

## Impact of culture linked gender and age on emotional intelligence of higher secondary school adolescents

Mamata Nayak

*Department of Psychology, Mangalpur Women's College,  
Mangalpur, Jajpur, Odisha, India. Pin-755011. Tel: 9437605416.*

*E-mail: nayakmamata64@gmail.com*

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### ABSTRACT

The Influence of different demographic variables such as gender, age and cultural settings (urban and rural) on Emotional Intelligence (EI) were examined among school adolescents during the most crucial and turning period of life. The participants in the study were 240 students randomly selected from ten higher secondary schools of Odisha, a South-Eastern region of India. The ages of the first year and second year students ranges from 15 to 18 years. In the study, Emotional Intelligent Questionnaires were used to measure emotional intelligence of the participants. Data were analysed by using descriptive statistics, multifactorial analysis of variance, post- hoc tests, correlation analysis and factor analysis. The results revealed that girl adolescents have scored higher EI average than boys of the same age group and within the same cultural environment. The overall EI average of girls (M=25.08) was found to be higher than that of boys (M=22.08). Moreover, 26.67% of adolescent girls have high level of EI, while 14.17% of adolescent boys have high level of EI. Younger adolescents of first year class were found to have scored lower mean EI (M=22.94) than older adolescents (M=24.22) of second year class taking both urban and rural-base school adolescents into consideration. 17.50% of younger adolescents have shown high level of EI, while 23.33% of older adolescents have shown high level of EI. Irrespective of gender and age, a significant difference was found between the adolescents of urban and rural secondary schools in EI test. Urban school adolescents scored overall higher EI average (M=26.18) than their rural counterparts (M=20.97). 33.33% urban school

adolescents exhibited high level of EI while only 9.17% of rural school adolescents exhibited high level EI, which was accounted for the difference in cultural values, cultural beliefs and other related facilities.

Key words: Emotional Intelligence, Adolescents, Higher Secondary School, Gender, Age, Urban, Rural.

### INTRODUCTION

The higher secondary school students aged 15-18 years pass through a crucial period of adolescence, which is a unique time in human development. It is a transitional period from childhood to adulthood. Adolescence is clearly a time during which much changes occur and thus, it is regarded as a significant intervention point for behavioural change (O' Dunohue & Tolle, 2009). These changes occur in multiple dimensional levels. Adolescents begin to adjust and adapt to remarkable physical, emotional and social changes. Hence, adolescence is accepted as a challenging time, because during this period adolescents face with task of dealing with biological and psychosocial changes, such as shifts in relationship with family, friends, peer group, communities and the wider world (Coleman & Hagel, 2007; Seiffge-Knenke, 2009).

Regarding the shifts in relationship it is observed that while passing from the childhood to adolescence the peer relationship become gradually important as compared to the parental relationship that is developed in childhood. If the previous close parental relationship is not sufficiently compensated by the peer group relationship, the feelings of loneliness, emptiness, boredom and unreality

develop in adolescents. This may result in various social, emotional and behavioral problems in them. Consequently, they may be involved in various unusual and antisocial activities, such as interpersonal conflict and aggressive behavior (Dinkas, Kemp & Baum, 2009), drug addiction (Ellickson et al., 1992; Vega & Gil, 2005)), smoking and taking alcohol (Hoffman et al., 2001; Orlando et al., 2005), early sexual involvement (Buhi & Goodson, 2007; Armour & Haynie, 2007; Luder et al., 2011).

