

Differences in Emotional Intelligence among Adolescents with Varying Attachment Styles and Regulations Based on Sibling Status

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Abstract

The present study seeks to investigate the influence of attachment styles and Cognitive Emotional Regulation Strategies in the development of Emotional Intelligence, with a comparison drawn between single children and children who have grown up in the company of siblings. A total of 200 participants within the age range of 13-21 years were subjected to the administration of standardised questionnaires such as Schutte Emotional Intelligence Scale, Cognitive Emotion Regulation Questionnaire and the Adolescent Attachment Questionnaire for assessing these psychological attributes, respectively. Analysis of data was done by using descriptive statistics, ANOVA, Pearson's Correlation and linear regression analysis. Results from ANOVA has detected no statistically significant differences between single children and children with siblings in the three psychological domains under consideration, thus indicating that sibling status alone does not exert a considerable influence over the development of Emotional Intelligence, attachment styles or Cognitive Emotional Regulation. However, further investigation of correlation results indicated associations of these variables with EI while multiple linear regression analysis precisely indicated the contribution of both attachment styles and CERS as significant predictors of Emotional Intelligence. A strong negative association was identified with attachment styles, while Cognitive Emotion Regulation Strategies had a positive relationship in both the instances. This study puts factors like quality of emotional interactions, internal emotion regulation in the forefront for having a profound impact on shaping Emotional Intelligence rather than family dynamics in isolation.

Keywords: Emotional Intelligence, attachment styles, Cognitive Emotional Regulation, siblings, single child

Introduction and Theoretical Background

The concept of intelligence has gained relevance significantly over the years, expanding from traditional association with intellectual capacity and cognitive abilities such as problem-solving, logical reasoning to inclusion of aspects which is concerned with analysing situations, regulating and catering to the emotions of other individuals. While cognitive intelligence primarily reflects one's ability to make rational decisions in relevance to the situations, emotional intelligence on the other hand is fundamental in understanding, regulating and expressing emotions in an effective manner.

The concept of Emotional Intelligence-aspects and foundation

Differences in levels of EI, attributed to individual variations have been a focus of investigation over a span of two decades (Mayer, Roberts & Barsade, 2008); particularly in understanding these abilities as determinants of health, interpersonal functioning and well-being at a psychological level (Heck & Oudsten, 2008). Initially conceptualised as the capacity to recognise, understand and evoke emotions to guide thinking, comprehend emotional information, and consciously regulate emotions to enhance both emotional and cognitive functioning (Mayer & Salovey, 1997)- the role of Emotional Intelligence in shaping psychological well-being and interpersonal functioning cannot be sidelined.

Extensive research in this construct has contributed to the development of several models (e.g., Mayer & Salovey, 1997; Bar-On, 2005; Goleman, 1995) which have outlined its various components; often overlapping with each other, but primarily consisting of self-awareness(the ability to recognise one's own emotional mechanisms and their impact on patterns of thought and behaviours) ; self-regulation (management of emotional responses, controlling impulsive reactions, adapting to changing circumstances, and ensuring composure under stressful situations); motivation (constructive channelling of emotions in a way that ensures personal and professional growth through display of resilience, enthusiasm, and long term-vision). In addition, empathy or the ability to understand and navigate social interactions by perceiving the emotions of others is fundamental in the development of social skills, the combination of which enables individuals to be better attuned to the association between emotion and behaviour, thus, directing their communication styles in accordance to the situations.

The construct of Emotional Intelligence includes a combination of the capacity to understand and implement emotional information (ability EI) and perceived effectiveness and behavioural patterns in processing such information (trait EI) (Petridis and Furnham,2001), thus, reflective of psychological characteristics and cognitive mechanisms. Thus, it is essential that cognitive and emotional traits and abilities associated with social aptitude must work in consonance to ensure effective expression of emotions, ability to relate to others and management of daily challenges (Beyazit et al., 2024).

Attachment Styles and its role in Emotional Intelligence

Development of emotional intelligence is often influenced by a number of factors at play, the primary being early experiences in childhood, social interactions, exposure to education and totality of various events that an individual is subjected to. From the perspective of development, an individual is exposed to various patterns of interaction in their immediate environment-these early experiences of caregiving are often internalized as functional prototype not only for future relationships but also as a framework that determines how individuals interpret, expresses, and deal with emotions that cause significant distress (Bowlby,1982). Hence, attachment can be defined in terms of the close, emotionally affectionate bond that develops between individuals, characterised by intimacy and care (Ainsworth et al., 1978). In context of adult attachment, the focus is primarily on four

dimension style given by Bartholomew (1990;Bartholomew & Horowitz, 1991) on the basis of perception about self and others: (i) secure, identified by display of positive feelings towards both self as well as others; (ii) dismissing, which involves positive feelings about only self rather than both; (iii) preoccupied, which reflects feelings of anxiety regarding both the self and others and lastly (iv) fearful, associated with negative feelings about self and others (Bartholomew & Shaver, 1998). There can be variation in the terminology used by other researchers (Griffin & Bartholomew, 1994; Hazan, & Shaver, 1987; Simpson, 1990); consistency has been found in the description of secure attachment style, preoccupied and

dismissing are often referred as “anxious-ambivalent” and “avoidant” respectively (Hazan, & Shaver, 1987; Simpson, 1990).

