
Differential Effect of Socio-Demographic Factors on Emotional Intelligence of Secondary School Students in Ernakulam District

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Emotional intelligence has been defined as the ability to adaptively recognize, understand, manage, harness emotions both in self and others (Mayer & Salovey 1995; Schutte *et al.*, 1998) and to use emotion to facilitate cognitive processing (Mayer *et al.*, 1999). Emotional intelligence has been conceptualized in the literature both as a relatively enduring trait and as ability (Mayer *et al.*, 2002; Petrides & Furnham, 2006; Schutte *et al.*, 1998). Mayer *et al.* (2002) & Afolabi (2004) argue that emotional intelligence is not a single trait or ability rather; it is a composite of distinct emotion reasoning abilities. Perceiving emotions consist of recognizing and interpreting the meaning of various emotional states, as well as their relations to other sensory experiences. Understanding emotions involve understanding of how basic emotions are blended to form complex emotions. Regulating emotions encompasses the control of emotions in oneself and in others. An individual's emotional intelligence is an indicator of how an individual perceives, understands and regulates emotions.

The construct of emotional intelligence incorporates in itself a number of abilities, including the ability to be aware of one's own and of other people's emotions, to be able to manage those emotions, and to understand the complex relationships that can occur between emotions and likely emotional transitions (Caner & Salovey, 1997). On the whole, the ability called 'emotional intelligence' is not fixed for life and can be improved with suitable training (Goleman, 1995; Caner & Salovey, 1997; Salovey & Caner, 1990). This can mean that the ability called emotional intelligence is not an innate but acquired ability on the part of an individual who earned it through rigorous experiences and practices with a number of interpersonal situations. If this is the situation, the socio-cultural and demographic milieu in which the person lives will have a decisive role in his emotional intelligence. This study is a part of the research activity taken up

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by the first author under the supervision and guidance of the second author, where an attempt was made to find out the differential effect of certain socio-demographic factors on the emotional intelligence of secondary school students from Ernakulam district.

Objectives of the Study

The specific objectives of the study are:

1. To study the emotional intelligence of secondary school students (*total sample and sub-samples based gender, locale, family type, age, socio economic status, ordinal position etc.*),
2. To compare the selected sub-samples of secondary school students with respect to their emotional intelligence.

Hypothesis of the Study

The following hypotheses were formulated for the purpose of the study:

1. Secondary school students of Ernakulam district do not have high emotional intelligence.
2. Gender is not a significant factor in differentiating the secondary school students with regard to their emotional intelligence.
3. Residential locale is not a significant factor in differentiating the secondary school students with regard to their emotional intelligence.
4. Type of family is not a significant factor in differentiating the secondary school students with regard to their emotional intelligence.
5. Birth order is not a significant factor in differentiating the secondary school students with regard to their emotional intelligence.
6. The school type is not a significant factor in differentiating the secondary school students with regard to their emotional intelligence.
7. The socio-economic status of the family is not a significant factor in differentiating the secondary school students with regard to their emotional intelligence.

METHODOLOGY

The normative survey method was adopted for the study. It made use of a sample of 368 secondary school students (13-16 age range), selected by simple random method from Ernakulam district, Kerala. The Kerala Emotional Intelligence Scale (KEIS) developed by Arjunan & Dixon (2014) was used to collect data. Statistical analyses were carried out with the help of SPSS 16.0.

RESULT & DISCUSSION

The data were analyzed so as to find valid answers to the objectives specified in the study. The descriptive statistical indices such as mean (M), median, standard deviation (SD), skewness, standard error of mean, and the population values of mean of the KEIS scores for the total

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sample and sub-samples based on gender and locale were calculated to get a general picture of the emotional intelligence of the secondary school students. On the basis of the norms of the Emotional intelligence Scale, the total sample was further classified into High, Average, and Low Emotional intelligence groups. The details of the analysis carried out in this regard are presented in Table 1 and 2.

