Predictors of emotional intelligence during adolescence

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ABSTRACT: *A study was conducted on PUC students in the age group of 16-18 years who were randomly selected from four science coaching institutes of Dharwad taluk and three science coaching institutes of Tanakpur taluk respectively. Sample selection included random selection of 10 to 15 per cent students from each class (PUC-I and PUC-II) of selected coaching institutes from each place that overall constituted a sample of 592 students. PUC students were assessed on emotional intelligence, self-concept and Big Five personality factors by using standardized scales. The results of the present study revealed that majority of urban and rural PUC students of Dharwad and Tanakpur were in medium level of all emotional intelligence dimensions and total emotional intelligence. Differential effect of individual and familial factors on emotional intelligence of urban and rural PUC students was also observed where, combined effect of individual factors, familial factors, personality factors and self-concept brought greater variance on emotional intelligence of rural Dharwad PUC students as well as among urban and rural PUC students of Tanakpur. However, among urban PUC students of Dharwad combined effect of individual factors and familial factors brought a greater difference in their emotional intelligence.*
Keywords: Emotional intelligence, Self-concept, Personality factors and PUC students.

I.   INTRODUCTION

Adolescence is a transitional stage of development from childhood to adulthood or a period following the onset of puberty during which a young person develops from a child into an adult. According to World Health Organization (2012), adolescence includes a period of life between ten and nineteen years of age.

Adolescence period is very important period of one's life as the growth achieved, the experienced gained and the relationship developed at this stage determines the entire future of an individual. Emotional intelligence of an individual is defined as an individual ability to perceive, understand, utilize and manage emotions in an effort to predict and foster personal effectiveness. Many scientists have found that an individual emotional intelligence not only plays an important role in determining the quality of healthy relationship but it is also a significant predictor of an individual success and happiness.

Emotional intelligence also determines an individual mental well-being. In today's era, young people need to deal with everyday stress and pressure. In such case, an individual who lags behind in skills to deal with everyday stress of life face higher anxiety and depression while, emotionally intelligent people possess positive outlook and attitude towards life which helps them in getting rid from anxiety and depression and to deal effectively with mood swings.

By understanding one's own emotion one can better manage oneself and communicate effectively. This also help to build stronger bonds and have more fulfilling interpersonal relationships. Emotional intelligence incorporates the important aspects of interpersonal and intrapersonal relationships, adaptability, moods and stress management skills, which have a profound effect on the academic performance of adolescents.

Goleman (2010) defined emotional intelligence as recognizing and managing feelings, self-action, the ability of understanding the others feelings and to continue the relationships. An individual ability to endure through various challenges and hardships as well as to deal effectively with various emotional turmoil during this period ultimately determines their future success.

Thus, keeping in view the importance of emotional intelligence during adolescence present study aims to assess the emotional intelligence of PUC students and influence of selected individual and familial factors on their emotional intelligence.

II. MATERIAL AND METHODS

The target population of the study comprised of urban and rural PUC-I and PUC-II students in the age range of 16 to 18 years from different science coaching centers of Dharwad (Karnataka) and Tanakpur (Uttarakhand) respectively. At the time of survey, a total of 18 PUC science coaching institutes in Dharwad taluk (Karnataka) and 12 PUC science coaching institutes in Tanakpur taluk (Uttarakhand) were identified. Out of overall identified science coaching institutes, 4 coaching institutes from Dharwad and 3 coaching institutes from Tanakpur were randomly selected. A class wise list of coaching students studying in PUC-I and PUC-II was prepared and prior permission was taken from head of each coaching institute to carry out research work. For selection of rural samples, list of such rural students who had completed their high-school studies in their village and had come to science coaching institutes of Dharwad (Karnataka) and Tanakpur (Uttarakhand) city was obtained. A random sample of 10 to 15 per cent were drawn from each class summing up to a total of 156 students each from PUC-I and PUC-II of Dharwad coaching institutes and 150 PUC-I and 130 PUC-II students from Tanakpur coaching institutes and thus, constituting an overall sample of 592 students.

Big Five Personality Factor Inventory (John et al., 1991), Adolescent's Self-Concept Short Scale (Viega, 2016) and Baron Emotional Quotient-inventory: Youth Version (Bar-on and James D.A. Parker, 2000) were used to assess personality factors, self-concept and emotional intelligence of PUC students. Data was analysed in SPSS by using statistical methods like frequency, percentage, χ^2 test and regression.