Individuals nurtured in an environment characterised by the presence of responsive, emotionally available and consistent caregivers experience comfort in intimacy and independence in relationships and are more likely to develop secure attachment styles. Especially in adolescence, they tend to exhibit better emotional adjustment (Engels, 2001), less loneliness (Kerns & Stevens, 1997), more ego-resilience (Kobak & Sceery, 1988), fewer mental issues including anxiety, inattention, depression, conduct problems and activities of delinquency (Aseltine, 1995; Smith & Krohn, 1995), minimal experimentation and use of drugs or substance abuse (Cooper, Shaver & Collins, 1998). Patterns of insecure attachment styles, developed as an outcome of inconsistent, unresponsive or neglectful care in the former years have been further classified into three types-anxious (preoccupied) attachment, avoidant (dismissive) attachment and disorganised (fearful-avoidant) attachment. In comparison to adolescents with secure attachment, they have been associated with reduced confidence levels, avoidance of problem solving, dysfunctional anger patterns along with more internalizing symptoms (Allen, Moore Kuperminc & Bell, 1998). Significant positive correlation of secure attachment with EI and life satisfaction, and negative correlation with anxious and avoidant styles have been detected, thus, highlighting the profound role of early relational experiences in determining emotional competence and life satisfaction in later years of life (Garg et al., 2023).

Examining Emotional Intelligence through association with attachment styles has yielded evidences of secure individuals being better at management of negative emotions in social context than individuals with insecure attachment patterns (Kobak & Sceery, 1988), experiencing more positive emotions, in addition to adaptive emotional regulation skills (Cooper et al., 1998). Anxious attachment develops as an outcome of caregiving that is associated with patterns of inconsistency-alternating between nurturing and emotional unavailability. Hence, the individuals tend to show extreme dependence in relationships, high sensitivity and the need for constant reassurance and validation in order to contradict their excessive worry about potential rejection. On the contrary, individuals with avoidant attachment patterns have been found to value independence, self-sufficiency and prefer emotional distance over intimacy. Distant caregiving, or persistent discouragement of emotional expression often develop patterns of suppression of emotions, avoidance of conflicts or vulnerability in the long run. Lastly, in disorganized attachment patterns, primarily an outcome of trauma, inconsistent caregiving or neglect-where the caregiver is recognised to be a source of both fear and comfort, individuals oscillate between seeking intimacy and fearing rejection. They often face difficulty in coping with stress, show unpredictable emotional responses and severe anxiety in relationships.

Development of Cognitive Emotional Regulation Strategies

Emotions can be essentially referred as biological reactions that are evoked in the context of certain situations being perceived as significant, that determines the response of the individual to vital events in a specific setting (Gross & Munoz, 1995). Thus, the construction of emotional experiences is determined primarily by an individual's mental interpretation of their experiences (Pessoa, 2008). The process of exhibiting any emotional responses primarily involves cognitive processing, followed by adjustment of reactions (Brockman et al., 2017). Although, while viewing from the framework of Thompson & Calkins (1996) and Gross (1998), emotional regulation as a whole can be seen as a very overarching theme that involves the totality of cognitive, biological as well as behavioural regulation processes- the underlying processes such as social aptitude, cognitive function, empathy, and the ability to identify, understand and

manage emotions necessitate a strong degree of cognitive control in emotional regulation (Extremera, Sánchez-Álvarez, & Rey., 2020; Pruessner et al., 2020). Cognitive regulation and response modulation of emotions refer to evaluating the situation one faces in order to alter the emotional response to it either by changing how the situation is perceived or by managing the emotional response the situation poses.

Depending upon the prolonged developmental experiences, the implementation and effectiveness of the strategies show variations across individuals (De France & Hollenstein, 2019) and they can be broadly categorised into-adaptive and maladaptive strategies respectively. Adaptive strategies are inclusive of all those which contribute in promoting healthy psychological and social functioning while others are dysfunctional and associated with high levels of distress (Garnefski et al., 2002). While adaptive strategies such as positive appraisal facilitate easy resolution of interpersonal issues, maladaptive strategies have been linked with diminishing one's sense of control and obstruct the development of effective coping strategies (Aldao, Nolen-Hoeksema, & Schweizer, 2010; Garnefski & Kraaij, 2006), and often associated with anxiety and depression outcomes ((Domaradzka & Fajkowska, 2018; Garnefski & Kraaij, 2018; Holgado-Tello et al., 2018; Martin & Dahlen, 2005). Adaptive strategies have been positively correlated with positive emotional reactivity and showed negative (although insignificant) with anxiety whereas maladaptive strategies were positively linked with both negative reactivity and anxiety (Kant & Soni, 2024).

The dynamics of these strategies and the reason why some of them show more effectiveness than others are grounded in developmental patterns (De France & Hollenstein, 2019)-the initial emotion regulation strategies that emerge in initial years are seldom rooted in cognitive processes; its only as children progresses through age that they acquire proficiency in cognitive techniques and their utilization across various scenarios (Gestsdottir & Lerner, 2008; Beyazit, 2020). Family predominantly shapes a child's understanding of emotional norms-guiding the way in which emotions are to be expressed, what emotions are appropriate to experience and accepted course of action in various social contexts (Alwaely, Yousif, & Mikhaylov, 2021). Suppression and minimal emotional expression were identified in avoidant individuals, whereas anxious individuals showed a preference for impression management and more suppression and rumination (Brandao et al. 2023). Hence, when family dynamics pose risks associated with development, they may in turn hinder the development of emotional competencies and generate maladaptive patterns of behaviour- attachment dimensions as predictors of adaptive as well as maladaptive regulation strategies have reinforced the role of attachment in its multidimensional influence in emotional problems amental and health consequences (Vahedi et al. 2016).