Large number of research studies revealed various buffering and protective factors/ skills that reduce the probability of adolescent risk behavior. From the study of Paled & Moretti (2007) it is revealed that adolescents who frequently engage in different forms of aggressive behavior may lack certain emotion-related abilities to identify and regulate the negative emotions. These emotion-relates abilities fall under broader dimensions of emotional intelligence (EI), which can buffer and reduce the aggressive behaviors in youth (Brackett, Mayer & Warner, 2004; Mayer et al., 2008; Lomas et al., 2012; Davis & Humphrey, 2012; Kokkinos & Kipritsi, 2012) and improve the establishment of personal relationship social network (Ciarrochi, Chan & Caputi, 2000). In another study, Brackett, Rivers & Salovey (2011) reported that these emotion-related abilities (i.e., EI) enhance the development of conflict resolution skills and are related to more positive and healthy social relationship. Emotion dysregulation and poor social skills are found to be primary contributors of adolescent psychological and behavioral problems (Compas, Jaser & Benson, 2009; Hughes & Gullon, 2010; Haynos & Fruzzetti, 2011). These studies clearly establish that for this age group focus on preventive interventions for proper emotion regulation and social competence is warranted. Thus, the role of emotional intelligence is found to be very important in this context.

### **Emotional intelligence and success in life**

Salovey and Mayer (1990) were among the earliest to propose the term “emotional intelligence” to represent the ability of people to deal with their emotions.

They considered emotional intelligence as a sub-set of social intelligence separable from general intelligence. They defined emotional intelligence as the ability to monitor one’s own and others’ feelings and emotions to discriminate among them and to use this information to guide one’s thinking and actions. The concept of emotional intelligence gained popularity after the publications of the book “Emotional Intelligence: why it can matter more than IQ” by Daniel Goleman (1995). According to Goleman (2001), EI refers to the ability to recognize and regulate emotions in ourselves and others. Daniel Goleman believed that EI, the latest discovery of psychological research has an amazing impact over our destiny and contributes much more vibrantly to our productivity and success in life than even much researched Intelligence Quotient (IQ), referred to general intelligence. Mayer and Salovey (1997) connected intelligence and emotion in order to emphasize the importance of thinking intellectually about emotion. (Goleman, 1998: Mayer & Salovey, (1995). More specifically, EI has been considered as a set of skills that allow us to use emotions to adopt, perceive, understand and regulate our mood and to use emotional information to improve cognitive processes (Mayer, Roberts & Barsad, 2008)

The concept of Emotional Intelligence gradually, gained momentum in the Psychological studies. Different viewpoints regarding the structure of EI had been proposed, known as models of Emotional Intelligence: Salovey and Mayer’s model of EI, Goleman’s Model of EI ( 1995), Salovey and Mayer’s revised Model of EI (1997) and Bar-On’s model of EI (1997). Although there were different views in various models of EI, the four similar substantial components are: perceiving emotions, regulating emotions, understanding emotions and utilizing

emotions. These four components can reflect the essence of EI and help the individual to achieve success in life. Thus, EI has been conceptualized as a multidimensional construct (Goleman, 1998; Mayer & Salovey, 1995). More specifically, EI has been considered as a set of skills that allow us to use emotions to adapt, perceive, understand and regulate our mood and to use emotional information to improve cognitive processes (Mayer, Roberts and Barsad, 2008).

In recent years, investigators have increased the interest to predict the impact of EI on various aspects of everyday life. For example, a number of studies have been made to establish that EI is one of the important factor in determining the success of life and psychological well-being (Goleman, 1995 & Bar-on, 2001). Fitness (2001) claimed that EI plays an important role in intimate relationship and marriage. Godse and Thingujam (2010) correlated the EI with conflict resolving ability. The study of Flury and Iekes (2001) established the correlation between EI and friendship. Mayer, Caruso, Salovey, Formica, and Woolery (2000) reported the negative correlation between EI and violent as well as trouble prone behavior among college students. Moreover, EI has been related to several factors such as life satisfaction, psychological well-being, occupational success and job performance (Adeyemi & Adeleye, 2008; Bar-on, 2005; Salovey & Mayer, 1990). The study of Carmeli (2003) revealed the relationship between EI and work attitude.

Further, many researchers have aimed to find out the role of EI on mental health. Ciarrochi, Deane & Anderson (2002) established the relationship among EI, stress and mental health. Studies of Salovey, Stroud & Woolery (2002) revealed that people with higher ability in discriminating and adjusting emotion reported less symptoms, less social anxiety and depression. Choubey, Singh & Pandey (2009) reported the relationship among EI, stress and health.

