

# **The Impact of Emotional Education on Preschoolers' Behaviours**

**Victoria Vudali**

Submitted to the  
Institute of Graduate Studies and Research  
In partial fulfilment of the requirements of the Degree of

Master of Science  
in  
Developmental Psychology

Eastern Mediterranean University  
February 2014  
Gazimağusa, North Cyprus

Approval of the Institute of Graduate Studies and Research

---

Prof. Dr. Elvan Yılmaz  
Director

I certify that this thesis satisfies the requirements as a thesis for the degree of Master of Developmental Psychology.

---

Assoc. Prof. Dr. Şenel Hüsnu Raman  
Chair, Department of Psychology

We certify that we have read this thesis and that in our opinion it is fully adequate in scope and quality as a thesis for the degree of Master of Science in Developmental Psychology.

---

Assoc. Prof. Dr. Biran Mertan  
Supervisor

Examining Committee

---

1. Assoc. Prof. Dr. Biran Mertan

2. Assoc. Prof. Dr. Şenel Hüsnu Raman

3. Dr. İlmiye Seçer

## ABSTRACT

Emotional literacy is a complex concept which children begin to acquire in the preschool years and greatly depends on the roles of individuals such as parents and teachers. The components of emotional literacy such as facial recognition and emotional understanding contribute to academic and social achievements and also workplace success. Parent-child emotion education program, Coaching and Rewarding Emotional Skills (CARES) was adapted and implemented within a preschool in order to assess the effectiveness in the classroom setting. It was expected that after participating in the program preschool children would display an increase in emotional understanding, compliance and pro-social behaviours. Overall 32 children of ages 4 and 5 were divided into two groups according to their preschool class; the experimental group participated in 6 weeks of the CARES-T (T) program and the control group did not receive any emotion education. Before and after the program, both groups were assessed regarding emotion recognition abilities, behaviour characteristics and empathy through computer tasks and parent and teacher questionnaires. Participants who took part in the CARES program developed better emotion recognition skills and were both faster and better able to label emotions than those who did not. They also displayed less intense problem behaviours with particular emphasis on uncaring behaviours. Unexpectedly the program had no effect on the participants' empathy levels as reported by parents and teachers. These findings suggest that emotion education is beneficial for preschool aged children and their emotional literacy development.

**Keywords:** Emotional literacy, Coaching and Rewarding Emotional Skills (CARES), Emotion Education.

## ÖZ

Duygusal okuryazarlık, ebeveyn ve eğitimci gibi bireylerin rollerine bağlı olarak okulöncesi yıllarında kazanılmaktadır. Yüz tanıma ve duyguları anlamayı içeren Duygusal okuryazarlık, bireyin sosyal ve akademik başarılarından mesleki başarılarına kadar katkıda bulunmaktadır. Bir ebeveyn-çocuk duygu eğitim programı olan Koçluk ve Ödüllendirme Eğitimiyle Duygusal Becerileri Kazandırma (Coaching and Rewarding Emotional Skills; CARES) programının sınıf ortamında uygulanabilirliğini ölçmek amacıyla, okulöncesi ortamda denenmiştir. Programa katılan anaokul çocuklarından, duyguları anlama, uyumluluk ve olumlu sosyal davranışlarda artış göstermeleri beklentiler arasındaydı. Yaşları 4 ile 5 arasında olan 32 çocuk, sınıflarına göre iki gruba ayrılmıştır; deney grubu 6 haftalık CARES-T (T) programına katılırken, kontrol grubu herhangi bir duygu eğitimi almamıştır. Programın öncesinde ve sonrasında, iki gruptaki çocuklar bilgisayar görevleri ve aile-eğitmen ölçekleriyle duyguları tanımlama becerileri, davranış özellikleri ve empati konularında değerlendirilmiştir. CARES-T (T) programında eğitim çocukların, duygu tanımlama becerilerini daha fazla geliştirdikleri ve duyguları daha hızlı ve doğru bir şekilde tanımlayabildikleri gözlemlenmiştir. Buna ek olarak, kayıtsız olma (ilgisiz) davranışları başta olmak üzere daha az problemlilikte buldukları sonucuna varılmıştır. Beklenmeyen bir sonuç olarak, aile ve eğitimcilerin değerlendirmelerine göre, empati düzeyinin üzerinde programın herhangi bir etkisi görülmemiştir. Bu bulgular, duygu eğitiminin okulöncesi çocuklarında ve duygusal okuryazarlık gelişimlerinde yararlı olabileceğini göstermiştir.

**Anahtar Sözcükler:** Duygusal Okuryazarlık, Koçluk ve Ödüllendirme Eğitimiyle Duygusal Becerileri Kazandırma (CARES), Duygu Eğitimi

I lovingly dedicate this work to my family

“A happy family is but an earlier heaven”

George Bernard Shaw

## ACKNOWLEDGMENTS

I first and foremost wish to thank Assoc. Prof. Dr. Biran Mertan, for without the encouragement, guidance, inspiration and academic training, writing this thesis would not have been possible. The help, support and education that you have provided has not just made a mark on my present education and attitudes but will be an asset which will continue to be invaluable throughout my personal and occupational life. Somehow my words of gratitude seem insignificant in comparison to what is in my heart.

My sincerest and infinite gratitude also belongs to one of my biggest role models Assist. Prof. Dr. Eva Kimonis, who not only authorized the use of CARES but with extreme patience, provided invaluable support. Your shared experience and education has not only contributed to shaping my theoretical orientation but has helped and will continue to influence my future career path.

I owe where I am today completely to my parents and the immense support of my family, which although I may never be able to fully repay, I hope by making you proud both today and tomorrow will be some small way of making your investment in me worthwhile. Your unconditional love has made me the person I am today. Thank you.

I would also like to thank Fatma Erişken for her help, ideas and motivation. Not only were you there as a friend but as a colleague and at times a teacher.



# TABLE OF CONTENTS

ABSTRACT .....	iii
ÖZ .....	iv
ACKNOWLEDGMENTS .....	vi
LIST OF TABLES .....	ix
LIST OF FIGURES .....	x
LIST OF ABBREVIATIONS .....	xi
1 INTRODUCTION .....	1
1.1 Theories of Emotional Development .....	1
1.2 Emotional Literacy .....	4
1.3 The Role of Caregivers in Emotional Literacy .....	6
1.3.1 Theories of Attachment .....	6
1.3.2 Theories of Social Learning .....	8
1.3.3 Social and Emotional Coaching .....	10
1.4 The Role of Teachers in Emotional Literacy .....	12
1.4.1 Teacher-Child Attachment .....	12
1.4.2 Teachers as Models .....	13
1.4.3 Teachers as Emotion Coaches .....	14
1.5 The Importance of Emotional Literacy .....	15
1.6 Non-Typically Developing Emotional Literacy .....	20
1.7 Intervention and Prevention .....	22
1.7.1 Parent Intervention Programs .....	22
1.7.2 Prevention Programs with Teachers .....	25
1.8 The Current Study .....	26



2 METHOD .....	28
2.1 Participants .....	28
2.2 Materials .....	29
2.2.1 Child Measures .....	29
2.2.2 Parent Measures .....	31
2.2.3 Teacher Measures .....	33
2.3 Procedure .....	36
3 RESULTS .....	44
3.1 Child Measures .....	45
3.2 Parent Measures .....	49
3.3 Teacher Measures .....	52
4 DISCUSSION .....	56
REFERENCES .....	66
APPENDICES .....	82
Appendix A: Permission Letter to Translate and Adapt the Griffith Empathy Measure (GEM) .....	83
Appendix B: Permission Letter to Translate and Adapt Coaching and Rewarding Emotional Skills (CARES) .....	84
Appendix C: CARES-T (T) Teacher Activity Instructions .....	85
Appendix D: Eastern Mediterranean University Psychology Department’s Ethics Committee Approval Letter .....	90

## LIST OF TABLES

Table 2.1: Summary of CARES-T (T) Program .....	38
Table 3.1: Pre- and Post- CARES-T (T) Reliability Scores .....	44
Table 3.2: Summary of Descriptive Statistics .....	56

## LIST OF FIGURES

Figure 3.1: Paper and Pencil Emotion Recognition Task Interaction Effects .....	47
Figure 3.2: Emotion Recognition Computer Task Interaction Effect .....	48
Figure 3.3: ECBI Problem Subscale Interaction Effect .....	50
Figure 3.4: Teacher's ICU Uncaring Subscale Interaction Effect .....	54

## LIST OF ABBREVIATIONS AND SYMBOLS

ADHD	Attention Deficit Hyperactivity Disorder
ANOVA	Analysis of variance
ASD	Autism Spectrum Disorder
C	Control group
CARES	Coaching and Rewarding Emotional Skills
CARES-T (T)	Coaching and Rewarding Emotional Skills for Teachers (Turkish)
CD	Conduct Disorder
CDI	Child Directed Interaction
CU	Callous-unemotional
E	Experimental group
ECBI	Eyberg Child Behaviour Inventory
ELC	Emotional Literacy in the Classroom
EMU-PDRAM	Eastern Mediterranean University - Psychological Counseling, Guidance and Research Center
<i>F</i>	F-ratio
GEM	Griffith Empathy Measure
ICU	Inventory of Callous-Unemotional Traits
<i>M</i>	Mean
ms	Milliseconds
<i>p</i>	Probability
PATHS	Promoting Alternative Thinking Strategies
PCIT	Parent-Child Interaction Therapy

PDI	Parent Directed Interaction
PMT	Parent Management Training
<i>SD</i>	Standard deviation
SESBI-R	Sutter-Eyberg Student Behaviour Inventory - Revised
SPSS	Statistical Product and Service Solutions
T1	Scale score pre-CARES-T (T)
T2	Scale score post-CARES-T (T)
Triple-P	Positive Parenting Program
UK	United Kingdom
USA	United States of America
$\alpha$	Alpha

# Chapter 1

## INTRODUCTION

Emotions play an important role from birth to death as they enable individuals to sustain and facilitate relationships with others. An imperative function of emotions is that they allow individuals to communicate with others through both verbal and non-verbal language (Sroufe, 1997). Not only is this crucial for interpersonal relationships but it aids individuals to adapt and survive. For both verbal and non-verbal language allows people to gain information about their environment. For example when a person in close proximity displays a facial expression of fear, it provides others with the information that danger may be close by. Information about the environment that individuals gain through emotional expression and this may not just benefit adaptation and survival but also guide people's behaviours through their own and others emotional expression. When one feels happy this may act as a reinforcer of behaviour they have performed or likewise when another person smiles it indicates that something good has happened.

### **1.1 Theories of Emotional Development**

The ability to express and understand emotions is not a skill that humans are born with, but instead it is something that begins to develop from birth. Researchers believe that emotional development begins from birth through early attachments with the objects and people around them (Greenspan & Greenspan, 1985). Greenspan and Greenspan (1985) suggested that emotional development occurs in stages which are outlined below. They proposed that these stages begin in the first three months of life

where infants begin to have interest in the world through sensory information that they receive from their environment. They also begin to develop the ability to regulate their feelings and sooth themselves. By seven months old infants begin to develop an interest in humans and start to display emotions through smiling (also known as the social smile), hugging and making noises. Evolutionists argue that these interactions are functional in that they are attractive expressions which encourage the caregiver to interact with their child and strengthen the child-caregiver attachment (Messinger & Fogel, 2007). At ten months old infants, begin to be able to communicate with those around them by displaying behaviours that let others know what they want or need which furthermore strengthens the child-caregiver attachment (Greenspan & Greenspan, 1985). This develops further and as the infant gets closer to the 18 month mark, infants become able to integrate physical behaviour with their emotions by being able to specifically show others what they want. Between eighteen and thirty-six months children begin to create emotional ideas and they can now replace ideas with actions and discuss how they are feeling (Brazelton & Greenspan, 2000). However, it is believed that not all individuals are successful in completing this stage and some struggle to talk or identify their own or others feelings throughout adulthood (Greenspan & Greenspan, 1985). Instead of talking about their feelings these people project their emotions through actions and behaviours which are often believed to be maladaptive. The final stage of Greenspan's theory occurs between the ages of thirty and forty-eight months where they begin to develop the ability to distinguish reality from fantasy. They also learn to go further than just labelling emotions by being able to link them with their context.

Although Greenspan's Model of Infant and Young Child Emotional Progress is very influential in the field of emotional development, cross-cultural differences are believed to be an important factor for consideration. Attachment theorist Mary Ainsworth (1967) found that in regards to the forming of specific attachments, whereby infants begin to show preference to a certain person, develops at different ages in different cultures. Ainsworth found that for Ugandan infants this occurs at 6 months of age, whereas Schaffer and Emerson (1964) found that this occurred a month later in Scottish infants.

However, although the process of emotional development can be argued to vary according to culture, facial expressions which are used to display emotions are believed to be universal (Ekman, 1994; Elfenbein & Ambady, 2002). Similarly, Izard (2007) agreed that each feeling has a unique facial expression. He suggested that for each facial expression different muscles in the face are stimulated which causes different physiological responses causing the individual to become aware of the emotion they are experiencing. For example, when muscles used to frown when activated indicate to the individual that they are unhappy. Izard (2007) theorized that there are six basic emotions (decreased from his original list of 10) that consist of interest, enjoyment (happiness), sadness, anger, disgust and fear. He proposed that interest, disgust and happiness are emotions which develop from birth within the first few months. Following these other emotions become functional during infancy, with pain, sadness, anger and fear often beginning to develop around the four month mark. Although Izard's original list of emotions also included surprise, contempt, shame and guilt he now refers to these as emotional schemas which depend on the social environment and reactions of others. Of these; shame, shyness and self-



awareness were thought to develop between six and eight months, followed by contempt and guilt which Izard argued developed during the second year of life.

Despite the fact that for Izard (2007) emotional development seems to stop or at least develop in a less consistent way after the age of two, during the preschool years emotional development matures through more social based activities. During the second year of life children's emotional development starts to become more socially obvious as they start to have interpersonal relationships with others (Lagattuta, Wellman, & Flavell, 1997). Although they are yet to be able to regulate their own emotions they may behave in a way to bring about an emotional response from others. As language develops more rapidly, during the third year of life, children's play becomes less independent and more co-operative. Some argue that it is during this year that emotion regulation begins as the child starts to learn through modelling and social learning how they should control their feelings. During the fourth year children become able to express their emotions verbally, begin to be able to identify common emotions and describe situations in which certain emotions may be felt. Finally during the fifth and sixth year children begin to be able to discriminate their minds from their bodies, they begin to understand themselves as being internal and how they differ from others in ways beyond being visible (Inagaki & Hatano, 1993).

## **1.2 Emotional Literacy**

An important component of emotional development is the development of emotional literacy. Emotional literacy is a term that was developed in the 1970's by humanist psychologists and is understood to be the "ability to recognise, understand, handle, and appropriately express emotions" (Sharp, 2001, p.8). 'Emotional literacy' has often been debated to possess the same meaning as 'emotional intelligence' which was developed by Salovey and Mayer (1989) and today the use of the two

terms are mainly accepted as being interchangeable (Sharp, 2001). Emotional intelligence consistent with emotional development is also believed to develop through stages; however these are less sequential as children acquire emotional literacy at different rates.

Emotional literacy is a skill which begins to develop in early childhood and starts with the ability to recognise emotions through facial expressions. Although literature suggests that at as young as 5 months old, infants can discriminate between different facial expressions, their understanding of their meaning and context within the first two years of life is found to be fairly rudimentary (Caron, Caron, & MacLean, 1988; LaBarera, Izard, Vietze & Parisi, 1976; Nelson, 1987). However by the age of three, children begin to recognise and identify different emotions through facial expressions, starting with surprise, sadness and happiness (Boyatzis, Chazan & Ting, 1993; Pons, Harris & Rosnay, 2004). This ability provides the basis for emotional literacy for without being able to identify emotions from social and environmental cues, one would be unable to know how another is feeling. Therefore they would be unable to develop the subsequent skills of which emotional literacy consists. Sequentially at around the age of three and four children begin to understand the context of emotions, and therefore become able to anticipate what others may feel (Pons, Harris & Rosnay, 2004). As children get older and closer to the age of five they begin to contemplate how people's emotions are related to their desires and beliefs thus why different individuals may feel different emotions regarding the same situation. However, it is not until the age of six and seven that children begin to be able to regulate or control their emotions through behaviour and communication.

### **1.3 The Role of Caregivers in Emotional Literacy**

Although the development of emotional literacy is something that developmental theorists thus far describe as being an ability that children acquire through their environment, the people around them play a critical role in this. The most important figures in the development of emotional literacy are children's parents or primary caregivers. Most studies conducted regarding parent-child interactions and attachment mainly study the mother-child relationship. However the term 'caregiver' is often used interchangeably. A 'caregiver' refers to the primary individual who attends to a child's needs, which is usually considered to be the child's parents. For children whose parents are not the individuals who primarily attend to their needs, substitutes who fill this role such as foster parents, or other family members are considered their 'caregiver'.

#### **1.3.1 Theories of Attachment**

One important caregiver-child domain for the development of emotional literacy is the social and emotional relationship between the parent and child. This is believed to be linked to the type of attachment that children have with their caregivers. Bowlby (1969), identified attachment as an emotional tie which joint infants to their caregivers. Bowlby attempted to categorize different types if attachment which he identified through a child's reaction to being separated from their caregiver (separation distress), their reaction to being reunited with their caregiver (greeting reactions) and their use of their caregiver as a secure base during exploration (secure-base behaviour). Based on Bowlby's hypothesis, Ainsworth, Blehar, Walters and Wall (1978) categorized four attachment types (secure, anxious-resistant insecure, anxious-avoidant insecure and disorganized/disoriented). Children with secure attachments were recognized as using their caregiver as a secure base for exploration,

showing distress when separated from their caregiver, but being comforted on their return. Children with anxious-resistant insecure attachments, rarely use their caregiver as a secure base as they continuously seek close proximity. When separated from their caregiver, the anxious-resistant child is recognized by becoming upset and behaving ambivalently on their caregiver's return. For children with anxious-avoidant insecure attachments exploration is seldom and often ignores or avoids their caregiver. When separated they show no distress and either ignore or avoid the caregiver on their return. Finally children with disorganized-disoriented attachments are recognized through their mixed or inconsistent behaviours, for example approaching their caregiver with their back turned. These children may behave in ways that suggest both avoidance and ignoring behaviours whilst in some cases may also seek comfort from their caregiver.

