Effect of demographics on social intolerance, emotional regulation, psychological distress among cardiac patients.

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ABSTRACT

Objective: To assess the effect of different demographics on variables of social intolerance, emotional regulation, psychological distress (e.g., depression, anxiety, and stress) among cardiac patients.
Study Design: Descriptive cross sectional study.
Place and Duration: Benazir Bhutoo Hospital (BBH), Pakistan Institute of Medical Sciences (PIMS), Heart International Hospital (HIH), Rawalpindi Institute of Cardiology (RIC) from 13th August, 2014 to 30th July, 2015.
Methodology: Purposive sampling technique was used in selection of 150 cardiac patients in age ranged between 20-60 years. For assessment of study variables among the cardiac patients the frustration discomfort scale, emotional regulation questionnaire, and depression anxiety stress scale were used.
Results: T-test analysis revealed that discomfort intolerance (M= 25.87, SD= 5.63) and achievement frustration (M= 23.71, SD= 4.55) was higher in male's patients. Emotional reappraisal (M= 21.25, SD= 7.91) and anxiety (M= 14.07, SD= 5.35) were higher in female's patients and expressive suppression (M= 18.92, SD= 6.44) and depression (M= 17.83, SD= 6.02) was higher in males. Emotional intolerance (M= 24.69, SD= 5.80), discomfort intolerance (M= 25.76, SD= 5.23) and anxiety (M= 10.89, SD= 4.63) were prominent in patients from a nuclear family structure. Depression (M= 15.66, SD= 5.33) is more prominent in cardiac patients from the joint family. The age difference has shown diverse age effects on social intolerance, emotional regulation, and distress among patients.
Conclusion: Effects of demographics such as gender, family structure, and age have the significant impact on enhancing and worsening the emotional and social states of cardiac patients.
Keywords: Cardiac patients, Stress, Anxiety, Depression, Social intolerance, Emotional regulation,

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INTRODUCTION

Cardiac events include procedures which are fairly costly causing the severe economic burden on patients as well as family. Health issues, unhealthy dietary habits, an absence of health facilities and financial issues are the reason behind increased mortality rate among Pakistani cardiac patients[1]. Different demographic factors such as age, gender, fluctuating blood pressure level, smoking habit, alcohol consumption, history of pathology, lack of exercise, weight issues and noise/pollution issues increase patient's vulnerability to develop cardiac events. As feeling of social intolerance creates feeling of restriction and incapability to handle opposing ideas and circumstance in which person need to reject one's own viewpoint and accept others[1,2].Reponses in result of economic issue, physical health issues and adverse life circumstances are better dealt with positive emotional mechanism[3].For that emotion regulation is concept defined as procedure that initiate, limit, maintain and develop reasonable center feelings that helps to normalize the occurrence, and strength, of emotional response for social adaptive processes[4].

Psychological distress is an expressive, rational and social response mainly experienced with feelings of apprehension, hopelessness, and tension. The higher distress feelings with emotional regulation disturbances effect individual manner of

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handling physical illness, accepting bodily and life styles changes, and medical compliance.[3] Literature has highlighted that balance between intolerant situation and life goals are achieved by individual endurance in emotional response. These adaptive mechanisms are apparent in both adult and children age levels[5-7].

Discomfort intolerance is strongly linked with the development of a lower level of depression and anxiety among psychological patients after a therapeutic session[8].Depression act as risk factor (about 60 %) as well as basic reason behind the onset and poor outcome and well as current episode of attach in 1 year in coronary heart disease and bypass patients[9].

The difference in age have shown that higher age is linked with more distress features among cardiac patients[10].One longitudinal study over 12 years of duration highlighted that cardiac patients with lower economic class suffered from more psychological distress[10].Other researches have shown that Coronary Artery Disease more common in male but is one of leading cause of death among women (above the age of 45)[11]. Emotional reappraisal is involved in enhancing the physical health, overall mental health and also in establishing better relationships. Excessive suppression in cardiac patients develop depression, personality issues and increase chances of mortality and morbidity[12]. In Pakistani culture research by Tahira[13]highlighted that female are higher on shame and psychopathology as compare to male. Age was seen to be an influential factor affecting social intolerance, and psychopathology.