With growing interest, in last two decades, more intensive studies have been carried out on EI in different organizations like banking sectors, health centres, medicals etc., and various educational institutions such as universities, colleges and schools.

Belias, Koustelias, Koutiva & Zournatzi (2013) have explored the relationship between EI and occupational stress among Greek Bank employees. Rahim (2010) also correlated EI with stress among Pakistani Bank employees. Rahim and Malik (2010) considered EI as an indicator of organizational performance in banking sectors of Pakistan. Slaski and Cartwright (2002) inter linked EI with health and performance of retail managers. The role of EI in the field of organizations, institution and companies in the context of job satisfaction, Job commitment and performance of employees, conflicts among colleagues and occupational stress has been explored (Steger, 2013; Balogun & Olowodunoye, 2012; Obiora & Iwuoha, 2013; Rothman, 2008; Zeidner, Matthews & Roberts, 2004)

The relationship among EI, leadership and organization development have been established by a number of investigators (Cooper & Sawaf, 1997; Palmer, Walls, Burgess & Stough, 2000; Barling, Slater & Kelloway, 2000, Srivastav & Bharamanaikar, 2004; Alhashmi & Hajee, 2013).

### **EI in educational institutions**

The study of Sulaiman (2013) explored the correlation between EI, depression and psychological adjustment among university students in the sultanate of Oman. A negative correlation between EI and depressive symptoms and a positive correlation between EI and psychological adjustment have been reported in this study. Sanchez-Ruiz, Mavroveli & Poullis (2013) have reported the link between EI and performances in the university examination.

Emotional intelligence is perceived as an essential skill for both nursing students as well as actively engaged nurses (Rochester, Kilstoff

and Scott,2005; Hurley,2008,Bulmar-smith,Profetto-McGrath and Cummings,2009). The impact of EI on nursing is reported by Landa & Lopez-Zafra (2010). The study of Evans& Allen (2002) explored the bare necessity of EI in nursing training.

Schutte et al., (1998) obtained a significant correlation between EI and grade point average (GPA). Parker, Creque, Barnhart, Harris, Majeski, Wood, Bond, & Hogan (2004) have suggested that academic success is strongly related to emotional intelligence.

EI is thought to be an indicative predictor of academic success of medical students, nursing students as well as general college and school students (Todres, Tsimsion, Stephenson & Jones, 2010; Fernandez, Salarmonson & Griffiths, 2012. Arora, Russ, Petrides, Sirimanna, Aggrawal, Darzi & Sevdalis, 2011; Beauvais, Brady O'shea and Quinn, 2011; Brackett,Rivers and Salovey 2011; Mavroveli & Sanchez-Ruiz, 2011; Abdullah, Elias, Mahyuddin & Uli, 2004; Petrides, Federickson & Furnhan, 2004).Since EI is proved and accepted as an important skill of students, EI scores are used in the selection of applicants desiring to take admission in medical schools.(Carrothers, Grigory & Gallagher, 2000).

Despite a plenty of studies on EI relating to academic performance, there is also some debate as to the exactness of the relation. For example, Bastian et al.,(2005) reported that EI is a poor predictor of life skills including academic achievement. Petrides, Frederickson, & Furnham,(2004) concluded that emotional intelligence has been found to have little influence on achievement tests. Sutarso et al. (1996) reported that there was insufficient evidence to confirm an effect of GPA on emotional intelligence. Similarly, Newsome, Day and Catano (2000) found no correlations between emotional intelligence and academic achievement, using grade point averages (GPA). The discrepancies in the result of EI test might be due to the fact that EI is a

relatively new field, and measurement techniques and methodologies for testing of EI might be different.

### **EI and Demographic variables**

The impact of certain demographic variables such as gender, age and culture on emotional intelligence has also been critically reviewed in the literature.

### **Impact of gender on EI**

In a number of recent studies the impact of gender on the performance relating to EI have been explored (Thingujam & Ram, 2000; Petrides & Furnhan, 2000; Ciarrochi, Chan & Bajgar,2001; Charbonneau & Nicol, 2002, Mayer, Salovey & Caruso,2002). Brackett, Mayer & Warner (2004) reported that women scored significantly higher in EI than men. Similar observations were found in the studies of Kafetsios (2004); Brackett, Warner & Bosco (2005).

