

## Gender differences in altruism, hope, and emotional contagion

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### ABSTRACT

There has been an increasing focus on Positive Psychology as there is a shift from mental illness, which was a major area concerning the field of Psychology, to positive aspects of human experiences. The study aims to assess if Emotional Contagion, a phenomenon in which behaviors or emotions of other people triggers the same in a person, has any relationship with Altruism and Hope along with gender differences between the same. The sample includes 138 individuals belonging to the age group 18-40 years (78 females and 60 males) residing in India. Three scales, namely, Rushton's Altruistic Personality Scale (1981), Snyder's The Trait Hope Scale (1991) and Doherty's Emotional Contagion Scale (1997) were administered to the subjects to assess Altruism, Hope and Emotional Contagion. Data was analyzed by using normality tests, tests of mean difference and correlation. Independent t-Test was used for Altruism and Hope while Mann-whitney U-Test was used for Emotional Contagion along with Spearman's Rank Correlation. The results indicate significant differences between male and females with respect to Altruism ( $p < 0.01$ ), Hope ( $p < 0.01$ ) and Emotional Contagion ( $p < 0.05$ ). Correlation between Hope and Emotional Contagion ( $p < 0.01$ ) was also significant. Findings helps us understand the relationship between the variables and further evaluate the role of the same in the context of Positive Psychology.

**Keywords:** *Altruism, Hope, Emotional Contagion, Gender Differences, Positive Psychology*

Owning to the importance of Positive aspects of the human psyche in the recent years, research has shifted its focus to positive psychological variables. Positive Psychology is the scientific study of positive human functioning and flourishing on multiple levels that include the biological, personal, relational, institutional, cultural, and global dimensions of life (Seligman & Csikszentmihalyi, 2014). It focuses on subjective positive life experiences and gives prominence to happiness, well-being and quality of life of an individual. Hope and Altruism are considered as an important aspect of positive psychology; and Emotional Contagion helps in strengthening bonds between people; The three aspects were analyzed to assess their relationship with each other. Research has shown that there is a significant relationship between altruistic behavior and positive emotions (Dulin & Hill, 2003). High hope is correlated with better performance in sports and academics along with psychological well-being and relationship with others (Rand &

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Cheavens, 2009). Emotional Contagion is the tendency to automatically mimic and synchronize facial expressions, vocalizations, postures, and movements with those of another person and, consequently, to converge emotionally (Hatfield, 1993). Positive emotions is linked to positive emotional contagion (Bhullar & Naureen, 2012). The concept of emotional contagion, altruism and hope are linked to positive affect in an individual but studies relating these concepts have been limited. The existence of these traits in an individual, shapes not just their own personal experiences but also the experiences of people around them. There is a positive relation between the presence of the factors individually and the positive outlook that one has on life, hence a combined study is necessary.

### *Objective*

- To compare Altruism between men and women.
- To compare Hope between men and women.
- To compare Emotional Contagion between men and women.
- To understand the relationship between Altruism and Hope, Hope and Emotional Contagion, Emotional contagion and Altruism among adults.
- To compare the correlation of Altruism and Hope, Emotional Contagion among females.
- To compare the correlation of Altruism, Hope and Emotional Contagion among males.

### *Hypothesis*

H<sub>01</sub> - There is no difference between men and women with respect to Altruism.

H<sub>02</sub> – There is no difference between men and women with respect to Hope.

H<sub>03</sub> – There is no difference between men and women with respect to Emotional Contagion.

H<sub>04</sub> – There is no correlation between Hope and Emotional Contagion among adults.

H<sub>05</sub>- There is no correlation between Altruism and Emotional Contagion among people.

H<sub>06</sub>- There is no correlation between Altruism and Hope among people.

H<sub>07</sub> – There is no correlation between Hope and Emotional Contagion in females and males.

H<sub>08</sub> - There is no correlation between Altruism and Emotional Contagion in females and males.

H<sub>09</sub> - There is no correlation between Altruism and Hope in females and males.

## **METHODOLOGY**

### *Sample*

The sample consisted of 78 females and 60 males belonging to the age group ranging from 19-40 years; Considered young adults according to Erik Erikson's stages of psychosocial development; belonging to the urban region and proficient in English. The participants represent the diverse population of the world. Convenient sampling technique was used.

### *Materials*

- Prosocial Orientation and Altruism.
- Adult Hope Scale.
- Emotional Contagion Scale.