Different features (e.g., nuclear family structure, fatigue, expressive issue, health perception) in cardiac patients have been linked with distress feelings. 16% cardiac patients experiences anxiety, 13 % patients experienced depression and 39% patients experience co morbid features of depression and anxiety[14].The cardiac patients with younger age suffered from more psychological distress as compared to elder patients (e.g., > 50 years). [4]Gender differences in chronic ailment are the basic factor that helps the cardiac patients to deal effectively with physical ailments[15].

Social intolerance creates the feeling of reluctance such rigid manner of perceiving in their own frame of reference in Pakistani population is making people prone toward different psychological issues[16,17].The number of researches have highlighted that depression, anxiety, and stress are positively linked with social intolerance[17]. Previous researches in Pakistan have catered social intolerance, emotional regulation, and psychological distress independently in different researches. Similarly, the social and emotional difficulties of cardiac patients have been explored with diverse variables but the effect of cardiac state with social intolerance, emotional regulation, and distress has never been explored. The present study can guide the psychologist in developing the intervention for cardiac patients suffering from the higher feeling of intolerance, emotional difficulties, and distress. For that the objective of the present study was to assess the effect of different demographics e.g., gender, age, and family structure on features of intolerance, emotional regulation, and distress.

METHODOLOGY

This descriptive cross sectional study comprised of cardiac patients age ranged between 20-60 years. The cardiac patients were selected from cardiac units of Benazir Bhutoo Hospital (BBH), Pakistan Institute of Medical Sciences (PIMS), Heart international Hospital (HIH), Rawalpindi Institute of Cardiology (RIC) from 13th August, 2014 to 30th July, 2015. Only referred cases by the cardiologist with the stable medical condition were taken cardiac patients. A total of 150 cardiac patients were selected that fulfilled inclusion criteria of the study. The patients in age range of 20-60 years with minimum education level of graduation were taken. The bypass patients were taken after 1 year of bypass surgery with that patients with other chronic issues e.g., hepatitis, kidney transplantation were excluded from the sample.

For assessing the study variables three instruments were utilized such as Frustration Discomfort Scale[18], the Emotional Regulation Questionnaire[19], and Depression Anxiety Stress Scale[20]. The three instruments were selected on the basis as the FDS dimension assess multiple features of social intolerance and how dimensions of ERQ are linked with the higher intolerance features and the ERQ features and manner of intolerance are linked with distress features.

Data Analysis: The descriptive analysis, correlation matrix and T-test was computed on study sample. Relationship between dimensions of social intolerance, emotional regulation, and psychological distress was explored using Pearson correlation.

RESULTS

The sample of the study comprised of 150 cardiac patients. Table I shows a positive relation between discomfort intolerance and Depression (r = .63, p<.01) and Anxiety (r = .54, p<.01). The entitlement has positive link with Depression(r = .46, p<.01), Anxiety (r = .29, p<.05) and Stress (r = .19, p<.05). The emotional intolerance has positive relation with Depression (r = .54, p<.01), Anxiety (r = .41, p<.01) and Stress (r = .18, p<.05). However, achievement frustration has positive relation with Depression (r = .32, p<.01), Anxiety (r = .44, p<.01) and Stress (r = .18, p<.05).

Table-II showes, that the male cardiac patients experience more discomfort intolerance and achievement frustration as compared to female cardiac patients. The dimension of emotional reappraisal is higher in female and expressive suppression is more in male cardiac patients. The current study results showed that depression is higher in male, female are higher on anxiety as compare to male cardiac patients.

