The effects of emotional awareness training on teachers' ability to manage the emotions of preschool children: An experimental study

Efectos del desarrollo de la conciencia emocional en la capacidad de los profesores para gestionar las emociones de niños en edad preescolar: un estudio experimental

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This article describes the process and results of a Randomized Controlled Trial (RCT) on teachers' ability to manage the emotions of preschool children during a constrained play activity. Thirty early childhood education teachers participated in the study. Half of the participants were taught strategies to enhance their own emotional competence. The control group was provided with standard information on child development. The experimental group was trained in active strategies on emotion coaching, emotional schemas, reflective practice focused on emotions, and mindfulness training. The teachers' outcomes were assessed in situ during a pretend play session with small groups of preschoolers. The dependent variables were observed occurrences of different components of emotional competence in teachers. Significant statistical differences were found between the two groups across the three different emotional competence skills (regulation, expression, and knowledge) demonstrated by the early childhood teachers during a game situation. This experimental study highlights the processes through which teachers support the emotional competence of young children, and the importance of the role of early childhood teachers' own emotional competence on the socialisation of children's emotions. Most importantly, it provides evidence, based on the influence of emotion-focused teacher-training and reflective practices, that teachers' emotional skills should be supported such that they can optimally meet the emotional needs of young children.

Key Words: Randomised Control Trial; Emotion-focused Training; Reflective Practices; Early Childhood Education.

Este artículo describe el proceso y los resultados obtenidos en un Ensayo Controlado Aleatorio (ECA) sobre la capacidad de los profesores para gestionar las emociones de niños en edad preescolar durante una actividad de juego restringido. Participaron en el estudio treinta profesores de educación infantil. La mitad de los participantes aprendieron estrategias para mejorar su propia competencia emocional. El grupo de control recibió información estándar sobre desarrollo infantil. El grupo experimental recibió formación más específica sobre estrategias activas relacionadas con el desarrollo emocional, los esquemas emocionales, la práctica reflexiva centrada en las emociones, y el mindfulness (atención plena). Se evaluaron in situ los resultados obtenidos por los profesores durante la sesión de juego simulada con grupos reducidos de preescolares. Las variables dependientes valoraban las ocurrencias observadas de componentes de la competencia emocional en los profesores. El estudio mostró que durante los juegos hubo diferencias estadísticamente significativas entre los docentes de ambos grupos en tres habilidades de competencia emocional (regulación, expresión, y conocimiento). Este estudio experimental subraya los procesos que utilizan los profesores para apoyar la competencia emocional de los niños pequeños, y el importante papel que desempeña la propia competencia emocional de los profesores en la socialización de las emociones infantiles. Además, a través de la influencia que ejerció la formación emocional y las prácticas de reflexión de los profesores, pone de manifiesto la importancia de fomentar la adquisición de habilidades emocionales por parte de los profesores a fin de satisfacer de manera óptima las necesidades emocionales de los niños pequeños.

Palabras Clave: Ensayo Controlado Aleatorizado, Desarrollo Centrado en Emoción, Prácticas Reflexivas, La Educación Preescolar.

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Emotional competence is a fundamental part of children's social development and determines their ability to interact and form relationships with others (Denham, Bassett, Zinsser, 2012; Dehham & Burton 2003; Saarni, 1990). As a construct, emotional competence is relatively new so there are still some debates in relation to sharing characteristics with other concepts such as emotional literacy and emotional intelligence. A comprehensive definition that also includes elements of both emotional intelligence, and emotional literacy describes emotional competence as "the ability to understand, manage, and express the social and emotional aspects of one's life in ways that enable the successful management of life tasks such a learning, forming relationships, solving everyday problems, and adapting to the complex demands of growth and development" (Elias, Zins, Weissberg, Fre, Greenberg & Haynes, 1997, p. 2). Children's ability to integrate in their life these three core aspects of emotional competence (regulation, expression, and understanding) is highly dependable on adult's intervention and this influence determines in great measure their success during social interactions (Halberstadt, Denham & Dunsmore, 2001). How adults manage, coach and engage with children through emotional communications has become an increasing area of interest in research (Kitzmann & Howard, 2011). While parents play a fundamental role in the development of children's emotional competence, teachers also play a fundamental role in this task. Although their functions differ in principle from the parental role, teachers utilise similar emotional socialization processes to foster children's emotion competence. Teachers in early childhood education often give children direct instruction on emotional skills via curricular activities, but also by building secure attachment relationships, modelling culturally appropriate emotional expressions, and using strategies for coping with feelings which include emotion talk, emotion coaching and other cognitive strategies during everyday interactions. These everyday interactions are recognised by teachers as particularly important in the development of healthy relationships within the Early Childhood Education (ECE) classrooms. Ebbeck and Yim (2009) have found that teachers recognised that spending quality time with young children by being emotionally available and responsive was the most important approach to foster a secure attachment in early childhood centres. Interestingly, attachment research has found that the best predictor for a child to develop a secure attachment is the caregiver's capacity of self-awareness (Siegel & Hartzell, 2003). Early attachment relationships also lead to the formation of emotional schemas as the child learns to both interpret and regulate emotions through interactions with caregivers. Emotion schemas, like other memory schemas, are based on information taken from numerous similar or repeated experiences from a person's past. Emotion schemas are differentiated from other memory schemas in that they are derived mainly from interpersonal interactions, and dominated by the emotional core, consisting of somatic, sensory and motoric experience (Bucci, 1997).

One aspect of the adults' role in successfully supporting young children's emotional competence through relationships is the manner in which they can monitor and regulate their own internal processes and behaviour during their interactions with the child (Schore, 2005). This interactive regulatory capacity called by Sterns (1985) as "attunement", has been described in the child development literature as the way in which one person focuses attention to the internal world of another and it is sensed as a feeling of a shared affect state. It has been claimed that this deep interpersonal communication "may lead the brain to grow in ways that promote balanced emotional self-regulation via the process of neural integration, which enables flexibility and self-understanding" (Siegel, 2007, p.136).