### *Data collection*

Primary data collection was undertaken to complete the process of this research.

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### Measures

1. Altruistic Personality Scale developed by (Rushton et al, 1981) was used to assess altruism of the sample.
2. The Trait Hope Scale developed by (Snyder, 1991) was used to assess hope of the sample. The scale has two sub-domains, namely, Agency and Pathway.
3. Emotional Contagion Scale developed by (Doherty, 1997) was used to assess the emotional contagion of the sample. The scale has various sub-domains such as Happiness, Love, Fear, Anger and Sadness.

### Variable

**Quasi-independent variable-** Gender of the person.

**Dependent variable-** Altruism, Hope and Emotional Contagion.

### Research Design

A quasi-experimental between groups research design was used to assess the difference between males and females with respect to Altruism, Hope and Emotional Contagion. A correlational research design is also used to understand the relationship among the dependent variables.

The analysis was carried out using the Statistical Package for Social Sciences (SPSS) Software, Version-20. Test of normality was executed and appropriate tests of mean difference were used. The results are as follows:

**Table 1: Demographics of the Sample**

	Females	Males
N	78	60
Age	19-40	19-40

Table 1 shows the demographic details of the sample population of females and males. The sample consisted of 78 females and 60 males. The range for the age was taken to be 19-40 years as per Erik Erikson's stages of development.

**Table 2: Descriptive Statistics for Altruism and Hope**

Variable	Females		Males	
	Mean	SD	Mean	SD
Altruism	57.91	12.602	64.27	13.996
Hope	65.64	10.387	70.62	8.531
Agency	22.56	5.649	25.07	4.513
Pathway	22.77	5.458	26.65	4.087

Table 2. shows the mean scores of females and males in Altruism and Hope along with its domains, Agency and Pathway. It was found that there was a significant difference between females and males in Altruism ( $57.91 \pm 12.602$  and  $64.27 \pm 13.996$ ); Hope ( $65.64 \pm 10.387$  and  $70.62 \pm 8.531$ ); Agency ( $22.56 \pm 5.649$  and  $25.07 \pm 4.513$ ); and Pathway ( $22.77 \pm 5.458$  and  $26.65 \pm 4.0$ ).

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**Table 3: Descriptive Statistics for Emotional Contagion**

Variable	Females		Males	
	Mean	SD	Mean	SD
Emotional Contagion	56.08	7.512	50.88	11.958
Happiness	12.67	1.828	11.70	3.033
Love	11.88	2.711	11.82	3.377
Fear	10.38	2.397	8.83	3.222
Anger	10.18	2.521	9.52	2.861
Sadness	10.96	2.862	9.02	3.652

Table 3 shows the mean scores of females and males in Emotional Contagion and its five domains. It was found that there was a significant difference between females and males in Emotional Contagion ( $56.08 \pm 7.512$  and  $50.88 \pm 11.958$ ); Fear ( $10.38 \pm 2.397$  and  $8.83 \pm 3.222$ ); and Sadness ( $10.96 \pm 2.862$  and  $9.02 \pm 3.652$ ).

**Table 4: Test of Normality - Shapiro-Wilk Test**

Variable	Statistic	df	Significance
AL	.993	138	.749
H	.062	138	.067
EC	.969	77	.003

Table 4 shows that Altruism and Hope follow normal distribution, so parametric tests are used whereas Emotional contagion does not follow the normal distribution, so non-parametric tests are used.

**Table 5: Independent t-Test for Altruism**

Variable	Mean Difference	t Statistic	Significance
AL	-6.356	-2.799	.006*

\*\* Significant at 0.01 level

Table 5 shows the parametric t-test for Altruism. From the table, it is concluded that altruism (MD= -6.356,  $t = -2.799$ )  $p < 0.01$  is statistically significant. This indicates that there is a statistically significant difference between females and males with respect to altruism. Males show high altruism when compared to females.

**Table 6: Independent t-Test for Hope**

Variable	Mean Difference	t Statistic	Significance
Hope	-4.976	-3.010	0.003**
Agency	-2.503	-2.810	0.006**
Pathway	-3.881	-4.602	0.000**

\*\* Significant at 0.01 level

Table 6 shows the Mean Ranks and t-value for Hope and its two sub-domains. From the table, it can be concluded that Hope (MD= -4.976,  $t = -3.010$ )  $p < 0.01$ ; Agency (MD= -2.503,  $t = -2.810$ )  $p < 0.01$ ; and Pathway (MD= -3.881,  $t = -4.602$ )  $p < 0.01$  are statistically significant. It can be deduced that males have obtained higher mean scores within Hope, Agency and Pathway than females.