Table-I: Bi-Variate Correlation among Social Intolerance, Emotional Regulation, Psychological Distress (N= 150)

	Variables	DI	E	EI	AF	ER	ES	Dp	Ax	St
1	DI	-	.54**	.67**	.45**	-.70**	.68**	.63**	.54**	.12
2	E		-	.35**	.46**	-.44**	.47**	.46**	.29**	.19*
3	EI			-	.39**	-.57**	.57**	.54**	.41**	.18*
4	AF				-	-.44**	.44**	.32**	.44**	.18*
5	ER					-	-.88**	-.68**	-.56**	-.10
6	ES						-	.67**	.56**	.18*
7	Dp							-	.49**	.05
8	Ax								-	.07
9	St									-

Note. DI= Discomfort Intolerance, E= Entitlement, EI= Emotional Intolerance, AF= Achievement Frustration, ER= Emotional Reappraisal, ES= Expressive Suppression, Dp= Depression, Ax= Anxiety, St=Stress
*p<0.05, **p<0.01

Table-II: Frequency of gender differences on Social Intolerance, Emotional Regulation, Psychological Distress (N = 150)

	Male(n = 80)		Female(n =70)				95% CI		Cohen's d
Variables	**M**	**SD**	**M**	**SD**	**t**	**p**	**LL**	**UL**	
Discomfort intolerance	25.87	5.63	23.02	5.60	2.91	.03	-.94	2.56	.50
Entitlement	22.42	5.28	22.18	5.54	.27	.77	-1.50	1.98	.04
Emotional intolerance	22.40	5.46	22.47	5.39	.08	.80	-1.82	1.68	-.01
Achievement frustration	23.71	4.55	20.91	4.44	2.51	.01	-.57	2.16	.62
Emotional reappraisal	19.96	7.88	21.25	7.91	2.45	.01	-3.84	1.26	-.16
Expressive suppression	18.92	6.44	15.17	5.42	3.84	.00	-1.00	2.51	.63
Depression	17.83	6.02	13.77	4.99	2.72	.00	-1.73	1.86	.73
Anxiety	14.07	5.35	12.21	5.15	3.16	.02	-1.84	1.56	.35
Stress	13.20	4.34	13.80	4.08	.87	.48	-1.96	.766	-.14

Note. CI= Confidence Interval, LL = Lower Limit, UP= Upper Limit.
*p<0.05, **p<0.01

Table-III: Frequency of family structure differences On Social Intolerance, Emotional Regulation, Psychological Distress (N = 150)

	Joint(n = 64)		Nuclear(n = 86)				95% CI		Cohen's d
Variables	**M**	**SD**	**M**	**SD**	**t**	**p**	**LL**	**UL**	
Discomfort intolerance	23.04	5.66	25.76	5.23	3.80	.00	-2.49	1.04	-.43
Entitlement	22.64	5.51	22.06	5.31	.64	.56	-1.19	2.32	.10
Emotional intolerance	22.07	4.86	24.69	5.80	3.69	.01	-2.38	1.14	-.48
Achievement frustration	21.25	4.30	20.73	7.82	.22	.98	-1.54	1.23	.08
Emotional reappraisal	20.44	8.00	20.44	8.00	.22	.59	-2.29	2.87	.00
Expressive suppression	15.66	5.33	15.66	5.33	2.23	.02	-1.98	1.56	.00
Depression	15.66	5.33	10.89	4.63	2.28	.02	-2.07	1.55	.95
Anxiety	10.89	4.63	13.06	5.50	2.56	.01	-3.85	-.49	-.42
Stress	13.00	4.16	13.83	4.25	2.20	.02	-2.21	.53	-.19

Note. CI= Confidence Interval, LL = Lower Limit, UP= Upper Limit.
*p<0.05, **p<0.01

The result of *t*-test on family structure (Table-III) showed that cardiac patients of nuclear family structure experienced more discomfort intolerance and emotional intolerance as compare to the patients of joint family structure. The domain of achievement frustration is higher in cardiac patients of joint family in comparison to patients of nuclear family structure. T-analysis has shown no significant mean differences on variables of emotional reappraisal and expressive suppression. Depression is higher in patients from the joint family, anxiety is higher in patients of the nuclear family.

In Table IV the mean value of discomfort intolerance is more prominent in age category of (50-61 years), entitlement is more in age category of (31-40 years), emotional intolerance mean is higher age category of (20-30 and 50-61 years), achievement frustration is higher in age category of (31-40 and 50-61 years).