In terms of emotional literacy development the child-caregiver attachment is an influential component. Children with secure attachments have been shown to respond more positively to the interaction of their caregivers and initiate interactions more frequently (Ashiabi, 2000). One explanation for this is the way that parents with securely attached children respond to their child's behaviour through consistently attempting to help the child maintain a positive affect by comforting and soothing the child (Denham, 1998). They also give importance to and tolerate negative emotions expressed by their offspring by behaving in a concerned manner when their child is in distress. This not only allows children to learn how to differentiate between different emotions, but is one method of informing the child through social cues, which emotions are appropriate in which situations. Additionally, it was found that management of strong emotions such as anger and frustration at 2 years old is predicted by the degree of synchronicity between mothers and their children at 10

months old (Schoore, 1999). On the other hand children with insecure attachments display more negative emotions by behaving in a hostile way or ignoring their caregiver in order to maintain proximity (Ashiabi, 2000). Similarly, this could be related to the responses of the caregiver. It is possible that parents of children with insecure attachments behave in a more punitive manner towards their children's emotional expressions (Denham, 1998). By ignoring or responding negatively to their child's emotional expressions they fail to provide their child with the adequate information required to enhance their emotional literacy skills. These theories have been supported and findings suggest that children with parents that are punitive or respond more negatively to their child's emotions display more aggression and negative affect in early childhood compared to parents who are warm and responsive to emotions who's children become more emotionally and socially competent (Davidov & Grusec, 2006; Denham, Mitchell-Copeland, Strandberg, Auerbach & Blair, 1997; Morris, Silk, Steinberg, Myers & Robinson, 2007; Ramsden & Hubbard, 2002).

### **1.3.2 Theories of Social Learning**

Child-caregiver attachment, although a vital aspect of the development of emotional literacy, it is not sufficient enough alone to be the only way in which parents influence its development. One substantial way that parents scaffold the development of emotional literacy is through social learning theory. Social learning theory was developed by Bandura in 1978 and has been an influential theory in the field of child development. His theory was based on studies which produced results that indicated that preschoolers acquire new behaviours through observing the behaviours of others or through direct experience (also known as modelling). In regards to emotional development, for young children one of their most prominent

models are their caregivers. Social Learning Theory would suggest that when parents express emotions, it provides their children through observation with the opportunity to gain information about the nature of different emotions and how and in what situations they are expressed (Denham, Zoller, & Chouchoud, 1994). They then internalize these observations and reproduce them, thus children having a style of emotional expression which reflect their parents. The information that parents provide regarding emotion expression is important for emotional literacy development as it teaches children how to differentiate between different emotions, and in which contexts they or others may experience them. For children with responsive parents who express emotions this can be extremely beneficial and provide many learning opportunities (Davidov & Grusec, 2006; Denham, Zoller, & Chouchoud, 1994). For example, preschoolers with parents who displayed prosocial responses also showed a higher frequency of prosocial responses than children with less prosocial parents (Mitchell-Copeland & Denham, 1997). Furthermore, children with more well balanced and generally positive parents not only were found to be more emotionally competent than others but also have a better understanding of emotions and were better able to maintain a positive affect. However, for children with unresponsive parents, they provide very few situations where their children can gain information about emotions and successfully model adaptive emotional expression (Davidov & Grusec, 2006; Denham et al., 1994). Parents who are punitive or discourage emotional expression prevent children from self-reflecting and thus processing emotions, resulting in an obstacle for the development of emotional literacy by restricting children from learning how to decode and analyse emotions (Mitchell-Copeland & Denham, 1997). In support of this, research has shown that children with parents who generally have a more negative affect have children who

are less emotionally and socially competent and are less successful in their social relationships in the preschool environment. Additionally, children with parents who are less responsive and sympathetic also mirror these characteristics (Davidov & Grusec, 2006). Literature has demonstrated that this can influence children in several different domains. Children of mothers with depression are known to be less able to effectively manage emotions and develop less emotion regulation strategies (Silk, Shaw, Skuban, Oland & Kovacs, 2006). Similarly, those with parents who had high levels of negative affect, especially anger, had children with poor strategies for emotion regulation, displayed more negative affect and aggression and had lower levels of empathy (Ashiabi, 2000; Denham et al., 1994).

### **1.3.3 Social and Emotional Coaching**

Despite the importance of parents in the development of their children's emotional literacy in terms of modelling, there are other ways in which caregivers significantly contribute to emotional literacy development. One crucial factor to consider is the parent's role as an emotion coach for their child. In this respect the concept 'coach' refers to instructing or tutoring in order to contribute to performance improvement and skill development (Parsloe, 1999). In parent-child coaching it is important that parents stay diligent by being aware, accepting and providing instructions on how their child should manage their emotions (Ramsden & Hubbard, 2002). It has been agreed by researchers that the most optimal emotion coaches are not only more attentive to their child's emotions but help negotiate them in different ways whilst aiding in the regulation of how their child experiences them. Literature suggests that parents who discuss emotions and nurture their children's ability to discuss their feelings allow children to express emotions in the most optimal way (Denham, 1998). The behavioural and emotional reactions of a caregiver also teach

children what situations merit emotional expression and what behaviours are appropriate when different feelings are experienced. One of the most important things that caregivers can do regarding coaching their children's emotional literacy is by reinforcing children's emotional responses, helping children to cope with strong emotions while maintaining a positive affect and treating all children's emotional expressions as worthy (Denham, 1998). One reason for the degree of importance of coaching is that through discussion, not only does it teach children about the context of emotions, allow for negotiation about emotion and provides an opportunity for reflection but it also socializes children about emotional language. An important part of being able to identify and understand emotions is the ability to label them, which advances as the child's vocabulary expands (Morris et al., 2007; Denham, 1998). This is optimized by the caregiver's communication style as by using direct instructions and commands regarding emotions allows for the socialization of emotional language. Mothers who spend more time discussing emotions with their children and spontaneously illustrate an adaptive use of emotions have children who have better emotional understanding and higher emotional literacy (Denham et al., 1994; Dunn, Brown, Slomkowski, Tesla, & Youngblade, 1991). One explanation for this is that, when mothers draw focus to emotion filled information it attracts the child's attention which is reinforced through the production of their own thoughts and feelings (e.g. guilt). In further support of the coaching concept, Gottman, Katz, and Hooven (1996) found that children with parents who acted as emotion coaches were better at emotional regulation from early into middle childhood. These children were also found to have a lower rate of negative interactions with their peers, display less aggression, have fewer behavioural problems and were more socially and emotionally competent (Gottman, Katz, & Hooven, 1996; Mitchell-Copeland &



Denham, 1997; Mize & Pettit, 1997). Although in many cases parents playing the role of emotion coach has a positive effect on emotional literacy development, those who are not effective in the coaching of their children may result in low understanding and the development of maladaptive strategies for dealing and expressing emotions (Mitchell-Copeland & Denham, 1997). Poor emotion coaches tend to be more punitive by ignoring, denying or attempting to divert their children's attention away from the emotions they are experiencing. When children receive misleading or contradictory information about emotions not only does it affect their understanding but can result in dysfunctional emotional and behavioural responses. For example, it was found that children who had parents who were poor emotion coaches were likely to respond more aggressively and display more anger. This is a result of misunderstanding certain situations such as not being able to distinguish intentional behaviour from accidental (Ramsden & Hubbard, 2002; von Salisch, 2001).

## **1.4 The Role of Teachers in Emotional Literacy**

Coaching and modelling as discussed are important factors in the development of emotional literacy. However it is not caregivers alone that can provide scaffolds for the development of emotional literacy. Day-care, nursery and preschool teachers also contribute to the development of emotional literacy and can further aid in its development via attachment style, modelling and coaching techniques.

### **1.4.1 Teacher-Child Attachment**

In the preschool environment in the absence of their parents, children's teachers substitute the role of their parents and provide a secure base for exploration. In light of this it is fair to say that children form attachments to their teachers as they become the main individual who responds to their needs (Shields, Dickstein, Seifer, Giusti,

Magee, & Spritz, 2001). Therefore, the enhancement of emotional literacy development through parent-child attachment is reflected to the teacher-child relationship. Howes and Ritchie (1999) proposed four different teacher-child attachment styles similar to those of parent-child attachment styles (secure, avoidant, resistant and near secure). Studies show that children who form a secure attachment to their teacher are better able to maintain a positive affect, have better emotion regulation and display fewer behavioural problems (Mitchell-Copeland, Denham, & DeMulder, 1997). Furthermore, preschool children who have close relationships with their teachers are believed to be more socially competent in their interpersonal relationships and display more prosocial behaviours (Howes & Ritchie, 1999; Mitchell-Copeland, Denham, & DeMulder, 1997).

#### **1.4.2 Teachers as Models**

Teachers can also contribute to the development of emotional literacy by like parents partaking in the role of model in regards to emotional expression. Children can learn about emotions from observing and modelling the emotional expression of teachers who must provide good examples of healthy and adaptive forms of communication and prosocial behaviour (Jennings & Greenberg, 2009). Although literature is scarce on the importance of the teachers role as a model, educational activities such as story-telling (Wentzel, 2002; Zeidner, Roberts, & Matthews, 2002) can enable children to think about how characters have behaved and the consequences of their actions, which is extremely important for reinforcing adaptive emotional responses. Another way that children learn through modelling in the preschool environment is by observing their peers interactions with teachers and other children (Zeidner, Roberts & Matthews, 2002). Therefore it is extremely

important that teachers maintain a positive affect and consistently display effective emotional expression when interacting with each individual child.

### **1.4.3 Teachers as Emotion Coaches**

Modelling and the teacher-child relationship, as important as they are for emotional literacy development, one of the most influential roles that the teacher can participate in is coaching. Preschool life is full of social activities and situations full of emotional expression, therefore teachers may often have rich and more frequent opportunities to act as emotion coach in comparison to children's parents. One way that teachers can take advantage of this is by coaching children through emotional situations using direct instructions (Zeidner et al., 2002). By using direct instructions as a method of communication, it ensures that the information regarding emotions is distinct and unambiguous. It is important that teachers coach children in wide domains of emotional literacy including emotion recognition, emotion context, emotion regulation and how to analyse situations from different perspectives. It is also important that as the role of coach, teachers take the opportunity of using the interactions between children and their peers as learning opportunities. The preschool environment provides the opportunity for teachers to educate children on sharing, co-operation, negotiating and dealing with powerful emotions that preschool children regularly experience such as anger and frustration (Zeidner et al., 2002; Shields et al., 2001; Izard, King, Trentacosta, Morgan, Laurenceau, Krauthamer-Ewing, & Finlon, 2008). Additionally, the classroom environment provides the ideal moments for discussion and reflection on activities and events happening within the social context. For example the use of characters in stories, or conflict between peers. This allows children to decode, analyse and receive guidance regarding emotion rich information from emotional experiences both individually and in collaboration with

teachers and peers. Emotion coaching from teachers enhances children's ability to label their own and others emotions whilst simultaneously promoting empathy (Bierman, Nix, Greenberg, Blair, & Domitovich, 2008). Discussions with children on the topic of emotions and through daily occurrences in the classroom, aid children in learning new emotion related words and how to use them. It encourages children to talk about their feelings and with the guidance of teachers enables them to use their words to problem solve and resolve conflict instead of using more maladaptive behaviours like aggression (Ahn, 2005a; Denham & Bassett, 2012). This has also been supported by literature which emphasizes that teachers with a high level of emotional coaching were better able to manage their classroom and experienced less aggression within the class (Jennings & Greenberg, 2009; Ulloa, Evans, & Parkes, 2010). However, Ahn (2005b) argues that teachers often fail to validate negative emotions that children display and focus too much on positive emotions through reinforcement.

### **1.5 The Importance of Emotional Literacy**

Thus far it has been determined that emotional literacy development begins in the preschools years and is greatly dependent on the roles of individuals such as teachers and parents who interact with the child. However, the importance of the development of emotional literacy must be considered to understand the value of these roles. Well-developed emotional literacy skills can make a positive impact on several different domains in life, the most obvious being socio-emotional effects. One of the largest interactions is the relationship between emotional literacy and empathy. Empathy is an affective response which relies on the ability to apprehend and comprehend another person's emotional condition or state (Batson, 1991). It could most certainly be suggested that without emotional literacy it would be an impossible task to either

comprehend or apprehend another person's emotional state. This is because if one is unable to identify emotions (a major part of emotional literacy) they would be unable to understand or predict what another is feeling. However, those who are able to empathize in turn have the ability to better identify and understand emotions such as shyness and aggression (Findlay, Girardi, & Coplan, 2006). Furthermore, the ability to express and comprehend emotions in addition to being able to understand others perspectives strongly predicts empathy (Roberts & Strayer, 1996).

Being able to display empathy and demonstrate emotional literacy can have a major impact on children's social achievement. One explanation for this is that children with better emotional understanding have more advanced social skills (Shields et al., 2001). Better developed social skills such as problem solving are positively correlated with popularity and peer acceptance (Warden & Mackinnon, 2003). This could be in result of the relationship between emotion knowledge and social skills. Preschool children with a developed knowledge of emotions have greater social skills due to their advanced verbal ability regarding emotions and negotiation thus leading to greater peer acceptance (Mostow, Izard, Fine, & Trentacosta, 2002). In addition other social skills such as the ability to defuse negative emotions and substitute negative emotions with positive ones are strongly correlated to peer acceptance (Young & Zeman, 2006). Furthermore, children with better emotional ability skills are viewed as being better play partners, more fun and are more successful in reaching their social goals (Ashiabi, 2000). This relationship between emotional literacy and social achievement although begins to develop in early childhood, it is an affiliation that has long-term consequences. Five year olds who were better able to interpret facial expressions displayed higher social

performance and better child-teacher relationships four years later (Elfenbein, Marsh, & Ambady, 2002).

Apart from emotional literacy and the development of empathy being important for social skills, peer acceptance is also related to children's adjustment ability (Gresham, Cook, Crews, & Kern, 2004). Ladd, Kochenderfer and Coleman, (1997) found that five and six year old children who had better school adjustment had higher levels of peer acceptance than those who were poorer at adjusting. Social and personal adjustment mainly relies on one's ability to sustain, initiate and facilitate significant interpersonal relationships. In order to do this and adequately adjust, one must know the appropriate way to respond which would be impossible if they do not understand how one is feeling or how certain behaviours or responses may make one feel. For this vicarious emotional responding, or empathizing is crucial. It is suggested that children who are more advanced in emotional literacy are more likely to successfully adjust to school than those who are not. Children with less developed emotional literacy skills are more at risk of difficulties when beginning preschool (Lonigan, Burgess, & Anthony, 2000; Miller, Gouley, Seifer, Dickstein, & Shields, 2004; Raver, 2002; Zeman, Cassano, Perry-Parrish, & Stegall, 2006). Furthermore preschool children who were better at identifying emotions, understanding how and when different contexts evoke different emotions and perspective taking were better at adjusting to preschool than those without (Shields et al., 2001).

Furthermore, children who use maladaptive strategies in response to their or others emotions are also more likely to have adjustment issues (Zeman, Cassano, Perry-Parrish & Stegall, 2006). Maladaptive behaviour is another domain which is closely related to emotional literacy and is linked to positive adaptive behaviours. Children with higher emotional literacy skills respond more positively than those

without (Izard et al., 2008; Shields et al., 2001). Studies show that children's social outcomes like peer relationships and school success at age seven was predicted by their ability to empathise and recognise emotions such as pain between two and four years old (Kochanska, Koenig, Barry, Kim, & Yoon, 2010). Additionally, these children are better able to adapt to pressure and their environmental limitations (Zeidner et al., 2002). One explanation for this is that children who are more skilled in recognizing, predicting and reflecting on emotions are better able to cope using adaptive strategies than those who lack these skills (Saarni, 1999). Children who are unable to correctly identify their own and other's feelings are more likely to respond using maladaptive behaviours such as aggression (Dodge, 1986; Hastings, Zahn-Waxler, Robinson, Usher, & Bridges, 2000).

The most obvious ways that children can display positive adaptive behaviours is through prosocial behaviours such as kindness and helping. Research has shown that children with better developed emotional literacy display more prosocial behaviours (Findlay, Girardi, & Coplan, 2006). These children are also better able to understand emotions, display empathy and are more aware of their peer's emotions (Roberts & Strayer, 1996; Strayer & Roberts, 2004; Warden & Mackinnon, 2003). Additionally, it is argued that children who are better at perspective taking (the ability to imagine what other people may be thinking and feeling) are more helpful in the classroom and are more likely to obey requests from their preschool teacher (Eisenberg-Berg & Lennon, 1980; Litvack-Miller, McDougall, & Romney, 1997). Ensor and Hughes, (2005) found that children's understanding of emotions at three and a half years of age predicted their frequency of prosocial behaviours one year later, and this continues into adulthood (Eisenberg, Guthrie, Murphy, Shepard, Cumberland, & Carlo, 1999). Furthermore, children with high emotional literacy are found to have

better relationships with their peers, be more emotionally competent and are rated as being more likeable (Denham, Blair, DeMulder, Levitas, Sawyer, Auerbach-Major, & Queenan, 2003; Izard, Ackerman, Schoff, & Fine, 2000). One explanation for this is that children who can identify facial expressions and understand the emotions that they connote, learn which behaviours elicit which emotions in different situations (Denham, Blair, DeMulder, Levitas, Sawyer, Auerbach-Major, & Queenan, 2003). Therefore, they are better able to comfort individuals who seem sad, or perform behaviours that make others happy.

Correspondingly, emotional literacy does not just relate to the increase of prosocial behaviours but also the decrease of antisocial ones such as anger and aggression (Findlay et al., 2006; Kam, Greenberg, & Walls, 2003). Literature demonstrates that children who are better able to understand the emotions of their own and others show less aggressive behaviour and are less socially withdrawn. When children are able to comprehend the consequences (both social and emotional) of their actions, they are less likely to respond in a physically aggressive manner. This is also argued to be a long-term characteristic as Hastings, Zahn-Waxler, Robinson, Usher and Bridges, (2000) found that children who exhibited more concern for others, reported to display less disruptive behaviours 2 years later. Furthermore, studies have shown that at age three a child's emotional knowledge predicted aggression and anger 1 to 2 years later. This can be accounted for by theories that conclude how children with high levels of aggression often have deficits in identifying and encoding emotion-related information, which often leads to the misinterpretation of social situations (Crick & Dodge, 1996). These children are thought to misunderstand social feedback from individuals around them and seem to have a hostile bias towards interactions. Another theory is that aggressive children



although are able to identify and understand emotions, fail to react to those of others (Shechtman, 2003).