PandeyandTripathi(2004)in a study withasampleof50males and 50females reported thatfemalesscoredhigherthanmalesin emotional intelligencetest. Van-Rooy, Alonso & Viswesvaran (2005) conducted a research with 275 participants and found that that women scored slightly higher than males in EI test. Austin, Evans, Goldwater & Potter (2005)in a study on EI test among 156 first year medical students revealed that females scored significantly higher than men. In order to observe the EI levels of undergraduate male and female college students aged 17-20 years, Nassar (2008) conducted a study and reported that adolescent girls have higher EI level than boys.

Sulaiman (2013) conducted his studies on EI among university students of Oman and findings of the study revealed that female students have higher EI average compared to male students.

However, Mathur, Malhotra & Dube (2005) in their studies on EI among high school students aged 13-17 years found that there was no

significant difference between girls and boys. On the contrary, Carr (2009) in his study among medical students reported that males score higher than females in EI test. From the study above literature it is revealed that previous research had produced mixed result regarding EI in relation to gender. Thus, it suggests the need for more research in this direction.

### **Impact of age on EI**

Most of the research studies correlating emotional intelligence with age have revealed that emotional intelligence increases with increase of age. Earlier study in this direction was initiated by Salovey and Mayer (1990). They reported that EI increases with age and experience. Goleman (1996) also stated that emotional intelligence increases with age and it can be learned, cultivated and increased in adulthood. It was shown that people can change their EI competencies over two to five years (Boyatzis, 2000). In another study, Mayer et al. (2000) also explored that EI increases with age and experience, which qualifies it as ability rather than a personality trait. Wong and Law (2002) in a study in the context various job on a different group of subjects found that age is positively correlated with emotional intelligence. .

Subsequently, Srivastava and Bharamanaikar (2004) also explored the relationship between age and EI among 291 Indian army officers. Their study also supported the idea that EI increases with age. Kafetsios (2004) conducted a study on 239 adults aged between 19-66 years. It was reported in his study that older participants got higher scores on three out of four branches of EI, which were facilitation, understanding and management. This study among adults also reported the same result that EI increases with age.

Van-Rooy, Alonso and Viswesvaran (2005) conducted a study on EI test among 275 participants to examine how different age-groups scored in an EI test. The results indicated that emotional intelligence scores

increase with age. Parker, Saklofske, Wood, Eastabrook & Taylor, (2005) administered a study focused on the transition from high school to university in a period of 32 months, and concluded that the overall change in the EI level of the participants was more than the level to be a result of the short time span and change in the age of the participants

Chapman and Hayslip (2006) compared EI scores among young participants in early and middle adulthood. In their study mid-life adults reported greater use of optimism (a component of emotional intelligence) as a mood regulation strategy compared to young adults. Gowdhaman and Murugan (2009) conducted a study on 300 trainee teachers to explore the relationship between two variables i.e., EI and age and reported a significant positive correlation between EI and age. On the contrary, in a study on secondary school teachers Tyagi (2004) reported that there is no significant relationship between EI and age as independent variable.

### **Impact of gender and age on EI**

Bar-On (2002) concluded that both gender and age have an impact on emotional intelligence. Females exhibited significantly higher interpersonal scores than males, while males scored higher with intrapersonal intelligence than females. However, no significant correlation was observed for stress management and adaptability scores with gender and age. Alumran and Punamaki (2008) conducted a study examining gender and age differences in emotional intelligence among 312 Bahraini adolescents and reported that gender was significantly correlated with emotional intelligence but age is not correlated with EI. In this study girls showed higher interpersonal skills than boys.