Table-IV: Age Differences on Social Intolerance, Emotional Regulation, Psychological Distress (N = 150)

	20-30Years(n = 11)		31-40Years(n = 31)		41-50Years(n = 34)		51-60Years(n = 74)			
Variables	**M**	**SD**	**M**	**SD**	**M**	**SD**	**M**	**SD**	**F**	**η^2**
Dis. Int	23.45	6.13	23.64	5.36	21.29	4.87	24.37	5.39	2.61*	.07
Entit	20.36	4.56	23.25	5.27	20.82	5.18	22.89	5.52	1.98	.08
Emo.int	23.18	4.23	21.80	5.43	20.67	4.24	23.39	5.86	2.22	.18
Ach.fru	19.90	3.14	21.25	4.60	20.94	4.35	21.77	4.18	.77	.17
Reap	20.72	7.73	20.83	7.63	22.85	7.78	19.37	7.99	1.53	.15
Sup	15.27	5.46	15.74	5.39	14.35	5.67	16.10	5.35	.82	.08
Dep	15.63	4.45	14.29	5.83	12.41	5.58	13.97	5.51	1.22	.04
Anxiety	11.45	5.66	11.64	5.43	10.23	4.89	13.32	5.05	3.02*	.18
Stress	13.00	4.38	13.09	4.90	14.00	4.56	13.47	3.77	.30	.07

*p<0.05, **p<0.01

Reappraisal mean is higher in age category of (41-50 years) and expressive suppression mean is high in age category of (50-61 years). The distress have shown diverse mean differences as depression is prominent in age category of (41-50 years), anxiety is more prominent in age category of (51-60 years). Eta value has highlighted that variable of age have significant effect on social intolerance and emotional reappraisal.

DISCUSSION

Health issues, unhealthy dietary habits, an absence of health facilities and financial issues are the reason behind increased mortality rate among Pakistani cardiac patients[1]. The correlation analysis highlighted that discomfort intolerance, entitlement, emotional intolerance, and achievement frustration tend to increase depression, anxiety and stress among the cardiac patients. The current study results are in accordance with previous literature that one's depressed mood lead to feeling of rejection and helplessness and moreover the anxious feelings are linked with apprehensive feelings. As predicted, previous researches have approved the current findings that intolerant feelings e.g., discomfort intolerance, entitlement, emotional intolerance and achievement frustration for longer duration evolve into feelings of distress[21]. The Further results of the study highlighted that emotional reappraisal has negative correlation with depression, anxiety and stress. Previous literature has highlighted that maladaptive emotional regulation strategies are involved in development of psychopathology. As individual with higher emotional reappraisal focus on modification, alteration, maintenance of healthy response by expanding emotional response to frustrating situation that minimizes psychological distress[22].On the contrary cardiac patient with higher emotional suppression suffer from cognitive impairment by falsifying emotional response by hiding true feelings, developing more cognitive biasness and hyper vigilance for intolerant situation that exaggerates feeling of depression, stress and anxiety.

Further, the objective of the study was to explore the effect of different demographic characteristics e.g., gender, family structure and age on study variables. The T-test analysis on social intolerance showed that discomfort and achievement intolerant is found to be more in male cardiac patients as compare to female patients. As highlighted in previous literature that the male cardiac patients experience job issues and due to physical state such job tasks are thwarted and such incompetent feelings for longer duration make cardiac patients experience more discomfort and achievement intolerance as compare to female cardiac patients[18].Furthermore, emotional reappraisal is more prominent in female as compare to male cardiac patients. As highlighted in indigenous literature that female in Pakistani culture utilize more flexible approach and modify the emotional response for the frustrated situation[22].The expressive suppression is more prominent in males as compare to female patients. The result of the study are proven by past researches, due to social pressure the male, mask their true feelings by hiding the internal feelings related to illness that create feeling of incongruence between individual feelings and emotional response[23].

As indicated in previous researches the male experience more hopelessness after suffering from serious ailments due to job strain, economic and financial constraints which leads to devaluation about oneself in fulfilling the responsibility that increases feelings of helpless and dejection in cardiac patients which are also highlighted in current study[24]. The results of the present study have shown that female patients are higher on anxiety as females have more house hold and children's responsibilities, which develops fear and apprehensive feelings in female patients due to social comments and evaluation[25].

