

## Effect of parental emotion regulation ability and parent-child attachment on adolescent's emotion regulation ability in Colombo, Sri Lanka

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### Abstract

**Introduction:** Many global studies identify the importance of parental emotion regulation (ER) and quality of parent-child attachment on children's ER ability. Such research is rare in Sri Lanka.

**Objective:** To assess the association between parental ER difficulties, quality of parent child attachment and temperament on adolescents' ER difficulties.

**Method:** A cross sectional study was done on 233, 12-14 year old adolescents and 349 parents accessed from a Type AB, Type C and Type 2 school and from a Christian and Buddhist Sunday school within the Colombo Educational zone using the convenient sampling method. Content and consensual validated Difficulties in ER Scale, the Inventory of Parent-Peer-Attachment-Parental subscale, the Abbreviated Dimensions of Temperament Survey-Revised were used along with a demographic questionnaire to collect data.

**Results:** A significant positive relationship was found between mother's, father's and adolescent's ER difficulties (Mother: *Pearson r* (208) = 0.305, Father: *Pearson r* (122) = 0.377). A significant negative relationship was seen between attachment towards mother and attachment towards father and adolescent's ER ability [(Mother: *Spearman r* (225) = -0.220, Father: *Spearman r* (219) = -0.233]. Fathers' ER abilities had a greater impact on the adolescents' ER abilities than mother's ER abilities (Father:  $\beta=0.32$ ,  $p<0.01$ , Mother:  $\beta=0.823$ ,  $p=0.526$ ). Similarly, father's attachment ( $\beta=-0.277$ ,  $p<0.01$ ) was seen to be more important in predicting ER ability in the adolescents than

attachment towards the mother ( $\beta=0.059$ ,  $p=0.629$ ). Adolescent temperament was not statistically significantly related to adolescent ER. A regression analysis indicated that parental emotional difficulties are more predictive of adolescent ER difficulties than quality of parent-child attachment and adolescent temperament.

**Conclusions:** In this study, extrinsic factors such as parental ER difficulties and parent-adolescent attachment had a larger effect than intrinsic factors such as temperament on adolescent ER difficulties.

(Key words: Adolescent emotion regulation, Parental emotional regulation, Attachment, Temperament)

### Introduction

Emotion regulation (ER) can be defined as the internal and external processes involved in initiating, maintaining and modulating the occurrence, intensity and expression of emotions<sup>1</sup>. Adolescents comprise 20% of the global population and ER reaches its maturity during this period. Limited research looking at ER during adolescence has concluded that contextual factors play a role in ER decisions during adolescence<sup>2</sup>. Adolescence is also an opportune time to explore the processes and correlates of ER due to adolescents experiencing more frequent and intense emotions than both youngsters and older individuals<sup>3</sup>. ER-related development occurring during adolescence also significantly impacts on a person's mental health. How an adolescent regulates his/her emotions is linked to many factors such as academic performance and deviant behaviour<sup>4</sup>, anxiety and depression<sup>5</sup> and problem behaviour<sup>6</sup>.

Adolescents around the world are at risk of numerous mental health related difficulties<sup>7</sup>. In Sri Lanka, past studies have found both low levels of ER skills<sup>8</sup> and a high frequency of self-reported emotional problems among university students<sup>9</sup>. These findings combined with a high prevalence of emotional abuse among children and youth<sup>10</sup> suggest that emotional development related difficulties need investigating in the Sri Lankan setting. ER skills are influenced by intrinsic as well as extrinsic elements in the child's life. One such intrinsic element is the temperament of the child

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and familial extrinsic elements include parental ER ability and quality of parent-child attachment.

As an intrinsic factor influencing ER, temperament has been researched extensively in children. However, there is a dearth of research looking at the influence of temperament on adolescents<sup>11</sup>. Studies looking at the role played by temperament on ER strategies among adolescents have found adolescents who experience and react with negative emotions as a temperamental factor are more prone to develop depression. Moreover, parental ER ability also influences this relationship, where highly reactive children, whose parents were unable to regulate their emotions, had a tendency to fall at the ends of continuum and thereby engage in internalizing or externalizing behaviour<sup>12</sup>.

