Improving Coping Skills and Promoting Social and Emotional Competence in Pre-Schoolers: A Pilot Study on COPE-R Program

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ABSTRACT: Developing children's ability to manage or cope with difficult situations and problems at a young age prepares them for future challenges, and enables them to experience greater success in life. Positive social interactions and self-regulation of emotions are two key competencies in helping a child cope effectively. This paper reports the change in the coping strategies that four to five years old preschool children demonstrated in challenging situations, and in behaviours that reflected their social emotional competence, after participating in a five-week teacher-led COPE-R program. The COPE-R program focuses on developing empathy and prosocial skills in young children. The outcome of the program was evaluated based on the development of social and emotional competence, measured by rating scales completed by parents and teachers. In addition, the development of coping skills was evaluated based on young children's personal responses to six age-appropriate challenging situations through a semi-structured interview, and by rating scales completed by parents and teachers. The results of this pilot study provide support for the benefits of an early childhood program such as COPE-R, which promotes development in preschoolers' social-emotional competence as well as their repertoire of coping strategies in challenging situations.

Keywords: preschoolers, group intervention, social-emotional competence, coping skills.

Importance of social, emotional and coping competencies

The ability to cope with challenging situations and problems develops from infancy, and is inextricably linked to the development of social and emotional competence. There is an increasing recognition of the importance of preschool education in supporting young individuals' growth and development (Denham & Burton, 2003; Raver & Knitzer, 2002). A growing body of research shows early development in the social and emotional domain as an important contributor to the child's later success in life - in health and well-being, academic and work performance, as well as social relationships (Denham, 2006; Durlak, Weissberg, Dymnicki, Taylor, & Schellinger, 2011; Losoya, Eisenberg, & Fabes, 1998; Raver & Knitzer, 2002). On the other hand, deficits in the social and emotional domains in preschool years increase the likelihood of problems like academic difficulties, delinquency, psychopathology and poor social relationships in future (Denham, 2006; Durlak et al., 2011; Losoya et al., 1998; Raver & Knitzer, 2002). Therefore, early support for the development of social and emotional competence in children is important in equipping them with better coping skills and strategies to manage stressful situations throughout their lives.

There is much research on social and emotional competence, and coping skills in school-age children, adolescents and adults, but little on the preschool population (Frydenberg, 2014). This paper reports on the outcomes of a pilot study on a five-week program, COPE-R, which teaches preschool children empathy and prosocial skills. Study outcomes were measured by children's pre- and post-program social emotional competence as well as repertoire of coping strategies, as reported by their teachers, parents, and the children themselves.

Definitions and development of coping competence

Researchers have relied on definitions in adult models of coping in the empirical studies of children and adolescents. A commonly used definition of coping in adults by Lazarus and Folkman (1984) states coping as "constantly changing cognitive and behavioural efforts to manage specific external and/or internal demands that are appraised as taxing or exceeding the resources of the person" (p. 141). Alternatively, a more developmentally appropriate definition of coping provides theoretical links to other developing regulatory subsystems that work together to manage stress (Skinner & Zimmer-Gembeck, 2007). Based on this definition, coping is viewed as "action regulation under stress" (Compas, Connor-Smith, Saltzman, Thomsen & Wadsworth, 2001; Eisenberg, Fabes, & Guthrie, 1997), and is considered as "conscious and volitional efforts to regulate emotion, cognition, behaviour, physiology, and the environment in response to stressful events or circumstances" (Compas et al., 2001, p. 89).

In this study, coping refers to the process of using behavioural and cognitive efforts to manage the demands of a person-environment relationship (Frydenberg, 2008; Zeitlin & Williamson, 1994), and is influenced by a complex interplay of factors like the availability of resources and developmental level of the individual (Compas, et al., 2001; Frydenberg, 2008; Skinner & Wellborn, 1997; Skinner & Zimmer-Gembeck, 2007). Hence, two individuals experiencing the same stressor may be affected, and respond in different ways. Moreover, coping does not only consist of a variety of effective strategies, but also unsuccessful attempts (Skinner & Wellborn, 1997). Therefore, coping is an iterative process of appraisal and adaption to stress that reflects and contributes to development and disorders (Skinner & Zimmer-Gembeck, 2009; Zimmer-Gembeck, Lees, & Skinner, 2011).