Table 1: Statistical indices relating to the Emotional intelligence Scores of Secondary School Students (Total Sample and Sub-samples)

Statistical Indices	Total Sample	Gender Groups		Family Type	
		Boys	Girls	Joint	Nuclear
N	368	176	192	176	192
Mean	117.25	115.76	119.77	119.70	115.00
Median	118.13	118.13	120.50	123.00	116.73
SD	14.69	15.24	14.19	15.34	13.74
Skewness	-0.322	-0.389	-0.224	-0.361	-0.423
Kurtosis	-0.581	-0.571	-0.754	-0.828	-0.305
SE_M	0.766	1.149	1.02	1.157	0.991
M_{pop} .05	115.75	113.51	117.77	117.43	113.06
	118.75	118.01	121.77	121.97	116.94
M_{pop} .01	115.27	112.80	117.14	116.71	112.44
	119.23	118.72	122.40	122.69	117.56

Table 2: Classification of the Total Sample into High-, Average-, and Low Emotional Intelligence Groups

Sl. No.	Emotional Intelligence Groups	Subjects	
		No.	%
1	High Emotional Intelligence Group (132 and above)	71	19.29
2	Average Emotional Intelligence Group (Between 104 and 131)	223	60.60
3	Low Emotional Intelligence Group (103 and below)	74	20.11
Total		368	100.00

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The data and results presented in Table 1 clearly indicate that the sample under study is a heterogeneous one with regard to their emotional intelligence. The highest score obtained on the Emotional intelligence Scale for the total sample is 144 and the lowest is 40 out of a possible maximum of 170, producing a range of 64 for the total sample. The value of skewness (-0.322) for the total sample shows that the distribution is slightly negatively skewed, indicating that the scores are marginally shifted to the high end of the distribution. The values of skewness for the different sub-samples also show similar pattern of frequency distribution. Table 2 makes it clear that only a small proportion (19.29%) of the secondary school students under study demonstrates a high level of emotional intelligence and as such they fall in the ‘high’ EI group. Majority of the subjects fall either in the ‘average’ (60.60%) or in the ‘low’ (20.11%) groups. The magnitude of average- and low emotional intelligence groups, together which comes about 80% of the population, indicates that the secondary school students of Ernakulam District, with the exception of a small percentage do not have high emotional intelligence. The hypothesis formulated in this context viz., Hypothesis-1, ‘secondary school students of Ernakulam district do not have high emotional intelligence’ is hence accepted.

Comparison of the Emotional Intelligence of Gender based Sub-samples

Comparison of the KEIS scores of the boys and girls was done to find out whether there is a significant difference between the groups with respect to their emotional intelligence. The comparison was done by applying the two-tailed test of significance for difference between means. The details of the comparison done with regard to the various groups are presented in Table 3.

Table 3: Comparison of the Emotional Intelligence of Gender based Sub-samples

Criteria	Sub-samples	Statistical indices			t-value	Level of Significance
		N	M	SD		
Gender	Boys	176	115.76	15.237	2.61	Significant at 0.01 Level
	Girls	192	119.77	14.194		

The data and result presented in Table 3 show that boys and girls differ significantly in their emotional intelligence ($t = 2.61$; $p < 0.01$). A closer observation of the data makes it clear that, the girls of Ernakulam district have better emotional intelligence than their male counterparts. The hypothesis formulated in this context viz., Hypothesis-2, ‘gender is not a significant factor in differentiating the secondary school students with regard to their emotional intelligence’ is hence rejected.

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Comparison of the Emotional Intelligence of Sub-samples based on Residential Locale

Ernakulam district of Kerala is highly heterogeneous with regard to the geographical surroundings and socio-cultural characteristics of the residential settlements. There exist metro city, urban towns, rural villages, and tribal colonies in Ernakulam district. Hence, a simple rural-urban division seems to have no much significance in understanding the differences in behavioural characteristics of people. The present study covered students from all these geographic areas and a comparison of their emotional intelligence was done by applying one-way ANOVA, the result of which is given in Table 4.

Table 4: One-way ANOVA: Residential Locale and Emotional Intelligence

ANOVA					
EI	Sum of Squares	df	Mean Square	F	Sig.
Between Groups	3936.634	3	1312.211	6.146	.000
Within Groups	77721.659	364	213.521		
Total	81658.293	367			

As clear from Table 4, the F-value obtained is significant at 0.01 level and above. It indicates that there exist significant differences among the groups compared with regard to their emotional intelligence. To put it differently, the emotional intelligence of secondary school students differ significantly according to their residential locale. Intergroup comparisons of the obtained differences were further carried out to find out whether the obtained significant differences exist between all the pairs of groups considered. The result of the *post hoc* (LSD) multiple comparisons made in the context is given in Table 5.