However, the relationship between emotional literacy and aggression is complex. It has also been suggested that high emotional literacy does not mean a reduction of aggression in all circumstances. In some situations for example when emotional intelligence is high but empathy is low, children tend to use aggression more instrumentally (Björkqvist, Österman, & Kaukiainen, 2000).

### **1.6 Non-Typically Developing Emotional Literacy**

Apart from the increase in aggression that may be effected by deficits in emotional literacy development there are several populations of children whose emotional development may be influenced by other factors. One population who is effected by poor emotional literacy is children who suffer from Attention-Deficit Hyperactivity Disorder (ADHD) (Fonseca, Segquier, Santos, Poinso, & Deruelle, 2009; Pelc, Kornreich, Foisy, & Dan, 2006). These children are known to have difficulties in coding and recognizing facial expressions especially anger and sadness. This population of children who continue to have these difficulties into adulthood also have less emotional awareness than typically developing individuals. One explanation for this is that children with ADHD have issues beyond understanding emotions through emotional expression, but they also fail to understand the context of emotions (Fonseca, Segquier, Santos, Poinso, & Deruelle, 2009). Even with no indication of how one is feeling through physical features children with ADHD are less successful in being able to predict how an individual may feel in certain contexts. These issues are also related to the consequential interpersonal obstacles that people with ADHD often suffer from.

Similarly to ADHD children with Autism Spectrum Disorder (ASD) also have emotional literacy development issues. Individuals with ASD are less successful in recognizing emotions such as anger and fear, even though when presented with such stimulus they often mirror the facial expression (Clark, Winkielman, & McIntosh, 2008; Rump, Giovannelli, Minshew, & Strauss, 2009; Wright, Clarke, Jordan, Young, Clarke, Miles, Nation, Clarke, & Williams, 2008). As well as having difficulty in recognising facial expressions, children with ASD also lack in empathy skills, in particular perspective taking (Schwenck, Mergenthaler, Keller, Zech, Salehi, Taurines, Romanos, Schecklmann, Schneider, Warnke, & Freitag, 2012). However, these skills are able to improve with age, which had provided a basis for research into how different therapeutic techniques can aid in the development of these skills.

Another population of children with effected emotional literacy development are children with behavioural problems such as Conduct Disorder (CD). Individuals with CD have a lower sensitivity towards hostile facial expressions such as anger and have difficulty recognising disgust and sadness. This deficiency increases in correlation to the presence of callous-unemotional (CU) traits (Fairchild, Stobbe, van Goozen, Calder, & Goodyer, 2010). CU characteristics are traits such as having no remorse, lack of empathy and deceitfulness (Woodworth & Waschbusch, 2007). Children with the highest level of CU traits not only have the lowest rate of emotion recognition accuracy but also display the highest level of antisocial behaviour and violence (Centifanti, 2009; Dadds, Perry, Hawes, Merz, Riddell, Haines, Solak, & Abeygunawardane, 2006). This may well be related to the fact that children with CU traits have a difficulty in recognizing fear as well as having a delayed or less sensitive fear response making them less likely to consider negative consequences

(Fairchild, Stobbe, van Goozen, Calder, & Goodyer, 2010). However like with ASD, numerous therapeutic techniques have been developed for CD and for children with CU traits in order to try to improve emotional literacy and reduce problem behaviours (Kimonis & Armstrong, 2012).

## **1.7 Intervention and Prevention**

Several diverse programs have been developed in effort to reduce problem behaviours related to deficiencies in emotional development and enhance emotional literacy development.

### **1.7.1 Parent Intervention Programs**

Different programs have been developed to suit different circumstances, but many focus on the importance of the parent-child relationship and the involved interactions. One program developed by Eyberg in the 1970's is Parent-Child Interaction Therapy (PCIT) which aims at teaching parents how to communicate with their children in order to build a better relationship. PCIT is an empirically supported treatment developed in particular for young children (2-12 years) with disruptive behaviours (Funderburk & Eyberg, 2011). It is a manualized structured intervention used to teach parents various ways of interacting with their child through play situations (Lyon & Budd, 2005). Parents are coached by therapists over two stages of therapy; Child-Directed Interaction (CDI) and Parent-Directed Interaction (PDI).

CDI aims to create or strengthen the relationship between the parent and child which is mutually rewarding by teaching the parents several skills which should be used in a play time where the activities are led by the child (McNeil, Eyberg, Eisenstadt, Newcomb, & Funderburk, 1991). These skills include things such as labelled praise, reflecting the child's behaviour and emotions, imitation of the child and behavioural descriptions. After CDI has been completed and the skills have been

mastered the family move onto the PDI stage. The PDI stage aims to increase prosocial behaviours and decrease antisocial behaviours by teaching parents how to use discipline through consistent consequences by rewarding compliance and punishing non-compliance (McNeil, Eyberg, Eisenstadt, Newcomb, & Funderburk, 1991). In PDI parents lead the activity and are taught to give effective commands which are clear, specific, direct, phrased positively, are developmentally appropriate and given one at a time.

Much research has been conducted on PCIT and it has been shown to be effective at reducing behavioural problems in children with disruptive behavioural disorders (Gallagher, 2003). Not only is this therapy beneficial in helping parents to maintain control over their emotions whilst interacting with their child, but also enhances the child's emotion regulation by providing parents with the skills to discuss and negotiate emotions and reactivity (Hembree-Kigin & McNeil, 1995). Literature shows that children who received PCIT displayed less problem behaviours, increased compliance and had a higher self-esteem whilst parents experienced lower stress and higher levels of confidence up to 6 years after participating in the program (Hood & Eyberg, 2003).

Although this evidence based therapy has mainly been aimed at populations of children with neurodevelopmental and behavioural disorders, in recent times research has been rapidly expanding on the application and adaptation of PCIT for different populations including children with ASD, CD, PCIT in the school environment and group based PCIT to mention a few.

Another program similar to PCIT is Parent Management Training (PMT) which was developed by Kazdin in 1997 for 2-17 year olds and uses operant conditioning to educate parents how to interact with their children (Pearl, 2009). PMT teaches skills

to parents which are to be used in daily interactions. It teaches children language, social skills, problem solving skills and helps them to be more competent. This is all done in an emotionally supportive context. Research shows PMT to have a high success rate and reduces emotional and behavioural problems. It is also argued that participants of this program increase the use of emotional references and interactions (Salmon, Dadds, Allen, & Hawe, 2009). After PMT children expressed less delinquency, non-compliance, aggression and loneliness at school. Parents also reported feeling more competent and having less parental stress.

In addition to these intervention programs is the Positive Parenting Program (Triple-P) developed by Sanders in 1999, which is designed for at risk families with children between birth and 16 years old. It has 5 different levels depending on the degree of severity of the problems (Pearl, 2009). The first level is known as Universal Triple-P and offers caregivers information through media sources like newsletters and videos. The second level known as Selected Triple-P is a one-off short session for parents to talk to professionals to gain brief parenting advice. The third level is the Primary Care level which is more narrowly focused and aims at teaching parents new skills to use for overcoming their problems. The fourth level is a longer intervention for more serious but still sub-clinical issues which is known as Standard Triple-P. Finally Level 5 or Enhanced Triple-P is an intensive family intervention for when there are serious problems with multiple sources of conflict. Literature shows that Triple-P can provide gains such as an improvement in parental warmth and self-efficacy with decreased parental hostility and stress (Sanders, 2003). It also is successful in teaching parents effective coping strategies for dealing with different emotions such as anger and depression. For children it is suggested to improve social and emotional competence and regulation and decrease negative child

behaviours like extreme tantrums, opposition and aggression. More importantly it reduces the risk of serious emotional and behavioural problems.

### **1.7.2 Prevention Programs with Teachers**

Considering the important roles of teachers in emotional development such programs are not believed to be successful with parents alone, but are also effective within the school context. Many different in-school programs have been established in order to enable the development of emotional literacy. Ulutaş and Ömeroğlu, (2007) provided a 12 week training program in schools for preschool children to help aid their emotional development including activities such as facial recognition and storytelling. Their activities involved teaching emotional recognition and understanding and how to deal with emotions. Several activities were also designed to increase empathy and social skills. They found that children who attended the emotional intelligence program had a significant increase in emotional intelligence and empathy in comparison to a control group. The participants also showed significant improvements in facial emotion recognition and understanding.

One of the largest curriculum based prevention programs which has been implemented since 2000 and continues in the Unites States of America (USA) today, is Promoting Alternative Thinking Strategies (PATHS) which has also been employed in the United Kingdom (UK) (Domitrovich, Cortes, & Greenberg, 2007). Although designed for children of school ages it has also been adapted for preschool children. The preschool version of PATHS provides 9 months of weekly activities that teaches children about emotions, self-control and problem solving strategies through activities such as pictures, stories and other projects. Studies show that after experiencing PATHS children were reported to have higher emotional skills and knowledge, were more socially competent both at school and at home, and were less

socially withdrawn when the school year ended (Bierman, Domitrovich, Nix, Gest, Welsh, Greenberg, Blair, Nelson & Gill, 2008). Children's ability to identify emotions and development of emotional vocabulary, emotional understanding, problem solving and social skills also increased.

Another more recent curriculum based prevention program which has been used in several countries including the USA and UK is the Emotional Literacy in the Classroom (ELC) program (Brackett & Rivers, 2008). This program began implementation in 2009 and is designed for children of different ages and focuses on teaching five particular emotion related skills; identifying, labelling, understanding, expressing and regulating. During ELC teachers and children focus on different emotion words and participate in activities and projects which involve the use of the emotion related word. Research shows that children who participate in the ELC program benefit from an increase in social competence and academic performance (Brackett, Rivers, Reyes, & Salovey, 2012).

## **1.8 The Current Study**

The present study focuses on a parent-child program called Coaching and Rewarding Emotional Skills (CARES; Kimonis & Hunt, n.d.). CARES is a program which is designed for parents to teach their children about recognising and understanding emotions through a series of activities and homework, such as identifying emotions and their context using stories and pictures. The programme consists of 6 weeks of activities (e.g. stories and pictures) which teach children about how to recognise emotions through facial expressions, in which contexts different emotions are felt and how to deal with emotions such as anger, sadness and excitement. In the first and last week of the CARES program children's facial and emotion recognition abilities are measured through two computer tasks and one

paper-pencil emotion recognition activity. The children's behavioural characteristics and ability to empathise are measured using questionnaires given to parents. As CARES has yet to be published and remains a work in progress unfortunately there has yet to be any literature discussing its effects. For the purpose of this study the CARES program was translated and adapted for the use of nursery teachers and their classes in preschools. The aim of this study was to explore whether the CARES program is effective in increasing children's emotional understanding, compliance and prosocial behaviours when applied by nursery school teachers in preschools. It was hypothesized that the application of the CARES program by teachers in a preschool should result in an increase in children's emotion recognition and understanding in addition to increasing compliance and prosocial behaviours.



## Chapter 2

### METHOD

For the purpose of the current study, the CARES program was adapted and applied in a preschool. Teachers in addition to parents were also requested to provide information about the emotional and behavioural characteristics of each child.

#### 2.1 Participants

Convenience sampling was used to select participants for the present study who were selected from a local preschool were approached and were invited to participate in six-week emotional education program. Two classes of a total of 32 children were selected according to their age groups including 22 males and 10 females. All participants were either Turkish Cypriot or Turkish Nationals living in Northern Cyprus and they were all native Turkish speakers. The participants ages ranged from 35.36 to 57.75 months and the mean age was 35.36 months ( $SD = 5.48$ ). Informed consent was obtained from the preschool director, the teachers and the participant's parents or guardians. One class was chosen randomly to be allocated to the control condition and the other was assigned to the experimental condition.

The control group consisted of 9 males and 6 females with a mean age of 46.40 months ( $SD = 6.97$ ). During the six-week experimental period 60% dropped out leaving 4 females and 7 males. Their parents had a mean age of 35.31 years ( $SD = 8.06$ ). The class was instructed by 2 female preschool teachers who participated by aiding in the assessment of the participants. The participants in the control group had

attended the same preschool and had been acquainted with their teachers for a mean number of 1046.67 hours ( $SD = 1427.15$ ).

The experimental group consisted of 13 males and 4 females with a mean age of 45.32 months ( $SD = 3.84$ ). Their parents had a mean age of 33.43 years ( $SD = 5.57$ ). The experimental group also involved two female preschool teachers who both participated in the program and aided the assessment process. The participants in the experimental group had attended the same preschool and had been acquainted with their teachers for a mean number of 2717.65 hours ( $SD = 1474.70$ ). An independent samples t-test was conducted to investigate the difference in duration of teacher-child acquaintance and although the experimental group had significantly more hours,  $t(27) = 3.045$ ,  $p = 0.005$ , the current study's hypothesis was not directly related to this.

## **2.2 Materials**

### **2.2.1 Child Measures**

*Paper and Pencil Emotion Recognition Task.* One method used to measure the participants emotion recognition abilities was the Paper and Pencil Emotion Recognition Task (developed by Kimonis) whereby each participant was presented with paper based examples of six different emotions; happiness, sadness, disgust, anger, surprise and fear. They were then presented with 24 different paper photos of 2 male and 2 female adults with different facial expressions in a random order. After each picture was displayed the participants were asked, "What emotion does this man/woman feel?". The participants were requested to select which emotion they thought best described the feeling in the picture. Scoring was obtained by summing the total correct answers. Mean scores were also produced for each emotion. The task required approximately 5 minutes to complete.

*Emotional Pictures Dot Probe Task (Loney, 2003).* It has been assumed that individuals invest more attention in emotion eliciting stimulus **that** neutral ones in particular negative emotions (Öhman, 1993). In order to implicitly assess children's emotional reactivity, children's attentional bias in response to emotional cues was measured through the exposure to different pictures. This was completed via a Millisecond computer task (designed in the Inquisit computer program) where both neutral and emotion eliciting images were presented. Neutral photos consisted of photos such as a spoon or an umbrella, and emotion eliciting photos were divided into positive categories such as puppies and kittens and negative categories such as crying children. The task began with a picture of a cartoon mouse which appeared in the centre of the screen for 500 milliseconds (ms) followed by a 750ms pair of photos above and below the centre point. Following this a cartoon picture of cheese appeared either in replacement of the top or bottom photograph. The participants were asked to help the mouse find the cheese by identifying its position by pressing one of two buttons on the computer keyboard; one corresponding to the top of the screen and the other to the bottom. The same process was repeated a total of 32 times (approximately 10 minutes) and was divided into four blocks of 8 pairs of photos. The first block was not scored as it was considered a practice block. Accuracy of position identification and reaction times for the duration it required for participants to respond after the photo pairs were presented was recorded. Time scores less than 100ms and more than 5000ms were considered incorrect as it would imply that the participant was not paying attention to the task.

*Emotion Recognition Computer Task (Blair, Colledge, Murray, & Mitchell, 2001).* An additional task used to assess the emotion recognition abilities of the participants was the Emotion Recognition Computer Task (designed in E-Prime

Version 2.0). Before beginning the task the children were presented with cartoon paper presentations of four different emotions in the form of smiley faces; happiness, sadness, anger and fear. They were told that they would see a series of photos of people with different emotions on the computer screen and were requested to either point to (from the cartoon faces) or verbalize the emotion which they saw. Photos appeared in black and white of adult males and females with different emotional expressions which were presented for 1000ms. The participant's answer was indicated via the experimenter pressing one of four computer keys which were allocated to different emotions. The task required approximately 10 minutes to complete and scoring was obtained through total correct responses. Mean scores for each emotion were also calculated.

### **2.2.2 Parent Measures**

*Demographics.* Parents were requested to complete a 17 item questionnaire requesting demographic information regarding their child and their family. Information was collected regarding their child's age and gender. Parental details for each parent such as age, marital status, employment status and educational background was also collected.

*Eyberg Child Behaviour Inventory (ECBI; Eyberg, 1974).* The ECBI was used to obtain information from parents regarding their children's behavioural problems. For the purpose of the current study the ECBI was translated into Turkish and back translated by the Eastern Mediterranean University Psychological Counseling, Guidance and Research Center (EMU-PDRAM). The inventory consists of 36 items, each of which is divided into two subscales; Intensity and Problem. A sample statement which was used to measure behaviour problems is, "Gets angry when doesn't get own way". For the Intensity subscale parents were asked to rate how true

each statement was for their child on a 7-point scale from *never* (1) to *always* (7). For the Problem subscale for the same items parents was asked whether they believed the statement to be a problem behaviour and were requested to answer either *yes* or *no*. Scoring was obtained for the Intensity subscale by calculating the score for each statement. For the Problem subscale the total number of statements where parents answered *yes* was calculated. In order for these scores to be standardized they were then converted into the corresponding *t*-score provided by Eyberg (1990). The ECBI exhibits strong internal consistency with the Problem subscale providing a Cronbach's  $\alpha = 0.91$  and the Intensity subscale  $\alpha = 0.93$  (Eyberg, 1990).

*Griffith Empathy Measure (GEM; Dadds, Hunter, Hawes, Frost, Vassallo, Bunn, Merz, & Masry, 2008)*. In order to assess participants ability to empathize the GEM was translated into Turkish (EMU-PDRAM) and given to parents to complete. The scale entails 23 statements regarding their children's awareness and responses to other's emotions. The GEM consists of two subscales; the Cognitive subscale which assesses children's awareness and understanding of emotions and the Affective subscale which measures children's emotional responses. Statements such as, "When I get sad my child doesn't seem to notice" (reverse item) comprised the Cognitive subscale whereas statements such as, "My child acts happy when another person is acting happy" are part of the Affective subscale. Each statement was rated by parents on a 9-point Likert scale from *strongly disagree* (-4) to *strongly agree* (+4) according to the extent in which parents agreed them to be true. In order for the scale to be scored, reverse items were recoded so that mean scores for the scale as a whole and the two subscales could be calculated. The GEM has presented good internal consistency, Cronbach's  $\alpha = 0.81$  for the full scale,  $\alpha = 0.62$  for the Cognitive subscale and  $\alpha = 0.83$  for the Affective subscale (Dadds et al., 2008).