To address the differences in the perception and management of stress between adults and children, Skinner and Zimmer-Gembeck (2007, 2009) reviewed studies on stress and coping, and identified age-related developmental shifts or changes in coping across ages. Coping was found to develop most rapidly during childhood (5 to 7 years old) and during transition to adolescence (10 to 12 years old). These periods of coping development coincide with underlying advances in processes like cognition, social understanding, emotions and self-regulation. Hence, there is a need for further research on developmental processes and pathways underlying and impacting coping development to facilitate and support children's acquisition of knowledge and skills from a young age.

As coping is a dynamic process of appraisals and reappraisals of the fluctuating person-environment relationship shaped by individual differences in resources, context and purpose, there is an enormous number of coping responses and categories recorded (Skinner, Edge, Altman, & Sherwood, 2003). Some of the influential adult-based models of coping sees it as a dichotomy, like Lazarus and Folkman's (1984) model, which focused on strategies used to manage stressors (problem-focused coping), and strategies used in the management of emotional arousal associated with the stressor (emotion-focused coping). There are also attempts to change the environment (primary-control) versus attempts to fit in with the environment (secondary-control) (Rothbaum, Weisz & Synder, 1982), engagement in stressful interactions (engagement coping) or disengage in them (disengagement coping) (Tobin, Holroyd, Reynolds & Wigal, 1989), as well as categories like "approach and avoidance coping" (Suls & Fletcher, 1986), and "active and passive coping" (Denham & Burton, 2003).

Others have tried to conceptualise the broad array of coping responses into several categories. Eisenberg, Fabes and Guthrie (1997) suggested three broad categories of coping relevant to managing stress. The three categories consist of attempts to regulate emotions (emotion-focused coping or emotion regulation), attempts to regulate situations (problem-focused coping), and attempts to regulate emotion-driven behavior (behavioural regulation). In consideration of the differences in theoretical approaches and dimensions,

Skinner, Edge, Altman and Sherwood (2003) analyzed 100 assessments of coping, and converged different conceptual and empirical classifications of coping into 13 potential core families of coping (i.e., problem-solving, support-seeking, escape, distraction, cognitive restructuring, rumination, helplessness, social withdrawal, emotional-regulation, information-seeking, negotiation, opposition, and delegation).

In Australia, Frydenberg and Lewis (1993) conceptualized three styles of coping after studying Australian adolescents – "productive coping", "non-productive coping", and "relational coping". Productive coping refers to adaptive, helpful ways of addressing a problem while non-productive coping are maladaptive responses; both include problem-solving and emotion-focused solutions. Relational coping refers to seeking support from others like families, friends, professionals and spiritual support. Based on studies and measures on adolescent coping, three distinct coping dimensions on early years coping were adapted – positive coping, negative coping-emotional expression, and negative coping – emotional inhibition (Frydenberg, Deans, & Liang, 2012; Pang, Frydenberg & Dean, 2015; Yeo, Frydenberg, Northam & Dean, 2014). Empirical studies that used the Children's Coping Scale – Revised (Frydenberg & Deans, 2011) on the preschool population supported these three distinct types of coping (Pang, et al., 2015; Yeo, et al., 2014), and these three coping dimensions will be used in the analysis on preschoolers' coping development in this study.

Development of social and emotional competence

While developing coping skills has been gaining increasing support, a burgeoning amount of sound research evidence, primarily from the USA, has supported the development of emotional and social competence as part of the education curricula for young children to gain a wide range of educational and social benefits (Collaborative for Academic, Social and Emotional Learning, CASEL, 2012). These benefits include school readiness, greater success in academic and work performance, as well as social participation and interactions (Denham, 2006; Durlak et al., 2011).