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**Table 7: Mann-whitney U-test for Emotional Contagion**

Variable	EC		HS		LV		FR		AG		SD	
	1	2	1	2	1	2	1	2	1	2	1	2
Mean Ranks	77.0	59.6	73.6	64.0	68.1	71.3	77.6	58.8	72.8	65.1	78.7	57.4
U	1.751E3		2.016E3		2.232E3		1.702E3		2.080E3		1.620E3	
Sig.	0.011*		0.158		0.637		0.006**		0.262		0.002**	

*\*\*Significant at 0.01 level*

*\*Significant at 0.05 level*

Table 7 shows the Mean Scores and U-value for Emotional contagion and its five domains for females and males. From the table, it can be concluded that Emotional contagion(U=1.751E3) p<0.05; Fear(U=1.702E3) p<0.01; and Sadness(U=1.620E3) p<0.01 are statistically significant. It can be observed that females have high mean scores in Emotional contagion, Fear and Sadness when compared to males.

**Table 8: Spearman's Rank Correlation between Altruism, Hope and Emotional Contagion.**

			AL	H	EC
Spearman's rho	AL	Correlation Coefficient	1.000	.189*	.082
		Sig. (2-tailed)	.	.026	.339
		N	138	138	138
	H	Correlation Coefficient	.189*	1.000	.235**
		Sig. (2-tailed)	.026	.	.006
		N	138	138	138
	EC	Correlation Coefficient	.082	.235**	1.000
		Sig. (2-tailed)	.339	.006	.
		N	138	138	138

*\*Significant at 0.05 level*

*\*\* Significant at 0.01 level*

Table 8 shows the correlation of Altruism, Hope and Emotional Contagion within the group. From the table, it can be deduced that there is low correlation between Hope and Emotional Contagion (r=0.235) p<0.01; while there is no correlation between the other variables.

**Table 9: Spearman's Rank Correlation between Altruism, Hope and Emotional Contagion in females.**

			AL	H	EC
Spearman's rho	AL	Correlation Coefficient	1.000	.152	.089
		Sig. (2-tailed)	.	.183	.438
		N	78	78	78
	H	Correlation Coefficient	.152	1.000	.242*
		Sig. (2-tailed)	.183	.	.033
		N	78	78	78
	EC	Correlation Coefficient	.089	.242*	1.000
		Sig. (2-tailed)	.438	.033	.
		N	78	78	78

*\*Significant at 0.05 level*

Table 9 shows correlation between Altruism, Hope and Emotional Contagion among females. From the above table, It can be inferred that Emotional Contagion and Hope have

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low correlation ( $r=0.242$ )  $p<0.05$ . Hence, it can be deduced that Emotional Contagion and Hope are directly proportional to each other in females.

**Table 10: Spearman's Rank Correlation between Altruism, Hope and Emotional Contagion in males.**

			AL	H	EC
Spearman's rho	AL	Correlation Coefficient	1.000	.175	.197
		Sig. (2-tailed)	.	.181	.131
		N	60	60	60
	H	Correlation Coefficient	.175	1.000	.353**
		Sig. (2-tailed)	.181	.	.006
		N	60	60	60
	EC	Correlation Coefficient	.197	.353**	1.000
		Sig. (2-tailed)	.131	.006	.
		N	60	60	60

\*\* Significant at 0.01 level

Table 10 shows the correlation between Altruism, Hope and Emotional Contagion among males. From the above table, it can be inferred that Hope and Emotional Contagion ( $r=0.353$ )  $p<0.01$  have low correlation in males. Hence, it can be deduced that Emotional Contagion and Hope are directly proportional to each other in males.

From table 9 and 10, it can be observed that Hope and Emotional Contagion are low correlated among both females and males.