Parental ER ability influences the ER ability of the child. One manner in which a child's self-regulatory ability can be enhanced is through enhancement of a parent's ability to self-regulate<sup>13,14</sup>. Enhancement of parent-child attachment is considered to aid in overriding developmental psychopathology even with children who have a difficult temperament<sup>15</sup>. For the Sri Lankan school going adolescent, family is a major factor in promoting their psychosocial wellbeing; 60% such adolescents consider their family to be close to them and 52% consider their family to be a refuge for their problems<sup>16</sup>. Another study in Sri Lanka found that if the attachment to the parents is not viewed positively, there is a shifting of this attachment to peers. The quality of the communication between the parent and the adolescent and the manner in which the adolescent is disciplined plays a major role in the manner the parent-child attachment is viewed by the adolescent<sup>17</sup>. However, no studies have been conducted directly exploring the transmission of ER ability or the effect the parent-adolescent attachment has on the ER ability of the adolescent.

The role played by parents in a child's life is prominent in a collectivist culture like Sri Lanka. Interventions aimed at improving parenting methods are considered to be a strategy that will have a significant impact on the mental wellbeing of adolescents in Sri Lanka<sup>16</sup>. Most research investigating familial influence on ER has focused on childhood. This research aims to fill this gap by focusing on an adolescent sample. Paternal influence on the ER of adolescents has not been explored extensively<sup>18</sup>; therefore this research will attempt to focus on both parents' influence on the ER of the adolescent. Although previous research in Sri Lanka has focused on emotional dimensions that effect childhood development, those studies have concentrated on emotional abuse<sup>10,19</sup>.

If an association is found between parental emotional socialization dimensions and the child's ER ability, the importance of parental integration to the treatment protocol of a child's psychopathology will be highlighted. Such an association will emphasize the need for an increase in family psychotherapy. Moreover, it is beneficial to focus research on factors that parents can modify as treatment targets, rather than focusing on elements that are, in the majority of cases, beyond the control of the parents. The researcher has hence selected possible change agents such as parental ER and the quality of parent-child attachment relationship as possible factors that affect the inter-generational transmission of maladaptive ER.

### Objectives

The main objective was to explore the relationship between parental ER ability and child's ER ability. In addition, the study will investigate the role played by the quality of parent-child attachment and the child's temperament on the relationship between parental ER and children's ER in a sample of school going adolescents from the 12-14 year age group in the Colombo Educational Zone

### Method:

Study was conducted in 2 stages. Stage one comprised selecting study instruments and their content and consensual validation. Stage two comprised implementing a cross sectional survey to gather data using the validated instruments with 12-14 year olds and their parents. The 2 stage design was employed as there was a need to first validate the study instruments as there were no relevant validated instruments measuring ER, parent-child attachment or temperament in Sri Lanka.

Based on data provided by the Ministry of Education, there were 5039 Sinhala speaking students 12-14 years of age in National and Provincial co-ed Government schools in the city of Colombo. Colombo consists of four educational divisions: Colombo South, Colombo North, Colombo Central and Borella. Sample size for a population of 5039 with a confidence level of 95% and a margin of error of 6.79% would be 200 participants (Krejcie and Morgan, 1970). Taking a non-response rate of 10% the stipulated sample size was considered to be 220. However, the final sample size amounted to 233 adolescents of whom at least one parent had completed their relevant questionnaires. The parental sample consisted of 349 parents.

A cross sectional study design was used, whereby adolescents belonging to Type AB, Type C and Type 2 schools were selected for the sample using the convenience sampling technique. Participants across the three schools were accessed during the

time of the parent-teacher meetings which made it easier to access the parents of each student. Due to the parent-teacher meetings occurring in all schools simultaneously, there was a reduction in the sample size as the primary investigator could not be present in all the schools at the same time. Therefore, the researcher accessed a Christian Sunday School and a Buddhist Sunday school within the Colombo Educational zone to increase the sample size.

**Inclusion criteria** for study sample included being a 12-14 year old Sinhala speaking adolescent, at least one of whose parents could respond to the questionnaires. Only those with parental permission to participate in the study were considered for the sample.