Emotional competence is commonly referred to as the ability to perceive, generate and understand emotions in order to reflect on and regulate emotions (Goleman, 1995; Salovey & Sluyter, 1997), and also to show self-efficacy in emotion-eliciting social situations (Saarni, 1999). The recognition of one's feeling, being able to label it accurately, and then relate it to a certain event or behaviour allows one to manage that emotion, and change the accompanying behaviour and/or thoughts. Understanding of emotions also allows one to empathise with others' feelings and increases the likelihood of showing prosocial behaviour. This in turn leads to positive peer status, which is an important element of social competence. Social competence on the other hand, refers to the ability to interact effectively with others in order to achieve interpersonal goals and social outcomes, as well as to avoid socially unacceptable responses from others (Gresham & Elliott, 1993;

Rose-Krasnor, 1997). Hence, the nature of social competence is context-dependent. At preschool level, developmental tasks of social competence include being able to communicate emotions, and initiate and maintain positive engagement with peers (Denham & Burton, 2003). Although social and emotional competencies are highly related and complementary, they are separate constructs (Denham et al., 2003; Frederickson & Cline, 2009; Saarni, 1999). Therefore, Social Emotional Learning (SEL) is the complex union of emotional competencies serving the goal of effectiveness in social interaction (Denham & Burton, 2003).

Social, emotional and coping competencies in preschool

In this fast-paced era of globalization, innovation and diversity, the importance and merits of having social, emotional, and coping skills to negotiate and steer through challenging situations have been widely supported by vast amount of research evidence. One of the leaders in SEL research, Collaborative for Academic, Social and Emotional Learning (CASEL) at the University of Illinois, Chicago, advocates for SEL to be incorporated into universal programs, starting from preschool through secondary school, for all children. CASEL (2012, p. 4) defines SEL as "the process through which children and adults acquire and effectively apply the knowledge, attitudes, and skills necessary to understand and manage emotions, set and achieve positive goals, feel and show empathy for others, establish and maintain positive relationships, and make responsible decisions". Thus, SEL programs explicitly teach emotional management and knowledge, social interaction and communication as well as coping and problem-solving skills (CASEL, 2012; Frydenberg, Deans, & O'Brien, 2011).

School-based SEL programs that promote SEL and prevent SEL deficits may produce small, significant effects, but its benefits on many outcomes are sustained over time (Sandler et al., 2014; Weare & Nind, 2011). Besides "the earlier the better" (Denham & Burton, 2003), it is important to engage in intentional teaching, which requires strategic planning of purposeful learning opportunities to engage children and develop their social and emotional understanding (KidsMatter Early Childhood Mental Health Initiative, Commonwealth of Australia, 2012; Moore, 2008). Hence, effective SEL approaches often include sequenced step-by-step training approach, active forms of learning, focus on sufficient time for skill development, and explicit, specific learning goals, as represented by the acronym SAFE (CASEL, 2012; Durlak, et al., 2011). In addition to the research evidence supporting the importance of SEL and specific SEL practices during early childhood, there needs to be more focused attention on successful SEL programs that start from preschool and progress over the older academic years.

In Australia, and particularly in Victoria, social-emotional well-being is an important learning and development outcome in the preschool curriculum (i.e., "The Early Years Learning Framework for Australia", Australian Government Department of Education,

2009, and "Victoria Early Years Learning and Development Framework", Department of Education and Early Childhood Development, 2011, 2016). However, there seems fewer SEL resources provided in preschools, than in primary and secondary schools, in Victoria, Australia (e.g., "Building Resilience", Department of Education and Training, 2016). Based on the learning theory (Bandura, 1971), specific behaviours can be acquired through modelling and interactions with others. Coping, along with prosocial behaviour, and emotion-regulatory behaviour, are also learnt behavioural responses that can be picked up from others even at a young age (Frydenberg & Deans, 2011). Therefore, it will be beneficial to identify evidence-based SEL programs suitable and effective for preschool children, so that children can be better supported in their development of social, emotional and coping competencies.

The present study

This pilot study investigates the impact of a teacher-led COPE-R (Caring for others, Open Communication, Politeness, Empathic sharing - Review) program that aims to increase emotional skills and knowledge, as well as prosocial and empathic knowledge and behaviour in four- to five-year-old children. The primary objectives of this pilot study are to verify that the COPE-R program would increase preschoolers' development of social, emotional and coping competencies. In addition, this study also examined the relationship between changes in social and emotional competence, and changes in coping skills. Program outcomes, focusing on preschoolers' social and emotional competence, and their use of adaptive coping knowledge, were investigated through a multiple informants and multimethod approach, then analysed and discussed based on the three research questions. The findings of this study will contribute to the existing literature and research on coping, and social and emotional development, as well as inform SEL programs within the preschool population.