Emotional Intelligence exceeds the simple mere understanding of emotions, but also encompasses the awareness of responding to them constructively. Cognitive Emotional Regulation Strategies establish the "how" aspect in this context-if an individual implements positive reappraisal in their interpretation of an obstacle, or direct their energy on planning, they demonstrate emotional regulation, understanding and strategic thinking-the central facets of emotional intelligence. Children with higher EI who can perceive and regulate their emotions display less levels of psychopathologies of emotions (Ke & Barlas, 2020; Kokkinos & Kipritsi, 2012; Piqueras et al., 2020; Williams et al., 2010) have more consistent self-esteem (Piekarska, 2020) and socio-emotional efficiency (Frederickson, Petrides, & Simmonds, 2012). Thus, processing of emotional events through reflection and cognition, enhances clarity into the cause-effect paradigm of it, which in turn allows redirection of energy towards constructive goals such as motivation, problem solving-strategies, decision making and management of emotional balance in the long run.

Being one of the earliest relationships that an individual is exposed to, sibling dynamics have been often found to exert influences on different aspects of functioning of individuals through emotional interactions, resolution of conflicts and social learning. These early relational experiences broadly allow individuals to observe, examine and internalize patterns in a space that resembles the subsystems within the family. While on one hand it can create the foundation for development of key components of EI, they can shape an individual's appraisal of events in a way that can be regarded as psychologically beneficial. Strong sibling attachment can play a role in compensating the deficiencies of parental approaches-nurturing sibling relationships can play a role in reinforcing functional attachment patterns by providing emotional safety and validation. Cultural contexts can be considered as important predictors in determining the roles that these relationships play in an individual's life-in collectivist societies, emotional scaffolding is often combined with moral obligations. Presence of a "parentification" dynamics in some instances may result in roles that turn out to be completely asymmetrical- the older sibling might have to take the responsibility of combined regulation of emotions of themselves as well as that of the older sibling while they younger sibling may be completely dependent upon advice or validation of the older siblings in instances of parental unavailability. Conversely, family dynamics which are underlined with emotional triangulation, competition or favouritism may lead to outcomes that are less favourable; a child may become adept at masking emotions in a way that is socially acceptable.

Although family system is regarded as the primary ecosystem which are responsible for developing the basis for various capacities such as Emotional Intelligence, regulation strategies and attachment styles, there exists a gap in the literature in their examination of the role of sibling dynamics in such outcomes. Research studies over the years have investigated these attributes in isolation, often focusing and prioritizing parental roles. Whether individuals with siblings tend to develop heightened emotional flexibility as an outcome of early exposure to complex interactions or there is a possibility of developing similar effective capacities through adequate parental involvement and peer support remains unanswered empirically especially in a cultural context where sibling roles are emotionally significant and socially dictated. The present study thus seeks to investigate whether indeed there is an influence of sibling dynamics in shaping Emotional Intelligence along with attachment styles and Cognitive Emotional Regulation Strategies, thus, enhancing the understanding of impact of early familial relationships in overall psychological development and social adaptability.

Methodology

Aim: The present study aims to investigate the influence of attachment styles and Cognitive Emotional Regulation Strategies on Emotional Intelligence, with a comparison between single children and children with siblings.

Objectives

- To study the sample under observation.
- To compare Cognitive Emotion Regulation Strategies, Attachment styles and Emotional Intelligence levels between single child and children with siblings.
- To understand the link between Cognitive Emotional Regulation Strategies, Attachment styles and Emotional Intelligence.
- To examine whether attachment styles, cognitive emotional regulation strategies predict Emotional Intelligence.

Hypothesis

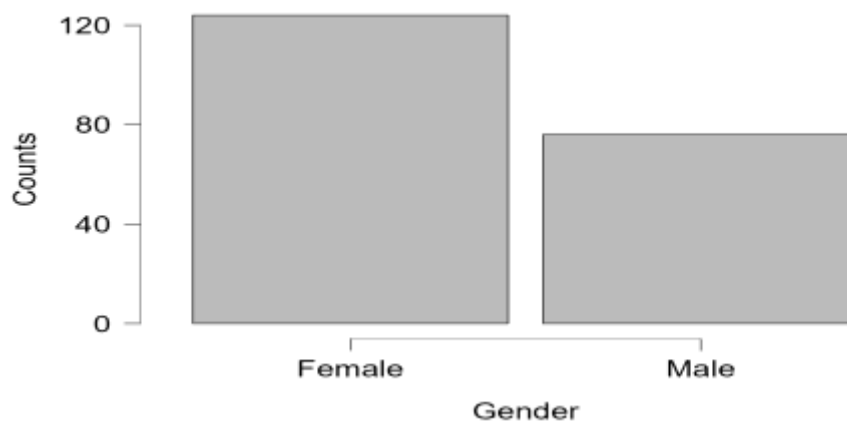
- There is significant difference in Emotional Intelligence, attachment styles, and Cognitive Emotional Regulation Strategies between single children and children with siblings.
- There are significant correlations among attachment styles, Cognitive Emotion Regulation Strategies (CERS) and Emotional Intelligence.
- There is a significant predictive relationship between attachment styles and Cognitive Emotional Regulation Strategies in explaining Emotional Intelligence.