**Exclusion criteria** included students who were not in the 12-14 year age group, those who were not literate in the Sinhala language and those for whom no parent or/caregiver had completed their set of questionnaires.

Sinhala versions of the Difficulties in Emotion Regulation Scale (DERS), Inventory of Parent-Peer-Attachment-Parent Scale only (IPPA-R-Parent subscale-Sinhala version) and Abbreviated version of the Dimensions of Temperament Survey-Revised (ADOTS-R) were used for data collection. All three scales reported good psychometric properties in cross-cultural studies.

The *DERS Sinhala version* is a 36 item scale measuring six ER dimensions: non acceptance of emotions, emotional awareness, difficulties of engaging in goal directed behaviour, impulse control difficulties, use of ER strategies and clarity of emotions. It records responses on a 5 point Likert scale. The score ranges from a minimum of 36 to a maximum of 180. The internal full scale values were at a highly acceptable level for the adolescent ( $\alpha=0.844$ ) and the parent ( $\alpha=0.840$ ) samples.

The *IPPA-R parent subscale Sinhala version* is a 25-item scale measuring quality of parent-child attachment. The three subscales in this instrument are trust, communication and alienation. The scale gives an overall attachment score separately for the mother and the father as well as subscale scores for each. This scale also requests a response from the adolescent on a 5 point Likert scale about the quality of their attachment with their parents. The score ranges from a minimum of 25 to a maximum of 145. The higher the score the better the quality of attachment. The internal consistency value of the IPPA-R parent subscale was at an acceptable level ( $\alpha=0.60$ ).

The *ADOTS-R Sinhala version* is a 23-item scale measuring five dimensions of temperament: behavioural flexibility, sleep rhythmicity, positive mood, task orientation and general activity level. The parents of the child are required to give their opinion regarding their child's temperament on a five point Likert scale. The score ranges from 23-125. The higher the score, the easier the temperament of the adolescent, while the lower the score, the more difficult the temperament. The full scale reliability value was at an acceptable level ( $\alpha=0.610$ ).

The three instruments were first taken through a forward and back translation process. The finalized questionnaires were then given to a five member Delphi panel. Feedback regarding adequacy of the translation, the appropriateness of items to be used with the targeted sample and suggestions for better adaptation of items was given by the panelists. A declared and undeclared pre-testing was conducted with a smaller group of adolescents and parents similar to the target sample. A final back translation of the content and consensually validated Sinhala versions of the instruments were sent to the original author to ensure the conceptual meaning of items was retained.

After obtaining consent from the respective educational institutions, the researcher visited the schools on the day of the parent-teacher meetings and distributed the information sheet, consent form as well as the DERS and the ADOTS-R, to the parents of age 12-14 year old adolescents (Grades 7, 8 and 9). The students whose parent completed all relevant sections of the parental set of questionnaires became eligible for the next stage of the study. The students whose parents had completed their questionnaires were then accessed. The adolescents were asked to read their information sheet and consent form and thereafter requested to complete the DERS and the IPPA-R-Parent subscale. The instructions and the sequence of the instruments administered were consistent throughout each administration. The instruments were self-administered and participants were encouraged to answer the questionnaires honestly, emphasizing the importance of the research and its outcomes. Tokens of appreciation (pencils and erasers) were provided during the process of finishing the data collection.

**Ethical issues;** Approval was granted for the study by the Ethical Review Committee of the Faculty of Graduate Studies (FGS), University of Colombo (No. FGS/ERC/2016/031). Further approval to access the sample was gained from the Ministry of Education and the principals of each school as well as the chief incumbents of the Christian Sunday School and the Buddhist Sunday School. Written

informed consent was obtained from the parents and assent from the adolescents.

**Results**

As shown in Table 1 the adolescent sample is androcentric in nature and was more representative of the 12-13 year age group (48.1%).The sample

also consisted of more Buddhist students when compared with other religious groups. The parent sample on the contrary was gynocentric with more mothers answering the questionnaire than fathers. The sample is also more representative of the middle socio-economic status (SES) group.