Hypothesis 1

There is a significant gain in parent- and teacher-rated social and emotional competence (i.e. an increase in prosocial behaviors and a decrease in problem behaviours) for the preschoolers who participated in COPE-R compared to the group who participated in an alternative teacher-led SEL program, at Time 2 (post-program).

Hypothesis 2

There is a significant gain in child-, parent-, and teacher-reported coping repertoire (i.e. an increase in positive coping and a decrease in negative coping) for the preschoolers who participated in COPE-R compared to the group who participated in an alternative teacher-led SEL program, at Time 2 (post-program).

Hypothesis 3

There is a significant positive relationship between an improvement in social and emotional competence, and an increased use of adaptive coping.

Method

Participants

The research was conducted in an inner city long day early learning centre in Victoria, Australia. A total of 76 preschoolers, their parents (i.e., n=76) and teachers (i.e., n=4) gave verbal and/or written consent to participate in this research study following ethics approval from the university and consent from the Centre directress were obtained.

There were two separate groups in this study, and each group was led by two teachers – the Program group implemented the teacher-led five-week COPE-R program, while the Comparison group participated in an alternative teacher-led community and social activities. As this pilot study was conducted in the natural setting of the preschoolers, the groupings were determined by pre-existing class enrolments.

The pre- and post-program sample size of responses from children, parents and teachers reduced from 76 to 74, 75 to 69 and 39 to 38, respectively, because two Mandarin-speaking children were excluded from the interviews conducted in English, and fewer completed questionnaires were returned from parents and teachers.

All the children were typically developing, and majority were of Anglo-Australian background (i.e., 77%). 97% of parents indicated English as the main, or one of the spoken home languages. The preschoolers comprised of 39 (51.3%) girls and 37 (48.7%) boys. At pre-program, the age of preschoolers in Program group was 46.8 months to 61.0 months, and in Comparison group was 45.8 months to 61.4 months. By post-program, the age of preschoolers in Program group was 50.2 months to 64.4 months, and in Comparison group was 49.2 months to 64.8 months.

The COPE-R program and its implementation

The COPE-R program is an universal, preventive intervention designed to teach empathy and prosocial skills to children aged three to eight years of age. The program is underpinned by theoretical foundations such as Piaget's *Theory of cognitive development*, Vygotsky's *Socio-cultural theory of development* (1962), Bronfenbrenner's *Ecological systems theory* (1979), Salovey and Mayer's theory around *Emotional intelligence* (1990) and Frydenberg's *Coping theory* (Frydenberg, Deans & Liang, 2012). There was previous research conducted with parents and/or children enrolled at the University of Melbourne

ELC, with the Early Years Coping Cards being one of the project outcomes (Frydenberg & Deans, 2011), and which findings had informed the development and revisions to the COPE-R program in this pilot study. The COPE-R program manual consists of different activities to facilitate teaching and practice of the targeted knowledge and skills of each week (see Table 1).

TABLE 1   Outline of the COPE-R Program Content

Foundation skills Understanding Emotions
- Feelings Detective: Noticing Emotions in Ourselves and Others
- Role-Play/Puppet-Play: What Feelings Look Like
- Art/Craft: Putting Ourselves In Someone Else's Shoes
- Singing/Dancing/Movement: We All Have Feelings
- Additional Resources and Activities

Lesson 1 Caring for Others (C)
- Early Years Coping Card: Getting Hurt
- Feelings Detective: What Is Caring?
- Play/Puppet-Play: When I'm Caring For Others
- Art/Craft: Caring Behaviours
- Singing/Dancing/Movement: Looking After Ourselves While Caring for Others
- The Caring Tree: Lesson Close
- Additional Resources and Activities

Lesson 2 Open Communication (O)
- Early Years Coping Card: Wanting To Play With Others
- Feelings Detective: How a Good Listener Listens
- Role-Play/Puppet-Play: Supportive Statements
- Art/Craft: Two Mouths and One Ear
- Singing/Dancing/Movement: Types of Communication
- The Caring Tree: Lesson Close
- Additional Resources and Activities