III. RESULTS

Table 1: Percentage distribution of dimensions of emotional intelligence of Dharwad PUC students

N = 312

Dimension of emotional intelligence	Levels			Levels		
	Low	Medium	High	Low	Medium	High
	Urban (N=150)			Rural (N=130)		
Intrapersonal	25 (15.63)	88 (55)	47 (29.38)	26 (17.11)	87 (57.24)	39 (25.66)
Interpersonal	42 (26.25)	72 (45)	46 (28.75)	54 (35.52)	76 (50)	22 (14.47)
Stress management	22 (13.75)	96 (60)	42 (26.25)	22 (14.47)	90 (59.21)	40 (26.32)
Adaptability	16 (10)	74 (46.25)	70 (43.75)	22 (14.47)	70 (46.05)	60 (39.47)
Total emotional intelligence	30 (18.75)	69 (43.13)	61 (38.13)	30 (19.74)	70 (46.05)	52 (34.21)

Figures in parenthesis indicate percentage.

Table 1 clearly illustrates that maximum percentage of both urban and rural Dharwad PUC students, were in medium level of all emotional intelligence dimensions where, among urban PUC students, 55 percent students in intrapersonal dimension, 45 percent in interpersonal dimension, 60 percent in stress management dimension, 46.25 percent in adaptability dimension and 43.13 percent in total emotional intelligence were in medium level. Similarly, majority of rural PUC students were also in medium level that included 57.24 percent students in intrapersonal dimension, 50 percent in interpersonal dimension, 59.21 percent in stress management dimension and equal number of students (46.05 %) in adaptability dimension and total emotional intelligence. Least students from urban and rural area of Dharwad were in low level of emotional intelligence dimensions.

Table 2: Percentage distribution of dimensions of emotional intelligence of Tanakpur PUC students

N=280

Dimension of emotional intelligence	Levels			Level		
	Low	Medium	High	Low	Medium	High
	Urban (N=150)			Rural (N=130)		
Intrapersonal	15 (10)	78 (52)	57 (38)	14 (10.77)	71 (54.62)	45 (34.62)
Interpersonal	44 (29.33)	73 (48.67)	33 (22)	65 (50)	49 (37.69)	16 (12.31)
Stress management	25 (16.67)	81 (54)	44 (29.33)	30 (23.08)	87 (66.92)	13 (10)
Adaptability	24 (16)	60 (40)	66 (44)	40 (30.77)	55 (42.31)	35 (26.92)
Total emotional intelligence	45 (30)	54 (36)	51 (34)	52 (40)	59 (45.38)	19 (14.62)

Figures in parenthesis indicate percentage.

Results from Table 2 clearly highlights that, among urban PUC students, maximum percentage of students were in medium level of intrapersonal dimension (52 %), interpersonal dimension (48.67 %), stress management dimension (54 %), adaptability (40 %) and total emotional intelligence (36 %). Similar results were also observed with respect to rural PUC students where, maximum percentage of students were in medium level of emotional intelligence.

Table 3.1. Predictor variables of emotional intelligence of urban Dharwad PUC students

Predictors	Model-1			Model-2			Model-3		
	Beta	t-value	Sig.	Beta	t-value	Sig.	Beta	t-value	Sig.
Individual factors									
Age	0.27	3.72	0.00	0.24	4.08	0.00	0.29	4.81	0.00
Gender	0.26	3.38	0.00	0.26	3.38	0.00	0.26	3.38	0.00
Class	0.30	4.26	0.00	0.24	4.12	0.00	0.21	3.14	0.00
Ordinal position	0.26	3.61	0.00	0.25	4.16	0.00	0.25	4.41	0.00
Familial factors									
Family size				0.13	1.58	0.12	0.08	1.06	0.29
Family type				0.09	1.12	0.27	0.03	0.37	0.71
Fathers education				0.16	2.06	0.04	0.10	1.40	0.17
Fathers occupation				0.13	1.60	0.11	0.18	2.51	0.01
Mothers education				0.10	1.20	0.23	0.08	0.89	0.37
Mothers occupation				0.04	0.44	0.66	0.02	0.19	0.85
Socio-economic status				0.33	3.92	0.00	0.01	0.10	0.92
Personality factors and self-concept									
Extroversion							0.12	1.48	0.14
Agreeableness							0.19	2.39	0.02
Conscientiousness							0.03	0.18	0.86
Emotional stability							0.02	0.13	0.90
Openness to experience							0.06	1.03	0.30
Self-concept							0.19	2.35	0.02
F-value	14.95**			19.46**			11.44**		
R	0.47			0.71			0.26		
R²	0.22			0.51			0.37		
R Square change	0.37								

**Significant at 0.01 level.

Results presented in Table 3.1 depicts the combined effect of individual factors (Model-1), individual factors and familial factors (Model-2), individual factors, familial factors, personality factors and self-concept (Model-3) on emotional intelligence of urban Dharwad PUC students. In Model-1, all individual factors accounted for 22 percent variance on emotional intelligence of PUC students. In Model-2, when familial factors were added along with individual factors then, it brought a variance of 51 percent on their emotional intelligence thus, added 29 percent to the first model. In Model-3, when personality factors and self-concept were added up, it brought about 37 percent variance on their emotional intelligence that was 14 percent less than Model-2.