**Table 11: Spearman's Rank Correlation between Altruism, Emotional Contagion and sub-domains of hope in males and females.**

			AL	H	A	P	EC
Spearman's rho	AL	Correlation Coefficient	1.000	.189*	.282**	.255**	.082
		Sig. (2-tailed)	.	.026	.001	.003	.339
		N	138	138	138	138	138
	H	Correlation Coefficient	.189*	1.000	.694**	.765**	.235**
		Sig. (2-tailed)	.026	.	.000	.000	.006
		N	138	138	138	138	138
	A	Correlation Coefficient	.282**	.694**	1.000	.690**	-.022
		Sig. (2-tailed)	.001	.000	.	.000	.796
		N	138	138	138	138	138
	P	Correlation Coefficient	.255**	.765**	.690**	1.000	-.011
		Sig. (2-tailed)	.003	.000	.000	.	.897
		N	138	138	138	138	138
	EC	Correlation Coefficient	.082	.235**	-.022	-.011	1.000
		Sig. (2-tailed)	.339	.006	.796	.897	.
		N	138	138	138	138	138

\*Significant at 0.05 level

\*\* Significant at 0.01 level

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Table 11 shows the correlation among Emotional Contagion, Altruism and the sub-domains of Hope- Agency and Pathway in males and females. From the above table, it can be inferred that there is low correlation between Altruism and Agency ( $r=0.282$ )  $p<0.01$ ; and Altruism and Pathway ( $r=0.255$ )  $p<0.01$ .

**Table 12: Spearman's Rank Correlation between Altruism, Emotional Contagion and sub-domains of Hope in females.**

			AL	H	A	P	EC
Spearman's rho	AL	Correlation Coefficient	1.000	.152	.232*	.231*	.089
		Sig. (2-tailed)	.	.183	.041	.042	.438
		N	78	78	78	78	78
H	H	Correlation Coefficient	.152	1.000	.737**	.810**	.242*
		Sig. (2-tailed)	.183	.	.000	.000	.033
		N	78	78	78	78	78
A	A	Correlation Coefficient	.232*	.737**	1.000	.679**	.060
		Sig. (2-tailed)	.041	.000	.	.000	.604
		N	78	78	78	78	78
P	P	Correlation Coefficient	.231*	.810**	.679**	1.000	.080
		Sig. (2-tailed)	.042	.000	.000	.	.489
		N	78	78	78	78	78
EC	EC	Correlation Coefficient	.089	.242*	.060	.080	1.000
		Sig. (2-tailed)	.438	.033	.604	.489	.
		N	78	78	78	78	78

\*Significant at 0.05 level

\*\* Significant at 0.01 level

Table 12 shows the correlation Altruism, Emotional Contagion and sub-domains of Hope in females. From the above table, it can be inferred that there is low correlation between Altruism and Agency ( $r= 0.232$ )  $p<0.05$ ; and Altruism and Pathway ( $r= 0.231$ )  $p<0.05$ .

**Table 13: Spearman's Rank Correlation between Altruism, Emotional Contagion and sub-domains of Hope in males.**

			AL	H	A	P	EC
Spearman's rho	AL	Correlation Coefficient	1.000	.175	.261*	.174	.197
		Sig. (2-tailed)	.	.181	.044	.184	.131
		N	60	60	60	60	60
H	H	Correlation Coefficient	.175	1.000	.589**	.623**	.353**
		Sig. (2-tailed)	.181	.	.000	.000	.006
		N	60	60	60	60	60
A	A	Correlation Coefficient	.261*	.589**	1.000	.660**	-.031
		Sig. (2-tailed)	.044	.000	.	.000	.815

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		AL	H	A	P	EC
	N	60	60	60	60	60
P	Correlation Coefficient	.174	.623**	.660**	1.000	.059
	Sig. (2-tailed)	.184	.000	.000	.	.657
	N	60	60	60	60	60
EC	Correlation Coefficient	.197	.353**	-.031	.059	1.000
	Sig. (2-tailed)	.131	.006	.815	.657	.
	N	60	60	60	60	60

\*Significant at 0.05 level

\*\* Significant at 0.01 level

Table 13 shows the correlation between Altruism, Emotional Contagion and sub-domains of Hope in males. From the above table, it can be inferred that there is low correlation between Altruism and Agency ( $r=0.216$ )  $p<0.05$ .