Lesson 3 Politeness (P)
- Early Years Coping Card Teasing
- Feelings Detective: The Impact of Behaviour
- Role-Play/Puppet-Play: Politeness
- Art/Craft: Respect
- Art/Craft: Different Cultural Backgrounds
- The Caring Tree: Lesson Close
- Additional Resources and Activities

Lesson 4 Empathic Sharing (E)
- Early Years Coping Card: Sharing
- Feelings Detective: Feelings Charades
- Feelings Detective: The Benefits Of Sharing
- Role-Play/Puppet-Play: Different Ways We Can Share
- Art/Craft: How Can We Share?
- The Caring Tree: Lesson Close
- Additional Resources and Activities

Lesson 5 Review (R)
- Art/Craft: Caring for Others (C) Review
- Singing/Dancing/Movement: Open Communication (O) Review
- Role-Play/Puppet-Play: Politeness (P) Review
- Feelings Detective: Empathic Sharing (E) Review

Teachers have to conduct at least two activities from the program in a given week, with the Early Years Coping Card activity as a required activity. These child-friendly picture cards depict different situations a child may face, and are used to generate discussions with preschoolers about coping. The program also included activities to develop children's foundation skills on understanding emotions in oneself and others. This is necessary for their development of empathy and engagement of prosocial behaviours. Teachers may implement some of these activities prior to the commencement of the program, and during the program when needed. Throughout the five weeks, teachers reinforce concepts and skills taught in the program across settings, such as the classroom, playground, and during meal times.

In this pilot study, COPE-R was implemented over five weeks in the program group by an experienced teacher who had delivered the program in the previous year, and her co-teacher. They also carried out activities to develop the children's emotional knowledge and understanding before commencing the program. Lesson observations by researchers, and record-keeping of the lessons by teachers (e.g., lesson plans, photographs, drawings) were conducted for program fidelity and program revisions, where necessary.

Measures and procedures

The study adopted a multiple informants and multimethod approach for a multilevel analysis, to address the context-dependent construct of social, emotional and coping competence (Eisenberg et al., 1993; Zeman, Klimes-Dougan, Cassano & Adrian, 2007). The pre- and post-program measures for parents and teachers consisted of the Children's Coping Scale – Revised (CCS-R) questionnaire (Deans, Frydenberg & Tsurutani, 2010) and the Strengths and Difficulties Questionnaire (SDQ) (Goodman, 2001). The preschoolers participated in a pre- and post-program semi-structured interviews.

While the preschoolers in the Program group participated in the teacher-led five-week COPE-R program, the Comparison group participated in an alternative teacher-led community and social activities. These activities consisted of weekly visits to a residential aged care and teachers-facilitated discussions on the considerate deeds they have done for their peers during the day. The objectives of these activities are for the children to develop a sense of community and empathy for others.

Strengths and Difficulties Questionnaire (SDQ)

The SDQ is a brief screening measure for identifying social, behavioural and emotional problems for children aged between four and sixteen (Goodman, 1997). There are five subscales, Emotional, Conduct, Hyperactivity, Peer problems and Prosocial items, with five items per subscale. The informant version of the SDQ is rated by parents or teachers for children aged three to sixteen (Goodman, 2001). The SDQ is scored using a 3-point Likert scale (Not True, Somewhat True and Certainly True), and has reverse scoring for some of the items, such as 'often loses temper scores' 2 for certainly true and 'generally liked by other children' scores 0 for certainly true. Therefore, a higher final score indicates more problems.

The SDQ has sound internal reliability (Cronbach's alpha coefficients of .73), and cross informant correlation mean of 0.62 (Goodman, 2001). There is also satisfactory internal consistency, test-retest reliability, and inter-rater agreement for both parent and teacher versions of the SDQ (Stone, Otten, Engels, Vermulst & Janssens, 2010). In a large sample of Australian children aged four to nine years old, the SDQ (Parent) was found to have moderate to strong internal reliability demonstrated across all subscales, ranging from 0.59 (peer problems) to 0.80 (hyperactivity) (Hawes & Dadds, 2004).