*Inventory of Callous-Unemotional Traits (ICU; Frick, 2004)*. For the purpose of identifying whether participants displayed any callous-unemotional traits the parent version of the Preschool-ICU was implemented. The same questions were given to both parents and teachers. The scale consists of 24 statements (translated into Turkish by EMU-PDRAM) regarding children's behaviour, expression of and response to emotion. The ICU contains three subscales; Unemotional subscale, Uncaring subscale and Callous subscale. The Unemotional subscale assesses children's emotional expression through statements such as, "Hides his/her feelings from others". The Uncaring subscale investigates the degree to which children care about the consequences of their own behaviours for example, "Always tries his/her best" (reverse item). The Callous subscale attempts to identify callous traits such as, "Does not care who he/she hurts to when what he/she wants". Parents were requested to complete the scale by scoring how applicable each statement is to their child via a 4-point Likert scale from *not true at all* (0), to *definitely true* (3). Scoring required the appropriate items to be reversed to enable the mean scores of the full scale and subscale to be calculated. Although there is no manual for ICU to describe specific scoring methods Cronbach's  $\alpha = 0.81$  for the full scale,  $\alpha = 0.81$  for the Uncaring subscale,  $\alpha = 0.53$  for the Unemotional subscale and  $\alpha = 0.80$  for the Callous subscale have shown solid internal consistency (Kimonis, Frick, Skeem, Marsee, Cruise, Munoz, Aucoin, & Morris, 2008).

### **2.2.3 Teacher Measures**

*Sutter-Eyberg Student Behaviour Inventory-Revised (SESBI-R; Eyberg & Pincus, 1999)*. The SESBI-R (translated into Turkish by EMU-PDRAM) was given to the participant's preschool teachers to complete with regard to measuring their behavioural problems. The inventory is composed of 38 statements which are

divided into two subscale; Intensity and Problem. An example statement is, “When given difficult tasks, he/she acts angrily”. For the intensity subscale teachers were asked to rate how true each statement was for every child on a 7-point Likert scale from *never* (1) to *always* (7). For the problem subscale they were asked how much each statement was a problem for them and were required to answer either *yes* or *no*. In order to score the Intensity scale, the score for each statement was calculated to produce a raw total score. For the Problem subscale the total number of statements where teachers answered *yes* was calculated. In order for these raw scores to be standardized they were then converted into the corresponding T-score provided by Eyberg and Pincus, (1999). The SESBI-R exhibits strong internal consistency with the Problem subscale  $\alpha = 0.96$  and the Intensity subscale  $\alpha = 0.98$  (Eyberg 1992).

*Griffith Empathy Measure (GEM; Dadds et al., 2008)*. In order to assess the participants empathy levels and with the authorization of the authors (Appendix A), the GEM was adapted for the use of teachers and translated into Turkish (EMU-PDRAM). The teacher adaptation used the same statements as the original GEM however the term *my child* was replaced with a blank space. Blank spaces were created for the teacher to enter the child’s name in order to ensure that the teacher focuses and considers each individual child when completing the scale. The scale entails 23 statements regarding children’s awareness and responses to other’s emotions. The GEM contains two subscales; Cognitive and Affective. The Cognitive subscale measures children’s attentiveness and contemplation of emotions and the Affective subscale assesses children’s affective responses. An example of a Cognitive subscale item is, “It’s hard for \_\_\_\_\_ to understand why someone else gets upset” (reverse item). The Affective subscale includes items such as, “\_\_\_\_\_ gets upset when he/she sees another child being punished for being

naughty”. Teachers were asked to rate each statement on a 9-point Likert scale from *strongly disagree* (-4) to *strongly agree* (+4) according to degree to which each statement was true. To enable mean scores for the full scale and the two subscales to be calculated, reverse items were recoded and the scores were calculated by totalling the rating of each statement.

*Inventory of Callous-Unemotional Traits (ICU; Frick, 2004).* In order to identify whether participants displayed any callous-unemotional traits teachers were asked to complete the same ICU as parents (See Parent Measures). Studies using the ICU Teacher version show good internal consistency Cronbach’s  $\alpha = 0.93$  (full scale),  $\alpha = 0.86$  (unemotional subscale),  $\alpha = 0.88$  (uncaring subscale) and  $\alpha = 0.81$  (callous subscale) (Ezpeleta, de la Osa, Granero, Penelo, & Domènech, 2012).

*CARES Materials. CARES Manual.* The CARES manual provides a step by step guide of the CARES program progresses and gives specific instructions regarding how each activity should be presented including specific phrases and questions that should be asked. The CARES manual with permission from the authors (Appendix B) was translated into Turkish (by EMU-PDRAM) and adapted for the use of preschool teachers in the classroom environment (CARES-T (T)) (for the English version of instructions, see Appendix C).

*Reward System.* A reward system was used during the CARES in order to reinforce participation and maintain motivation within the classroom. The reward system in the original CARES manual is used in every session, but for CARES-T (T) it was only used on the last day of each week in order for the children not to be desensitized to the reinforcement, The token system consisted on a set of four cards with animal pictures on them for each participant. One card was earned at a time and was given in response to positive or participatory behaviours. Once a total of four



cards had been earned the participants were allowed to choose a gift which were made up of plastic animals, bead-activities and plasticine, from a box referred to as the Surprise Box.

### **2.3 Procedure**

The initial step in being able to begin the current project required obtaining ethical approval from the Eastern Mediterranean University Psychology Department's Ethics Committee (Appendix D). On the attainment of authorisation, a local preschool was visited whereby verbal and written consent was granted to complete the study. After consent was also obtained from the parents and guardians of the participants and the associate preschool teachers the CARES program was translated into Turkish (by EMU-PDRAM) and adapted for the use of preschool teachers (CARES-T (T)). A summary of the CARES-T (T) program is displayed in Table 2.1. The first week of the program consisted of data collection. Parents and teachers (of both the control and experimental conditions) were asked to complete the GEM, ICU and ECBI (SESBI-R for teachers). All of the participating children were also assessed using the Paper and Pencil Emotion Recognition Task, the Emotion Recognition Computer Task and the Emotional Pictures Dot Probe Task. The order of these tasks was counterbalanced in order to eliminate order effects. In addition to data collection, during the first week of CARES-T (T) program the preschool teachers from the experimental group participated in a 2 hour workshop where they were educated on the aims and format of the program. They were given a theoretical background regarding the program, an overview of its progression and information about the role they would play. It was emphasized to the teachers the importance of their role as emotion coach. For the present study the concept of emotion coach was used and understood as, nurturing children's emotional and social skills through

discussion, instruction and by providing appropriate emotionally expressive models. The teachers were explained that being an emotion coach included responsibilities such as verbally labelling and modelling emotions and drawing attention to their own and other's emotions by using and creating opportunities to implement the new skills taught during the CARES-T (T) activities consistently within the classroom environment. Examples of how the newly learnt skills could be used in the natural classroom environment were given such as, when a child's parent comes to collect them saying, "Look Mehmet is smiling because he is happy that his mother has come". These skills were also practiced through role playing different scenarios. It was decided that the control group teachers and the rest of teachers from the school would not be included in this training in order to ensure that they would not behave in a bias manner or use the examples and skills taught in their own classrooms or school setting.

The experimental group teachers were also taught about the token reward system which was used on the last day of every week during the CARES-T (T) activity. The reward system was used to both aids in the maintenance of attention within the class and to reinforce involvement. Children were told about the classroom rules during the activities such as participating to the best of their ability and remaining quiet when necessary. They were told that in order to earn the cards they were required to comply with the rules. Children who collected a total of four cards were allowed to choose a small reward out of the Surprise Box. Preschool teachers were also asked both during activities and throughout their daily activities to consistently praise the children for their responses whether correct or not, in order to reinforce participation and maintain motivation.

Table 2.1. Summary of CARES-T (T) Program

Week	Subject Matter	Activities
Week 1	Data collection	<p>Child Measures:            Paper and Pencil Emotion Recognition Task            The Emotion Recognition Computer Task            Emotional Pictures Dot Probe Task</p> <p>Parent Measures:            ECBI            GEM            ICU</p> <p>Teacher Measures:            SESBI-R            GEM            ICU</p>
Week 2	Identifying emotions	<p>Learning to Recognize Facial Expressions            Feelings Flash Card Game            Emotions Collage</p>
Week 3	Identifying emotions	<p>Learning to Recognize Facial Expressions            Feelings Flash Card Game            Blank-Face Activity</p>
Week 4	The context of emotions	<p>Learning to Recognise Facial Expressions            Feelings Flash Card Game            Situations Based Activity            Just For Me Stories</p>
Week 5	Dealing with negative emotions	<p>Learning to Recognise Facial Expressions            Feelings Flash Card Game            Stop-Breathe-Think Activity</p>
Week 6	Review and data collection	<p>Child Measures:            Paper and Pencil Emotion Recognition Task            The Emotion Recognition Computer Task            Emotional Pictures Dot Probe Task</p> <p>Parent Measures:            ECBI            GEM            ICU</p> <p>Teacher Measures:            SESBI-R            GEM            ICU</p>

Remaining preschool teacher training regarding the CARES-T (T) activities and what was required on behalf of the teachers was conducted on a weekly basis and was refreshed before every activity. Teachers were also coached during the activities and throughout their other daily activities in order for them to become accustomed and experienced in how to coach the children.

During the second week of CARES-T (T) program the class activities for the experimental group began on a daily basis for approximately an hour every morning. The first week of activities began with teaching and coaching children about how to recognize emotions through facial expressions. The first activity began with the Learning to Recognize Facial Expressions Activity. During this activity children were shown different pictures of facial expressions and were asked “What feeling is this?” for every picture. Teachers then described the facial expressions and explained why they were related to which emotion for example, “This child is happy see how his mouth is turned up and the outside of his eyes are pinched”. This activity was spread out over two days with the first day presenting happiness and sadness and the second day fear, surprise and anger. On the third day the children participated in the Feelings Flash Card Game where children took turns in choosing a card with a photo of a child on it. The photos included children displaying different emotions such as happiness, sadness, anger, fear and surprise. After selecting a card the children were asked to label the emotion for example “What is this child feeling?”. The next day’s activity was to create an Emotion Collage. Photos of people were cut out of magazines and children were told to make a collage from the pictures. Whilst the children were completing this task teachers rotated around the classroom asking each child to label the emotions which they had used. On the fifth day the Feelings Flash

Card Game was repeated however as it was the last day of the week the reward system was also introduced.

The third week of CARES-T (T) continued with teaching the children how to identify and recognize emotions. The first day began with a review of the Learning to Recognize Facial Expressions Activity, however this activity varied slightly from the previous week as all the emotions were included in a random order opposed to in blocks. This was also repeated as an activity on the third day. On the second day the children repeated the Feelings Flash Card Game however on this occasion they were asked to choose a card and using a mirror create the same facial expression whilst the other children tried to guess the emotion. To make it more enjoyable music was also introduced. Whilst the music played the children passed around the cards and when the music stopped the child holding the card was asked to mirror the expression on the card while the other children guessed. The children were told, “We will pass around this container while music plays. When the music stops, whoever is holding the container will pick a card. Don’t let anyone see it. Then using the mirror you will make the same feeling as the child on the card and see if anyone can guess what the feeling is”. For the fourth day of the week’s activity the children completed the Blank-Face Activity. For this activity there was a blank face at the front of the class with different cut-out facial features for different expressions. The teacher whispered to each child in turn which emotion they should create using the cut-outs and the other children were required to guess which emotion had been created. On the fifth day for the reward session the Feelings Flash Card Game was repeated without music. Again the children used a mirror to imitate the facial expression on the card.

The fourth week introduced the context of emotions and aimed to help the children to understand when people feel which emotions. To aid with this process

two stories (one about helping and another about a child who doesn't get his own way) were introduced. The two stories were read throughout the week on alternate days before the CARES-T (T) activities. After the stories, class reflection through discussion occurred about what they had read.

The first day's activity started with a review of the Learning to Recognize Facial Expressions Activity. On the second and fourth day the children participated in the Feelings Flash Card Game. Once again this was played without music and with a mirror. When each child had produced the emotion in the mirror and the other children had guessed, they were asked to describe a time when they had felt that particular emotion. On the third and fifth day the children engaged in the Situation Based Activity. For this activity the children were shown cartoon scenarios of different situations, for example a father playing with his son, or a girl with a broken toy. For each situation the class was asked, "What will the character in this situation feel" and, "Why will they feel this emotion?". After each answer, whether correct or incorrect the principle behind the emotion was given, for example the teacher would say, "When someone does something bad or mean to you on purpose (etc.), then you feel angry". On the fifth day the same activity was completed with the reward system.

The fifth week was the last week of CARES-T (T) activities which aimed to teach children how to deal with negative or powerful emotions. It began with the Learning to Recognize Facial Expressions Activity, however for the purpose of this week only negative emotions were presented. This activity also included a discussion about what could be done in order to help people calm down when they are experiencing such emotions. The second day repeated the Feelings Flash Card Game once again with children being asked to describe a time when they had felt that particular

emotion. For the third day children were shown a poster displaying the words *Stop-Breathe-Think* and were taught that when they get angry in order to make better decisions and express their emotions more adaptively they should stop, take a deep breath and think about what they are and should be doing. A story demonstrating the use of this was also read to the children. The children were then requested to role-play the *Stop-Breathe-Think* solution. The children were then shown different cartoon scenarios of children either behaving appropriately (e.g. playing together) or behaving inappropriately (e.g. fighting). For this exercise after each scenario the children were asked to identify whether the behaviour was good or bad. If the behaviour was considered bad then the children were asked what behaviour they should do instead, providing the opportunity to repeat the *Stop-Breathe-Think* solution. On the fourth day the Feelings Flash Card Game was repeated as earlier in the week. On the fifth day the *Stop-Breathe-Think* story was re-read to the children followed by role-playing and the *Stop-Breathe-Think* scenarios. The token system was included in the activity.

The sixth and final week consisted of a review of what had been learned which occurred on the first day with a brief recap of the Learning to Recognize Emotions Activity, the Situation Based Activity and the *Stop-Breathe-Think* scenarios. Furthermore the class held a discussion about what they had learned over the past four weeks. The following days entailed data collection whereby the children were once again assessed using the Paper and Pencil Emotion Recognition Task, the Emotion Recognition Computer Task and the Emotional Pictures Dot Probe Task. Parents and teachers were once again asked to complete the ICU, GEM and ECBI or SESBI-R. To control for any confounding variables due to teaching methods or education style the control group was also measured using the same instruments.

When data collection was completed it was input and analysed by the Statistical Product and Service Solutions (SPSS) computer program.



## Chapter 3

### RESULTS

The data collected was analysed in SPSS (Version 20) and the assumptions of homogeneity of variance and normality were completed for each scale. Each scale's reliability was examined both pre (T1) and post (T2) CARES-T (T). Table 3.1 summarizes the scale's reliability scores. In order to assess differences between the experimental group (E) who participated in the CARES-T (T) and control group (C), a 2 (group: E vs. C) x 2 (time: T1 vs. T2) mixed ANOVA with repeated measures on

Table 3.1. Pre- and Post- CARES-T (T) Reliability Scores

	Cronbach's Alpha	
	Pre	Post
Paper and Pencil Emotion Recognition Task	.656	.689
Emotional Pictures Dot Probe Task		
Accuracy	.835	.859
Reaction Time	.901	.931
Emotion Recognition Computer Task		
Accuracy	.742	.768
Reaction Time	.837	.814
ECBI		
Intensity	.954	.959
Problem	.962	.966
GEM (Parent)	.895	.882
ICU (Parent)	.868	.801
Unemotional	.656	.748
Uncaring	.748	.580
Callous	.803	.730
SESBI-R		
Intensity	.970	.987
Problem	.944	.968
GEM (Teacher)	.913	.944
ICU (Teacher)	.949	.922
Unemotional	.787	.634
Uncaring	.918	.885
Callous	.888	.916

the last factor subject analysis of variance (ANOVA) was conducted for each measure with a significance level of  $p < 0.05$ . For each ANOVA the between-subjects factors were the experimental condition and the within-subjects factor were the results of the measures or task at T1 and T2. The mean and standard deviation was calculated for the E and C scores for both T1 and T2 which are displayed in Table 3.2.

### 3.1 Child measures

The Paper and Pencil Emotion Recognition Task was conducted to examine whether after receiving CARES-T (T) the participant's ability to recognize emotions through facial expressions increased.

A significant main effect of group was found,  $F(1, 22) = 4.12$ ,  $p = 0.053$ , partial eta squared = 0.160, with E ( $M = 11.67$ ,  $SD = 0.73$ ) scoring higher than C ( $M = 9.22$ ,  $SD = 0.94$ ). The main effect examining time was also found to be significant,  $F(1, 22) = 14.38$ ,  $p = 0.001$ , partial eta squared = 0.395, showing scores at T2 ( $M = 12.13$ ,  $SD = 3.75$ ) were higher than at T1 ( $M = 9.38$ ,  $SD = 3.09$ ). An interaction effect was also found for group and time,  $F(1, 22) = 5.65$ ,  $p = 0.027$ , partial eta squared = .204. Simple effects analysis of the interaction effect showed that at T2 E ( $M = 13.60$ ,  $SD = 2.97$ ) scored significantly higher than C ( $M = 9.67$ ,  $SD = 3.742$ ). Furthermore there was a significant increase in scores for the experimental group T2 ( $M = 13.60$ ,  $SD = 2.97$ ) in comparison to T1 ( $M = 9.73$ ,  $SD = 2.96$ ). An illustration of the interaction effect is displayed in Figure 3.1.

Emotional Pictures Dot Probe Task was another task conducted to investigate how CARES-T (T) affected participant's attentional bias towards emotions.