There is substantial evidence showing that the way teachers interact with young children, affect their social and emotional outcomes. Evans and Harvey (2012) have identified five components of the emotional climate of primary school classrooms that contribute to the understanding of the impact of emotions in educational settings. This model has examined aspects as: (a) the emotional relationship with the teacher, (b) the emotional awareness of the teacher (teachers' own emotional competence), (c) the teacher's responses and validation of emotions, (e.g. utilisation of "emotion coaching"), (d) he teachers' Meta-Emotion Philosophies (emotional intrapersonal beliefs) and (e) emotional interpersonal guidelines(emotional boundaries that include fairness, respect, avoidance of over-involvement, discipline and development of structured routines). Among these features, teachers own emotional competence and self-awareness play a crucial role in building up positive relationships with children and contribute to the creation of healthy atmospheres of classrooms. (Gottman & Declaire 1997; Gottman, Katz, & Hooven, 1997; Hamre & Pianta, 2001; Harvey & Evans, (2003), Ulloa, Evans, & Parkes, 2010).

Jennings and Greenberg (2009) highlighted the importance of teachers' own socio- emotional competence and well-being in the development and maintenance of supportive teacher–student relationships, effective classroom management, and successful social and emotional learning program implementation. Early childhood teachers' emotional competence is considered essential in building successful and trusty emotional relationships, genuinely based in the individual understanding of the children needs and feelings. Teachers' emotional competence allows them to be aware of their own emotions, to discriminate between their own feelings and those of others, to monitor and regulate their own internal processes as well as to understand more accurately the causes of emotions in themselves and the children they work with. Once teachers understand and are in touch with their own emotional experience, their reactions to emotional situations can be constructively regulated and cope with. Because of these abilities, emotionally competent teachers are capable of implementing a range of positive strategies as emotion coaching, use and cultivate self-awareness and mindfulness skills as well

as understand and reflect on the emotional difficulties that underlie behaviour in children. These competences can be integrated as a part of a process of reflective practice focused on emotions in shared settings where they can discuss and reflect on their own relationships with individual children. These practices are fundamental in understanding how teachers can help to shape children's emotional competence (Zeller, 2009). A lack of this understanding could be the cause of teachers having negative attitudes towards children, feed on negative attributions about behaviour, and rely on harsher discipline strategies for classroom management. These aspects may result in adverse effects for both teachers and children impeding them to be positively engaged with the environment and affecting in the long term their overall physical and psychological well-being.

All the interpersonal aspects that guide the construction of positive emotional climate in classrooms seemed to be closely linked to the emotional competence of the teacher. Whether or not the emotional skills involved in the emotional competence of teachers occur naturally or can be trained was the basic research question guiding this study.

A variety of programmes around the world has targeted the enhancing of children's emotional competence. These interventions tend to consider teacher training as a fundamental part for the success of these programmes. Although well considered through the studies on emotional climate of primary school classrooms in New Zealand, teacher training focused on emotions has been less frequently implemented in early childhood education. A few interventions aiming to increase the emotional competence in early Childhood Education have been developed. Popular programmes as PATHS programme -Promoting Alternative Thinking Strategies- (Greenberg & Kusché, 2006), Zippy's friends (Clarke & Barry, 2010), The Emotion Course developed within a Head Start population in USA (Izard et al., 2008), Incredible Years teacher training (Webster-Stratton, Reid & Stoolmiller, 2008), have demonstrated the increase of emotional knowledge and social competence as well as the decrease of internalised and externalised problems in preschool children. Teacher training was a critical component of all these interventions that usually focus on offering on going teacher training on practical skills for promoting children's emotional competence. Improving teacher, own emotional skills as well as offering to teachers strategies that can have direct effects on children emotions in early childhood settings are the soul of interventions and studies have claimed the need for training teachers to handle children's emotions (Swartz & Mc Elwain, 2012). A variety of teacher training programmes has been focused on developing mindfulness based education to enhance teachers well being and emotional competence (Garrison Institute, 2012; Mental Health Foundation, 2011). Examples of these initiatives include programmes as CARE for Teachers (Cultivating Awareness and Resilience in Education), The aware teacher at the Center for Mindfulness ,University

of Massachusetts, Cultivating Emotional Balance research project (CEB). These mindfulness approached programmes are based on applying mindfulness usually defined as a form of non judgmental attention characterised by openness, acceptance and an enhanced ability to respond have been the present moment. Mindfulness and attention practices has been linked with the ability to better understand the relationship between thinking, emotional experience and action, and consequently helps people to respond appropriately to stimuli instead of reacting impulsively. The effects of mindfulness meditation on brain function has been demonstrated through research in neuroscience, cognitive science and developmental psychology (Davidson et al., 2012; Siegel, 2007).

In spite of these innovative training programmes, professional development programmes for educators typically focus on what teachers need from the outside: Theory, pedagogy, content knowledge, and put less emphasis on their insides. Teachers' personal emotional abilities, their capacity to be reflective, to be present and deeply connected with the children in their care have a direct impact on supporting young children emotional development. Research evidence has shown that teachers cannot communicate effectively emotional and social competence to children if their own emotional needs are not met. This gap is considerably more important when teachers are novice or unexperienced. (Corcoran & Tormey, 2012; Jenning & Greenberg 2009; Sutton, 2004).

The present study addresses the effects of a reflective emotionally focused training on teachers' own emotional competence. It was predicted that teachers' experiential training in different aspects of emotional competence would have an effect on the manner in which they would support emotional competence in children during a controlled play session. Experience was considered as a confounding variable since it is possible that teachers with several years in the service had developed better competence that novice teachers. Clotfelter, Ladd & Vigdor (2007) have found that experience has a significant on teacher-student quality of relationships and classroom effectiveness. It was predicted that experience has a moderating effects on the manner teachers respond to induced emotional experiences in young children. This research aims to examine the ways in which a brief intervention, focused on teachers' emotional experience could help early childhood teachers manage emotionally driven situations with young children and thus contribute to inform this important area of child development, childhood mental health, and education.

Method
Participants

Participants were 30 preschool teachers working in different ECE services in the Greater Wellington Region. After the approval from the Human Ethics committee, it was seen as advantageous that the ECE centres included in the project were from different demographic areas in Wellington in order

to ensure diversity of socio-economic backgrounds among the participants. The New Zealand Deprivation Index (2007) was consulted to determine the demographic characteristics of possible ECE centres. While the index showed there was socio-economic difference in populations living in the physical locations of the services in the official early childhood education listing, it should be noted that New Zealand ECE services are not "zoned" so parents may elect to have their child attend any particular centre for its special character. Similarly, New Zealand ECE centre teachers did not necessarily live in the location of a centre. During the recruitment process, invitation letters and telephone calls were made to centres covering a range of service-types and geographical locations in purposive sampling, until the quota of a minimum 30 teachers was reached. The sample of ECE centre teachers consisted of 30 ECE teachers from six services. Teachers were assigned by service group, not individually, to either the intervention or control groups by a coin toss: a task undertaken by a confederate, blind to the type of group "heads" or "tails" represented; with the requirement that there be three groups in each condition at the end of the process.