### **Impact of culture on EI**

Culture has been defined as a dynamic phenomenon that surrounds us at all times, being constantly enacted or created by our interactions (Schein, 2004, p 1). In the context of cultural difference, Sternberg (2004) bluntly

stated, "Behaviour that in one cultural context is smart may be, in another cultural context, stupid" (p. 325). Thus, it is a matter of debate whether EI is universal or culture-bound. In this direction, Elfenbein & Ambady (2002) have discussed regarding the universality and culture specificity of emotion regulation. Matsumoto et al. (2008) correlated cultural difference with emotion regulation and adjustment. With respect to the relation between culture and emotional intelligence, scholars have taken everything from a wholly universal to a wholly relativistic view. While some scholars have assumed that everything about intelligence is the same across cultures and can be assessed identically between cultures (Jensen, 1982; Eysenck, 1986), others have argued that nothing about intelligence is necessarily the same across cultures and can only be assessed as an indigenous construct within cultures (Sarason & Doris, 1979). Sternberg (2004), who conceptualized intelligence as the knowledge and skills needed for success in life, presented a model of intelligence that accounts for both universality and cultural-relativity.

However, Tang (2001) explored the relationship between emotional intelligence and cross-cultural adaptability. She defined emotional intelligence as empathy, communications of emotions and regulation of mood, and found that these abilities correlated with cross-cultural adaptability. Cherbosque, Gardenswartz, and Rowe (2005) expanded the definition of emotional intelligence by incorporating the capacity for cultural adaptation into their construct. According to their model, the emotional ability to "feel, understand, articulate, manage and apply the power of emotions to interactions across lines of cultural difference" is a critical aspect of emotional intelligence.

In a recent study of 910 job applicants, Whites scored the highest on a self-report EI measure, followed by Hispanics, and then Blacks (Whitman, Van Rooy, Viswesvaran, Burns, & Kraus, 2006). Whitman and his colleagues

noted that these ethnic differences in EI are comparable to that found for general intelligence. Morling et al. (2002) and Yuki, Modux & Masuda (2007) have examined the cultural difference between United States and Japan. In another similar study of EI among four broad ethnic groups of over 3000 people, Asians performed significantly worse (Mayer, Salovey, & Caruso, 2002).

More recently, it was noted that there is a general consensus among emotion researchers on the important role that culture can play when applying EI in practical settings, but there is currently little relevant research and few specific recommendations (Roberts, Zeidner, & Matthews, 2007). Moreover, studies on EI relating to urban and rural culture was found to be completely ignored.

From the study of literature it is revealed that research studies to explore the impact of gender, age and culture in the specific sense of urban and rural culture on emotional intelligence school going adolescents is not far less developed but historically neglected. In view of these considerations, the present study explored the impact of culture linked gender and age differences on emotional intelligence of higher secondary school adolescents.

#### HYPOTHESES

- H1. Significant gender differences exist in terms of emotional intelligence
- H2. Significant difference exist between junior (1st year) and senior (2nd year) higher secondary students in terms of EI.
- H3. Significant difference exists between students of Urban and Rural settings in terms of EI.

#### METHOD OF STUDY

##### Participants:

Participants were 240 higher secondary School students 120 from each of the gender groups equally drawn from Urban and rural settings. The age of participants ranges from 15 to 18 years. Participants were randomly selected

from ten higher secondary Schools of Odisha, a south – eastern region of India.

**Instruments**

Standardized questionnaires were used for collecting data from the participants to measure their emotional intelligence.

**Procedure**

Heads of the institutions were informed sufficiently earlier seeking permission, to conduct the tests/study. After obtaining permission the Participants (both 1st year and 2nd year students) were invited to a hall instructions were printed on the booklets containing the questionnaires: Booklets were provided to the students and instructions were read out by the investigator and doubts were cleared before the start of test. The size of the group varied from 15 to 35 participants. The test administration took about 2 hours duration.

**Results**

Culture linked significant gender difference in EI score are presented in Table 1. Levels of overall emotional intelligence of adolescent boys and girls are computed in Table 2. The relationship between EI and age difference linked to both urban and rural culture has been presented in Table 3, and levels of overall emotional intelligence of younger and older adolescents are presented in Table 4. Table 5 predicts the correlation between EI and cultural settings (urban and rural). Levels of overall emotional intelligence of urban and rural adolescents are presented in Table 6.