Results of the T-test on family structure showed that discomfort and emotional intolerance is more prominent in patients of nuclear family structure. Previous researchers have indicated that nuclear family structure lack social assistance, and sharing of emotions that leads to higher feeling of distress and emotional intolerance. As cardiac patients of both family structures suppress and use reappraisal strategy for the emotional response in order to better adjust in social situations. Mean differences on psychological distress highlighted that depression was higher in patients of joint family structure as the fear of being aloof, inability in performing regular task, social restrictions, conflicting issues, and lack of emotion expression exaggerate depressive feelings. Result further revealed that the cardiac patients of nuclear family structure experienced more anxiety feelings due to

loneliness, burden of duties, lack of emotional support, more work strain that make cardiac patients more apprehensive as compare to patients of joint family[26].

Effect of age on study variables was also explored. The results revealed that cardiac patients with elder age experience more discomfort, emotional, entitlement, achievement intolerance as compare to younger cardiac patients. As highlighted in previous literature that the feelings of intolerance increases as the patient's belief for the unease upsurges and belief that desires should be met without any hesitation. Whereas, the younger patients utilize more reappraisal strategies as they are flexible have more adjustment power and better modification mechanism. These findings are supporting the previous studies notion that cardiac patients with more age utilize more suppression as compare to reappraisal thus suffer from higher frustration[27].

CONCLUSION

Effects of demographics such as gender, family structure, and age have the significant impact on enhancing and worsening the emotional and social states of cardiac patients.

CONTRIBUTION OF AUTHORS

Zonash RZ: Designed research methodology, Literature search, Data interpretation, Manuscript final reading and approval
Arouj Z: Conceived idea, Data collection, Literature review, Statistical analysis, Manuscript writing

