

## Gratitude hope and stress appraisal in caregivers of cardiovascular disease

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**Objective:** To investigate the liaison between gratitude and hope with stress appraisal on caregivers of cardiovascular disease (CVD).

**Methodology:** The cross-sectional had 150 caregivers of CVD consisting of 84 men and 66 women selected from public and private hospitals of Lahore, Pakistan. Purposive sampling technique was used. We used Urdu versions of questionnaires the Gratitude Questionnaire-Six Item, Adult Dispositional (Trait) Hope Scale and the Stress Appraisal Measure.

**Results:** Gender differences were significantly

present in hope and gratitude. Hope and gratitude affirmatively and negatively were related to different ways of appraising stress. A positive correlation between gratitude and hope was found.

**Conclusion:** Caregivers with possession of positive aspects of gratitude hope and stress appraisal can inculcate positive aspect of thankfulness and level of hope and stress management while care giving.

**Keywords:** Gratitude, hope, stress appraisal, caregivers, cardiovascular disease.

## INTRODUCTION

The new line of research in Positive Psychology has seized the concern of researcher over the decade.<sup>1</sup> This research has given the importance to the positive emotions with the link of stress.<sup>2</sup> Caregivers of any chronic disease commonly perceive stress and even social embarrassment and isolation.<sup>3</sup> Sources of stress range from major life events to minor hassles that encountered in everyday life.<sup>4,5</sup>

Caring for unwell family members affects the care in multiple ways, producing biological, psychological, and behavioral effects. However, if caregivers have the worth cultivating emotions including gratitude and hope both provides the prosper well-being of the caregivers as useful and supporting techniques for the caregivers.<sup>6</sup>

Gratitude has been intensely affiliated with numerous constructive coping styles of seeking positive reframing, active coping strategies, social support, and problem solving, and as well as mental health growth.<sup>7</sup> Hope is another positive response like gratitude, recognized as a force that facilitate community individuals, even when faced with the most overwhelming obstacles, to envision a promising future and to set and pursue goals.<sup>8</sup> Positive emotions hope and gratitude positively facilitate caregivers especially to the parents who care the patients (child) who are experiencing loss, pain and uncertainty.<sup>9,10</sup>

CVD include angina, coronary heart disease (CHD) congenital heart disease and arrhythmia.<sup>11</sup> During CVD caregivers experience multiple stressors and disastrous emotions. Family of the caregivers in Pakistan have

been paid less focus than families all over the world.<sup>12</sup> The current study will look at the dynamic connection between gratitude, hope and perception of stress in CVD patient's caregivers.

## METHODOLOGY

A sample of 150 caregivers of patients with CVD of 66 women and 84 men was collected through purposive sampling technique from private and public hospitals in Lahore, Pakistan with age range of 18 to 60 years old.

**Adult Dispositional Hope Scale** was used to determine the positive aspect of hope. It is 12 items scale having two subscales including Hope-Agency subscale and Hope-Pathway's subscale. The scale has good psychometric properties with .08 value of Cronbach's alpha.<sup>13</sup>

**Gratitude Scale** is a six – item self – reported questionnaire and was used to measure the positive aspect of gratitude. It was developed by McCullough, Emmons and Tsang.<sup>14</sup> The GQ-6 has alpha value of .67.

**Stress Appraisal Measure** is of 28 items and was used to explore the stress appraisal.<sup>15</sup> It consists of seven subscales of stress appraisal. Centrality refers to how much importance the person attaches to the stressful event. The stress appraisal measure has alpha value of .95.

**Research Procedure:** Initially the permission was obtained from concerned authorities of Fatima Memorial Hospital, Surgimed Hospital, Services Hospital, Punjab Institute of Cardiology and Sir Ganga

Ram Hospital. Then the respondents were approached after obtaining the informed consent from the research participants.

**Statistical Analysis:** The data were analysed from SPSS 21. Study main and sub variables were analysed via spearman correlation. Predictive effects of variables were assessed through regression analysis.  $p < 0.05$  was considered significant.

## RESULTS

Table 1 shows the demographic characteristics of study population. Table 2 shows the relationship among the subscales of hopes and stress appraisal. Significant positive correlation was found between hope pathways and stress challenge and hope pathways and stress control self, indicating that the greater the hope, the more will be the tendency to see stress in positive ways, that is both as a challenge and as controllable.

Hope agency was also positively correlated with stress challenge and stress controls self. On the other hand, a negative correlation between hope agency and stress threat was found meaning that the higher the hopefulness, the less likely it is that the situation will be seen as a threat. An unexpected finding was that hope agency was also positively correlated with stress.

**Table 1: Demographic Characteristics of primary caregivers (N = 150).**

Variable	Category	<i>f</i>	%
Age	21 – 30	112	74.7
	31 – 40	19	12.7
	41 – 50	15	10
	51 – 60	4	2.7
Gender	Women	66	44
	Men	84	56
Marital Status	Married	56	33.3
	Unmarried	94	62.7

Table 3 shows the predictive effect between demographic variables and stress appraisal. It resulted that gender, relationship, and marital status act as a predictor for stress appraisal subscales. Gender, marital status, and relationship with patient were identified as predictors of stress threat. Whereas relationship with caregivers predicted the stresses control self and gender resulted as a significant predictor of stress stressfulness (Table 4).