Inclusion criteria were for the teachers to work in ECE classrooms with preschool children (aged 3-5). The ECE centres that agreed to participate were distributed in this proportion: two Kindergartens, two preschool programmes, and two day care centres. Intervention sessions were arranged as part of the teachers' professional development and took place in their own settings after work hours. All the teachers that were initially recruited for the training completed all the sessions. All the participants were female teachers (ages 23 - 52) with different levels of experience. Eighty per cent of participants were qualified early childhood teachers and the other 20% were training to obtain the teaching qualification. The participants who reported having more than 3 years of ECE practice were considered experienced. The ethnicity of the participant teachers was distributed as follow: 23 participants were European New Zealanders, three participants were Māori, two Pasifika and two participants were Asian.

As initial screening tool, all participants were invited to complete a self-assessment instrument; the Teacher Emotional Style Questionnaire (TESQ) which was adapted from the 14-item Maternal Emotional Style Questionnaire (Lagace´-Se´guin & Coplan, 2005).

The purpose of this assessment was to check that the random assignment process don't accidentally generate two groups of teachers who already differed significantly in terms of their general emotion style (knowledge competence). The MESQ assesses how mothers cope with their child's emotions. Since the teacher- child relationship mirrors the maternal relationship in predicting social and emotional competence (Howes, Matheson, Hamilton, 1996), no new items to the original questionnaire were added for this study; only the word "your child" was replaced by "your student". Lagace´-

Se´guin and Coplan reported good psychometric properties, including stability, convergent validity, and construct validity for the 2-factor (seven items each) MESQ. In the three studies they reported, Cronbach's alpha for the first factor, emotion dismissing (ED) ranged from .78 to .92, and for the second factor, emotion coaching (EC), from .81 to .90.

Not statistically significant differences were found in both groups. The mean Coaching score for the Control group was ($M = 21.6$, $SD = 4.17$) and for Experimental ($M= 21$. $SD= 5.17$); t (28) <1.0, $p>$ .7.6. The mean Dismissing score for Control was ($M= 23.9$, $SD = 4.14$) and for Experimental ($M=23.4$, $SD = 5.15$); t (28) <1.0 $p >$ .96. These results confirmed that participants in both groups had similar emotional styles prior the intervention.

Materials

Two different set of materials were designed and used during the intervention study (a) the training curriculum (b) the contrived assessment situation, known as the crocodile game.

The training curriculum. The training consisted of three sessions aimed to integrate theoretical, practical and personal aspects of the emotional competence in participant teachers. The sessions were inspired by the principles addressed by Greenberg and Paivio (1997) which guide The Emotion Focus Therapy (EFT) approach. Although the intervention was focused on achieving changes in participants'' emotional competence, it was not intended to be a therapeutic treatment.

The first session was designed to introduce the participants to the conceptual foundations of the training and exercise on the concepts of emotional competence (Denham, Bassett & Zinsser, 2012; Elias et al., 1997; Halberstadt, Denham & Dunsmore, 2001) and emotion schemas (Bucci, 1997). This session also focused on emotion coaching (Kitzmann & Howard, 2011) as a fundamental construct in supporting emotional competence and socialization of emotions in ECE settings. Video-clips and observational material showing teachers exercising different ways of emotion coaching were presented and discussed in the group.

The second session aimed to consolidate some of the emotions theory concepts, specifically the concept of emotion schemas, and to integrate these ideas into a process of reflecting on emotions practice through an experiential exercise. The assumption was that by using a particular model of self-reflection on emotional experience, the participant teachers could integrate and reflect on the links between their own and children's experiences, feelings and beliefs and integrate it with the theoretical ideas already presented (McMahon, 2001; Schön, 1983). The activity through which this model was presented is called "The child that concerns me greatly" and include a voluntary presentation from one of the participants to describe a recent episode with one of the children of concern. Following the individual presentation the group was invited to reflect on this experience while the facilitator guide the group

on focusing on their own emotional experience as well as their children rather than focusing only behavioural and pedagogical aspects of the problem

Session three was designed to promote and sustain teachers' emotional communication with children. In this session, the concepts of synchronicity and atunement (the intentional focus on emotional attention) and mindfulness in ECE practices were introduced. They were encouraged to enhance their self-awareness and awareness of others to become more emotionally competent by using mindfulness strategies that they can incorporate in their practice**.** Two strategies aimed to to promote a compassionate emotional communication with children were practiced within the session: A role-play exercise called The Flat Face (Wood, 2008) followed by group discussion, and an experiential activity using a savoury exercise followed by a short session of mindfulness guided meditation (Williams, Teasdale, Segal & Kabat-Zinn, 2007). The meditation materials in the form CDs were offered to the teachers to encourage their continuous practice.

Control group training format. The control (non-intervention) group was presented with one single session of general child development theory which included a refreshment lesson on modern theories of child development as Behaviourism, Nativism, Constructivism, Social Constructivism and cognitive development.

Contrived assessment situation: the crocodile game. The game involved introducing to a small group of children a variety of toys and building blocks. Soon after, the teacher was encouraged to initiate the game using the toys available. A few minutes after, once the teacher and children were observed to be engaged playing, the researcher introduced an emotional arousing situation, presenting unexpectedly a crocodile puppet pretending "to eat the toys." The children and teachers were not warned at any stage of the time when the stimulus would appear. The introduction of the unexpected stimuli aimed to elicit some level of emotional arousal in participant children, and allowed us to observe a variety of teacher-child interactions, as well as teachers' responses to children's emotions. This activity was comprised of two main parts:

1. Time- period before the presentation of the emotional stimuli (crocodile)

2. Time- period after the presentation of the stimuli.

This pretend game activity was previously used in research (Galyer & Evans, 2001, Golomb & Galasso, 1995). The unexpected entrance of the crocodile character was thought to meet the criteria for a significant event that elicits some level of emotional arousal (Kobak & Ferenz-Gillies, 1995). Because of the pretend nature of this game, it can be seen as a more ethical approach of provoking a mild emotional reaction in young children.