There was no significant main effect for group accuracy scores,  $F(1, 22) = 0.012$ ,  $p = 0.913$ , partial eta squared = 0.001. However, a main effect was found for time,  $F$

Table 3.2. Summary of Descriptive Statistics

	Experimental Group				Control Group			
	Pre		Post		Pre		Post	
	<i>M</i>	<i>SD</i>	<i>M</i>	<i>SD</i>	<i>M</i>	<i>SD</i>	<i>M</i>	<i>SD</i>
Paper and Pencil Emotion Recognition Task	9.73	2.96	13.60	2.97	8.78	3.38	9.67	3.74
Emotional Pictures Dot Probe Task								
Accuracy	14.93	6.61	16.73	5.61	14.11	3.79	18.00	4.85
Reaction Time	2578.18	792.14	2270.86	893.89	1867.66	579.38	2099.44	773.14
Emotion Recognition Computer Task								
Accuracy	1.79	.52	2.50	.63	1.48	.60	1.77	.67
Reaction Time	5310.70	2463.48	6229.64	3789.16	3709.44	1373.22	3657.00	2068.75
ECBI								
Intensity	56.67	13.23	52.17	12.04	49.71	7.30	51.43	10.05
Problem	74.00	8.54	22.33	5.69	53.00	9.20	11.60	8.96
GEM (Parent)	5.84	.59	5.87	.85	5.74	2.10	6.24	1.52
ICU (Parent)	.97	.30	1.15	.22	1.03	.41	.99	.46
Unemotional	1.07	.41	1.30	.47	.77	.31	.89	.61
Uncaring	1.26	.29	1.37	.38	1.39	.64	1.32	.61
Callous	.72	.51	.96	.43	.89	.53	.75	.51
SESBI-R								
Intensity	50.47	9.57	48.94	10.55	47.55	5.20	45.00	7.07
Problem	46.29	6.88	45.53	6.96	45.20	2.88	45.20	7.45
GEM (Teacher)	5.18	1.00	4.99	.98	5.88	1.37	5.81	1.37
ICU (Teacher)	1.47	.53	1.32	.51	1.20	.62	1.17	.37
Unemotional	1.25	.31	1.55	.53	1.44	.37	1.50	.52
Uncaring	2.03	.63	1.84	.69	1.63	.64	1.81	.41
Callous	1.20	.70	.89	.54	.84	.65	.60	.29

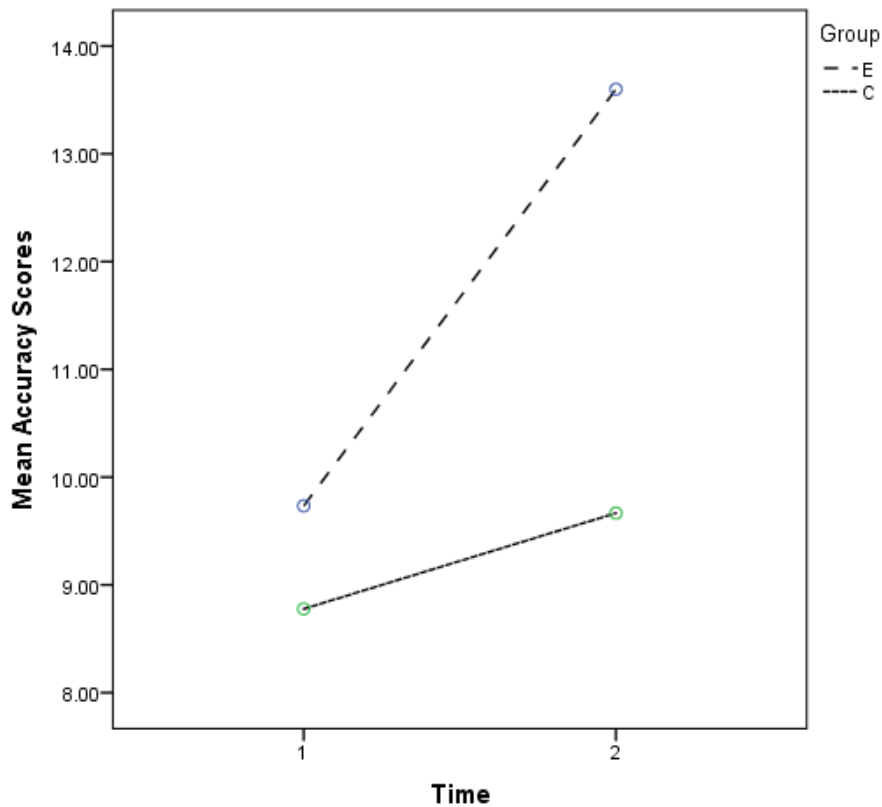


Figure 3.1. Paper and Pencil Emotion Recognition Task Interaction Effect

(1, 22), = 5.52,  $p = 0.028$ , partial eta squared = 0.033, suggesting that scores at T2 ( $M = 17.21$ ,  $SD = 5.27$ ) were higher than T1 ( $M = 14.63$ ,  $SD = 5.63$ ). No significant interaction effect was found for group and time,  $F(1, 22) = 0.75$ ,  $p = 0.398$ , partial eta squared = 0.201.

For reaction time no significant main effect was found for group,  $F(1, 22) = 2.142$ ,  $p = 0.157$ , partial eta squared = 0.089, or time,  $F(1, 22) = 0.071$ ,  $p = 0.792$ , partial eta squared = 0.003. No significant interaction effect for group and time was found for reaction time,  $F(1, 22) = 3.62$ ,  $p = 0.070$ , partial eta squared = 0.141.

The Emotion Recognition Computer Task was also conducted to study what effects CARES-T (T) might have on the participant's emotion recognition abilities.

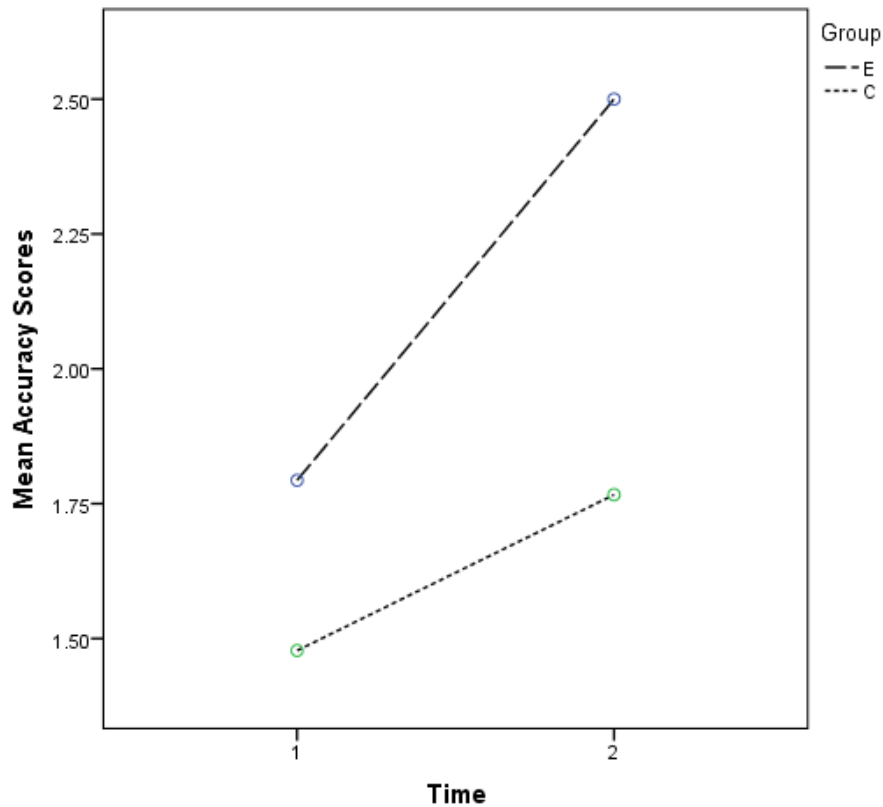


Figure 3.2. Emotion Recognition Computer Task Interaction Effect

A main effect was found to be significant in terms of accuracy for time,  $F(1, 22) = 33.17, p = 0.000$ , partial eta squared = .601, with higher scores at T2 ( $M = 2.23, SD = 0.73$ ) than T1 ( $M = 1.68, SD = 0.56$ ). A main effect was also found for group,  $F(1, 22) = 4.91, p = 0.037$ , partial eta squared = 0.183, with E ( $M = 2.15, SD = 0.15$ ) scoring higher than C ( $M = 1.62, SD = 0.19$ ). In addition to this, an interaction effect was found for group and time,  $F(1, 22) = 5.84, p = 0.024$ , partial eta squared = 0.210, with simple effects analysis suggesting showing that the scores at T2 for E ( $M = 2.50, SD = 0.63$ ) and C ( $M = 1.77, SD = 0.67$ ) were significantly higher than E ( $M = 1.79, SD = 0.51$ ) and C's scores at T1 ( $M = 1.48, SD = 0.60$ ). Furthermore at T2, E ( $M = 2.50, SD = 0.63$ ) scored significantly higher than C ( $M = 1.77, SD = 0.67$ ). This

suggests that although all participants improved, E's improvement was greater than C's. An illustration of the interaction effect is displayed in Figure 3.2.

When reaction time was analysed there was no significant main effect for time,  $F(1, 22) = .62, p = 0.440$ , partial eta squared = 0.027, suggesting that overall the participants did not respond significantly faster between T1 and T2. A main effect was found for group,  $F(1, 22) = 4.15, p = .054$ , partial eta squared = 0.159, showing that C ( $M = 3683.22, SD = 810.42$ ) responded faster than E ( $M = 5770.17, SD = 627.75$ ). An interaction effect for time and group,  $F(1, 22) = .78, p = 0.388$ , partial eta squared = 0.034, was not found symbolizing that the CARES-T (T) program had no effect on reaction time.

### **3.2 Parent Measures**

In order to understand whether the education from the CARES-T (T) program resulted in any improvements in behaviour the ECBI was completed by parents.

As there was a large difference between group scores for the Problem subscale at T1, an independent samples t-test was conducted in order to examine whether there was a significant difference between parent's opinions of the extent to which they believed their child's behaviour to be a problem. There was no significant group differences between scores T1 and T2,  $t(25) = 0.771, p = 0.448$ .

The ANOVA showed a main effect for time was found to be significant for the degree to which parents believed behaviours to be a problem,  $F(1,6) = 377.87, p = 0.000$ , partial eta squared = 0.984. This suggests that parents believed their children's behaviours to be less of a problem at T2 ( $M = 15.63, SD = 9.27$ ) than T1 ( $M = 60.87, SD = 13.69$ ). A main effect was also found for group,  $F(1,6) = 7.65, p = 0.033$ , partial eta squared = 0.560 suggesting that E's ( $M = 48.17, SD = 4.54$ )

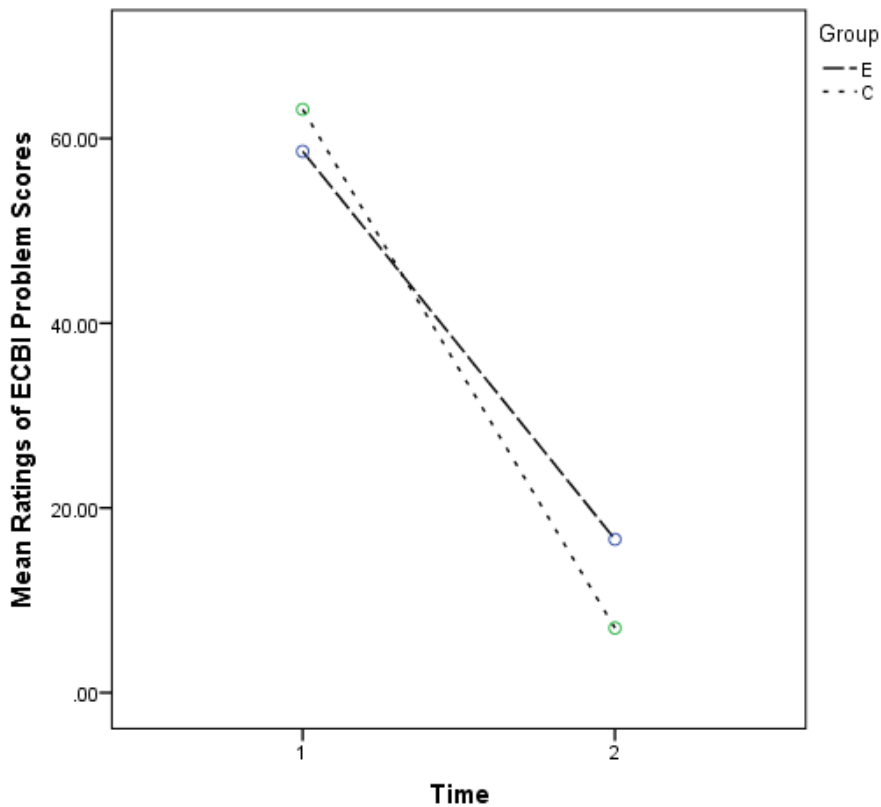


Figure 3.3. ECBI Problem Subscale Interaction Effect

parents found their children’s behaviour to be significantly more of a problem than C’s ( $M = 32.30$ ,  $SD = 3.51$ ) parents. A marginally significant interaction effect was found for group and time,  $F(1, 6) = 4.6$ ,  $p = 0.076$ , partial eta squared = 0.434. Simple effects analysis showed that E scored significantly higher T1 ( $M = 74.00$ ,  $SD = 8.54$ ) compared to T2 ( $M = 53.00$ ,  $SD = 9.19$ ). Additionally, C also scored significantly higher T1 ( $M = 22.33$ ,  $SD = 5.69$ ) compared to T2 ( $M = 11.60$ ,  $SD = 8.96$ ). An illustration of the interaction effect is displayed in Figure 3.3.

There was also a large difference between group scores at T1 for the Intensity subscale therefore an independent samples t-test was also conducted in order to examine whether there was a significant difference in parent’s opinions of their

child's negative behaviour intensities. There was no significant group differences between scores T1 and T2,  $t(25) = 0.651, p = 0.521$ .

The ANOVA showed no main effect for group,  $F(1, 11) = 0.45, p = 0.516$ , eta partial squared = 0.039 or time,  $F(1, 11) = .73, p = 0.412$ , partial eta squared = 0.062. A non-significant interaction effect was found for group and time,  $F(1, 11) = 3.62, p = 0.084$ , partial eta squared = 0.248.

The parent's GEM scores were analysed to explore how the participant's empathy levels differed over time.

The ANOVA produced no main effects for group,  $F(1, 11) = 0.3, p = 0.866$ , partial eta squared = 0.003, or for time,  $F(1, 11) = 1.47, p = 0.250$ , partial eta squared = 0.118. This means that there were no overall differences between E ( $M = 134.64, SD = 13.01$ ) and C's ( $M = 137.71, SD = 12.04$ ) empathy levels and no overall significant difference in scores between T1 ( $M = 60.87, SD = 13.69$ ) and T2 ( $M = 15.63, SD = 9.27$ ). Furthermore no interaction effects were found,  $F(1, 11) = 1.15, p = 0.306$ , partial eta squared = 0.095, suggesting that the CARES-T (T) had no effect on empathy scores.

ICU scores were obtained from parents to inspect the presence of participant's callous, unemotional and uncaring behaviours.

The total ICU scale produced no main effects for group,  $F(1, 11) = 0.57, p = 0.816$ , partial eta squared = 0.005, or for time,  $F(1, 11) = 0.93, p = 0.355$ , partial eta squared = 0.078. This suggests that there was no overall significant difference between E ( $M = 1.06, SD = 0.14$ ) and C ( $M = 1.01, SD = 0.13$ ) or between T1 ( $M = 1.06, SD = 0.35$ ) and T2 ( $M = 1.07, SD = 0.36$ ). There was also no interaction effect for group and time,  $F(1, 11) = 2.12, p = 0.174$ , partial eta squared = 0.161, implying that CARES-T (T) has no overall impact on callous-unemotional behaviours.



However the Unemotional subscale did produce a marginally significant main effect for time,  $F(1, 11) = 3.76, p = 0.079$ , partial eta squared = 0.255, suggesting unemotional behaviours decreased between T1 ( $M = 0.97, SD = 0.38$ ) and T2 ( $M = 1.08, SD = 0.57$ ). No main effect for group was found,  $F(1, 11) = 2.13, p = 0.173$ , partial eta squared = 0.162 and no interaction effect for group and time was also found,  $F(1, 11) = 0.23, p = 0.520$ , partial eta squared = 0.039. This suggests that CARES-T (T) had no impact on unemotional behaviours.

The Uncaring subscale failed to produce a main effect for time,  $F(1, 11) = 0.07, p = 0.802$ , partial eta squared = 0.006, and also for group, Uncaring,  $F(1, 11) = 2.13, p = 0.890$ , partial eta squared = 0.002. No interaction effect was found for group and time,  $F(1, 11) = 1.30, p = 0.279$ , partial eta squared = 0.105. This suggests that CARES-T (T) has no significant effect on uncaring behaviours.

The Callous subscale found no main effects for time,  $F(1, 11) = 0.11, p = 0.746$ , partial eta squared = 0.010, or group  $F(1, 11) = 0.12, p = 0.916$ , partial eta squared = 0.001. No interaction effect was found for group and time,  $F(1, 11) = 0.11, p = 0.746$ , partial eta squared = 0.133. This suggests that CARES-T (T) had no impact on callous trait behaviours.

### **3.3 Teacher Measures**

Participant's negative behaviours were measured by teachers using the SESBI-R. The behaviours were measured on two scales; the intensity of behaviours and the extent to which teachers considered them to be a problem.

For the Problem subscale no main effect was found for group,  $F(1, 26) = 0.13, p = 0.725$ , partial eta squared = 0.004, or time,  $F(1, 26) = 0.14, p = 0.714$ , partial eta squared = 0.005. Therefore there was no significant difference in the degree to which teachers believed their students' behaviour to be a problem throughout the

experimental period and between conditions. There was also no significant interaction effect,  $F(1, 26) = 0.14$ ,  $p = 0.714$ , partial eta squared = 0.005, suggesting that the CARES-T (T) program did not affect teacher's opinions about how much of a problem they believed their students negative behaviours to be.