Table 3.2. Predictor variables of emotional intelligence of rural Dharwad PUC students

Predictors	Model-1			Model-2			Model-3		
	Beta	t-value	Sig.	Beta	t-value	Sig.	Beta	t-value	Sig.
Individual factors									
Age	0.40	5.29	0.00	0.39	5.62	0.00	0.38	5.84	0.00
Gender	0.23	3.39	0.00	0.34	5.19	0.00	0.26	3.81	0.00
Class	0.32	4.31	0.00	0.20	2.82	0.00	0.18	2.51	0.01
Ordinal position	0.29	4.16	0.00	0.23	3.70	0.00	0.20	3.31	0.00
Familial factors									
Family size				0.00	0.10	0.92	0.01	0.14	0.89
Family type				0.03	0.30	0.76	0.01	0.12	0.90
Fathers education				0.05	0.63	0.53	0.01	0.14	0.89
Fathers occupation				0.16	1.80	0.07	0.18	2.21	0.03
Mothers education				0.15	1.33	0.19	0.14	1.46	0.15
Mothers occupation				0.01	0.11	0.92	0.14	1.53	0.13
Socio-economic status				0.27	2.88	0.00	0.18	1.77	0.08
Personality factors and self-concept									
Extroversion							0.10	1.10	0.27
Agreeableness							0.25	2.61	0.01
Conscientiousness							0.07	0.74	0.46
Emotional stability							0.20	2.22	0.03
Openness to experience							0.06	0.61	0.54
Self-concept							0.05	0.76	0.45
F-value	16.75**			13.69**			11.61**		
R	0.56			0.68			0.75		
R²	0.31			0.47			0.56		
R Square change	0.56								

**Significant at 0.01 level.

Results presented in Table 3.2 highlights that, in Model-1, all individual factors significantly accounted for 31 percent variance on emotional intelligence of rural Dharwad PUC students. In Model-2, when familial factors were added then, it brought a variance of about 47 percent and thus, added 16 percent to the first model. In Model-3, personality factors and self-concept were added up, that brought about 56 percent variance on their emotional intelligence that added 9 percent to Model-2.

Table 4.1. Predictor variables of emotional intelligence of urban Tanakpur PUC students

Predictors	Model-1			Model-2			Model-3		
	Beta	t-value	Sig.	Beta	t-value	Sig.	Beta	t-value	Sig.
Individual factors									
Age	0.33	4.08	0.00	0.19	2.40	0.02	0.11	1.43	0.16
Gender	0.06	0.76	0.45	0.16	1.99	0.05	0.15	1.75	0.08
Class	0.12	1.46	0.15	0.07	0.92	0.36	0.15	1.93	0.06
Ordinal position	0.01	0.11	0.91	0.01	0.15	0.89	0.02	0.34	0.73
Familial factors									
Family size				0.17	1.80	0.06	0.13	1.39	0.17
Family type				0.21	2.28	0.02	0.18	1.91	0.06
Fathers				0.06	0.66	0.51	0.04	0.42	0.68

Predictors	Model-1 Beta	t-value	Sig.	Model-2 Beta	t-value	Sig.	Model-3 Beta	t-value	Sig.
education									
Fathers occupation				0.21	2.79	0.01	0.20	2.77	0.01
Mothers education				0.41	3.72	0.00	0.31	2.77	0.01
Mothers occupation				0.19	1.67	0.09	0.18	1.60	0.11
Socio-economic status				0.24	2.18	0.03	0.09	0.82	0.42
Personality factors and self-concept									
Extroversion							0.01	0.05	0.96
Agreeableness							0.19	1.99	0.05
Conscientiousness							0.04	0.32	0.75
Emotional stability							0.04	0.36	0.72
Openness to experience							0.07	0.86	0.39
Self-concept							0.23	2.83	0.01
F-value	6.36**			8.64**			7.95**		
R	0.39			0.60			0.69		
R²	0.15			0.36			0.47		
R Square change	0.47								

**Significant at 0.01 level.

Results presented in Table 4.1 depicts that, in Model-1, individual factors brought about 15 percent variance on emotional intelligence of PUC students where, age was a significant predictor. In Model-2, when familial factors were added along with individual factors then, it brought a variance of 36 percent on their emotional intelligence and thus, added 21 percent to the first model. In Model-3, when personality factors and self-concept were added up, then it brought about 47 percent variance that added 11 percent to Model-2 where, father's occupation, agreeableness personality factor and self-concept were significant predicting factors.