Participants

The participants of the study included adolescents and young adults aged between 13 to 21 years (n=200) enrolled in various educational institutions (specifically, schools and colleges) and included 38% of males and 62% of females; acquired through stratified random sampling so as to ensure representation of broader population and enhancing overall generalizability. This age range can be regarded as the ideal for understanding the interaction of these constructs in the backdrop of cognitive, emotional and relational development. Erickson's theory regards this age involves conflicts related to identity and intimacy, the resolution of which are vital for Emotional Intelligence along with neurological maturation and shift in attachment patterns and internal relational models.

The participation in this study was completely voluntary after prior informed consent.

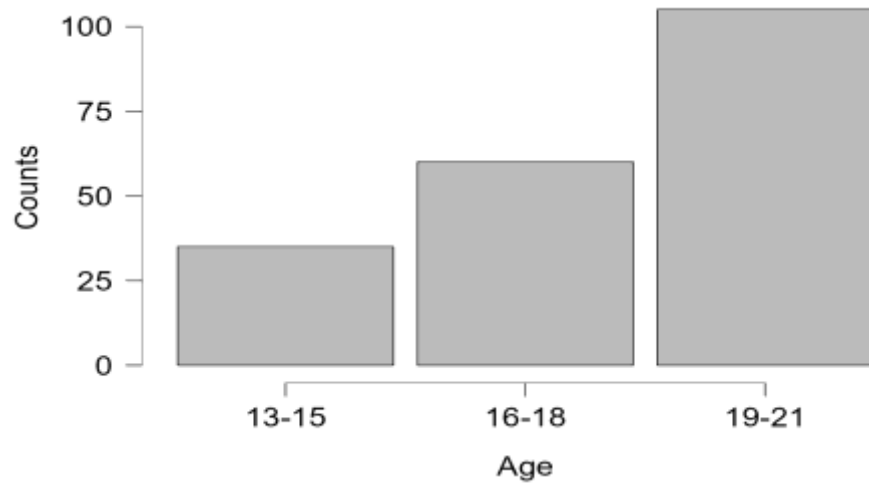
Demographic Data



Graph 1 showing the gender distribution within the data

Gender		
Male	76	38%
Female	124	62%

Table 1: Gender distribution within the data



Graph 2 showing the age distribution within the data

Age		
13-15 years	35	17.5%
16-18 years	60	30%
19-21 years	105	52.5%

Table 2: Age distribution within the data

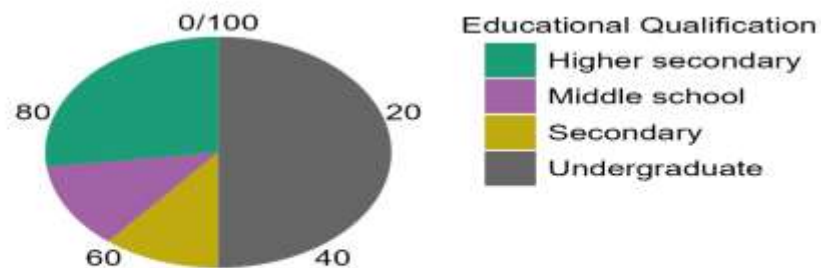


Chart 3: Educational qualification within the data

Educational Qualification		
Middle School	24	12%
Secondary	22	11%
Higher secondary	54	27%
Undergraduate	100	50%

Table 3: Educational Qualification within the data

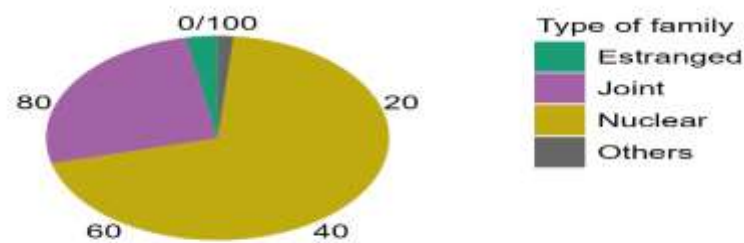


Chart 4: Family Composition within the data

Type of family		
Nuclear	139	69.5%
Joint	52	26%
Estranged	6	3%
Others	3	1.5%

Table 4: Family Composition within the data

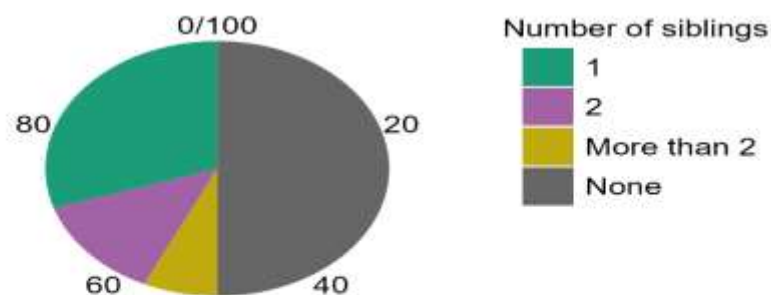


Chart 5: Sibling status within the data

Number of Siblings		
None	100	50%
One Sibling	60	30%
Two Siblings	26	13%
More than 2	14	17%