The game was designed to assess the effects of the intervention training on teacher's ability to support and manage children's emotions in a controlled game situation. The first phase of the game assessed the interactional child- teacher dynamics before the introduction of the contrived stimulus (the crocodile). The second phase assessed teachers' abilities to manage this emotional situation in children and demonstrate their recent acquired emotional competence skills. The teachers' overall emotional competence skills during both phases of the game were also assessed through a global impressionistic measure.

Design

Each centre was taken as an independent cohort and each group was composed of five teachers. This study used a factorial design 2 (between factors, experimental vs. control) X 2 (within factors high vs. low experience). Small groups were randomly assigned to one of two conditions (experimental and control) and by two levels of experience (low and high experience). All participants were unaware of which group they were assigned. The experimental group (N=15) was taught a variety of strategies aiming to enhance their emotional competence. The control group (N=15) was provided with standard information on basic child development theory.

The factorial analysis compared all the participants randomly assigned to the experimental (intervention) condition with those assigned to the control group. The impact of the training on participant teachers (outcomes) was assessed in situ by observing the child- teacher interactions during a pretend game. This play activity has been previously used in research (Galyer & Evans, 2001, Golomb & Galasso, 1995) was designed to elicit some level of emotional arousal in children. (Kobak & Ferenz-Gillies, 1995). In Galyer and Evans' (2001) research, this particular game was used with the intention of exploring children's emotion regulation skills within the pretend play context. In the context of Galyer and Evans' study 82001) "it was expected that children who had responses that were successful in resolving conflict or keeping the game going despite the introduction of a negatively valence event, would be rated as having higher emotion regulation in the wider context" (p. 96).

This protocol involved an innovative way of arousing specific but harmless emotions in children and thus provided a controlled environment for observing teacher skills in managing different types and levels of feelings expressed by the children, especially for those children who were less able to regulate their own affect.

Procedure

Participants' recruitment and initial arrangements. An even number of the types of early childhood programs offered in NZ was preferred to balance their representation. The intention of the recruitment process was to be inclusive, so it was expected that the settings selected to be part of this study, reflected and represented the cultural and ethnic diversity of the

population of New Zealand.

To conduct the allocation of participants to the intervention and control groups, a simple randomization was conducted using a repeated fair coin toss. A research assistant located at CHERUBS Lab, Massey University conducted this process, and the main researcher was initially blind to this allocation. Cluster groups of participants were randomly selected to receive (or not receive) the intervention curriculum. Training teachers in clusters had logistical purposes since teachers in the same school, working under the same time tables can receive the training more conveniently together. This homogeneity of the centres can result in potential sampling problems since teachers from the same centre will be more like one another than they are like teachers from other centres. To balance the possible effects of this intra-class correlation, the number of groups and individuals within those groups assigned to both conditions was the same, giving balance to group levels. In addition to that, the nature of the early childhood centres recruited permitted that the centres in the experimental group were reasonably similar to the centres in the control group.

Those allocated as not receiving the intervention curriculum, were offered a session of child development theory instruction soon before assessing their skills through the pretend game. However, once the process of assessment was finished the full training was also offered to these groups of teachers, to give them the opportunity to acquire the skills in the same way that the intervention participants did. All the participants were blind to what workshops curriculum they received.

Once the cultural consultation took place and consent from the Massey University Human Ethics Committee was applied for and granted, the groups were randomly assigned to the experimental and control condition. Written consent was obtained from teachers and children, the later through parental permission. The teachers approached parents in order to obtain signed consent. Issues of confidentiality and anonymity of teachers, children and settings were discussed with the groups before the workshops started. Participants were debriefed on the workshop's general content needed for informed participation, but were blind to the group they were allocated.

Before the workshops started, the researcher organised the settings and personally organized the sitting arrangements and refreshments.

The physical prearrangements of the settings were prepared with the intention of facilitating group dynamics leading to an open, trusting and non- judgmental participation. Instructions and workshop's curricula were given to each group according to their allocation to the two conditions. The sessions were video recorded and the participants' verbatim material during the intervention was transcribed from the video footage.

Previous to the intervention and control, curricula sessions were offered to the participants in both groups. There were asked to complete the TESQ questionnaire, a self-assessment screening tool to examine any initial differences in their emotional styles. For the experimental (intervention) group, three sessions of two hours each were given. The first session included basic theoretical constructs of emotions, emotion schemas and emotion coaching and discussion on videos showing examples of emotion coaching events. The first part of the second session contained a revision of the role of emotion schemas in the emotional responses within the teacher –child relationship. The second part consisted of offering the participants the opportunity to reflect on their own emotions though an experiential exercise designed to link personal and emotional aspects of their relationship with children and the concepts and skills learned in the first session. In the third session, teachers were invited to practice their self- awareness skills by participating in two exercises that included the idea of synchronicity and mindfulness practice.

The control groups were run consecutively; the intervention curriculum for these groups consisted of general information on child development and lasted one hour. Once both groups took part on the sessions, the participants were invited to participate in the game situation. Each game session was independently organised with each individual and written instructions of the game protocol were distributed among the participants. The game sessions took place in the participants' own settings. For this, a quiet room was allocated and the researcher arranged the setting for the game. Small but attractive toys were distributed on the floor and the camera was located to capture the children and teachers interacting. A small group of children (usually three or four) whose consent was previously obtained was invited to come to the room where their teacher was waiting. The researchers clarified with the children and the teacher their right to withdraw whenever they wished to do so. During the first phase of the game, children and teachers were usually engaged in an imaginative game using the toys available. When children and teacher were observed to be completely absorbed in the game, the researcher unexpectedly brought up a crocodile puppet pretending to eat the toys. The introduction of the crocodile into the game created an instance disturbance in the flow of the game and a range of reactions from participant children. The game protocol allowed the exploration of a variety of teacher-child interactions. The game usually ended after the teachers were given the opportunity to respond to children's emotions. Then the children were invited by the teacher to collect all the toys and go back to their normal activities in the centre. Before the children were sent back to the normal activities, the researcher offered them a sticker as a "thank you" token for participating. After this gesture, the children left the room in a happy mood. The duration of the game was approximately 10 minutes. Teacher's implementation of their own emotional competence skills during those interactions were assessed by systematically observing the video-recorded play sessions. The emotional competence skills demonstrated by individual teachers during the game situation reflected the core components of the theoretical construct of emotional

competence (Emotional Knowledge, Emotional Expression, and Emotional Regulation).