In regards to the Intensity subscale, a main effect was found for time,  $F(1, 26) = 4.77$ ,  $p = 0.038$ , partial eta squared = 0.155. This suggests that overall, at T2 ( $M = 47.39$ ,  $SD = 9.40$ ) the participants had significantly lower ratings of negative behaviour intensity in comparison to T1 ( $M = 49.32$ ,  $SD = 7.68$ ). No main effect was found for group,  $F(1, 26) = 1.10$ ,  $p = 0.303$ , partial eta squared = 0.041, meaning that there was no significant difference in group ratings of behaviour intensity. Furthermore no interaction effect was found on the Intensity subscale,  $F(1, 26) = 0.30$ ,  $p = 0.591$ , partial eta squared = 0.011, meaning that CARES-T (T) had no influence on negative behaviour intensity.

The GEM was given to teachers in order to measure the participant's empathy levels. No main effect was found for time,  $F(1, 26) = 1.14$ ,  $p = 0.295$ , partial eta squared = 0.042. A marginally significant main effect was found for group,  $F(1, 26) = 3.14$ ,  $p = 0.088$ , partial eta squared = 0.108. This signifies that overall E's ( $M = 116.94$ ,  $SD = 6.18$ ) scores for empathy were higher than the C ( $M = 134.41$ ,  $SD = 7.68$ ) but neither group significantly changed during the experimental period. Additionally no interaction effect was found for group and time,  $F(1, 26) = 0.20$ ,  $p = 0.657$ , partial eta squared = 0.008, suggesting that CARES-T (T) had no impact on empathy levels rated by teachers.

Teachers also completed the ICU in order to assess the presence of callous behaviour traits within the participants.

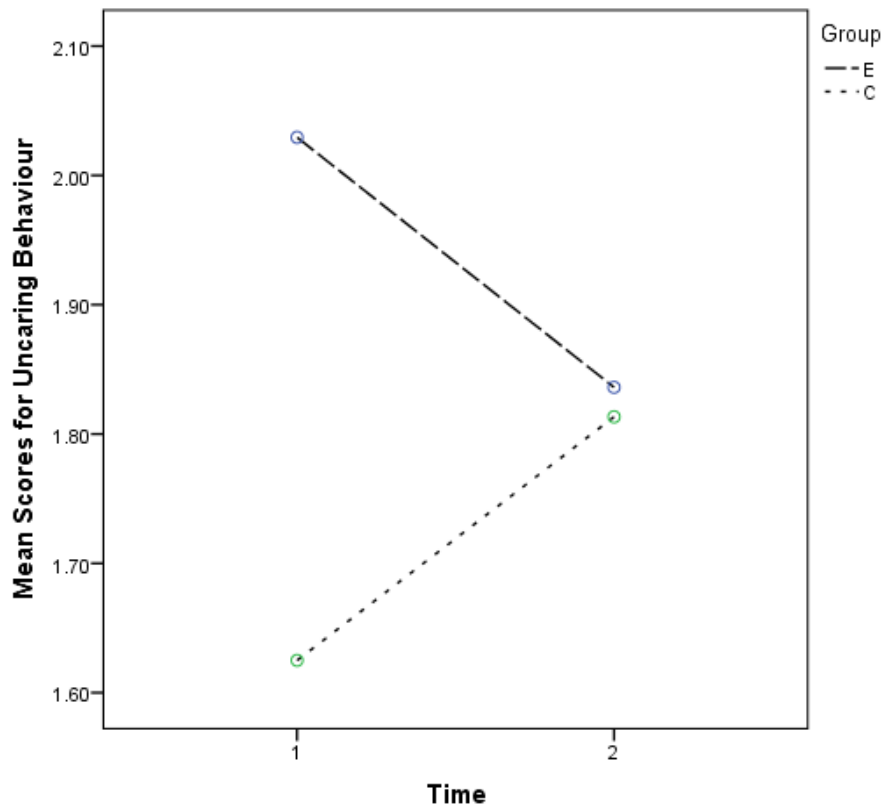


Figure 3.4. Teacher's ICU Uncaring Subscale Interaction Effect.

No significant main effect was found for the full ICU scale for group,  $F(1, 26) = 1.20$ ,  $p = 0.283$ , partial eta squared = 0.044, or time,  $F(1, 26) = 2.06$ ,  $p = 0.163$ , partial eta squared = 0.073. Additionally no interaction effects were found for group and time,  $F(1, 26) = 0.73$ ,  $p = 0.401$ , partial eta squares = 0.027. This suggests that there were no significant differences in ICU scores between or within groups, or as an effect of the CARES-T (T) program.

For the Uncaring subscale no main effects were found for group,  $F(1, 26) = 0.61$ ,  $p = 0.347$ , partial eta squared = 0.034, or for time,  $F(1, 26) = 0.001$ ,  $p = 0.977$ , partial eta squared = 0.000. However an interaction effect for time and group was found to be significant,  $F(1, 26) = 5.2$ ,  $p = 0.031$ , partial eta squared = 0.167. Simple effects analysis showed that E's scores were significantly less T2 ( $M = 1.84$ ,  $SD =$

0.69) compared to T1 ( $M = 2.03$ ,  $SD = 0.63$ ). The interaction effect is displayed in figure 3.4.

In regards to the Unemotional subscale no main effect for group was found,  $F(1, 26) = 0.22$ ,  $p = 0.641$ , partial eta squared = 0.009. However there was a significant main effect for time,  $F(1, 26) = 4.98$ ,  $p = 0.035$ , partial eta squared = 0.161. This means that overall between T1 ( $M = 1.32$ ,  $SD = 0.34$ ) and T2 ( $M = 1.53$ ,  $SD = 0.52$ ) participants unemotional behaviours increased. No interaction effect was found,  $F(1, 26) = 2.01$ ,  $p = 0.168$ , partial eta squared = 0.072, implying that unemotional behaviours were not impacted by the CARES-T (T) program.

For the Callous subscale a main effect was found for time,  $F(1, 26) = 11.62$ ,  $p = 0.002$ , partial eta squared = 0.309. This indicates that all of the participant's callous traits decreased between T1 and T2. However, no significant main effect was found for group,  $F(1, 26) = 2.38$ ,  $p = 0.135$ , partial eta squared = 0.084. This means that there was no significant difference between the E and C's callous trait ratings. Furthermore no interaction effect was found for group and time,  $F(1, 26) = 0.18$ ,  $p = 0.678$ , partial eta squared = 0.007, suggesting that the CARES-T (T) program had no effect on callous traits.

## **Chapter 4**

### **DISCUSSION**

The current study investigated whether the CARES-T (T) program is effective in increasing preschool children's emotional understanding, compliance and prosocial behaviours. Participants aged 4 and 5 years old, experienced a six-week emotion education program which was incorporated in their daily curriculum and were compared to a control group. Before and after CARES-T (T) the control group and the experimental group were both assessed in emotion recognition abilities, behavioural intensities and empathy levels. The results mainly supported the research hypothesis that the application of the CARES-T (T) program by teachers in a preschool resulted in an increase in children's emotion recognition and understanding and a decrease in negative behaviours.

Although all of the participant's emotion recognition abilities increased during the experimental period, children who participated in CARES-T (T) had a significantly more substantial increase in emotion recognition abilities. This is consistent with previous research which demonstrates that emotional education can improve the development of emotional literacy (Bierman et al, 2008; Ulutaş & Ömeroğlu, 2007). Previously implemented emotion education programs in school such as PATHS and ELC also produce similar results in relation to emotion recognition and understanding. The increase of emotion recognition also corroborates the theory that children with teachers who emotionally coach and use modelling are better able to

label their own and others emotions (Bierman et al., 2008). During the program teachers in the experimental group were trained how to coach their class and provide adaptive and positive modelling opportunities.

Behavioural changes in were also found, with the reduction of negative and uncaring behaviours as a result of the CARES-T (T) program. After finding an increase in emotion recognition ability this was to be expected as existing literature suggests that children with better emotional literacy skills, produce less maladaptive responses (Dodge, 1986; Hastings et al., 2000; Saarni, 1999;) and more prosocial behaviours (Findlay et al., 2006). This was especially supported by the results which found such a significant decrease of problem behaviour intensities. In addition to the reported results, due to the availability of standardised t-scores, the data collected from parents and teachers regarding problem behaviours were briefly considered in comparison to a standardized population. Before participating in the CARES-T (T) program assessments of many of the participants in the experimental group showed indications of conduct problems, and during the program these behaviours reduced to significantly below the cut-off mark. This suggests that such a program when used within preschools may be effective for children with behavioural problems such as conduct disorder. This is supported by research based on other prevention and intervention programs such as PCIT which has also found to be effective in reducing problem behaviours (Gallagher, 2003).

However, one important factor that requires consideration is that when assessing behaviour change, parents and teacher's reports of the same children did not concur. Whilst parents reported a change in behaviour teachers did not. This could be due to the fact that teachers may find it difficult focusing on one particular child when completing assessments or it could be that when focusing on more problematic

children teachers may fail to be aware of changes occurring in less prominent children. This may be less of a problem for parents who may only have one or two children who require their attention, which is one possible explanation for why parents reported a change in behaviour whilst teachers did not. Another point to consider is that all participants regardless of their participation in the program showed a decrease in unemotional and callous behaviours within the school setting. It must be contemplated that regardless of any emotional literacy program, children in preschools already actively integrate new social and emotional skills through shaping. Similarly to CARES-T (T), preschool curricula also reinforce the attainment of new behaviours. Furthermore, it is around the 4<sup>th</sup> year that children become more able to verbally express their emotions which may explain why unemotional behaviour decreased in addition to teacher's assessments of problem behavioural intensity for all children (Lagattuta, Wellman & Flavell, 1997).

CARES-T (T) seemed to have no significant effect on empathy and emotional understanding when measured by parents and teachers. These findings were unexpected and are inconsistent with previous research on empathy development which implies that emotional education programs are effective in increasing empathy (Bierman et al, 2008; Ulutaş & Ömeroğlu, 2007). Furthermore, considering the present study's findings regarding an increase in emotion recognition abilities and a decrease in problem behaviours, to be in line with current research an increase in empathy levels was expected to accompany this (Findlay, Girardi & Coplan, 2006; Roberts & Strayer, 1996; Warden & Mackinnon, 2003; Strayer & Roberts, 2004). A particular point to consider is the indiscrepancy between the results regarding behaviour and empathy. Behavioural measures showed a decrease in uncaring behaviours, however no change in empathy was found. This suggests that there is the

possibility of methodological issues that may have caused these findings not to change as expected. Such existing prevention programs (Bierman et al, 2008; Ulutaş & Ömeroğlu, 2007) typically have durations which continue for a minimum of 12 weeks whereas in the current study the duration was limited to 6 weeks. Other empirically supported intervention programs such as PCIT and PMT also have longer durations often continuing for up to 18 or 20 weeks (Funderburk & Eyberg, 2011; Pearl, 2009). Curriculum based emotional education programs such as PATHS consist of 9 months of emotion education included as part of the standard curriculum which advance each year (Bierman, et al., 2008). It must therefore be considered that the duration of the program may have been too short for substantial behavioural or empathy changes to occur or for parents and teachers to correctly evaluate behavioural changes especially in regards to empathy. It is possible that if the same children were to be assessed at a later date in regards to empathy, using the same assessment methods, different results may be produced. A longer interval between the two assessment points may make it easier for parents and teachers to notice and evaluate behavioural and emotional changes.

Another possible explanation is that the CARES-T (T) program as an early prevention adapted to the preschool setting may need further adaptations. For example, in regards to teaching children how to link emotions to their contexts, it may require more empathy improving activities in different social contexts. It is possible that as a one-to-one program the existing activities are effective, but as a group program may need intensifying. For example it may be that like in several areas of education when children are tutored on a one-to-one basis they learn more efficiently than they may in a classroom environment (Vadasy, Jenkins, Antil, Wayne, & O'Connor, 1997). Therefore a longer duration of the CARES-T (T)



program with particular focus on educating children on the context of emotions and learning how to deal with negative emotions may be beneficial. Another consideration to make regarding adapting CARES-T (T), is that the age group of the participants included in the study was at the younger spectrum of the population in which the program is aimed for. An extension of the program to make it long-term (for example, exposure to CARES throughout the advancement of the preschool) similarly to existing programs such as PATHS (Domitrovich, Cortes, & Greenberg, 2007) and ELC (Brackett, Rivers, Reyes, & Salovey, 2012) may also produce more effective long-term results. Beginning with the current age group provides a good educative base that can then be built on in the future.

The current study provides numerous theoretical implications, concerning at what point an increase in emotion recognition translates into empathy development. One may wish to investigate exactly how the two are related. For example, it could be that an increase in emotion recognition skills although may result in an increase in empathy may not be an immediate effect, but something which requires a certain time duration. Furthermore, although research has been conducted regarding cultural differences in attachment (Ainsworth, 1967; Schaffer & Emerson, 1964) and emotion recognition, further research into how empathy develops in different cultures may also enrich the emotional development body of knowledge. Similarly to the current study Narvaez, Wang, Gleason, Cheng, Lefever and Deng (2013), also used a Western developed empathy scale (the empathy subscale of My Child developed by Kochanska in 1994) to assess empathy levels in Chinese 3 year olds with different parenting styles. Regardless of significant differences in guilt and self-regulation, two concepts which are closely related to empathy, the study failed to find differences in empathy levels. This may imply one of two things, firstly the

possibility that Western developed measures of empathy such as the GEM and My Child are not culture-free. Secondly, it could be suggested that empathy may be expressed differently in varying cultures in which Western measures of empathy may not be sensitive to.

Practically, the results of this study contribute to the pool of research which enables intervention and prevention programs to become empirically supported. It is believed that intervention and prevention programs should be developed with the aim of meeting the needs of varying target audiences on many different levels. These intervention and prevention programs should not only contribute to the welfare of participants on an individual level but should enhance the wellbeing of their family and wider society. Organisations such as the National Institute of Child Health and Human Development (NICHD) and Mother Child Education Foundation (AÇEV), work not only by developing new intervention and prevention programs for those with issues with their social, physical and behavioural development, but they also conduct intensive research before their application into which of these programs are most beneficial (National Institutes of Health, U.S. Department of Health and Human Services, 2008; Mother Child Education Foundation (AÇEV), 2010). Their research includes investigating how teaching methods can be improved and which strategies are most optimal for managing behaviour. Before the implementation of intervention and prevention programs it is critical that these evidence based approaches be verified and validated both ethically and scientifically as being effective and beneficial. With the same intention the current study has been able to make a contribution to the research based around the CARES program. The results may provide valuable information for the continued development of the CARES program.

The findings of this study are most certainly informative to individuals researching or developing emotional education programs for children. It could possibly aid in the decision of how children should be assessed, as by using more direct child measures ensures the data not only remains as valid as possible but also certifies objectivity. For a wider application the results of this study are important for policy makers and individuals who design curricula for preschool aged children. It emphasizes the importance of emotional education on preschool children in addition to the standard curriculum. It should also be highlighted how the development of emotional literacy not only influences academic success in childhood but also results in more positive workplace outcomes in adulthood (Elfenbein, Marsh, & Ambady, 2002).

Several limitations with the present study can be identified. The biggest limitation was the participant sample size which decreased during the experimental period due to drop-out rates. This may have been overcome if participants of the same age attending different schools were included in the participant group. However, this would have produced several confounding variables such as education style and content within their existing curriculum. Whereas by using participants from the same preschool ensured that they were already all receiving similar educational experiences.

Other possible confoundings which could be considered limitations to the study were that the control group and the experimental group were not matched for social, familial and environmental characteristics. Factors such as parental age, marital status, economic status and educational background could cause potential confounding variables. It may be possible that the participants received different degrees of emotional education, exposure and stimulation at home through activities

and interactions with their caregivers. Although this is an important point to consider the aim of the study was not to focus on the existing differences between the groups in general but to investigate the differences in degree of change within the groups during the experimental period.

Similarly there were significant differences between the group's duration of acquaintance with their teachers. The experimental group had been acquainted with their teachers for significantly longer than the control group. However as previously stated, the focus on the study was not on the differences between the groups, but the changes within the groups, therefore this confounding was not directly related to the study's hypothesis.

Another limitation to this study is that due to CARES-T (T) being an adaptation of a parent-child intervention program, the original role of the parent was transferred to the teacher, leaving the parents of the participants excluded from the program. Some existing literature shows that the involvement of parents is not a necessity for an emotion education program to be effective (Bierman et al, 2008; Ulutaş & Ömeroğlu, 2007). Although not a necessity, contrasting research suggests that the inclusion of parents in the education process enhances its effects and can be critical for learning (Comer & Haynes, 1991). Therefore, for future research more parental involvement could be included to enhance the effectiveness of the CARES-T (T) program. It should be considered that parents should also receive some training regarding the content of the program in order to reinforce the learning process in the home setting by using behaviours such as labelling their children's emotions.

Possible improvements could be made to the current research such as expanding the participant sample size. Furthermore, more instruments could be included regarding the use of child measures. Children themselves could be directly measured

for empathy through similar instruments given to the parents and teachers in the current study, for example the Index of Empathy for Children and Adolescents (Bryant, 1982). In addition to questionnaires children could be measured directly like adults using physiological responses such as by measuring heart rate, skin responses (Predinger & Ishizuka, 2005) or even through vocal (Lewis & Ramsay, 1999), facial (Strayer & Roberts, 1997) and gestural measures (Zahn-Waxler, Radke-Yarrow, Wagner, & Chapman, 1992). These assessments could then be compared to those of parents and teachers. This would not only aid in the collection of more objective data for the participant's empathy levels and behaviour characteristics, but also to understand further how aware parents and teachers are exactly of their children's abilities and changes within these domains. Furthermore, in order to optimize children's emotion education within the CARES-T (T) program, perhaps a short educative workshop could be constructed in order to include parents and caregivers with the same role. Details could be given informing parents and caregivers about how they can coach their children and which behaviours they can display in order to reinforce and enhance their child's emotional development during the program.

In conclusion the present study showed that the CARES-T (T) emotion education program was successful in improving children's emotional literacy through enhancing emotion recognition abilities and reducing negative or problem behaviours. These findings are consistent with previous literature which affirmed that emotion education programs are successful in optimizing emotional literacy development (Bierman et al, 2008; Ulutaş & Ömeroğlu, 2007). In contrast to existing literature, unexpectedly the CARES-T (T) program failed to produce an increase in empathizing abilities which were expected to occur coinciding with emotional recognition and behavioural improvement (Findlay et al., 2006; Roberts & Strayer,

1996; Strayer & Roberts, 2004; Warden & Mackinnon, 2003). As stated above, these issues may be due to methodological constraints such as program duration or rater incomprehension, a problem which only future research may identify. This research could benefit policy makers and curriculum developers who must be made aware of the important implications of the inclusion of emotion education within the current curriculum.