Table 5: Sibling status within the data

Instruments

• Emotional Intelligence

The domain of Emotional Intelligence has been assessed through Schutte Emotional Intelligence Scale. Also known as Schutte Self-Report Emotional Intelligence Scale (SSEIT), it is a self-report measure

consisting of 33 items that assesses Emotional Intelligence using a 1 (strongly disagree) to 5 (strongly agree) scale. Developed on the basis of the model proposed by Salovey and Mayer in 1990, it assesses Emotional Intelligence across 4 factors: emotion perception, utilization of emotions, management of self-relevant emotions and managing the emotions of others. Schutte et al. (1998) has reported a reliability rating of 0.90 of their Emotional Intelligence scale. Although, it has shown fairly high reliability in the adults as well as adolescents; the emotional sub-scales have shown poor reliability (Ciarrochi, Chan & Bajgar, 2001). Also, average correlations have been found with measures as self-reported Emotional Intelligence, the Big Five EI scale, and life satisfaction (Petrides & Furnham, 2000). Several studies have supported its validation across different cultural contexts, including South Africa (Jonker & Vosloo, 2008) and Zambia (Musonda et al., 2019). These studies have reported the instrument reliable, with Cronbach's alpha coefficients ranging from 0.74 to 0.79.

- **Cognitive Emotion Regulation Strategies**

For assessing Cognitive Emotion regulation Strategies, the **Cognitive Emotion Regulation Questionnaire** has been administered. It is a 36-item questionnaire consisting of 9 distinct sub-scales with 4 items in each that are reflective of what an individual experiences after going through a life event which is of either stressful or life threatening in nature such as self-blame or blaming others, catastrophizing, rumination putting into perspective, acceptance, positive refocusing and reappraisal and planning.

The responses have been evaluated on a five-point Likert scale ranging from 1 (almost never) to 5 (almost always). Empirical support has been found in previous research with good internal consistencies ranging from 0.68 to 0.83 and test-retest correlations ranging from .40 and .60 (Garnefski et al, 2001).

- Adolescent Attachment has been measured with the help of Adolescent Attachment Questionnaire, a self-report measure designed to measure attachment patterns in individuals mostly between the age group of 12-19. It particularly focusses on three primary components: availability (responsiveness and availability of attachment figures); angry-distress (feelings characterised by anger and distress directed towards attachment figure) and goal-corrected partnership (consideration of the needs of attachment figure separately). West et al. (2018) has demonstrated good internal consistency for the subscales of AAQ (angry distress $\alpha = .62$, availability $\alpha = .80$, goal-corrected partnership $\alpha = .74$) and good test-retest reliability within a time frame of 3 months ($r = .68, .73$, and $.72$, respectively). In regards of validity, it has shown convergent validity with the Adult Attachment Interview (AAI): secure dimension has been correlated with availability ($t = -2.21, p = .031$), preoccupied with angry distress ($t = -2.61, p = .011$), and dismissing with goal-corrected partnership ($t = -2.65, p = .01$) (Bodfield et al., 2020).

The following instruments have been utilized because of their alignment with the study's objectives and the age group that has been under examination along with their statistical validity. In combination, the scales assess different domains that provides a framework for understanding the interaction between these variables in the developmental perspective.

Procedure

A Google Form was created including all the questions from the questionnaire and was circulated among individuals enrolled in schools and colleges who were within the age group of 13-21 years. The participants were given a detailed information about the purpose of the study and their informed consent were taken. Total scores from each dimension were calculated after interpreting the values from individual responses as marked by them and accordingly the scores were placed within various criteria specified by the norms. Further analysis was done using descriptive and inferential statistics in JASP.

Statistical Analysis

Since the study compares variations on Emotional Intelligence based on attachment styles and Cognitive Emotion Regulation Strategies, specifically between single children and children with siblings, at first descriptive statistics need to be performed to provide a thorough overview of the three variables across the groups-mean and Standard Deviation. In the second step, ANOVA has been administered to understand whether there exists any statistically significant difference in EI across two groups by using Attachment styles and CERS respectively. Further, the association between the variables have been examined through correlation and whether these variables predict Emotional Intelligence have been investigated through linear regression.

Results

Understanding Emotional Intelligence involves exploration of several interacting dynamics that shape an individual's way of navigating interpersonal and emotional experiences. The role of the immediate environment in influencing the patterns of development of an individual has been the subject of several researches over the years-while some has predominantly focussed on these variables either individually or in various combinations to understand the paradigm of behavioural patterns in more accuracy. The present study aimed to examine the relationship between attachment styles and Cognitive Emotional Regulation Strategies in influencing EI, while also establishing a comparison between individuals with no siblings and individuals with siblings.

The descriptive statistics (Mean and SD) have been computed between Cognitive Emotional Regulation Strategies, Attachment styles and Emotional Intelligence for the sample which has been divided equally between individuals with siblings (n=100) and individuals with siblings (n=100).