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REFERENCES

1. Buhr K, Dugas MJ. The intolerance of uncertainty scale: Psychometric properties of the English version. Behav Res Ther. 2002; 40: 931–945.
2. Castella DeK, Goldin P. Jazaieri H, Ziv M, Dweck S C, Gross JJ. Beliefs About Emotion: Links to Emotion Regulation, Well-Being, and Psychological Distress. Basic & Applied Soc Psychol. 2013: 35, 497–505. doi: 10.1080/01973533.2013.840632
3. Carthy T, Horesh N, Apter, A., Edge MD, Gross JJ. (2010). Emotional reactivity and cognitive regulation in anxious children. Behav Res & Therap, 2010; 48, 384–393. doi:10.1016/j.brat.2009.12.013.
4. Bargh JA, Williams LE. On the non-conscious of emotion regulation. In J. Gross (Ed.), Handbook of Emotion Regulation New York: Guilford Press. 2007; PP 429–445.
5. Gilmore R, Ziviani J, Sakzewski L, Shields N, Boyd RA. Balancing act: children's experience of modified constraint-induced movement therapy. Deviance Neuro Rehabil. 2010; 13(2): 88-94.
6. Morris ME, Kathawala Q, Leen TK. Mobile therapy: case study evaluations of a cell phone application for emotional self-awareness. J Med Int Resil. 2010; 12(2): e10-e20.
7. Rudolph KD, Troop-Gordon W, Granger DA. Peer victimization and aggression: moderation by individual differences in salivary cortisol and alpha-amylase. J Abnorm Child Psychol. 2010; 38(6): 843-856.
8. McHugh RK, Kertz JS, Weiss BR, Baskin-Sommers RA, Hearon AB, Björgvinsson T. Changes in Distress Intolerance and Treatment Outcome in a Partial Hospital Setting. Behav Ther. 2014; 45(1): 232-240.
9. Evangelista LC, Ter-Galstanyan A, Mougharabi S, Moser DK. Anxiety and depression in ethnic minorities with chronic heart failure. J Card Fail. 2009; 15(7): 572–592.
10. Chen Y C, & Hong YR. Intolerance of uncertainty moderates the relation between negative life events and anxiety. Personality and Individual Differences, 2010; 49, 49–53. doi:10.1016/j.paid.2010.03.006
11. Sharma R, Kandpal A. Mood States of Cardiac Patients: An Indian Perspective. Procedia Soc Behav Sci. 2014; 113: 26–35.
12. Aldao A, Nolen-Hoeksema NS, Schweizer S. Emotion-regulation strategies across psychopathology: A meta-analytic review. Clin Psychol Rev. 2010; 30: 217–237. doi:10.1016/j.cpr.2009.11.004.
13. Tahira Q. Shame, Guilt and psychopathology among adolescents; the role of social intolerance.(Unpublished M.phil dissertation). 2014; National Institute of psychology, Quiad-I-Azam University, Islamabad. [Website: pjpr.edu.pk] Accessed on: April 01, 2018.
14. Ansa OV, Abasiubong F, Agbulu OR, Edet EB. Psychological distress in Nigerian patients with heart failure. CVD Prevent and Control. 2010; 4:207–11. doi:10.1016/j.cvdpc.2010.01.001.
15. Holland JC, Alici Y. Management of distress in cancer patients. J Support Oncol. 2010; 8: 4-12.
16. Matcham F, Rayner L, Hutton J, Monk A, Steel C, Hotopf M. Self-help interventions for symptoms of depression, anxiety and psychological distress in patients with physical illnesses: A systematic review and meta-analysis. Clin Psychol Rev.2014; 34 (3): 141–157. doi.org/10.1016/j.cpr.2014.01.005.
17. Zinchenko Y, Pervichko E, Martynov A. Emotional Experiences and Coping Processes in the Context of Verification of Psychosomatic Hypotheses in MVP Patients. Procedia Soc Behav Sci. 2013; 86: 47– 52.doi: 10.1016/j.sbspro.2013.08.523
18. Harrington N. The Frustration Discomfort Scale: development and psychometric properties. Clin Psychol Psychother. 2005. 12(5): 374-387. doi:10.1002/cpp.465.
19. Gross JJ, John O. Individual differences in two emotion-regulation processes: Implications for affect, relationships, and well-being. J Pers Soc Psychol. 2003; 85: 348–362.
20. Lovibond SH, Lovibond PF. Manual for the Depression Anxiety Stress Scales. (2nd ed.). Sydney: Psychology Foundation1995:119-121
21. Schienele A, Köchel A, Ebner F, Reishofer G, Schäfer A. Neural correlates of intolerance of uncertainty. Neurosci. Lett. 2010; 479:272–276.
22. Roohafza H, Talaei M, Pourmoghaddas Z, Rajabi F, Sadeghi

M. Association of social support and coping strategies with acute coronary syndrome: a case–control study. J Cardiol. 2012; 59: 154-159.

23. Jabeen F, Anis-ul-Haque M, Riaz NM. Parenting Styles as Predictors of Emotion Regulation among Adolescents. Pak J of Psycho Res. 2013: *28*(1): 85-105.
24. Etkin A, Prater KE, Hoeft F, Menon V, Schatzberg AF. Failure of anterior cingulate activation and connectivity with the amygdala during implicit regulation of emotional processing in generalized anxiety disorder. The Am J of Psy, 2010; 167, 545–554. http://dx.doi.org/10.1176/appi.ajp.2009.09070931
25. Parto M, Besharat MA. Mindfulness, psychological well-being and psychological distress in adolescents: Assessing the mediating variables and mechanisms of autonomy and self-regulation. Procedia Soc Behav Sci . 2011; 30: 578–582. doi:10.1016/j.sbspro.2011.10.112
26. Jaclene A, Zauszniewski AJ, Bekhet KA. Factors associated with the emotional distress of women family members of adults with serious mental illness. Arch Psychiatr Nurs. 2014; 28: 102–107. http://dx.doi.org/10.1016/j.apnu.2013.11.003
27. Novy DM, Price M, Huynh PT, Schuertz A. Percutaneous Jaclene A, Zauszniewski AJ, Bekhet KA. Factors associated with the emotional distress of women family members of adults with serious mental illness. Arch of Psych Nur, 2014; 28, 102–107. http://dx.doi.org/10.1016/j.apnu.2013.11.003