiety and/or depression with past AMI history (p less than 0.10) is in union with past studies [18]. Being able to deal with the same nature illness effectively may be the reason of this negative association manifesting reduced experience of symptoms following AMI. Our study found family history of AMI significantly (p less than 0.0070) associated with symptoms of anxiety and/or depression succeeding AMI, possibly due to observations of same illness among relatives. This study found type 'A' behaviour traits showing significant association (p less than 0.0010) with symptoms of anxiety and/or depression in succeeding AMI (Table – III) which is in union with previous studies [26, 27] for example Fukunshi and Hattori [19] (Japanese study). The reason of this finding is proposed to be due to ambitious, competitive and fast-paced lifestyle of type 'A' individuals and compulsory bed rest is forced upon them following AMI which is in opposition to their natural lifestyle thus increasing their anxiety and stress. Association of job stress (p less than 0.010) with symptoms of anxiety and/or depression after AMI is proposed by Ladwig et al. [18] as possibly because of extra stress at job is aided with AMI occurrence' stress. Our finding also propose association between symptoms of anxiety and/or depression and less confiding in relationships (p less than .00020) (Table – IV).

Our study finds this finding in union with previous studies [5, 27 – 29]. Reasons may include forced marriages, insecurity, socio-cultural setup, and lack of trust etc. of this finding. Studies [30, 31] also proposed lack of social support and loneliness to be not only causing early death following AMI but also anxiety and depression [22, 32].

CONCLUSIONS:

Several psycho-social factors like job stress, type 'A' behaviour traits, lack of social support, and history of AMI in family have been highlighted in our study which shows association of symptoms of anxiety and/or depression in patients of post AMI. An awareness about these factors must be created among those medical teams working with AMI patients. Our study also highlights the importance of introducing stress and lifestyle management techniques, psycho-awareness programs for these patients to achieve preventive mental health. This will help them manage AMI comprehensively as well as reduce anxiety and depression.

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