	Cognitive Emotional Regulation Strategies		Attachment Styles		Emotional Intelligence	
	0	1	0	1	0	1
Mean	112.020	111.620	22.280	22.010	112.350	115.300
Std. Deviation	14.702	18.427	8.710	7.352	25.137	19.410

Table 6: Descriptive Statistics (0 indicates no siblings whereas 1 indicates individuals with siblings)

As indicated in table 6, mean and standard deviation were calculated for each of the groups separately, divided on the basis of number of siblings (0 indicated individuals with no siblings whereas 1 indicated individuals with siblings). The results indicated a greater score of Emotional Intelligence ((M = 115.30, SD = 19.41) in individuals with siblings compared to single children (M = 112.35, SD = 25.14), though it was modest. However, marginal higher scores in both Cognitive Emotion Regulation ((M = 112.02, SD = 14.70)) and attachment styles (M = 22.28, SD = 8.71) have been found for single children, in comparison to children with siblings (CERS: M = 111.62, SD = 18.43; Attachment: M = 22.01, SD = 7.35). These differences, however, were small and identified by relatively similar standard deviations, the exception being Emotional Intelligence, which showed greater variation among single children.

Understanding the influence of sibling status on these constructs require an examination of the differences in the mean scores of the variables-Emotional Intelligence, attachment styles and Cognitive Emotional Regulation Strategies and their comparison on the basis of the number of siblings they have. A one-way ANOVA has been conducted separately for the three variables to examine whether they yield any significant differences between the two groups.

Variable	SS (Between)	df (between)	SS (Within)	df (Within)	MS (Between)	F	p	Effect (η^2)
Emotional Intelligence (EI)	435.125	1	99851.75	198	435.125	0.8628	0.354	0.004
Cognitive Emotion Regulation Strategies (CERS)	8	1	55017.52	198	8	0.0287	0.865	0.0001454
Attachment Styles	3.645	1	12861.15	198	3.645	0.0561	0.812	0.0002833

Table 7: ANOVA results

The findings reveal no significant differences between the two groups in these psychological constructs with p-values exceeding 0.05-for Cognitive Emotional Regulation strategies ($F(1,198)=0.0287$, $p=0.865$); Emotional Intelligence ($F(1,198)=0.8628$, $p=0.354$) and Attachment styles ($F(1,198)=0.056$, $p=0.812$). Although a slight difference has been detected in mean score of Emotional Intelligence for individuals with siblings, it fails to be statistically significant. Hence, the presence or absence of siblings doesnot exert a significant influence on the way in which individuals regulate their emotions with cognitive influence or develop attachment styles over time. leading to the acceptance of null hypothesis in this case. Additionally, the results revealed negligible to very small effect sizes for the three variables-EI revealed an eta squared (η^2) value of 0.004, CER strategies and attachment styles showed values of 0.0001 and 0.0003 respectively. Hence, it is evident that sibling status in isolation provides reasonable explanation for less than 0.5% of the variance in any of the following variables while widening scope for further exploration with other mediating variables in emotional development throughout the developmental lifespan.

Variable	Score (CERS)	Score (EI)	Score (Attachment)
1. Total (CERQ)	Pearson's r	—	
	p-value	—	

Variable		Score (CERS)	Score (EI)	Score (Attachment)
2. Total Score (EI)	Effect size (Fisher's z)	—		
	SE Effect size	—		
	Pearson's r	0.259	—	
	p-value	< .001	—	
3. Total Score (Attachment)	Effect size (Fisher's z)	0.265	—	
	SE Effect size	0.071	—	
	Pearson's r	-0.072	-0.736	—
	p-value	0.312	< .001	—
	Effect size (Fisher's z)	-0.072	-0.941	—
	SE Effect size	0.071	0.071	—

Table 8: Correlation

Since no significant differences were found in the mean of the attributes on the basis of the presence or absence of siblings, a Pearson Correlation analysis was done to further explore the relationships among these variables. Analysis of results indicates a significant positive correlation between CERS and Emotional Intelligence ($r = 0.257$, $p < .001$) while a strong and significant negative correlation was found between attachment and Emotional Intelligence ($r = -.735$, $p < .001$). This establishes that individuals who tend to implement more adaptive emotion regulation strategies report high Emotional Intelligence whereas attachment styles characterised by insecurity are associated with lower levels of emotional competence. This is evidenced even when loneliness is taken into consideration as a variable- lowest scores were detected in secure attachment patterns, while dismissive attachment styles were associated with highest scores (Maldar & Nayak, 2024). Insecure attachment styles, primarily identified by patterns of imbalance between hyperactivation and deactivation of the attachment system, often develop from a distortion in their overall perception of themselves as well as others in the relationships which often result emotional regulation deficits or maladaptive coping patterns.

Linear Regression

Table 9: Model Summary - Total Score (EI)

Model	R	R ²	Adjusted R ²	RMSE	R ² Change	df1	df2	p
M ₀	0.000	0.000	0.000	22.449	0.000	0	199	
M ₁	0.763	0.582	0.578	14.584	0.582	2	197	< .001

Note. M₁ includes Total Score (Attachment), Total (CERS)

Predictor	B	Standard Error of B	β	t	p
(Constant)	127.332	7.788	---	16.350	<.001
Attachment Styles (Total)	-2.011	0.129	-0.720	-15.599	<.001
CERS (Total)	0.277	0.062	0.206	4.451	<.001

Table 10: Regression Coefficients

The findings of the correlation analysis were further strengthened through multiple linear regression which was implemented to understand whether attachment styles and CERS had any predictive role in Emotional Intelligence, irrespective of the sibling status. The regression model was detected to be statistically significant, $F(2, 197) = 137.27$, $p < .001$, thus, explaining a considerable 58.2% of the variance in Emotional Intelligence ($R^2 = .582$). The adjusted R^2 value of .578 supports the generalizability of the model.