**Table 14: Spearman's rank Correlation between Altruism, Hope and the sub-domains of Emotional Contagion.**

			AL	H	EC	HS	LV	FR	AG	SD
Spearman's rho	AL	Correlation Coefficient	1.000	.189*	.082	.055	.218*	.067	-.053	.008
		Sig. (2-tailed)	.	.026	.339	.523	.010	.438	.539	.930
		N	138	138	138	138	138	138	138	138
H	Correlation Coefficient	Correlation Coefficient	.189*	1.000	.235**	.198*	.249**	.142	.264**	-.030
		Sig. (2-tailed)	.026	.	.006	.020	.003	.096	.002	.729
		N	138	138	138	138	138	138	138	138
EC	Correlation Coefficient	Correlation Coefficient	.082	.235**	1.000	.584**	.585**	.786**	.687**	.701**
		Sig. (2-tailed)	.339	.006	.	.000	.000	.000	.000	.000
		N	138	138	138	138	138	138	138	138
HS	Correlation Coefficient	Correlation Coefficient	.055	.198*	.584**	1.000	.403**	.267**	.253**	.326**
		Sig. (2-tailed)	.523	.020	.000	.	.000	.002	.003	.000
		N	138	138	138	138	138	138	138	138
LV	Correlation Coefficient	Correlation Coefficient	.218*	.249**	.585**	.403**	1.000	.300**	.225**	.219**
		Sig. (2-tailed)	.010	.003	.000	.000	.	.000	.008	.010
		N	138	138	138	138	138	138	138	138
FR	Correlation Coefficient	Correlation Coefficient	.067	.142	.786**	.267**	.300**	1.000	.591**	.457**
		Sig. (2-tailed)	.438	.096	.000	.002	.000	.	.000	.000
		N	138	138	138	138	138	138	138	138



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		AL	H	EC	HS	LV	FR	AG	SD
	N	138	138	138	138	138	138	138	138
AG	Correlation Coefficient	-.053	.264**	.687**	.253**	.225**	.591**	1.000	.295**
	Sig. (2-tailed)	.539	.002	.000	.003	.008	.000	.	.000
	N	138	138	138	138	138	138	138	138
SD	Correlation Coefficient	.008	-.030	.701**	.326**	.219**	.457**	.295**	1.000
	Sig. (2-tailed)	.930	.729	.000	.000	.010	.000	.000	.
	N	138	138	138	138	138	138	138	138

\*Significant at 0.05 level

\*\* Significant at 0.01 level

Table 14 shows the correlation between Altruism, domains of Hope and Emotional Contagion in the groups. It can be inferred from the above table that there is a low correlation between Altruism and Love ( $r=0.218$ )  $p<0.01$ ; Hope and Love ( $r=0.249$ )  $p<0.01$ ; and Hope and Anger ( $r=0.264$ )  $p<0.01$ . Within the domains of Emotional Contagion, there is a moderate positive correlation between Fear and Anger ( $r=0.591$ )  $p<0.01$  and low correlation between Happiness and Love ( $r=0.403$ )  $p<0.01$ ; Happiness and Fear ( $r=0.267$ )  $p<0.01$ ; Happiness and Anger ( $r=0.253$ )  $p<0.01$ ; Happiness and Sadness ( $r=0.326$ )  $p<0.01$ ; Love and Fear ( $r=0.300$ )  $p<0.01$ ; Love and Anger ( $r=0.225$ )  $p<0.01$ ; Love and sadness ( $r=0.219$ )  $p<0.01$ ; Fear and Sadness ( $r=0.457$ )  $p<0.01$ ; and Anger and Sadness ( $r=0.295$ )  $p<0.01$ .

**Table 15: Spearman's Rank Correlation between Altruism, Hope and the sub-domains of Emotional Contagion in females.**

		AL	H	EC	HS	LV	FR	AG	SD
Spearman's rho	AL								
	Correlation Coefficient	1.000	.152	.089	.055	.223*	.107	-.137	-.022
	Sig. (2-tailed)	.	.183	.438	.631	.050	.351	.231	.847
	N	78	78	78	78	78	78	78	78
H	Correlation Coefficient	.152	1.000	.242*	.141	.191	.183	.301**	-.144
	Sig. (2-tailed)	.183	.	.033	.219	.095	.109	.007	.208
	N	78	78	78	78	78	78	78	78
EC	Correlation Coefficient	.089	.242*	1.000	.551**	.649**	.679**	.587**	.586**
	Sig. (2-tailed)	.438	.033	.	.000	.000	.000	.000	.000
	N	78	78	78	78	78	78	78	78
HS	Correlation Coefficient	.055	.141	.551**	1.000	.388**	.187	.092	.325**
	Sig. (2-tailed)	.631	.219	.000	.	.000	.101	.422	.004
	N	78	78	78	78	78	78	78	78
LV	Correlation Coefficient	.223*	.191	.649**	.388**	1.000	.244*	.183	.209
	Sig. (2-tailed)	.050	.095	.000	.000	.	.032	.110	.066
	N	78	78	78	78	78	78	78	78