Data reduction and coding. For data processing, videos were scrutinised several times for the researcher to familiarise herself with the data. To evaluate the teachers' display of emotional competencies during the game, a categorisation was established. The categories of analysis were established by classifying observable events observed in the recorded game sessions, and attaching these examples to each correspondent emotional competence operational definition. Teachers' responses to the children's emotional reactions during the game were aligned to the main conceptual components of emotional competence addressed by psychological literature (Denham, 1998; Denham, Bassett & Zinsser, 2012; Denham & Burton, 2003; Halberstadt, Denham & Dunsmore, 2001). For the first part of the game (Phase 1, before the appearance of the emotional event), this categorisation included observable events that demonstrated teachers overall interactional and emotional capacities such as attention (e.g., teacher focuses entirely on the game), sustainability (e.g., teacher maintains the flow and narrative of the game), initiative (teacher initiates and adds new input to the game), acknowledgment of emotions (e.g., teacher names emotional states in children), expression of emotion (teacher models appropriate emotional expression) and containment of emotions (e.g., teacher helps to regulate/reduce arousal of emotions through physical comfort). The data was scrutinized again taking into consideration the established coding, so the frequency in which the events occurred during the observation (the number of times an emotional skill happened per minute of observation) was calculated to be considered for further statistical analysis.

For the second part of the game (Phase 2, during and after the introduction of the emotional event), the categorisation included examples of events that illustrated the main defined components of emotional competence such as: emotional regulation (e.g., containment of, and regulation of expression of emotion), emotional expression (e.g., helps children to express emotions by modelling o using words), and emotional knowledge (e.g., picks up emotion cues, and recognizes emotion in herself and the children).

Observation suggested that teachers differed on the basis of experience, so they were then divided by median split into high and low experience (junior and experienced). To test the effects of the intervention on the experimental and control groups considering the participants' level of experience a 2x2 independent sample ANOVA was conducted.

To determine if the natural competence of the participants, regardless of being trained, does have a direct effect on the competences demonstrated by the teachers during the game; a measure of overall emotional competence performance was created. Using a 4 points Likert scale ranging from 0 (poor) to 3 (excellent). Observers rated participants' competence on items such as: (a) sustaining attention throughout the game

e.g., teacher focus attention on the game and keep eye contact with the children; (b) expressing and promoting expression of emotion e.g., models own emotions and encourages children to express emotions; (c) perceiving emotional cues e.g., notices a child who is withdrawn; (d) understanding of children's individual differences e.g., accepts feelings and comforts a child who seems scared or withdrawn; (e) connecting their own feelings with those of children, e.g., shows adequate expression of own feelings in tune with the children's; (f) helping children with emotional arousal e.g., uses physical contact for comfort; (g) facilitating problem solving e.g., helps the children through disagreement.

In order to assure that the observed data was reliable, teachers' videos were then scored by two observers (coders), the researcher and a psychology graduated research assistant and their observations correlated. The graduate research assistant was previously trained to follow the guidelines for scoring, and was blinded to the purposed hypotheses and the research project. Eighty two percent (82%) inter-observer agreement was reached. Inter-agreement was calculated by dividing the number of observer agreements by the total number of agreements plus disagreements and multiplied by 100 (Richards, Taylor, Ramasamy, & Richards, 1999). Levels of agreement were sufficiently high between the two coders, and discrepancies were resolved in discussion between the observers.

All the training sessions were recorded and transcribed and raw data were used for the purpose of conducting a qualitative analysis. This analysis was based following the four different stages described through the training process. These stages were inspired by the intervention principles addressed by Greenberg and Paivio (1997) which guide the Emotionally Focus Therapy (EFT) approach. Although the intervention was focused on achieving changes on the participants' use of their emotional skills, it did not intend to be a therapeutic treatment.

Results

Participants who received the training felt very satisfied by the acquired learning and with the overall training experience. During the training sessions, the participants displayed interest and had a positive approach to the process. Some of the teachers' opinions on the training were conveyed through the following comments:

"The workshops have helped me to symbolise my own emotions and feelings....put them in words and try to make sense of them....also I feel more empathic towards children's different emotions, and how we have to respect and understand their feelings"

"I have enjoyed your Korero talks…the workshops have been valuable to me as a reflective teacher wanting to improve my interaction with the children….."

"Group discussion helped with team building and created team awareness of our own feelings and reactions to the

children…..”

"The programme has impacted my practice. I feel I am more attentive to my own emotions…..not just a hug and you will be OK approach!!"

"I am seeing emotions more positively …. I see them as a chance to get close to the children and help them develop emotional competence."

"It is such an important topic for both children and teachers….Emotional awareness, especially in early childhood, should be in the front of your mind at all times. The ability to be aware of feelings in yourself and children, to act accordingly is of great value for emotional wellbeing development."

During the contrived task, the participant teachers were very enthusiastic and followed the protocol of the game. The children were always willing to participate. The children's reactions when mildly stressed by the unexpected appearance of the crocodile eating the toys were very diverse. Children showed diverse responses from emotional arousal. Their reactions were mixed; they withdrew, escaped or avoided the crocodile or attacked, fed or hurt the crocodile. A few children looked for immediate physical protection from the teacher.

The first task to proceed with the analysis was to develop a way of coding the teacher's ability to handle emotions in the children before and after the appearance of the crocodile in the game. It was predicted that in the first half of the game teachers would be able to handle the normal play appropriately, but when the children were mildly stressed by the unexpected event, the trained teachers would be able to handle children's emotions resulting from this event much better than the control group. It was also predicted that even if there was not a large difference on the teachers' performance prior to the appearance of the crocodile, it was predicted that once the emotional event emerged, the trained teachers involved would manage children's feelings more effectively. Teachers in the experimental group were expected to be better than teachers in the control group during Phase 1 of the game; they were expected to be even better during the second part of the game when the unexpected event was introduced.

Frequency of occurrences: Phase 1 before the presentation of the emotional event

A frequency of occurrences per observational time of different emotional competence skills for the two compared groups (experimental and control) during the Phase 1 of the game (before the presentation of the crocodile) was calculated adjusted for the total number of minutes that the observation was recorded. Teachers in the experimental group demonstrated higher frequencies of occurrences of emotional skills per minute in comparison to the controls: focused and attention 3.89 to 2.17, Sustainability 7.89 to 5, Initiative 2.40 to 1.97,

Acknowledgment of emotion 1.71 to 0.78, Modelling 1.93 to 1.02, and Reduce or Contain Emotion when needed it 0.74 to 0.07. Figure 1 illustrates the frequency of the categorised emotional skills recorded in experimental and control groups during the Phase 1 of the game.