Table 4.2. Predictor variables of emotional intelligence of rural Tanakpur PUC students

Predictors	Model-1 Beta	t-value	Sig.	Model-2 Beta	t-value	Sig.	Model-3 Beta	t-value	Sig.
Individual factors									
Age	0.27	3.14	0.00	0.25	2.92	0.00	0.19	2.27	0.03
Gender	0.02	0.27	0.79	0.03	0.34	0.74	0.07	0.85	0.40
Class	0.22	2.43	0.02	0.21	2.41	0.02	0.20	2.20	0.03
Ordinal position	0.00	0.02	0.98	0.02	0.21	0.83	0.03	0.43	0.67
Familial factors									
Family size				0.09	0.93	0.35	0.11	1.14	0.26
Family type				0.03	0.28	0.78	0.04	0.43	0.67
Fathers education				0.08	0.76	0.45	0.05	0.52	0.60
Fathers occupation				0.18	1.83	0.07	0.14	1.41	0.16
Mothers education				0.21	2.35	0.02	0.24	2.54	0.01
Mothers occupation				0.09	1.09	0.32	0.07	0.78	0.44
Socio-economic status				0.32	3.04	0.00	0.28	2.57	0.01
Personality factors and self-concept									

Extroversion								0.11	1.04	0.30
Agreeableness								0.09	0.83	0.41
Conscientiousness								0.11	0.96	0.34
Emotional stability								0.03	0.28	0.78
Openness to experience								0.12	0.93	0.36
Self-concept								0.30	3.58	0.00
F-value	5.83**			6.11**				4.92**		
R	0.40			0.56				0.63		
R^2	0.16			0.31				0.39		
R Square change	0.39									

**Significant at 0.01 level.

Results presented in Table 4.2 clearly highlights that, in Model-1, combined effect of all individual factors contributed to a variance of 16 percent on emotional intelligence of PUC students. In Model-2, when familial factors were added along with individual factors then, it brought a variance of about 31 percent on their emotional intelligence. In Model-3, when personality factors and self-concept were added up, then it brought about 39 percent variance on emotional intelligence of PUC students that added 8 percent to Model-2 where, significant predicting variables were age and class in individual factors, mother's education and socio-economic status in familial factors and self-concept.

IV.   DISCUSSION

Significant influence of age and class on emotional intelligence of Dharwad and Tanakpur PUC students are supported by the findings of Fariselli *et al*. (2006) who stated that emotional intelligence at early age may be low due to pragmatic behavioural pattern as well as less experience and learning of an individual to deal with various outer world challenges in an emotionally stable manner. As student progresses or steps up from lower class to higher class, their age also increases which brings more maturity and emotional competence in an individual to deal with various situations in an emotionally stable manner. Gogebakan (2003) also stated that students possess different intelligences which differ in accordance with the grade level of students. First born PUC students had higher emotional intelligence than later born PUC students which might be because of greater maturity, analytical and logical reasoning capacity of first-born students in dealing with different types of problems and people in their life than later born students. Gender difference can be supported by the findings of Sanchez et al. (2008) who stated that gender difference on emotional intelligence may be attributed to the varying socialization and emotional teachings of girls and boys in childhood. They supported that girls receive greater amount of emotional support from parents than boys which make girls more adapt at recognizing and expressing emotions. Parents from higher socio-economic status were well enough in providing better and conducive family environment for emotional growth of their children. Conscientious and agreeable students might have received more attention and encouragement from their teachers and counsellors which would have brought higher emotional stability and emotional intelligence in them. Openness to experience trait of an individual might be a reason for their maximum openness in exploring, learning and experiencing various situations of life in a more positive manner. Schutte *et al*. (2002) stated that adolescents who possess clear self-perception in identifying emotions are better able to regulate emotions which enables them to get least affected by negative experiences of life.

V.   CONCLUSION

Individual factors and familial factors had its significant influence on the emotional intelligence of PUC students in one way or the other.

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