## REFERENCES

- Ahn, H. J. (2005a). Teachers' discussions of emotion in child care centers. *Early Childhood Education Journal*, 32(4), 237-424. doi: 10.1007/s10643-004-1424-6
- Ahn, H.J. (2005b). Child care teachers' strategies in children's socialization of emotion. *Early Child Development and Care*, 175(1), 49-61. doi: 10.1080/0300443042000230320
- Ainsworth, M.D.S. (1967). *Infancy in Uganda: Infant Care and the Growth of Love*. Baltimore: Johns Hopkins University Press.
- Ainsworth, M.D.S., Blehar M.C., Walters, E., Wall, S. (1978). *Patterns of Attachment: A Psychological Study of the Strange Situation*. Oxford: Lawrence Erlbaum.
- Ashiabi, G. S. (2000). Promoting the emotional development of pre-schoolers. *Early Childhood Education Journal*, 28(2), 79-84.
- Bandura, A. (1978). Social learning theory of aggression. *Journal of Communication*, 28(3), 12-29.
- Batson, C.D. (1991). *The Altruism Question: Toward a Social-Psychological Answer*. New Jersey: Lawrence Erlbaum Associates, Inc.
- Bierman, K.L., Domitovich, C.E., Nix, R.L., Gest, S.D., Welsh, J.A., Greenberg, M.T., Blair, C., Nelson, K.E., & Gill, S. (2008). Promoting academic and social-emotional school readiness: The Head Start REDI program. *Child Development*, 79(6), 1802-1817
- Bierman, K.L., Nix, R.L., Greenberg, M.T., Blair, C., & Domitovich, C.E. (2008). Executive functions and school readiness intervention: Impact, moderation and

- mediation in the Head Start REDI program. *Development and Psychopathology*, 20, 821-843. doi: 10.1017/S0954579408000394
- Björkqvist, K., Österman, K., & Kaukiainen, A. (2000). Social intelligence – empathy = aggression? *Aggression and Violent Behavior*, 3(2), 191-200.
- Blair, R. J. R., Colledge, E., Murray, L., & Mitchell, D. G. V. (2001). A selective impairment in the processing of sad and fearful expressions in children with psychopathic tendencies. *Journal of Abnormal Child Psychology*, 29(6), 491-498.
- Bowlby, J. (1969). *Attachment and Loss: Vol. 1. Attachment*. London: Hogarth Press.
- Boyatzis, C.J., Chazan, E., & Ting, C.Z. (1993). Preschool children's decoding of facial emotions. *The Journal of Genetic Psychology*, 154(3), 375-382.
- Brackett, M.A., & Rivers, S.E. (2008). What is emotional literacy? In M. A. Brackett & J. P. Kremenitzer with M. Maurer, M. Carpenter, S. E. Rivers, & N. Katulak (Eds.), *Emotional literacy in the classroom: Upper elementary*. Portchester, NY: National Professional Resources, Inc.
- Brackett, M.A., Rivers, S.E., Reyes, M.R., & Salovey, P. (2012). Enhancing academic performance and social and emotional competence with the RULER feeling words curriculum. *Learning and Individual Differences*, 22, 218-224. doi: 10.1016/j.lindif.2010.10.002
- Brazelton, T.B., & Greenspan, S.T. (2000). *The Irreducible Needs of Children: What Every Child Must Have to Grow, Learn, and Flourish*. Cambridge, MA: Perseus Publishing.
- Bryant, B. (1982). An Index of Empathy for Children and Adolescents. *Child Development*, 65, 413-425.
- Caron, A.J, Caron, R. F., & MacLean, D.J. (1988). Infant discrimination of naturalistic emotional expressions: The role of face and voice. *Child Development*, 59(3), 604-616.



- Centifanti, L.C. (2009). Callous-unemotional traits are related to combined deficits in recognizing afraid faces and body poses. *Journal of the American Academy of Child and Adolescent Psychiatry*, 48(5), 554-562.
- Clark, T.F., Winkielman, P., & McIntosh, D.N. (2008). Autism and the extraction of emotion from briefly presented facial expressions: Stumbling at the first step of empathy. *Emotion*, 8(6), 803-809. doi: 10.1037/a0014124
- Comer, J.P., & Haynes, N.M (1991). Parent involvement in schools: An ecological approach. *The Elementary School Journal*, 91(3), 271-277.
- Crick, N.R., & Dodge, K.A. (1996). Social information-processing mechanisms in reactive and proactive aggression. *Child Development*, 67(3), 993-1002.
- Dadds, M.R., Hunter, K., Hawes, D.J., Frost, A.D.J., Vassallo, S., Bunn, P., Merz, S., & Masry, Y.E. (2008). A measure of cognitive and affective empathy in children using parent ratings. *Child Psychiatry and Human Development*, 39, 111-122. doi: 10.1007/s10578-007-0075-4
- Dadds, M.R., Perry, Y., Hawes, D.J., Merz, S., Riddell, A.C., Haines, D.J., Solak, E., & Abeygunawardane, A.I. (2006). Attention to the eyes and fear-recognition deficits in child psychopathology. *British Journal of Psychiatry*, 189, 280-281. doi: 10.1192/bjp.bp.105.018150
- Davidov, M., & Grusec, J.E. (2006). Untangling the links of parental responsiveness to distress and warmth to children outcomes. *Child Development*. 77(1), 44-58.
- Denham, S.A. (1998). *Emotional Development in Young Children*. New York: Guilford Press.
- Denham, S.A., Blair, K.A., DeMulder, E., Levitas, J., Sawyer, K., Auerbach-Major, S., & Queenan, P. (2003). Preschool emotional competence: Pathway to social competence? *Child Development*, 74(1), 238-256.

- Denham, S.A., & Bassett, H.H. (2012). Early childhood teachers as socializers of young children's emotional competence. *The Journal of Early Childhood Education, 40*, 137-143. doi: 10.1007/s10643-012-0504-2
- Denham, S.A., Mitchell-Copeland, J., Strandberg, K., Auerbach, S., & Blair, K. (1997). Parental contributions to preschoolers' emotional competence: Direct and indirect effects. *Motivation and Emotion, 21*(1), 65-86.
- Denham, S.A., Zoller, D., & Couchoud, E.A. (1994). Socialization of preschoolers' emotion understanding. *Developmental Psychology, 30*(6), 928-936.
- Dodge, K. A. (1986). A social information processing model of social competence in children. In M. Perlmutter (Ed.), *Eighteenth Annual Minnesota Symposium on Child Psychology*. Hillsdale, NJ: Erlbaum.
- Domitrovich, C.E., Cortes, R.C., & Greenberg, M.T. (2007). Improving young children's social and emotional competence: A randomized trial of the preschool "PATHS" curriculum. *The Journal of Primary Prevention, 28*(2), 67-91. doi: 10.1007/s10935-007-0081-0
- Dunn, J., Brown, J., Slomkowski, C., Tesla, C., & Youngblade, L. (1991). Young children's understanding of other people's feelings and beliefs: Individual differences and their antecedents. *Child Development, 62*(6), 1352-1366.
- Eisenberg, N., Guthrie, I.K., Murphy, B.C., Shepard, S.A., Cumberland, A., & Carlo, G. (1999). Consistency and development of prosocial dispositions: A longitudinal study. *Child Development, 70*(6), 1360-1372.
- Eisenberg-Berg, N., & Lennon, R. (1980). Altruism and the assessment of empathy in the preschool years. *Child Development, 51*(2), 552-557.
- Ekman, P. (1994). Strong evidence for universals in facial expressions: a reply to Russell's mistaken critique. *Psychological Bulletin, 115*, 268-287.

- Elfenbein, H., Marsh, A.A., & Ambady, N. (2002). Emotional intelligence and the recognition of emotion from facial expressions. In L. F. Barrett & P. Salovey (Eds.), *The Wisdom of Feeling: Psychological Processes in Emotional Intelligence - Emotions and Social Behavior*. New York: Guildford Press.
- Elfenbein, H.A., & Ambady, N. (2002). On the universality and cultural specificity of emotion recognition: A meta-analysis. *Psychological Bulletin*, *128*(2), 203-235. doi: 10.1037/0033-2909.128.2.203
- Ensor, R., & Hughes, C. (2005). More than talk: Relations between emotion understanding and positive behaviour in toddlers. *British Journal of Developmental Psychology*, *23*(3), 343-363. doi: 10.1348/026151005X26291
- Eyberg, S.M. (1974). *Eyberg Child Behavior Inventory*. (Available from S. Eyberg, Department of Clinical and Health Psychology, Box 100165, HSC, University of Florida, Gainesville, FL 32610.)
- Eyberg, S.M. (1990). Eyberg Child Behavior Inventory (ECBI). In K. Corcoran & J. Fischer (Eds.), *Measures of Clinical Practice and Research: A Sourcebook*. New York: Oxford University Press.
- Eyberg, S.M. (1992). Parent and teacher behavior inventories for the assessment of conduct problem behaviors in children. In L. VandeCreek, S. Knapp, & T.L. Jackson (Eds.), *Innovations in clinical practice: A source book* (Vol. 11, pp. 261-270). Sarasota, FL: Professional Resource Press.
- Eyberg, S.M., & Pincus, D. (1999). *Eyberg Child Behavior Inventory and Sutter-Eyberg Student Behavior Inventory: Professional manual*. Odessa, FL: Psychological Assessment Resources.
- Ezpeleta, L., de la Osa, N., Granero, R., Penelo, E., & Domenech, J.M. (2013). Inventory of callous-unemotional traits in a community sample of pre-schoolers.

- Journal of Clinical Child and Adolescent Psychology*, 42(1), 91-105. doi:  
10.1080/15374416.2012.734221
- Fairchild, G., Stobbe, Y., van Goozen, S.H.M., Calder, A.J., & Goodyer, I.M (2010). Facial expression recognition, fear conditioning, and startle modulation in female subjects with conduct disorder. *Biological Psychiatry*, 68, 272-279. doi:  
10.1016/j.biopsych.2010.02.019
- Findlay, L.C., Girardi, A., & Coplan, R.J. (2006). Links between empathy, social behaviour, and social understanding in early childhood. *Early Childhood Research Quarterly*, 21, 347-359. doi: 10.1016/j.ecresq.2006.07.009
- Fonseca, D.D., Segquier, V., Santos, A., Poinso, F., & Deruelle, C. (2009). Emotion understanding in children with ADHD. *Child Psychiatry and Human Development*, 40, 11-121. doi: 10.1007/s10578/008/0114-9
- Frick, P.J. (2004). *Inventory of Callous-Unemotional Traits*. Unpublished rating scale, University of New Orleans.
- Funderburk, B.W., & Eyberg, S.M. (2011). Parent-child interaction therapy. In J.C. Norcross, G.R. VandenBos & D.K. Freedheim (Eds.), *History of Psychotherapy: Continuity and Change* (pp. 415-420). Washington DC: American Psychological Association. doi: 10.1037/12353-021
- Gallagher, N. (2003). Effects of Parent-Child Interaction Therapy on young children with disruptive behaviour disorders. *Bridges*, 1(4), 1-17.
- Gottman, J.M., Katz, L.F., & Hooven, C. (1996). Parental meta-emotion philosophy and the emotional life of families: Theoretical models and preliminary data. *Journal of Family Psychology*, 10(3), 243-268.

- Greenspan, S.I., & Greenspan, N.T. (1985). *First Feelings: Milestones in the Emotional Development of Your Infant and Child from Birth to age 4*. New York: Viking Press.
- Gresham, F.M., Cook, C.R., Crews, S.D., & Kern, L. (2004). Social skills training for children and youth with emotional and behavioural disorders: Validity considerations and future directions. *Behavioral Disorders, 30*(1), 32-46.
- Hastings, P.D., Zahn-Waxler, C., Robinson, J., Usher, B., Bridges, D. (2000). The development of concern for others in children with behaviour problems. *Developmental Psychology, 36*(5), 531-546. doi: 10.1037//0012-1649.36.5.531
- Hembree-Kigin, T.L., & McNeil C.B. (1995). *Parent-Child Interaction Therapy*. New York: Plenum Press.
- Hood, K.K., & Eyberg, S.M. (2003). Outcomes of Parent-Child Interaction Therapy: Mothers' reports of maintenance three to six years after treatment. *Journal of Clinical Child and Adolescent Psychology, 32*(3), 419-429.
- Howes, C., & Ritchie, S. (1999). Attachment organizations in children with difficult life circumstances. *Development and Psychopathology, 11*, 251-268.
- Inagaki, H., & Hatano, G. (1993). Young children's understanding of the mind-body distinction. *Child Development, 64*(5), 1534-1549
- Izard, C.E. (2007). Basic emotions, natural kinds, emotion schemas, and a new paradigm. *Perspectives on Psychological Science, 2*(3), 260-280. doi: 10.1111/j.1745-6916.2007.00044.x
- Izard, C.E., Ackerman, B.P., Schoff, K.M., & Fine, S.E. (2000). Self organization of discrete emotions, emotion patterns, and emotion-cognition relations. In M.D. Lewis & I. Granic (Eds.), *Emotion, Development, and Self-organization* (pp. 15–36). Cambridge, UK: Cambridge University Press.

- Izard, C.E., King, K.A., Trentacosta, C.J., Morgan, J.K., Laurenceau, J.P., Krauthamer-Ewing, E.S., & Finlon, K.J. (2008). Accelerating the development of emotion competence in Head Start children: Effects on adaptive and maladaptive behaviour. *Development and Psychopathology*, *20*, 369-397. doi: 10.1017/S0954579408000175
- Jennings, P.A., & Greenberg, M.T. (2009). Teacher social and emotional competence in relation to student and classroom outcomes. *Review of Educational Research*, *79*(1), 491-525.
- Kam, C.M., Greenberg, M.T., & Walls, C.T. (2003). Examining the role of implementation quality in school-based prevention using the PATHS curriculum. *Prevention Science*, *4*(1), 55-63. doi: 10.1023/A:1021786811186
- Kazdin, A. E., (2005). *Parent Management Training: Treatment for Oppositional, Aggressive, and Antisocial Behavior in Children and Adolescents*. New York: Oxford University Press.
- Kimonis, E.R., & Armstrong, K. (2012). Adapting Parent-Child-Interaction Therapy to treat severe conduct problems with callous unemotional traits: A case study. *Clinical Case Studies*, *11*(3), 234-252. doi: 10.1177/1534650112448835
- Kimonis, E.R., Frick, P.J., Skeem, J.L., Marsee, M.A., Cruise, K., Munoz, L.C., Aucoin, K.J., & Morris, A.S. (2008). Assessing callous-unemotional traits in adolescent offenders: Validation of the inventory of callout-unemotional traits. *International Journal of Law and Psychiatry*, *31*, 241-252. doi: 10.1016/j.ijlp.2008.04.002
- Kimonis, E.R., & Hunt, E. (n.d.). *Coaching and Rewarding Emotional Skills, Treatment Manual, CARES Module; Version 3.0*. Unpublished manuscript.

- Kochanska, G., Koenig, J.L., Barry, R.A., Kim, S., & Yoon, J.E. (2010). Children's conscience during toddler and preschool years, moral self, and a competent, adaptive developmental trajectory. *Developmental Psychology, 46*(5), 1320-1332. doi: 10.1037/a0020381.
- LaBarbera, J.D., Izard, C.E., Vietze, P., & Parisi, S.A. (1976). Four- and six-month-old infants' visual responses to joy, anger, and neutral expressions. *Child Development, 47*(2), 535-538.
- Ladd, G.W., Kochenderfer, B.J., & Coleman, C.C. (1997). Classroom peer acceptance, friendship, and victimization: Distinct relational systems that contribute uniquely to children's school adjustment? *Child Development, 68*(6), 1181-1197.
- Lagattuta, K., Wellman, H., & Flavell, J. (1997). Preschoolers' understanding of the link between thinking and feeling. *Child Development, 68*(6), 1081-1104
- Lewis, M., & Ramsay, D.S. (Eds.). (1999). *Soothing and Stress*. Mahwah, NJ: Lawrence Erlbaum Associates, Inc.
- Litvack-Miller, W., McDougall, D., & Romney, D.M. (1997). The structure of empathy during middle childhood and its relationship to prosocial behaviour. *Genetic, Social, and General Psychology Monographs, 123*(3), 303-324.
- Loney, B. (2003). *Computerized Dot-Probe Task for Assessing Emotional Processing in Youth*. Tallahassee, FL: Florida State University.
- Lonigan, C.J., Burgess, S.R., & Anthony, J.L. (2000). Development of emergent literacy and early reading skills in preschool children: Evidence from a latent-variable longitudinal study. *Developmental Psychology, 36*(5), 596-613.