Figure 1
Frequency of occurrence of interacting skills during Phase 1.
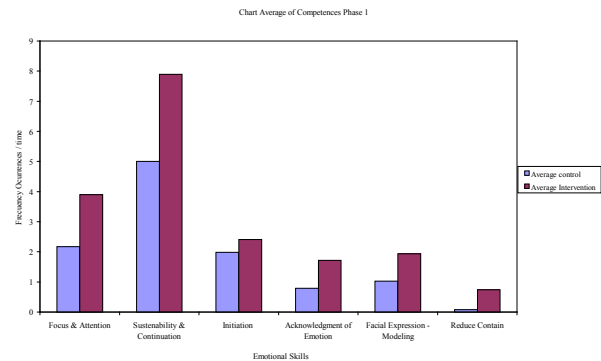
An independent samples *t*-test was conducted to see if there was a significant difference in the means of all six emotional skills scored during this phase of the game for experimental and control groups. There were significant differences in scores for the two groups in four of the six emotional skills. There was a significant difference in the mean scores on: Attention for the control group ($M = .006$, $SD = .002$), and the experimental group ($M = .010$, $SD = .004$); $t (20) = -3.40$, $p = .005$; Sustainability for the control group ($M = .013$, $SD = .005$, and the experimental group ($M = .021$, $SD = .013$); $t (18) = -2.10$, $p = .045$; Acknowledgement of emotion for the control group ($M = .002$, $SD = .002$), and the experimental group ($M = .0048$, $SD = .003$); $t(25) = -2.49$, $p = .019$; Modelling for the control group ($M = .002$, $SD = .002$), and the experimental ($M = .005$, $SD = .003$); $t (26) = -253$, $p = .017$.

Two variables failed to reach statistical significance. Initiative for the control group ($M = .005$, $SD = .003$), and for the experimental group ($M = .006$, $SD = .002$); $t (27) = -1.05$, $p = .302$ and Containment of emotions, when needed for the control group ($M = .0002$, $SD = .0008$), and for the experimental group ($M = .002$, $SD = .004$) $t (14) = -1.52$, $p =. 1.38$.

These results suggested that the intervention did have an effect on the majority of the emotional skills tested during the Phase 1 of the game. Variables such as initiative and containment of emotions failed to reach statistical significance. This can indicate that at this stage of the game, teachers preferred to follow the initiative of the children without imposing their own, allowing the game to flow, as they needed little intervention in containing emotions since the mild aversive procedure (crocodile) had yet to be introduced. It was expected that prior to the introduction of the crocodile, the teachers would not show great differences in their behaviour but once the crocodile was involved the trained teachers were expected to manage

children's emotions more effectively.

Comparison of scores between experimental and control groups on emotional competence components (Phase 2 of the game)

For the final analysis a one way independent samples analysis of variance, ANOVA, was conducted in order to compare the effects of the intervention and the score differences between the 2 conditions (experimental and control) and the 2 levels of participant's experience (junior and experienced) in 3 different components of emotional competence (Emotional Regulation, Emotional Expression, and Emotional Knowledge) during the second phase of the game, after the presentation of the crocodile puppet. The results were: a) There was a significant effect of the Intervention on three different components of emotional competence at the $p<.05$ level for all the conditions. b) For Emotional Regulation, there were statistically significant differences between the two groups, $F(3, 26) = 9.96$, $p <.001$. These findings are represented in the Figure 2.

Figure 2
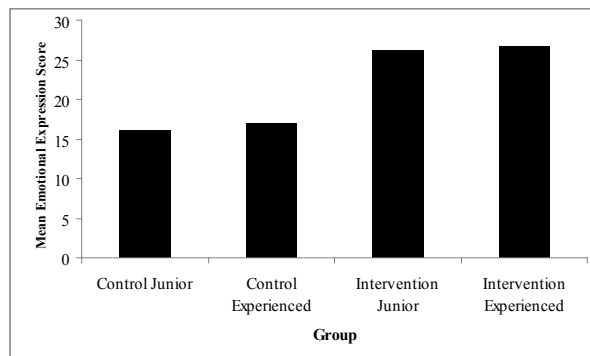Group Comparisons in Emotional Regulation.
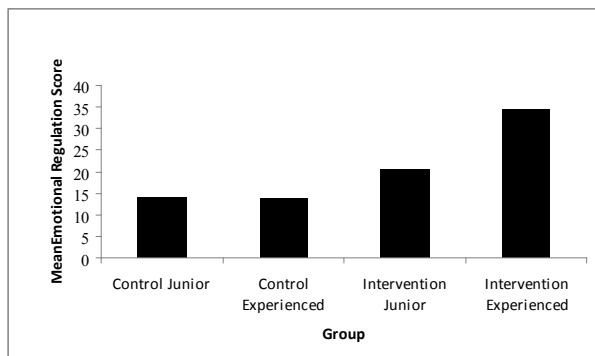
The mean scores on Emotional Regulation for each compared group, Junior and Experienced in two conditions, control and experimental after the presentation of the crocodile are described in the Table 1.

Table 1
Comparison of Means. Two Levels of Experience for Dependent Variable Emotion-Regulation.

Condition	Junior			Experienced		
	N	M	SD	N	M	SD
Control	6	14.1	3.2	9	13.7	6.54
Experimental	6	20.4	9.7	9	34.5	12.3
Total	12	17.2	7.6	18	24.1	14.3

For Emotional Expression there were also statistically significant differences between the two groups, $F(3, 26) = 4.36$, $p <.013$. These findings are represented in the Figure 3.

Figure 3
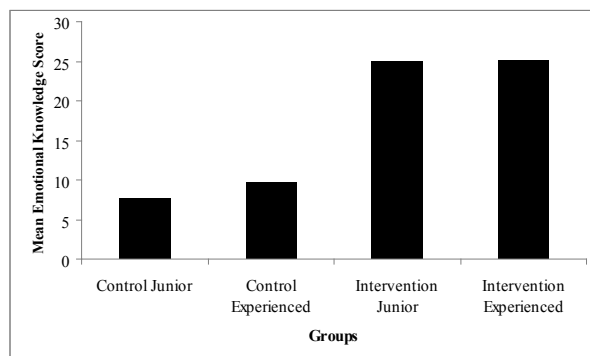Group Comparisons in Emotional Expression.