Table 5: Post Hoc Tests for Comparisons of the Emotional Intelligence of different Group Pairs: Groups based on Residential Locale of the Students

Multiple Comparisons						
Emotional Intelligence LSD		Mean Difference (I-J)	Std. Error	Sig.	95% Confidence Interval	
(I) Locale	(J) Locale				Lower Bound	Upper Bound
Metro	Rural	-8.530*	2.102	.000	-12.66	-4.40
	Tribal	-2.337	2.543	.359	-7.34	2.66
	Urban	-5.695*	2.083	.007	-9.79	-1.60
Rural	Metro	8.530*	2.102	.000	4.40	12.66
	Tribal	6.192*	2.421	.011	1.43	10.95
	Urban	2.834	1.932	.143	-.96	6.63
Tribal	Metro	2.337	2.543	.359	-2.66	7.34
	Rural	-6.192*	2.421	.011	-10.95	-1.43

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Multiple Comparisons						
Emotional Intelligence LSD		Mean Difference (I-J)	Std. Error	Sig.	95% Confidence Interval	
(I) Locale	(J) Locale				Lower Bound	Upper Bound
	Urban	-3.358	2.404	.163	-8.09	1.37
Urban	Metro	5.695*	2.083	.007	1.60	9.79
	Rural	-2.834	1.932	.143	-6.63	.96
	Tribal	3.358	2.404	.163	-1.37	8.09

* The mean difference is significant at the 0.05 level.

The results of the post hoc test for multiple comparisons between means of emotional intelligence scores in different locale groups show that the observed significant difference is limited to certain pairs of locale based groups compared. A closer observation of the mean differences (vide Table 5) shows that the significant difference exists between three pairs compared viz., metro vs rural; metro vs urban; rural vs tribal. No significant difference was found to exist between the metro and tribal students as well as between the rural and urban students with regard to their emotional intelligence. A scrutiny of the mean difference obtained (vide Table 5) makes it clear that the students from rural area excel all other locale groups in their emotional intelligence, the metro group positioned at the lower end of the hierarchy. The data and result presented in Table 5 reveals that the residential locale of the secondary school students partially enables one to discriminate them on the basis of their emotional intelligence. The hypothesis formulated in this context, viz., ‘residential locale is not a significant factor in differentiating the secondary school students with regard to their emotional intelligence’ is hence partially accepted.

Comparison of the Emotional Intelligence on the basis of Family Type

The emotional intelligence of the secondary school students from Joint Family and Nuclear Family was compared to find out whether there is a significant difference between the groups. The details of the comparison done with regard to the various groups are presented in Table 6.

Table 6: Comparison of the Emotional Intelligence of Sub-samples based on Family Type

Criteria	Sub-samples	Statistical indices			t-value	Level of Significance
		N	M	SD		
Type of Family	Joint Family	176	118.90	15.542	3.28	Significant at 0.01 Level
	Nuclear Family	192	113.86	13.928		

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The result of the two-tailed test of significance for difference between means, presented in Table 6, show that students from the joint family and nuclear family differ significantly in their emotional intelligence ($t = 3.28$; $p < 0.01$). Scrutiny of the data makes it clear that, the students from joint families excel their counterparts from nuclear families in their emotional intelligence. The hypothesis formulated in this context viz., Hypothesis-4, '*type of family is not a significant factor in differentiating the secondary school students with regard to their emotional intelligence*' is hence rejected.

Comparison of the Emotional Intelligence on the basis of Ordinal Position

The secondary school students in different birth orders were compared so as to find out whether the ordinal position is a significant factor in discriminating them on the basis of their emotional intelligence. The data and result of the one-way ANOVA carried out in this context is given in Table 7.

Table 7: One-way ANOVA: Birth Order and Emotional Intelligence

ANOVA					
EI	Sum of Squares	df	Mean Square	F	Sig.
Between Groups	3039.260	3	1013.087	4.691	.003
Within Groups	78619.033	364	215.986		
Total	81658.293	367			

The F-value estimated is significant ($F = 4.691$; $p < 0.01$) showing the existence of a true difference among the groups based on the ordinal position with regard to their emotional intelligence. Intergroup comparisons of the obtained differences were further carried out to find out whether the obtained significant differences exist between all the pairs of groups considered. The result of the *post hoc* multiple comparisons made in the context is given in Table 8.