**Table 2: Correlation between hope subscales and stress appraisal subscales.**

Variable	1	2	3	4	5	6	7	8	9
Hope Pathways	—	.65**	-.14	.27**	-.23	.31**	.05	-.11	.03
Hope Agency		—	-.19*	.27**	-.15	.44%	.09	.17*	-.03
Stress Threat			—	-.09	.36**	-.37	.38**	.55**	.67**
Stress Challenge				—	.12	.33**	-.68	-.05	.00
Stress Centrality					—	-.15	-.20**	.24**	.26**
Stress – Control Self						—	.31**	.24**	-.24**
Self – Control Others							—	.20*	-.23**
Stress Uncontrollable								—	.49**
Stress Stressfulness									—

Note: \* $p < 0.01$ , \*\* $p < 0.05$

**Table 3. Multiple Regression Analysis of the demographic variables as predictors of the eight subscales of stress appraisal.**

Variable	B	SE	B	T	p
(R= .422, R <sup>2</sup> = .178)			Threat		
Age – Cat	.088	.96	.19	.88	.37
Gender	-1.73	.54	-.24	-3.1	.002**
Status	-1.88	.67	-.26	-2.8	.001**
Relationship	-.30	.15	-.15	-1.9	.05*
Care Giving Period of Month	-.05	.06	-.7	-.97	.33
(R= .269, R <sup>2</sup> = .72)	Control Self				
Age – Cat	1.05	.75	.33	1.4	.16
Gender	.02	.42	.00	-.06	.94
Status	-.27	.52	-.05	-.52	.60
Relationship	-.24	.12	-.17	-2.0	.04*
Care Giving – Period of Month	-.00	.04	-.00	-.01	.99
(R= .378, R <sup>2</sup> = .143)	Stressfulness				
Age – Cat	-.35	.85	-.09	.41	.68
Gender	-1.42	.47	-.23	-2.96	.01**
Status	-.71	.59	-.11	-1.20	.232
Relationship	-.23	.13	-.14	-1.69	.092
Care Giving Period Month	-.07	.05	-.11	-1.40	.162

**Table 4: Independent Sample t-test comparing gender differences on hope, gratitude and stress appraisal scale and their subscales (N = 150).**

	Men		Women		<i>t</i>	<i>p</i>	<i>Cohen's d</i>
	<i>M</i>	<i>SD</i>	<i>M</i>	<i>SD</i>			
Hope	52.70	8.53	49.84	9.62	1.92	.05*	-0.32
Pathways	26.46	4.52	24.90	4.95	2.0	.04*	-0.33
Agency	26.23	5.07	24.93	5.44	1.50	.13	-0.24
Gratitude	31.10	6.57	31.27	5.57	3.0	.00***	0.02
Stress Threat	7.18	3.10	8.90	3.71	2.24	.02*	0.50
Stress Challenge	12.02	2.46	11.14	2.26	.189	.85	-0.37
Stress Centrality	10.17	2.35	10.09	2.67	1.20	.02*	-0.03
Stress Control self	10.95	2.62	10.43	2.53	.68	.04*	-0.20
Stress Control other	9.35	2.68	9.02	3.24	1.78	.08	-0.11
Stress Uncontrollable	7.10	2.56	7.93	3.17	2.5	.01**	0.29
Stress Stressfulness	8.35	2.77	9.59	3.15	.163	.87	.42

## DISCUSSION

Positive appraisals of stress lead to gratitude, specifically, when the stressful situation is seen as beneficial, highly significant, and as having implications for the accountability of others, feelings of gratitude are consequently experienced.<sup>16</sup> Hope was found to correlate positively with the perception of stress as challenge and stress as controllable by self. Hope was negatively associated with the appraisal of stress as threat.

A study revealed that challenge and hope are very similar to each other as both help an individual to attain an unrealized objective and represent opportunity.<sup>17</sup> In line with same context, the study results confirmed this prediction in a study that figure out the strong positive correlation between hope and gratitude.<sup>18</sup> Another study found hope as a positive correlate of gratitude and concluded that positive emotions trigger the emotional wellbeing.<sup>19</sup> Practicing gratitude on a daily or weekly basis increases the number of positive feelings including hope.<sup>20</sup>

On the other hand, gender differences in gratitude got evident by a study which found that women were more likely to express and feel gratitude than men.<sup>21</sup> Women experience more negative feelings, greater cardiac reactivity, and a greater number of negative thoughts. In line with same context, an empirical study showed positive emotions as antidote to health problems, it revealed that if the individual possessed with tendency of gratitude and hope then can deal with health problems effectively by having the optimistic approach.<sup>22</sup> Another study explored the positive relationship between gratitude and wellbeing which is consistent with the result of current study.<sup>23</sup>

The individual demographical statistics revealed the marked stress among the respondents. Study revealed that the caregivers with older age will likely give the less support to the patients they will extend less and experience more stress as compared to younger age. A previous study in this regard postulated the significant correlated effect among caregiver's demographic including age, education, income and home environment with anxiety and stress.<sup>24</sup> Current study showed the significant positive predictive effect of additional information related to disease with lesser stress level and increased hopefulness.

## CONCLUSION

The current study highlighted the positive aspects in the field of psychology, providing the features of positive psychology including gratitude, stress appraisal and hope under the stressful circumstances in the context of Pakistani society.

### Author Contributions:

Conception and design: Uzma Sarwar.

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