The mean scores on Emotional Expression for each compared group, Junior and Experienced in two conditions, control and experimental after the presentation of the crocodile are described in the Table 2.

Table 2
Comparison of Means. Two Levels of Experience for Dependent Variable: Emotion-Expression.

Condition	Junior			Experienced		
	N	M	SD	N	M	SD
Control	6	16.0	9.75	9	17.0	7.31
Intervention	6	26.2	4.92	9	26.7	7.42
Total	12	21.1	9.09	18	21.8	8.71

As Figure 4 shows, for Emotional Knowledge there were statistically significant differences between the two groups, $F(3, 26) = 4.71$, $p <.009$.

Figure 4
Group Comparisons for Emotional Knowledge.

The Mean scores on Emotional Knowledge for each compared group, Junior and Experienced in two conditions, control and experimental after the presentation of the crocodile are described in the Table 3.

Table 3
Comparison of Means. Two levels of experience for Dependent Variable Emotion- Knowledge

	Junior			Experienced		
Condition	N	M	SD	N	M	SD
Control	6	7.56	6.04	9	9.64	4.53
Intervention	6	24.9	19.3	9	25.1	13.4
Total	12	16.2	16.3	18	17.3	12.5

Taken together these results suggest that the intervention had a consistent effect across all three domains of the emotional component composite (Emotional Regulation, Emotional Expression, Emotional Knowledge) tested in teachers. Teachers trained in emotional competence skills showed higher means of those emotional skills, especially during the Phase 2 of the game when children were mildly stressed by an unexpected emotional event, when compared with non-trained teachers. Trained teachers were specifically good at demonstrating these competences during the Phase 1 of the game but even better during Phase 2 when children's feelings were better managed. Experience was a mediator for their performance during the game; however, trained teachers who were more experienced demonstrated higher emotional competences than those who were less experienced. The intervention enhanced the experienced teachers further than the less experienced ones.

Global Measure of Overall Emotional Performance

To determine if the natural emotional competence of the participants due to their experience or their individual abilities, does have a direct effect on the competences demonstrated by the teachers during the game; a measure of overall impressionistic emotional competence performance was created. The impressionistic measure of overall performance in emotional competence was rated by two coders, who scored the performance of the teachers in the videos using a 4 point Likert scale. Descriptive results comparing scores between the two coders/observers are presented in the Table 4.

Table 4
Comparison of Means and *p* Values between Coders.

Performance in Emotional	Coder 1		Coder 2		t- test
Competence	M	SD	M	SD	p
Sustain attention	2.4	0.67	2.5	0.62	.32
Express promote expression	2.3	0.56	2.3	0.61	.57
Perceive emotional cues	1.9	0.65	1.8	0.69	.16
Understand individual differences	1.8	0.79	1.8	0.77	.74
Awareness of feelings	2	0.69	2.1	0.71	.71
Manage emotional arousal	2.1	0.71	2.1	0.73	.57
Facilitate problem solving	1.8	0.83	1.6	0.66	.96

A paired samples *t*- test was conducted to compare the global emotional competence scores given by Coder 1 and Coder 2 on the 7 indicators of overall competences. The results indicated that there were no significant differences for the scores given by Coder 1 and Coder 2 (the independent coder). There were no significant differences between the means of the two raters; in fact, sometimes the means were the same for both of them. The means showed that the raters tend to agree and in their majority of scores the mean differences were near zero suggesting higher confidence intervals agreement.

Due to the confidence of this agreement the mean results produced by the independent Coder 2 for the global overall performance across the seven dimensions of emotional competences for both Experimental and Control groups are presented in the Figure 5.

Figure 5
Means of the global measure of overall performance in Emotional Competence by two independent coders.
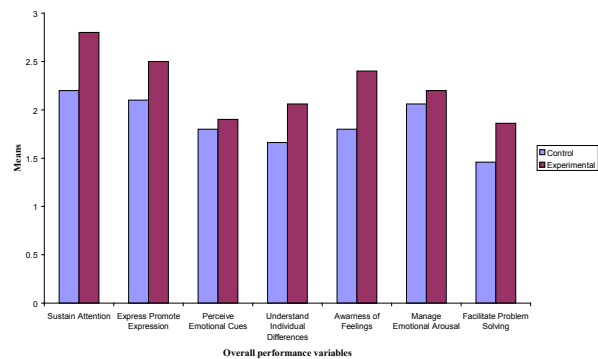
An independent samples *t*-test was conducted to compare for the independent coder, seven different overall emotional competences in both the experimental and control groups during the game.

In the variable of Sustain Attention there was a significant difference in the means of the experimental (M= 2.8, SD= 0.41) and the control (M= 2.0, SD= .75) conditions; t (0.35) = 21.7, p = .001

There were no significant differences in means between the experimental (M_e) and the control (M_c) conditions in the six remaining variables rated by the independent coder: Express and Promote Expression of Emotion (M_e = 2.5, SD = 0.51; M_c = 2.1, SD = 0.63; t (1.8) = 26.8 , p = .70), Perceived Emotional Cues (M_e = 1.9, SD = 0.70; M_c =1.8 , SD = 0.74; t (0.25) = 28 , p = .83); Understand Individual Differences (M_e = 2.0, SD = 0.88; M_c = 1.9, SD = 1.03; t (0.38)=27, p = .70); Awareness of Feelings (M_e = 2.4, SD = 0.82; M_c = 2.2, SD = 1.2, t (0.52) = 28, p = .60), Manage Emotional Arousal (M_e = 2.2, SD = 0.77; M_c = 2.5, SD = 1.5; t (0.74) = 28, p = .46); and Facilitate Problem Solving the experimental (M_e =1.8, SD = 0.74) and control (M_c = 2.2, SD = 2.0), t (0.6) = 28, p = 0.55).

With the exception of Sustain Attention during the game, that was higher in the experimental group, the natural overall emotional skills measured by this impressionistic scale were equally observed by the independent coder, regardless of the assignation of the groups. It demonstrated that natural abilities

and experience did not moderate the impact of the training in the experimental group in the majority of the variables measured.

Discussion

This study showed significant statistical effects of a Randomized Control Trial on the emotional competence skills demonstrated by early childhood teachers during a contrived game situation. The participants in the intervention group (N=15) showed a clear enhancement on three components of emotional competence, in comparison with the participants (N=15) in the control group who did not receive the same training. More experienced participants (three or more years of practice) gained further enhancement of their abilities. However, less experienced participants in the intervention group also gained skills from the training in comparison to the junior participants who did not receive the same training. The level of experience of participants was considered as a mediator in the teachers' enhancement and demonstration of their recently acquired emotional skills.