**Table 1: Demographic characteristics of adolescent and parent study sample**

Sample Type	Gender (%)		Age range (years) (%)			Religion (% of total sample)				Type of school (%)			SES (% of total sample)		
	Male	Female	12-13	13-14	14-15	Buddhist	Hindu	Islam	Christianity	AB type	Type C	Type 2	Low SES	Middle SES	High SES
Adolescent n=233	62	38	48	30	22	86	4	5	5	72	16	12			
			25-35	36-45	46-55										
Parent n= 349	39	61	14	55	31	85	4	5	6				10	50	40

A significant positive relationship was found between mothers' and fathers' ER difficulties and adolescent ER difficulties (Mother: *Pearson r* (208) = 0.305, Father: *Pearson r* (122) = 0.377). Therefore, when the parental ER difficulties were high the adolescent ER difficulties were also seen to be high. Moreover, the present study finds that fathers' ER abilities had a greater impact on the adolescents' ER abilities (Father:  $\beta=0.32, p<0.01$ , Mother:  $\beta=0.823, p=0.526$ ).

Findings from the current study indicated that there was a negative relationship between quality of parent child attachment and ER difficulties (Mother: *Spearman r* (225) = -0.220, Father: *Spearman r* (219) = -0.233). When considering attachment to mother and father separately, father's attachment ( $\beta=-0.277, p<0.01$ ) was seen to be more powerful in predicting ER ability in the adolescents than attachment towards the mother ( $\beta=0.059, p=0.629$ ).

**Table 2: Correlation matrix for adolescent ER, parental ER, quality of parent-adolescent attachment and adolescent temperament**

		1	2	3	4	5
1. Adolescent ER difficulties	Correlation coefficient 95% Lower 95% Upper	1				
2. Mother's ER difficulties	Correlation coefficient 95% Lower 95% Upper	.305** .176 .423	1			
3. Father's ER difficulties	Correlation coefficient 95% Lower 95% Upper	.377** .217 .516	.694** .576 .784	1		
4. Attachment with mother	Correlation coefficient 95% Lower 95% Upper	-.220** -.341** -.092	-.208** -.335 -.073	-.291** -.448 -.117	1	
5. Attachment with father	Correlation coefficient 95% Lower 95% Upper	-.233 -.035 -.104	-.211** -.340 -.074	-.294** -.045 -.120	.842** .798 .877	1

When conducting a sub-analysis, it appeared that adolescents of middle and lower socio-economic

status (SES) were seen to have more ER difficulties (Middle SES:  $M=93.12 SD=18.12$ : Lower SES:

$M=103$   $SD=10.34$ ) than adolescents from higher SES ( $M=86.93$   $SD=19.48$ ). This coincided with a significant difference found in adolescent ER difficulties based on the type of school attended. Participants from type 2 schools reported significantly higher ER difficulties ( $M=99.83$   $SD=15.98$ ) than type AB school participants ( $M=88.96$   $SD=18.99$ ). No significant results were found when exploring the relationship between adolescent temperament and adolescent ER.

When comparing the predictive value of parental ER difficulties, parent-adolescent attachment and adolescent temperament in connection with ER difficulties, it was found that parental ER difficulties ( $\beta=0.371$ ,  $p<0.05$ ) significantly predicted adolescents' ER difficulties. However, the quality of attachment to the mother ( $\beta=.336$ ,  $p=0.128$ ), quality of attachment to the father ( $\beta=0.546$ ,  $p=0.014$ ) and temperament ( $\beta=0.067$ ,  $p=0.460$ ) did not significantly predict adolescent ER difficulties.

### Discussion

The present study aimed to assess the association between parental ER difficulties, quality of parent-child attachment, and temperament on the adolescents' ER abilities in the Colombo educational zone. Results indicated that there is a positive relationship between parental ER difficulties and adolescent ER difficulties. This finding matched the findings of previous research<sup>20,21</sup>. However, when the ER ability of parents was correlated separately, the father's ER ability was found to have a higher impact on the adolescents' ER than mother's ER. This is contrary to previous research which indicated mother's ER ability had a more significant impact, as mothers usually engage in the emotion socialization process<sup>22</sup>

The same sex parent-child emotion ability transmission process was found to be true for male adolescents but not for females. However, in other research, it has been found that females are more likely to model their ER behaviours on their mothers and males on their fathers<sup>20</sup>. The author opines that the patriarchal nature of the Sri Lankan family could be one reason as to why the father's ER ability has such a significant impact on the adolescent ER ability. Future research could explore the validity of this hypothesis. This difference in findings could also be due to the limited number of studies that have considered father's ER ability.