Further, through examining the standardized regression coefficients, attachment styles were detected to be a strong negative predictor of Emotional Intelligence ($\beta = -0.720$, $t = -15.599$, $p < .001$), indicating an association between insecure attachment and lower Emotional Intelligence. On the contrary, CERS positively predicted EI ($\beta = 0.206$, $p < .001$), indicating that individuals who efficiently implement cognitive strategies to regulate and manage their emotions tend to score high in Emotional Intelligence.

Although descriptive and inferential statistics showed no significant influence of sibling status on development of EI, attachment styles or Cognitive Emotional Regulation Strategies, the results of regression analysis clearly demonstrate that individual dynamics such as attachment styles and emotion regulation exert a strong and direct influence on development of Emotional Intelligence-variations were noted in different instances on account of different attachment styles and emotional regulation. While individuals with secure attachment patterns were identified with advanced capacity of reappraisal efficacy, individuals with anxious, avoidant or fearful attachment patterns struggled with dealing with arousals through various strategies (Domic-Siede et al., 2024). Attachment styles, primarily are rooted in biological aspect in terms of origin-it has been detected that individuals have the tendency to seek proximity and safety from their caregivers, particularly when they face distress. Caregiving patterns characterized by sensitivity provides the landscape where the children feel secure to express and explore the world, which in turn shapes their mechanisms in which they process and regulate their emotional needs. From Freud's stages of psychosexual development to Erickson's stages of psychosocial development, each have explicitly highlighted the impact of internalizing these interactions-the child understands not only whether their needs will be met but also their emotional approach in behaviour to receive care.

The association of Emotional Intelligence with various facets of well-being has been the subject of investigation over the years-most profoundly in its association with attachment styles. Evidences of it being the moderating as well as mediating factor in the relationship between attachment styles and loneliness (Borawski et al., 2022) or in mediating the negative impact of insecure attachment through enhancing levels of life satisfaction (Garg et al., 2023) establish the importance of EI in dealing with life challenges and enhancing well-being as whole. While patterns of insecure attachments may make

individuals more vulnerable to challenges in emotional or relational aspects, Emotional Intelligence, over time has emerged to be a protective factor, enabling better emotional regulation, healthy relationships and even development of secure patterns of attachment over time. The main question which emerges at this point from these studies is the extent to which Emotional Intelligence can act as a protective mechanism or the extent to which these abilities are impaired as a consequence of dysfunctional relational experiences in the initial years. An infant who is consistently exposed to caregiving patterns characterised by emotional unavailability, inconsistency or neglect develop a distorted outlook in the way they process their emotions. For individuals who show avoidant attachment, emotions are associated as cues for rejection; an anxiously attached child's emotional outbursts becomes a reflection of their call for attention, which is often unpredictable; whereas for the child with disorganized attachment, emotions are often expressed in combination with fear. Thus, when these patterns are taken into consideration, it is evident that these children are not learning ways to regulate their emotions-they are rather figuring out techniques of effective suppression or distortion; emotions, particularly the intense ones are perceived as threats to survival. This early disruption poses significant threat to the development of foundation of raw psychological material for any form of Emotional Intelligence. Being a development outcome, Emotional Intelligence requires safety as a prerequisite. Thus, if a child has been only exposed to unpredictability, EI cannot function as a protective shield to secure a system that is either neurologically predisposed to disintegrate under stress or has been never properly forged in the first place. The mechanisms which are later developed as a result of damage are more of compensatory or performative in nature-these individuals become more adept in navigating the emotional challenges, while internally they are dysregulated or avoidant.

While Emotional Intelligence has often emerged as a psychological protective mechanism mitigating the adverse effects of various events; a critical point that is often casted into background is the way it functions. The fourth dimension of Emotional Intelligence-emotional regulation is primarily linked with the type and the quality of Cognitive Emotional Regulation strategies that an individual implements. These conscious as well as unconscious strategies determine the way in which an individual interprets the emotional experiences. Studies by Ashori & Rashidi, 2020 have found how these strategies have positive effects on emotional regulation-thus, it is important to understand that these strategies typically construct the base upon which Emotional Intelligence develops. If a person struggles with interpreting or managing their emotions, their ability of understanding and regulating of emotional experiences of themselves as well as the others will be inevitably compromised. Hence, the conceptualization of Emotional Intelligence as a significant protective factor remains incomplete if the role of CERS is not taken into consideration. EI, rather than an innate trait should be understood more as an outcome of these cognitive strategies-emotional awareness in isolation is gravely insufficient in shielding an individual from distress until the way through which the emotions are being processed, interpreted or restructured through CERs are taken into consideration.

The role of attachment styles emerges as a recurrent theme in this context as well providing evidence for neurodevelopmental models in the context of emotional development. Different patterns of strategies are often internalized by individuals through their initial interactions with their caregivers which facilitates the emergence of Emotional Intelligence in the later years. While studies have found that individuals who have been exposed to absent or rejecting parenting may show adequate emotional competence through implementation of diverse regulation strategies (Delgado et al.,2023), what is fundamental to be mentioned in this narrative is that an individual's ability to draw upon their emotional awareness, empathy or

regulation strategies can be functional only when they understand how to identify, label and respond to emotions. Devoid of this, even if the individuals develop regulation strategies to deal with the challenges, whether they would be effective or adaptive remains a point of deliberation. For instance, emotional insecurity being hallmarks of paternal neglect predisposes individuals to struggle with basic sense of security leading to a complete misapplication or orthodox use of regulation strategies-reappraisal, rather than being used for constructive reinterpretation of a situation may be used as a defense mechanism to avoid acknowledging the vulnerability altogether. Thus, what is often observed as emotional regulation might be crafted with underlying elements of avoidance, compensation, detachment, relational anxiety or internal self-serving validation.