- Lyon, A.R., & Budd, K.S. (2010). A community mental health implementation of Parent-Child Interaction Therapy (PCIT). *Journal of Child and Family Studies*, *19*(5), 654-668. doi: 10.1007/s10826-010-9353-z
- McNeil, C.B., Eyberg, S., Eisenstadt, T.H., Newcomb, K., & Funderburk, B. (1991). Parent-Child Interaction Therapy with behaviour problem children: Generalization of treatment effects to the school setting. *Journal of Clinical Child Psychology*, *20*(2), 140-151.
- Messinger, D., & Fogel, A. (2007). The interactive development of social smiling. In R. Kail (Ed.), *Advances in Child Development and Behavior* (pp. 327–366). Oxford, UK: Elsevier.
- Miller, A.L., Gouley, K.K., Seifer, R., Dickstein, S., & Shields, A. (2004). Emotions and behaviors in the Head Start classroom: Associations among observed dysregulation, social competence, and preschool adjustment. *Early Education and Development*, *15*(2), 147-166. doi: 10.1207/s15566935eed1502\_2
- Mitchell-Copeland, J., Denham, S.A., & DeMulder, E.K. (1997). A-sort assessment of child-teacher attachment relationships and social competence in preschool/. *Early Education and Development*, *8*(1), 27-39. doi: 10.1207/s15566935eed0801\_3
- Mize, J., & Pettit, G.S. (1997). Mothers' social coaching, mother-child relationship style, and children's peer competence: Is the medium the message? *Child Development*, *68*(2), 312-332.
- Morris, A.S., Silk, J.S., Steinberg, L., Myers, S.S., & Robinson, L.R. (2007). The role of the family context in the development of emotion regulation. *Social Development*, *16*(2), 361-388. doi: 10.1111/j.1467-9507.2007.00389



- Mostow, A.J., Izard, C.E., Fine, S., & Trentacosta, C.J. (2002). Modelling emotional, cognitive, and behavioural predictors of peer acceptance. *Child Development*, 73(6), 1775-1787.
- Mother Child Education Foundation (AÇEV) (2010). *Mother Child Education Foundation –ACEV*. Istanbul, Turkey: AÇEV.
- Narvaez, D., Wang, L., Gleason, T., Cheng, Y., Lefever, J., & Deng, L. (2013). The evolved developmental niche and child sociomoral outcomes in Chinese 3-year-olds. *European Journal of Developmental Psychology*, 10(2), 106-127.
- National Institutes of Health, U.S. Department of Health and Human Services, (2008). Eunice Kennedy Shriver National Institute of Child Health and Human Development (NICHD) (NIH Publication 08–6514). Bethesda, MD: National Institutes of Health.
- Nelson, C.A. (1987). The recognition of facial expressions in the first two years of life: Mechanisms of development. *Child Development*, 58(4), 889-909.
- Öhman, A. (1993). Fear and anxiety as emotional phenomena: Clinical phenomenology, evolutionary perspectives, and information processing mechanisms. In M. Lewis & J.M. Haviland (Eds.), *Handbook of Emotions* (pp. 511-536). New York: Guilford Press.
- Parsloe, E. (1999). *The Manager as Coach and Mentor*. London: Chartered Institute of Personnel and Management.
- Pearl, E.S. (n2009). Parent management training for reducing oppositional and aggressive behaviour in pre-schoolers. *Aggression and Violent Behavior*, 14, 295-305. doi: 10.1016/j.avb.2009.30.007

- Pelc, K., Kornreich, C., Foisy, M.L., & Dan, B. (2002). Recognition of emotional facial expressions in Attention-Deficit Hyperactivity Disorder. *Paediatric Neurology, 35*(2), 93-97.
- Pons, F., Harris, P.L., & de Rosnay, M. (2004). Emotion comprehension between 3 and 11 years: Developmental periods and hierarchical organization. *European Journal of Developmental Psychology, 1*(2), 127-152. doi: 10.1080/17405620344000022
- Predinger, H., & Ishizuka, M. (2005). The empathic companion: A character-based interface that addresses users' affective states. *Applied Artificial Intelligence, 19*, 267-285. doi: 10.1080/08839510590910174
- Ramsden, S.R., & Hubbard, J.A. (2002). Family expressiveness and parental emotion coaching: Their role in children's emotion regulation and aggression. *Journal of Abnormal Child Psychology, 30*(6), 657-667.
- Raver, C. (2002) Emotions matter: Making the case for the role of young children's emotional development for the early school readiness, *Social Policy Report, 3*, 3-18.
- Roberts, W., & Strayer, S. (1996). Empathy, emotional expressiveness, and prosocial behaviour. *Child Development, 67*(2), 449-470.
- Rump, K.M., Giovannelli, J.L., Minschew, N.J., & Strauss, M.S. (2009). The development of emotion recognition in individuals with autism. *Child Development, 80*(5), 1434-1447. doi: 10.1111/j.1467-8624.2009.01343.x
- Saarni, C. (1999). *The Development of Emotional Competence*. New York: Guilford.
- Salmon, K., Dadds, M.R., Allen, J., & Hawes, D.L. (2009). Can emotional language skills be taught during parent training for conduct problem children? *Child*

- Psychiatry and Human Development*, 40, 485-498. doi: 10.1007/s10578-009-0139-8
- Salovey, P., & Mayer, J.D. (1989). Emotional Intelligence. *Imagination, Cognition and Personality*, 9(3), 189-1890. doi: 10.2190/DUGG-P24E-52WK-^CDG
- Sanders, M.R. (1999). Triple P-Positive Parenting Program: Towards an empirically validated multilevel parenting and family support strategy for the prevention of behaviour and emotional problems in children. *Clinical Child and Family Psychology Review*, 2(2), 71-90. doi: 10.1023/A:1021843613840
- Sanders, M.R. (2003). Triple P – Positive Parenting Program: A population approach to promoting competent parenting. *Australian e-Journal for the Advancement of Mental Health*, 2(3), 1-17.
- Schaffer, H.R., & Emerson, P.E. (1964). The development of social attachments in infancy. *Monographs of the Society for Research in Child Development*, 29(3), 1-77.
- Schore, A.N. (1999). Commentary on emotions: Neuro-psychoanalytic views. *Neuro-Psychoanalysis*, 1, 49–55.
- Schwenck, C., Mergenthaler, J., Keller, K., Zech, J., Salehi, S., Taurines, R., Romanos, M., Schecklmann, M., Schneider, W., Warnke, A., & Freitag, C.M. (2012). Empathy in children with autism and conduct disorder: Group-specific profiles and developmental aspects. *Journal of Child Psychology and Psychiatry*, 53(6), 651-659. doi: 10.1111/j.1469-7610.2011.02499x
- Sharp, P. (2001). *Nurturing Emotional Literacy: A Practical Guide for Teachers, Parents and Those Working in the Caring Professions*. London: David Fulton.

- Shechtman, Z. (2003). Therapeutic factors and outcomes in group and individual therapy of aggressive boys. *Group Dynamics: Theory, Research, and Practice*, 7(3), 225-237. doi: 10.1037/1089-2699.7.3.225
- Shields, A., Dickstein, S., Seifer, R., Guisti, L., Magee, K.D., & Spritz, B. (2001). Emotional competence and early school adjustment: A study of pre-schoolers at risk. *Early Education and Development*, 12(1), 73-96. doi: 10.1207/s15566935eed1201\_5.
- Silk, J.S., Shaw, D.S., Skuban, E.M., Oland, A.A., & Kovacs, M. (2006). Emotion regulation strategies in offspring of childhood-onset depressed mothers. *Journal of Child Psychology and Psychiatry*, 47(1), 69-78. doi: 10.1111/j.1469-7610.2005.01440.x
- Sroufe, L.A. (1997). *Emotional Development: The Organization of Emotional Life in the Early Years*. Cambridge: Cambridge University Press.
- Strayer, J., & Roberts, W. (2004). Empathy and observed anger and aggression in five-year-olds. *Social Development*, 13(1), 3-13.
- Strayer, J., & Roberts, W. (1997). Facial and verbal measures of children's emotions and empathy. *International Journal of Behavioral Development*, 20(4), 627-649.
- Ulloa, M.L., Evans, I.M., & Parkes, F. (2010). Teaching to care: Emotional interactions between preschool children and their teachers. *NZ Research in ECE Journal*, 13, 33-43.
- Ulutaş, I., & Ömeroğlu, E. (2007). The effects of an emotional intelligence education program on the emotional intelligence of children. *Social Behavior and Personality*, 35(10), 1365-1372.

- Vadasy, P. F., Jenkins, J. R., Antil, L. R., Wayne, S. K., & O'Connor, R. E. (1997). The effectiveness of one-to-one tutoring by community tutors for at-risk beginning readers. *Learning Disability Quarterly*, 20(2), 126-139.
- von Salisch, M. (2001). Children's emotional development: Challenges in their relationships to parents, peers, and friends. *International Journal of Behavioral Development*, 25(4), 310-319. doi: 10.1080/01650250143000058
- Warden, D., & Mackinnon, S. (2003). Prosocial children, bullies and victims: An investigation of their sociometric status, empathy and social problem-solving strategies. *British Journal of Developmental Psychology*, 21, 367-385.
- Wentzel, K.R. (2002). Are effective teachers like good parents? Teaching styles and student adjustment in early adolescence. *Child Development*, 73(1), 287-301.
- Woodworth, M., & Waschbusch, D. (2007). Emotional processing in children with conduct problems and callous/unemotional traits. *Child: Care, Healthy and Development*, 34(2), 234-244. doi: 10.1111/j.1365-2214.2007.00792.x
- Wright, B., Clarke, N., Jordan, J., Young, A.W., Clarke, P., Miles, J., Nation, K., Clarke, L., & Williams, C. (2008). Emotion recognition in faces and the use of visual context in young people with high-functioning autism spectrum disorders. *Autism*, 12(6), 607-323. doi: 10.1177/1362361308097118
- Young G., & Zeman, J. (2003, April). *Emotional expression management and social acceptance in childhood*. Poster presented at Society for Research in Child Development, Tampa, FL.
- Zahn-Waxler, C., Radke-Yarrow, M., Wagner, E., & Chapman, M. (1992). Development of concern for others. *Developmental Psychology*, 28(1), 126-136. doi: 10.1037/0012-1649.28.1.126

Zeidner, M., Roberts, R.D., & Matthews, G. (2002). Can emotional intelligence be schooled? A critical review. *Educational Psychologist, 37*(4), 215-231.

Zeman, J., Cassano, M., Perry-Parrish, C., & Stegall, S. (2006). Emotion regulation in children and adolescents. *Developmental and Behavioral Paediatrics, 27*(2), 155-168.

## **APPENDICES**

## **Appendix A: Permission Letter to Translate and Adapt the Griffith Empathy Measure (GEM)**

Hi Eva and Biran,

I am very happy for you to do the translation. Please cite the original as its origin and keep me informed of your work!

Best wishes, mark.

Mark R Dadds

Professor of Psychology  
NHMRC Principal Research Fellow  
School of Psychology  
University of New South Wales  
Sydney NSW 2052  
+612 9385 3538 (t)  
+612 9385 3641 (f)  
Homepage: <http://www2.psy.unsw.edu.au/Users/Mdadds/>



## Appendix B: Permission Letter to Translate and Adapt Coaching and Rewarding Emotional Skills (CARES)

September 13<sup>th</sup>, 2013

Dr. Biran Mertan, Associate Professor  
Eastern Mediterranean University  
Famagusta, Cyprus



Dear Dr. Mertan:

As developer of the Coaching and Rewarding Emotional Skills (CARES) treatment module, this letter is written as formal confirmation of my permission to allow Ms. Victoria Vudali to adapt and test the CARES protocol in her thesis research conducted under your supervision at EMU. In return I ask that you please share with me your findings from this research when available. Please do not hesitate to contact me should you require consultation during the implementation of this project.

Sincerely,

A handwritten signature in black ink, appearing to read 'Eva R. Kimonis'.

Eva

Eva R. Kimonis, Ph.D.  
Senior Lecturer, School of Psychology  
Mathews Building, Room 1103  
The University of New South Wales  
Sydney NSW 2052  
Australia

Tel: +61 9385 0376 Fax: +61  
(2) 9385 3641

Email: [e.kimonis@unsw.edu.au](mailto:e.kimonis@unsw.edu.au)

Webpage: <http://www.psy.unsw.edu.au/contacts-people/academic-staff/dr-eva-r-kimonis>

THE UNIVERSITY OF NEW SOUTH WALES | UNSW SYDNEY NSW 2052 AUSTRALIA  
T +61(2) 9385 0000 | F +61 (2) 9385 0000 | ABN 57 195 873 179 | CRICOS Provider Code 00098G  
SYDNEY | CANBERRA | AUSTRALIA

## **Appendix C: CARES-T (T) Teacher Activity Instructions**

### **Learning to Recognize Feelings – Teacher Instruction Sheet.**

*“Everyone has feelings. We are going to look at some pictures of different people showing different types of feelings. We’re going to figure out together how we can tell how others are feeling.*

*First, we’ll guess how the person is feeling, and then we’ll talk about what we can look for to know how others are feeling. For example, we will talk about what the mouth looks like when we show certain feelings, the eyebrows, forehead and eyes.*

*Learning what to look for on people’s faces can give us clues about how they are feeling. This activity will help us learn different types of feelings so you can know how others feel, like your friends, your parents and other people”*

Go to the first slide and ask the class, *“What feeling is this?”* If the children respond incorrectly praise their effort and say, *“Good try!”* Before giving the children the correct answer go to the next series of slides and ask the class, *“Does his nose/ears/mouth/eyes tell us how he’s feeling?”*

Go to the last slide in the series and point out the arrows that show what to look for in identifying the emotion: *“This child is happy. See how his mouth is turned up and the outside of his eyes are pinched.”* For the next few slides when a child gives a correct response ask, *“How do you know that he/she feels (sad)?”* and then review the facial cues. If a child responds incorrectly, tell them the correct emotion while pointing out relevant facial features.

Throughout and at the end of the activity praise the class for their compliance.

## **Blank Face Activity – Teacher Instruction Sheet**

*“Today we are going to start out with an activity to help review what we learned about identifying feelings and what parts of our face do when we have certain feelings. If we want to know how someone is feeling on the inside, we can look at their face for clues.*

*For this activity, we are going to create different faces for some of the feeling words we have learned. “*

You and your class will use the cut-outs of eyes, eyebrows and mouths to create faces with various expressions. Some suggested prompts for the activity include:

*“What are we going to look at? What parts of our faces show we are happy?” Hold up drawing of mouths. “How about our mouths? What do people sometimes have on their face when they are happy? A smile! Which lips look like they are smiling?”*

Hold up the drawings of eyes. *“What about this part of the face? Do people’s eyes tell us about how they are feeling?”*

Scared/afraid – *“What is something we have on our faces that shows we are scared? Is it our eyes?” Hold up pictures of eyes. “Can you tell which eyes belong to a person who feels scared? What about mouths? Eyebrows?”*

*“Now that we’ve seen some pictures of how a person’s eyes, eyebrows, and mouths might look for different feelings, we’re going to create someone who looks scared/sad/angry/happy/surprised”*

## Situations Based Emotions Activity – Teacher Instruction Sheet

*“For this activity, we will look at some pictures and figure out what’s going on around the person to understand why they are feeling a certain way.”*

Whether correct or incorrect, the child is always provided with the general principle behind that emotion:

1. Happy: *“When someone gives you something nice/you do something exciting (etc.), then we feel happy”*
2. Afraid: *“When something scary happens, we feel frightened or afraid and want to run away/hide.”*
3. Sad: *“When something bad happens accidentally or people leave or a friend doesn’t come to school then we feel sad.”*
4. Angry: *“When someone does something bad or mean to you on purpose (etc.), then we feel angry”*

Read situation 1 to the class and ask them the questions below:

- There is an *“Emotion Question”* and a *“Why Question”* for each story
- The emotion question asks **how the character will feel in the situation**
- The why question asks **why the character feels that particular emotion**

If a child answers incorrectly, provide the correct answer and the reason that character might feel that way to strengthen the class’s understanding. If a child answers correctly give specific praise.

## **Stop-Breathe-Think Activities – Teacher Instruction Sheet**

- Show the class the Stop-Breathe-Think poster.
- Read the *Just for me Story* to the class and discuss what the children understood from the story.

Explain to the class that *“Sometimes our feeling make us do things that are not OK, but when we are calm we are better at making OK choices”*

- Ask the children to come up with their own special phrases for Stop-Breathe-Think so you can help to prompt the class when noticing negative emotions.
- Model each step to the class – for instance show the class how to take a deep breath with their mouth closed and breathing through the nose. Then prompt the children to say *“I feel \_\_\_\_\_, because \_\_\_\_\_.”*
- Role play with the other class teacher how to use Stop-Breathe-Think to calm down when angry or frustrated.

For example, one teacher can put their keys in their pocket and say: *“Oh, no, I have a problem. I can’t find my keys and I am getting so upset. It’s hard to think about where I left them. I should try to Stop-Breathe-Think. First, I’ll tell myself to stop”* (fold arms over chest). *“Then I’ll take a long, deep breath”* (take an exaggerated long breath). *“I feel better. The problem is I can’t find my keys and it’s making me feel mad and frustrated. I’m calm now, so I will think about what to do. I know, I will try to remember the last time I had them. Oh, that right! I put them in my pocket”*.

- With the other teacher and class members role-play different situations which are likely to get the class frustrated (e.g. when another child knocks over their blocks) to demonstrate how to use this technique.

## **Stop-Breathe-Think Scenarios.**

The Stop-Breathe-Think scenarios are drawings of different situations to help the class understand when to use the Stop-Breathe-Think sequence and how it can help with problem solving and making better choices.

For each scenario, point out “OK” or “Not OK” choices. When a choice is “Not ok” point out what could have been done instead (e.g. Stop-Breathe-Think)

Make sure to emphasize how the class’s behaviour and choices can affect others- for example, if the picture shows one child being aggressive towards another, discuss with the class how each character in the story might feel and ask them how they would feel in that same situation. Praise appropriate responses.

This technique will likely take practice so it is a good idea to cue the class’s Stop-Breathe-Think technique before their feelings escalate or a problem situation gets out of control. Be watchful for situations where conflicts are likely to occur to help cue the class to use Stop-Breathe-Think. Reminders should always be given in a supportive manner or as a helpful suggestion.

## Appendix D: Eastern Mediterranean University Psychology Department's Ethics Committee Approval Letter



Eastern  
Mediterranean  
University

**The Department of Psychology  
Eastern Mediterranean University  
Research & Ethics Committee  
Senel Husnu Raman-Chairperson**

**Famagusta, Turkish Republic of Northern Cyprus  
Tel: +(90) 392 630 1389  
Fax: +(90) 392 630 2475  
e-mail: senel.raman@emu.edu.tr  
Web: <http://brahms.emu.edu.tr/psychology>**

Ref Code: 13/10-41  
Date: 10.10.2013

Dear Victoria Vudali,

Your proposal submitted in partial fulfilment of the course requirements for PSYC500 *Masters Thesis* has been *approved* by the Research & Ethics Committee on 10.10. 2013 as there are no ethical violations in the application. However, the participants of your study are not only the children but teachers too. For future reference you would need to include this information into an ethics application.

If any changes to the study described in the application or supporting documentation is necessary, you must notify the committee and may be required to make a resubmission of the application. This approval is valid for one year.

Good luck with the research.

Yours sincerely,

A handwritten signature in black ink, appearing to be 'Senel Husnu Raman'.

Assist. Prof. Dr. Senel Husnu Raman  
On Behalf of the Research & Ethics Committee  
Psychology Department  
Eastern Mediterranean University