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		AL	H	EC	HS	LV	FR	AG	SD
FR	Correlation Coefficient	.107	.183	.679**	.187	.244*	1.000	.490**	.184
	Sig. (2-tailed)	.351	.109	.000	.101	.032	.	.000	.106
	N	78	78	78	78	78	78	78	78
AG	Correlation Coefficient	-.137	.301**	.587**	.092	.183	.490**	1.000	.066
	Sig. (2-tailed)	.231	.007	.000	.422	.110	.000	.	.568
	N	78	78	78	78	78	78	78	78
SD	Correlation Coefficient	-.022	-.144	.586**	.325**	.209	.184	.066	1.000
	Sig. (2-tailed)	.847	.208	.000	.004	.066	.106	.568	.
	N	78	78	78	78	78	78	78	78

\*Significant at 0.05 level

\*\* Significant at 0.01 level

Table 15 shows the correlation between Altruism, domains of Hope and Emotional Contagion in females. From the above table, it can be deduced that there is low correlation between Altruism and Love ( $r=0.223$ )  $p<0.05$ ; Hope and Anger ( $r=0.301$ )  $p<0.01$ . Within the sub-domains of Emotional Contagion, there is low correlation between Happiness and Love ( $r=0.388$ )  $p<0.01$ ; Happiness and Sadness ( $r=0.325$ )  $p<0.01$ ; Fear and Love ( $r=0.244$ )  $p<0.05$ ; Fear and Anger ( $r=0.490$ )  $p<0.01$ .

**Table 16: Spearman's Rank Correlation between Altruism, Hope and the sub-domains of Emotional Contagion in males.**

		AL	H	EC	HS	LV	FR	AG	SD	
Spearman's rho	AL	Correlation Coefficient	1.000	.175	.197	.086	.227	.165	.060	.157
		Sig. (2-tailed)	.	.181	.131	.511	.081	.208	.649	.231
		N	60	60	60	60	60	60	60	60
H		Correlation Coefficient	.175	1.000	.353**	.351**	.295*	.240	.275*	.246
		Sig. (2-tailed)	.181	.	.006	.006	.022	.064	.033	.058
		N	60	60	60	60	60	60	60	60
EC		Correlation Coefficient	.197	.353**	1.000	.632**	.585**	.832**	.787**	.774**
		Sig. (2-tailed)	.131	.006	.	.000	.000	.000	.000	.000
		N	60	60	60	60	60	60	60	60
HS		Correlation Coefficient	.086	.351**	.632**	1.000	.427**	.300*	.412**	.306*
		Sig. (2-tailed)	.511	.006	.000	.	.001	.020	.001	.018
		N	60	60	60	60	60	60	60	60
LV		Correlation Coefficient	.227	.295*	.585**	.427**	1.000	.371**	.269*	.266*
		Sig. (2-tailed)	.081	.022	.000	.001	.	.004	.038	.040
		N	60	60	60	60	60	60	60	60
FR		Correlation Coefficient	.165	.240	.832**	.300*	.371**	1.000	.682**	.648**
		Sig. (2-tailed)	.208	.064	.000	.020	.004	.	.000	.000

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		AL	H	EC	HS	LV	FR	AG	SD
	N	60	60	60	60	60	60	60	60
AG	Correlation Coefficient	.060	.275*	.787**	.412**	.269*	.682**	1.000	.537**
	Sig. (2-tailed)	.649	.033	.000	.001	.038	.000	.	.000
	N	60	60	60	60	60	60	60	60
SD	Correlation Coefficient	.157	.246	.774**	.306*	.266*	.648**	.537**	1.000
	Sig. (2-tailed)	.231	.058	.000	.018	.040	.000	.000	.
	N	60	60	60	60	60	60	60	60