Previous research has indicated that low SES (probably the stressors related to low SES) may lead to increased difficulties in ER<sup>23</sup>. This link between SES and ER difficulties was confirmed by

the present study as adolescents from lower SES groups were seen to have more difficulty in regulating emotions. This disparity in ER ability mitigated by SES could be due to individuals from low SES being more likely to have experienced negative emotions resulting from social and economic difficulties that they and their parents may have encountered. The reason for this is possible allostatic load i.e. frequent activation of the physiological system due to exposure to repeated stressors. This process could be mediated by the use of a re-appraisal based ER strategy.

Re-appraisal is defined as an antecedent focused ER strategy, whereby when a negative emotion eliciting event occurs it is re-evaluated to reduce the emotional impact. Adolescents and adults who belonged to low socio-economic groups were less likely to re-appraise life situations in benign ways due to having been more exposed to response focused ER strategies such as suppression, as well as ongoing social stressors. This can lead to ER difficulties<sup>24,25</sup>. It was evident in this sample that adolescents in type 2 schools tend to occupy the middle and low socio-economic strata while the majority of adolescents who attend type AB schools belonged to the high or middle socio-economic categories. This highlighted a need to implement ER strategy programmes with particular focus on re-appraisal for type 2 schools. There is also an argument for sociological/societal reforms: if a family is under socio-economic stress, it is harder for parents to teach ER skills as they are also struggling to cope.

The current study found a negative relationship between parent-child attachment and ER difficulties. When considering attachment to mother and father separately, father's attachment was seen to be a stronger predictor of ER ability in the adolescent sample. This finding was different to previous research that found mothers were closer to both sons and daughters<sup>26</sup>. A previous study examining inter-generational transmission of attachment patterns found that fathers who had secure attachment styles with their parents were more likely to have children who were securely attached. Contrarily, if the father exhibited insecure attachment and yet the mother had a secure attachment to her family of origin, this did not appear to buffer against the development of insecure attachment in children<sup>27</sup>. Therefore the father's attachment style had a strong impact on the child's attachment pattern. This pattern was also observed in the present study, as attachment towards the father was more predictive of quality of attachment experienced by the adolescent and this might influence ER competencies.

In the present study sample, regression analysis found that parental ER difficulties are more predictive of adolescent ER difficulties than quality of parent-child attachment and adolescent temperament. This finding is also contrary to previous research findings which highlighted the importance of temperament as a factor that interacts with the parental emotional support provided and thereby affected the adolescent's ER ability<sup>28,29</sup>. The importance of implementing parenting programmes that target parental ER (e.g.: Enhanced Positive Parenting Programmes) for the promotion of adolescent ER was supported by these research findings.

The study had limitations. Ideally the three study instruments should have undergone a validation process to ensure their construct validity. However, this was beyond the scope of the study due to limited time and resources. Secondly, a convenient sample was chosen for the study. After data was collected, demographic analysis showed most participants to be male in the adolescent sample and female in the parent sample and from the middle socio-economic class. This limits the generalizability of the findings to the larger population. Thirdly, only three variables that impact ER in adolescence i.e. temperament, parental ER ability and parent-adolescent attachment were investigated in this study. Other variables that influence ER ability in adolescence such as parenting styles, emotional climate of the family, family expressivity, peer influences as well as the prevalence of neurodevelopmental disorders such as autism, which will lead to ER and attachment difficulties were not examined in this research. Moreover, though parental ER ability was found to play a significant role in influencing adolescent ER ability, whether it is a causative factor could not be assessed through the current study. These variables and their association to ER in the Sri Lankan context could be explored in future research.

### Conclusions

The present study indicated that the parental ER is more predictive of adolescent ER than the quality of parent-child attachment and temperament of adolescents. Moreover, adolescents from lower socio-economic groups are more likely to have ER difficulties than those from higher socio-economic groups.

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