In order to evaluate teachers' learned skills, two phases of the game, before and after the presentation of the mildly stressful event were examined. Before the appearance of the crocodile, participant teachers in the intervention group showed, on average, higher frequencies of occurrences indicating emotional competence. They were capable of sustaining and continuing the game, initiating new paths to playing, and contained the children emotionally when they needed it, more often than participants in the control group. In the second phase, after the presentation of the crocodile, the impact of the training was measured through three different components of emotional competence (emotional regulation, emotional expression, and emotional knowledge) as defined in emotions literature (Eisenberg, Cumberland & Spinrad, 1998; Elias et al., 1997; Saarni, 1997).

The variable of experience was also determined in order to examine its mediation effects. Emotionally trained teachers showed more frequent occurrences of emotional competence skills assessed during the game. Teachers who had worked for three or more years in early childhood settings applied the skills more frequently after the introduction of the emotional event in comparison to less experienced ones. In emotional knowledge for instance, there were no differences in the amount of experience participants had. These findings are consistent with other studies that argued that increased emotional knowledge and increased emotional regulation mediates the positive effects of emotion-intervention training on the development of social competencies (Izard et al., 2008).

The global measure of overall performance conducted was also scored by a second independent coder unaware of the group membership of the participants or the hypotheses of the study, also showed that teachers in the intervention group scored better in their general emotional skills performance than the controls. These results supported the prediction that participants in the intervention group would do better at demonstrating their emotional skills during a game situation than the ones who did not receive the same training, but instead received an overall information course on child development. Emotionally trained teachers were more conscious of implementing emotional coaching strategies than non-trained teachers. For instance, they showed more frequent use of emotion-talk and other cognitive processes for problem solving when facing emotional situations during the game than non- trained ones.

In terms of their emotional style, both groups of participants were homogenous in two typologies of emotional style (emotion coaching and emotion dismissing) before the intervention was in introduced to the experimental group.

Teachers' natural interest and awareness of their own and children's feelings could moderate the abilities shown during the game after training. This variable, together with the amount of experience teachers had before the intervention, was enhanced through emotion based training.

The training process itself reflected on the teachers' emotional change, which started with the creation of a holding environment where feelings were accepted and validated. Through their narratives, changes in their emotional schemas were appreciated; they talked differently about the children and were more reflective about children's behaviour. The use of the process of reflective practice helped the teachers integrate different aspects of the child's life and the child's behaviour, in relation to themselves and the children's social contexts. They also used less negative attributions to describe problematic child behaviour. The use of teachers' ability for reflective practice focused on emotions was observed through their capacity to pick up minimal cues and subtle changes in the tone of voice, patterns of speech, and body language. Teachers focused their attention on ways through which children may communicate their emotional needs and showed their ability in processing and interpreting these communications by personally identifying with the child's feelings.

In the context of this study, reflective practice was mainly focused on emotions. Manning–Morton (2006) claimed that it is not sufficient to expand theoretical knowledge in early childhood education and other areas of child development "without practitioners having the opportunity to reflect on the links between their own experience, feelings, values, and beliefs and those of the children they worked with" (p. 42).

Teachers in the intervention group verbally reported significant and immediate changes in their practice, especially towards the children they were concerned with. Previous interventions where teachers were trained on strategies to shape children's emotional competence have shown significant improvement in the social and emotional competence of children they worked with (Denham, et al., 1996, Greenberg & Kusche, 2006). Although teachers' training appeared to be a critical component of these interventions, teachers' emotional competence skills had not been measured before. Previous

studies have traditionally measured children's outcomes of socio-emotional competence; however, in this research the effects of teacher's training on children's emotional competence were not measured. Although the children's responses were reviewed in the videos and were taken into account in relation to the teachers' responses to their emotional communications the fact that children's emotional competence was not measured in an equal way than the teachers did, can be considered as a limitation for the study .

This study has been conducted with a small and culturally specific sample from New Zealand, restricting the scope for generalizations to other populations. Another limitation was that the participants in the study were only teachers from one gender (Female), restricting the variability of the sample. This limitation reflected limited participation of male teachers in the Early Childhood Education sector possibly due to cultural stereotypes considering RCE as a predominantly a female vocation.

In relation to the variable experience, teachers were considered as experienced when having least three years of practice, however, other aspects moderating this variable were not controlled. For instance, factors as they type of training they have had or other form of previous professional development in socio-emotional competencies classroom management were not examined.

The emotional competence training was based on a curriculum designed for three session, it is possible that by including more sessions additional stable changes could have been found in some dimensions established as no significant between control and experimental groups. Unobservable characteristics as motivation, strong interest in the subject or even the active encouragement of head teachers and supervisors could also contribute to behavioral change after the intervention.

Using less rigorous observational and inter-rater agreement as percent agreement rather than a statistical coefficient which adjusts for chance, could represent a methodological limitation regarding the reliability of the emotional competence assessment used in the study.

Although a number of studies have implemented teacher training on emotional focused interventions, this research included an experiential approach that facilitated the recognition, expression, and awareness of feelings and mobilized changes in participants' emotional schema, with positive consequences for teacher- child relationships and emotional climate of ECE classrooms. This study has demonstrated that a brief intervention, focused on teachers' emotional experience and emotional awareness can help early childhood teachers effectively manage emotionally driven situations with young children. In an unusual, emotionally driven contrived situation, it was demonstrated that teachers trained on emotional competence skills can do better in thinking and responding rapidly and effectively to young children's emotional needs.

These findings have relevance for social policies. They highlight the important role of early childhood teachers as agents of emotion socialization and more importantly the role of teachers's own emotional competence and self awareness of emotions in responding adequately to children's emotional communications. This role is specifically essential for young children who are challenged by the multiple risks associated with life in disadvantaged communities.

This study has also has a potential impact for future research in emotional socialization in early childhood education, focusing on theory development, measurement, reflective practices, and emotion focused interventions to improve these competences. Teacher training focused on reflective and attention practices as well as on the emotional experience of teachers complements and enhances the universal social-emotional ECE curricula. It might not be comprehensive enough in all instances and on their own to meet the mental health needs of all children. Teachers' emotional competence represents a critical building block in protecting all children from previous or future risk exposure.

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