\*Significant at 0.05 level

\*\* Significant at 0.01 level

Table 16 shows correlation between Altruism, domains of Hope and Emotional Contagion in males. From the above table, it can be inferred that there is a low correlation between Hope and Happiness ( $r=0.351$ )  $p<0.01$ ; Hope and Love ( $r=0.295$ )  $p<0.05$ ; Hope and Anger ( $r=0.275$ )  $p<0.05$  and within the sub-domains Emotional Contagion, there is a moderate correlation between Fear and Anger ( $r=0.682$ )  $p<0.01$ ; Fear and Sadness( $r=0.648$ )  $p<0.01$  and low correlation in Happiness and Love( $r=0.427$ )  $p<0.01$ ; Happiness and Fear ( $r=0.300$ )  $p<0.05$ ; Happiness and Anger( $r=0.412$ )  $p<0.01$ ; Happiness and Sadness( $r= 0.306$ )  $p<0.05$ ; Love and Fear( $r=0.371$ )  $p<0.01$ ; Love and Anger( $r=0.269$ )  $p<0.05$ ; Love and Sadness( $r=0.266$ )  $p<0.05$ .

A Significant difference was found between men and women with respect to Altruism. When the mean scores were compared, it was found that men showed high scores in altruism when compared to women. Hence, the hypothesis stating, “There is no difference between men and women with respect to Altruism” is rejected. The findings are in line with previous study with regard to Altruistic behavior that men tend to help more when compared to women and women got more help in comparison to men (Eagly& Crowley., 1986). Our findings seem to be contrary to the recent findings which states that women are more altruistic when compared with men (Branas-Garza et al., 2016).

A Significant difference was found between men and women with respect to Hope. When the mean scores were compared it was found that men showed high scores in hope when compared to women males scored higher in both Agency and Pathway. Hence, the hypothesis stating, “There is no difference between men and women with respect to Hope” is rejected.

A Significant difference was found among men and women with respect to Emotional Contagion. When mean scores were compared it was found that women showed high scores when compared to men. Females scored higher in Happiness, Fear, Anger and Sadness compared to males. Hence, the hypothesis stating, “There is no difference between men and women with respect to Emotional Contagion” is rejected. The findings are in line with previous studies suggesting women received high Emotional contagion scores, reported sharing the targets’ emotions to a greater extent, and were rated by judges as displaying more Emotional Contagion than did men (Doherty et al., 1995).

Correlational study of Hope and Emotional Contagion showed that there was positive low correlation among adults; it was found that there is low correlation between Hope and

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Anger; and Hope and Love among adults. Hence, the hypothesis states that, “There is no correlation between Hope and Emotional Contagion among adults” is rejected.

Correlational study of Altruism and Emotional Contagion showed that there was no significant correlation between Altruism and Emotional Contagion. Therefore, the hypothesis which states that “There is no correlation between Altruism and Emotional Contagion among adults” is accepted.

The correlational analysis of Altruism and Hope showed that there was no significant correlation between Altruism and Hope. Therefore, the hypothesis which states that “There is no correlation between Altruism and Hope among adults” is accepted.

The correlational analysis of Hope and Emotional Contagion among females and males suggest that there is a positive low correlation between Hope and Emotional Contagion among males as well as females. Among females, there was a low positive between Hope and Anger; while among males, there is a low positive correlation between Hope and Happiness; Hope and Love; and Hope and Anger. Therefore, the hypothesis which states that, “There is no correlation between Hope and Emotional Contagion in females and males,” is rejected.

The correlational analysis of Altruism and Emotional Contagion among females and males suggest that there is no significant correlation between Altruism and Emotional Contagion in both males and females. Therefore, the hypothesis which states that, “There is no correlation between Altruism and Emotional Contagion in females and males” is accepted.

The correlational analysis of Altruism and Hope among females and males suggest that there is no significant correlation between Altruism and Hope in both females and males. Therefore, the hypothesis which states that, “There is no correlation between Hope and Emotional Contagion in males and females,” is accepted.

The study compared Altruism, Hope and Emotional Contagion in males and females across the globe. The study showed that males showed high mean scores in Altruism and Hope; were also high in Agency and Pathway the dimension of Hope. Women showed high mean scores in Emotional Contagion; Happiness, Fear, Anger, and Sadness except Love where men showed high scores. The gender differences are evident across the domains and with the focus on Positive Psychology, the study can be used to increase positive feelings like Hope and Altruism along with relating a person’s emotions and feelings with another’s across genders.

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### **Conflict of Interest**

The author declared no conflict of interest.

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