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Table 8: Post Hoc Tests for Comparisons of the Emotional Intelligence of different Group Pairs: Groups based on Ordinal Position of the Students

Multiple Comparisons						
Emotional Intelligence LSD		Mean Difference (I-J)	Std. Error	Sig.	95% Confidence Interval	
(I) Birth Order	(J) Birth Order				Lower Bound	Upper Bound
1	2	-5.330*	1.843	.004	-8.95	-1.71
	3	.844	2.215	.703	-3.51	5.20
	4	1.198	2.849	.674	-4.40	6.80
2	1	5.330*	1.843	.004	1.71	8.95
	3	6.174*	2.100	.003	2.05	10.30
	4	6.528*	2.761	.019	1.10	11.96
3	1	-.844	2.215	.703	-5.20	3.51
	2	-6.174*	2.100	.003	-10.30	-2.05
	4	.353	3.022	.907	-5.59	6.30
4	1	-1.198	2.849	.674	-6.80	4.40
	2	-6.528*	2.761	.019	-11.96	-1.10
	3	-.353	3.022	.907	-6.30	5.59

* The mean difference is significant at the 0.05 level.

The results of the post hoc test for multiple comparisons between means of emotional intelligence in different *birth order groups* show that significant differences exist only between certain pairs. True difference was found to exist between first and second born children in which the second born was found to have better emotional intelligence. Pairwise comparison of the second born with the third and fourth born also produced significant differences, wherein the third and fourth born trail behind the second born in their emotional intelligence. Significant differences were not found to exist between the first born and third born as well as between the first born and the fourth born children. It is thus evident from the foregoing discussion that the second born children outshine others in their emotional intelligence.

Comparison of the Emotional Intelligence on the basis of School Type

In order to find out the influence of the type of school system (Mono-gender vs Co-education) on emotional intelligence of secondary school students, the groups were compared by applying the two tailed test of significant differences between the means. The data and result of the analysis done in this context is given in Table 9.

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Table 9: Comparison of the Emotional Intelligence of Sub-samples based on Type of School

Criteria	Sub-samples	Statistical indices			t-value	Level of Significance
		N	M	SD		
Type of School System	Mono-gender Schools	188	115.97	14.440	0.39	Not Significant
	Co-education Schools	180	116.58	15.433		

The t-value obtained ($t = 1.84$; $p > 0.05$) on comparing the students from mono-gender and co-education schools is not significant, indicating that the groups do not differ in their emotional intelligence. To put it differently, the type of school system is not a significant factor in discriminating the secondary school students on the basis of their emotional intelligence. The hypothesis formulated in this context, viz., ‘*the school type is not a significant factor in differentiating the secondary school students with regard to their emotional intelligence*’ is hence accepted.

Comparison of the Emotional Intelligence on the basis of Socio-Economic Status

In order to find out the differential effect of socio-economic status on the emotional intelligence of secondary school students, comparison was done among high-, average-, and low SES group by applying one-way ANOVA. The data and result of the analysis is given in Table 10.

Table 7: One-way ANOVA: Socio-Economic Status and Emotional Intelligence

ANOVA					
EI	Sum of Squares	df	Mean Square	F	Sig.
Between Groups	499.078	2	249.539	1.122	.327
Within Groups	81159.215	365	222.354		
Total	81658.293	367			

The F-value obtained on comparing the high-, average-, and low socio-economic status groups of the secondary school students are not significant, declaring that the groups are alike with regard to their emotional intelligence. Stating differently, the socio-economic status is not a significant factor in discriminating the secondary school students on the basis of their emotional intelligence. The hypothesis formulated in this context, viz., ‘*the socio-economic status of the family is not a significant factor in differentiating the secondary school students with regard to their emotional intelligence*’ is hence accepted.

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CONCLUSIONS

1. It was found that only a small percentage of the secondary school students have high emotional intelligence while majority have average or low emotional intelligence.
2. Girls excel boys in their emotional intelligence
3. Secondary school students from tribal and metropolitan areas have lower emotional intelligence than those from urban and rural areas.
4. Compared to children from joint families, those from nuclear families have significantly lower emotional intelligence.
5. The secondary school students from mono-gender schools and co-education schools are alike in their emotional intelligence.
6. Socio economic status is not a decisive factor in deciding the emotional intelligence of secondary school students.
7. Birth order of the individual was found as a significant factor in discriminating secondary school students with regard to their emotional intelligence. The second born surpass children in other ordinal positions in their emotional intelligence.

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Conflict of Interests

The author declared no conflict of interests.

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