Table 1. Culture linked gender differences in EI average

Variables	Gender	Number (N)	Mean (M)	Standard Deviation(SD)
EI	Male	120	22.08	6.25
	Female	120	25.08	6.27

Results presented in Table 1 were computed from scores of 8 sets of group participants consisting of 30 each. Mean scores in EI (M=22.08, SD=6.25) for 120 male participants were computed from mean EI scores of 30

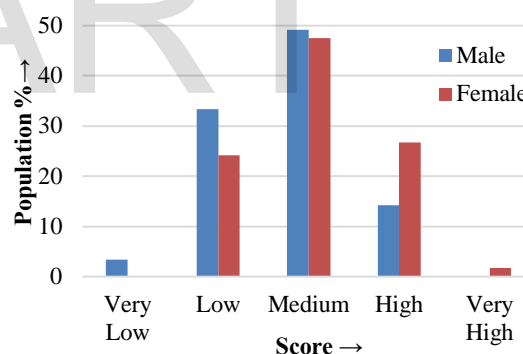
urban 1<sup>st</sup> year boys (M=23.93, SD=6.02), 30 urban 2nd year boys (M=24.90, SD=6.16), 30 rural 1<sup>st</sup> year boys (M=19.37, SD=6.22), and 30 rural 2nd year boys (M=20.10, SD=6.58).

Further, mean scores in EI (M=25.08, SD=6.27) for 120 female participants were computed from mean EI scores of 30 urban 1st year girls (M=27.17, SD=6.09), 30 urban 2nd year girls (M= 28.73, SD=6.70), 30 rural 1st year girls (M=21.27, SD=5.73), and 30 rural 2nd year girls (M=23.13, SD=6.53).

Table 2. Levels of overall emotional intelligence of adolescent boys and girls

Score→	Very Low (<20%)	Low (20%-39%)	Medium (40%-59%)	High (60%-79%)	Very High (80%-100%)
Male	3.33%	33.33%	49.17%	14.17%	0.00%
Female	0.00%	24.17%	47.50%	26.67%	1.67%

Levels of overall emotional intelligence of adolescent boys and girls as computed in Table 2 are depicted in bar graph 1.



Bar graph 1. Levels of Overall Emotional Intelligence of Adolescent Boys and Girls

Table 3. Culture linked age differences in EI average

Variables	Gender	Number (N)	Mean (M)	Standard Deviation (SD)
EI	Younger (1 <sup>st</sup> year)	120	22.94	6.02
	Older (2 <sup>nd</sup> year)	120	24.22	6.40

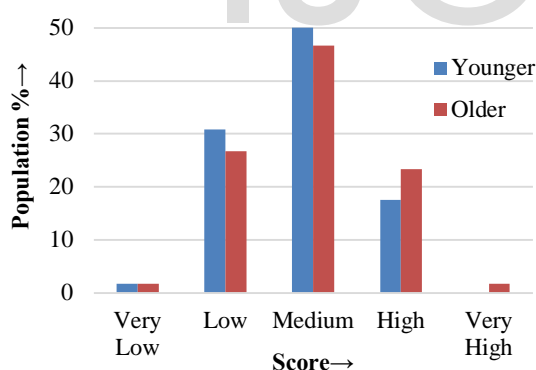
Similarly, results presented in Table 3 were computed from scores of 8 sets of group participants consisting of 30 each. Mean scores in EI (M=22.64, SD=6.02) for 120

younger adolescents were computed from mean EI scores of 30 urban 1st year boys (M=23.93, SD=6.02), 30 urban 1st year girls (M=27.17, SD=6.09), 30 rural 1st year boys (M=19.37, SD=6.22), and 30 rural 1st year girls (M=21.27, SD=5.73). Further, mean scores in EI (M=24.22, SD=6.40) for 120 older adolescents were computed from mean EI scores of 30 urban 2nd year boys (M=24.90, SD=6.16), 30 urban 2nd year girls (M= 28.73, SD=6.70), 30 rural 2nd year boys (M=20.10, SD=6.58) and 30 rural 2nd year girls (M=23.13, SD=6.53).