Hence, Emotional Intelligence should be interpreted as a psychological construct that develops through interaction of diverse factors-it is predicted by the way an individual manages and attaches meaning to their emotions, which is in turn determined by the experiences of attachment during formative years. The findings of this study serve more than only highlighting the predictive relationship between the different variables-it seeks to uncover the developmental mechanisms that predominate the lineage of Emotional Intelligence as a protective force in its truest sense. Strategies that emerge in response to fear or neglect are more about surviving the emotions rather than understanding them, resulting to their collapse in times of duress. While these cognitive strategies fail to restore what has already been fractured by the patterns of insecure attachment, efforts can be dedicated towards corrective emotional relationships that would serve as a source of validation resulting in a new emotional framework-EI is not just an outcome of merely management of emotions, but rather how emotions are experienced in the safety of another; it's more about redefining one's emotional landscape. Contrary to the defense mechanisms that are dictated by instincts, CER strategies that are adaptive in nature can be learned and applied consciously. Over time, the emotional overwhelm is reorganised into something that can be labelled and controlled. This results in individuals implementing strategies that builds their trust and self-efficacy, thus providing them a stable core that empowers them to deal with their emotional turmoil even when an external scaffolding is absent. While majority of the psychological literature concentrates on the parenting styles as the primary determinant of emotional growth, sibling dynamics functioning with reciprocal interactions allow individuals to monitor their own emotions effectively along with responding to the needs of another with vulnerabilities reflecting their own. The present study was essentially conducted to gain a deeper understanding of the influence of attachment styles and Cognitive Emotional Regulation Strategies (CERS) through a comparative analysis between single children and children with siblings. However, the findings have posed a challenge to the pre-existing beliefs in this context-mostly regarding the advantages and disadvantages linked with being a single child versus growing up in company of siblings. While sibling relationships have been often connected with better patterns of emotional regulation, and stability in relationships, it is imperative to regard internal processing and integration of emotional experiences, healthy bonding, and acquired skills of regulation in same importance as factors that influence emotional aptitude. Emotional Intelligence is not an isolated domain which is strictly restricted within home environment. School, peer interactions, extracurricular engagement and media exposure can be regarded as arenas that provide children to acquire the skills of emotional regulation. Children primarily associate security with the patterns of responsiveness, affection and availability that they receive from their caregivers which often shapes their emotional regulation through reflective learning. Presence of siblings may mitigate some of the consequences of dysfunctional parenting patterns, but eradicating them, or changing the complete trajectory of the outcomes is rather debatable-it may undertake a contextual role

rather than a direct influencing variable. If the upbringing of a single child is shaped by parental engagement, secure attachment and peer interactions-the chances of them developing stable and refined Emotion Intelligence cannot be ignored. Recent trends of urbanization, nuclear upbringing, digital communication has altered the sibling dynamics- emotional distance, rivalry may foster maladaptive patterns that puts overall emotional functioning in jeopardy. Thus, it is the overall quality of one's formative emotional environment characterised by trust, reciprocity that can lay the foundation for effective perception, understanding and management of emotional reactions. Even in the context of siblings, rather than the presence alone, the texture of the relationship as well as the strategies which it enhances are crucial. Hence, effective interventions directed towards enhancing Emotional Intelligence of an individual should focus on the initial relational equations, equipping them with functional emotion regulation tools rather than putting external factors such as family size or structure as the vital determinant.

Conclusion

This research through its investigation into the interplay between early relational experiences (as detected from attachment styles), strategies of emotional regulation through the use of cognition and development of Emotional Intelligence in the context of sibling dynamics have provided a critical understanding of the role of family dynamics during the formative years of an individual. Since the study's findings reveal no significant association between development of Emotional Intelligence and sibling interactions, it provides impetus for understanding the mediating and moderating roles of other variables such as peer relationships, parenting style, traits of personality or exposure to various tragic events can be examined in these contexts in combination with additional qualitative methods which can help in decoding the patterns of interpersonal relationships throughout the development life-span.

Although limited sample diversity, use of self-report questionnaires or cross-sectional design with classification of family dynamics in a binary form can oversimplify several factors that may have a moderating effect on emotional development, these findings can be considered as a crucial factor in redirecting the focus towards nurturing emotional bonds characterised by security, positive coping mechanisms regardless of family dynamics. There is a further scope of understanding this from longitudinal study so as to map the evolution of these relationships over time along with a more expansive sample size ensuring a more diverse demographic settings-for the findings to be more generalizable. Sibling dynamics can be further examined by different configurations such as older vs younger children, age gaps, sibling rivalries which may enhance a more complex understanding of these patterns. Practical training in these aspects-given the inverse relationship between insecure attachment and EI, understanding the attachment histories and emotional regulation capacities becomes crucial in the therapeutic framework that can be used to reframe the maladaptive strategies and beliefs in a way that enhances overall emotional functioning

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