Table 4. Levels of overall emotional intelligence of younger and older adolescents

Score→	Very Low (<20%)	Low (20%-39%)	Medium (40%-59%)	High (60%-79%)	Very High (80%-100%)
Age Group↓					
Younger	1.67%	30.83%	50.00%	17.50%	0.00%
Older	1.67%	26.67%	46.67%	23.33%	1.67%

Levels of overall emotional intelligence of younger and older adolescents as computed in Table 4 are depicted in bar graph 2.



Bar graph 2. Levels of Overall Emotional Intelligence of younger and older adolescents

Table 5. Cultural differences in EI average

Variables	Gender	Number (N)	Mean (M)	Standard Deviation (SD)
EI	Urban	120	26.18	6.24
	Rural	120	20.97	6.27

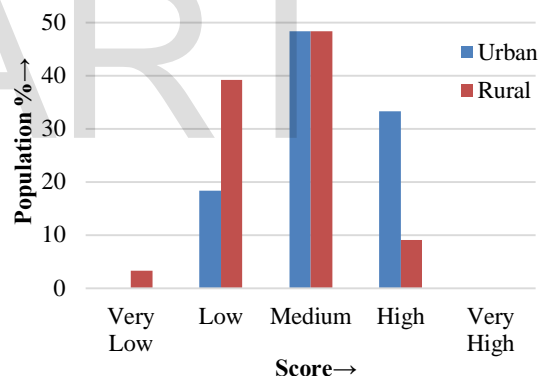
Similarly, results presented in Table 5 were also computed from scores of 8 sets of group participants consisting of 30 each. The presented mean EI score (M=26.18) for urban

students is the mean of the mean EI scores of 1<sup>st</sup> year urban boys (M=23.93), 1st year urban girls (M=27.17), 2nd year urban boys (M=24.90) and 2nd year urban girls (M=28.73). Further, the presented EI mean score (M=20.97) for rural students is the mean of the mean EI scores of 1st year rural boys (M=19.37), 1st year rural girls (M=21.27), 2nd year rural boys (M=20.10) and 2nd year rural girls (M=23.13).

Table 6. Levels of emotional intelligence of urban and rural adolescents

Score→	Very Low (<20%)	Low (20%-39%)	Medium (40%-59%)	High (60%-79%)	Very High (80%-100%)
Cultural Setting↓					
Urban	0.00%	18.33%	48.33%	33.33%	0.00%
Rural	3.33%	39.17%	48.33%	9.17%	0.00%

Levels of emotional intelligence of urban and rural adolescents as presented in Table 6 are depicted in bar graph 3.



Bar graph 3. Levels of Emotional Intelligence of urban and rural adolescents

## DISCUSSION

### EI and gender difference

Table 1 shows that boys and girls are different in their EI average. Thus, significant gender difference exist in EI in the present study, which is in agreement with first hypothesis (H1). The findings of this study revealed that girls are more emotionally intelligent than boys of the same age group (younger 1<sup>st</sup> year group or older 2<sup>nd</sup> year group). Further, the gender differences are comparable within the



same cultural environment (urban or rural). The urban girls scored higher EI average ( $M=27.95$ ) than urban boys ( $M=24.42$ ) and rural girls also scored higher average ( $M=20.20$ ) than boys ( $M=19.74$ ) in EI test. Even if the above results of urban and rural students are combined together, the overall mean score in EI for girl adolescents ( $M = 25.08$ ) is found to be higher than their boys counterparts ( $M = 22.08$ ). This result of gender difference for higher secondary students is in consistent with the results of large number of earlier studies using performance indicators like Mayer-Salovey-Caruso Emotional intelligent Test ( MSCEIT) or Multifactor Emotional Intelligence Scale (MEIS) (Extremera, Fernandez-Berrocal & Salovay, 2006; Petrides and Furnhan, 2000; Brackett et al., 2005; Mayer, Salovey and Caruso, 2002; Kafetsios, 2004, Brackett, Mayer & Warner, 2004). Moreover, Table 2 presents a comparative study on levels of EI of boys and girls. 28.33% of girl adolescents have high level of EI, while 14.17% of boy adolescents have high level of EI. In addition, 1.17% of girls have also very high level of EI. The complete results of levels of EI of adolescent boys and girls are depicted in bar graph 1.

In connection with the observed gender difference in EI, Feldman Barret et al., (2000); Garaigordobil & Galdeano (2006) and Snew (2004) stated that the relation between EI and female sex are closely linked from very childhood. For example, when parents read or talk stories to their small children, they tend to use more emotionally charged words with girls than boys (Adam et al., 1995; Fivush, 1991, 1998; Fivush, Brotman, Buckner & Goodman, 2000). In addition, some medical related physiological supporting evidences explored that certain areas of brain dedicated to processing emotion is found to be larger in women than in men (Bar Cohen, 2005; Gur et al., 2002) and that there is difference in cerebral activity based on sex (Jausovec & Jausovec, 2005). These evidences attributed to

explain why female adolescents exhibit higher level of EI than male adolescents.

### **EI and age difference**

A positive response is obtained for second hypotheses (H2). That means, a significant age difference exist in EI in the present study. When mean EI scores of boys and girls of urban and rural schools are compiled together, it is observed that older 2nd year students show higher EI average ( $M = 24.22$ ) than younger 1st year students ( $M=22.94$ ). In the present study, EI is found to have a positive correlation with age as presented in Table 3. This result explored that EI increases with increase of age of higher secondary school students. This result is also supported by the earlier findings of Mayer et al.,(2000); Kafetsios (2004); Srivastava & Bharamanaikar (2004); Van-Rooy et al.,(2005); Extremera et al., ( 2006); Rodrigues & Modgnkar (2013). In addition, Table 4 presents a comparative study on levels of EI of younger and older adolescents. 23.33% of older adolescents have high level of EI, while 17.50% younger adolescents have high level of EI. The complete results of levels of EI of younger and older adolescents are depicted in bar graph 2. The above difference in EI may be accounted for the greater experience of older adolescents as compared to younger adolescents.

### **EI and cultural difference**

Further, another significant difference exist in EI for urban and rural students (Hypotheses, H3). Results of Table 5 predicts that urban students exhibit higher level of EI ( $M = 26.18$ ) as compared to their rural counterparts ( $M = 20.97$ ). More specifically, comparing the EI scores of urban boys ( $M=24.42$ ) and urban girls ( $M=27.95$ ) with EI scores of rural boys ( $M=19.74$ ) and rural girls ( $M=22.20$ ), it is explored that both urban boys and girls scored higher average EI than their rural counterparts. Moreover, urban older adolescents are found have scored higher EI average ( $M=26.82$ ) than rural older adolescents ( $M = 21.62$ ) and urban younger

adolescents scored higher ( $M=25.55$ ) than rural younger adolescents ( $M = 20.32$ ) in EI test. In addition, Table 6 presents a comparative study on levels of EI of urban and rural adolescents. 33.33% of urban adolescents have high level of EI, while only 9.71% of rural adolescents have high level of EI. The complete results of levels of EI of urban and rural adolescents are depicted in bar graph 3. This higher level of EI can be attributed to the greater chance of exposure of urban school adolescents to higher intellectual environments and more facilities in urban schools as compared to rural schools. The difference in EI scores of urban and rural adolescents can also be accounted for the contrasting cultural values and beliefs.

### Conclusion and suggestions

Since two years of higher secondary school education is the most crucial period and turning point for adolescents in the context of academic career as well as professional career, utmost care should be taken to improve their emotional intelligence, so called a giant potential of human being, through special trainings or including EI in higher secondary school syllabus. More intensive research studies are needed to be carried out on emotional intelligence and social competence relating to stress management and mental health among higher secondary school adolescents in both rural and urban sectors. More specifically, additional care is to be taken from Government level for students of rural base schools to improve the levels of their EI and social competence skills with a view to minimize the difference, which adversely affect the future life, career and perspectives of rural base students.

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