In this study, the quantitative, dependent variables were parent- and teacher-rated scores on the SDQ subscales, Emotional, Conduct, Peer Problems and Pro-social. The scores on these four subscales were used in the analysis because the constructs central to social and emotional competence are emotional expression, emotion regulation, emotion knowledge, social problem-solving and social behaviour (Denham, 2006).

Children's Coping Scale - Revised (CCS-R)

The other quantitative, dependent variable was the ratings from the CCS-R questionnaire on children's general and situation-specific coping styles. The CCS-R questionnaire was derived empirically as part of the Early Year's Coping Project (Frydenberg & Deans, 2011). The CCS-R required parents to rate their child's frequency of using the 29 coping strategies listed on a 3-point Likert scale (i.e., "never", "sometimes", "a lot") (Deans, et al., 2010; Yeo, et al., 2014; Pang, et al., 2015). This questionnaire measures general and situation-specific coping responses. The situation-specific coping has two sections: Goodbye situation (e.g., going to preschool), and Dislike situation (e.g., how the child copes when he/she has to do something he/she does not like). Three total scores were calculated by averaging the sum of corresponding items that formed the three distinct ways of coping dimensions derived from the questionnaire; (1) positive coping (e.g., "try to help others"), (2) negative coping – emotional expression (e.g., "cry or scream") and (3) negative coping – emotional inhibition (e.g., "give up") (Yeo, et al., 2014; Pang, et al., 2015). The CCS-R has adequate internal consistency across three coping dimensions, positive coping (α = .87), negative coping-emotional expression (α = .73) and negative coping-emotional inhibition (α = .66), with Cronbach alpha of .85 (Yeo, et al., 2014).

In this research, the final scores for the three coping dimensions (i.e., PC - Positive Coping, NEE - Negative Coping-Emotional Expression, and NEI - Negative Coping-Emotional Inhibition) of the coping measure were calculated based on the average of each dimension's total scores across the three coping situations (i.e., General coping, situation-specific Dislike and Goodbye).

Child interviews

Interviewing is a direct way to gain insights into one's thoughts, experiences and behaviours (Seidman, 2013). In this study, a ten to fifteen-minute, semi-structured child interview was verbally administered and complemented with situation cards, which are part of the Early Years Coping Cards (Frydenberg & Deans, 2011), to ensure clarity of content. The cards were based on common fearful or challenging situations such as fear of separation, feeling of social exclusion, negative evaluation by peers and adults, unfamiliar new experiences, and also fear of the dark (Fields & Prinz, 1997; Sorin, 2005). Although some of these cards were used in the program, the objectives focused on emotions, and did not specifically include teaching of coping strategies, which was the focus of this interview. The first question assessed children's interpretation of the situational card before they were asked to provide coping strategies. The responses to the last two interview questions were used in the data analysis, and one of them is a two-part question (i.e., "Question 2, what do you think the child can do to feel better?", "Question 3, have you been in this situation? If so, what did you do to make yourself feel better? If not, imagine you were this child, what would you do to make yourself feel better?"). The final six situational cards used in the interview were: 1) being anxious about leaving someone you love 2) being bullied or teased 3) wanting to belong to a group 4) being afraid of trying something new 5) getting in trouble with the teacher or parent 6) fear of the dark. To reduce order effects, the presentation order of the situation cards was determined by a randomly generated list.
A mixed-method approach was utilised to analyse the coping strategies reported in the child interviews. The number of coping strategies were recorded, and verbatim records of the coping strategies were coded into the three distinct coping dimensions (i.e., identical to the coping dimensions in the CCS-R questionnaire) by the researcher using a coding guide.

A second researcher from the Early Years Coping research (Frydenberg, et al., 2012) coded the responses and yielded an agreement of 96%. To ensure a rigorous process, a research colleague familiar in this area of work coded sixteen child interviews (i.e., 20% of total data) selected using a randomised list of the children's identification number, and the interrater agreement was 96%. After the checks, a final list of codes that categorised the coping strategies from the interviews into the three separate coping dimensions was generated. Then, the number of coping strategies under each coping dimension was summed up for every child before and after the program, and used in the analysis.

Results

Statistical analyses were administered using the IBM Statistical Package for the Social Sciences (SPSS) Version 20.0 for all quantitative data. To address hypotheses 1 and 2, the data was analysed using multivariate analysis of variance (MANOVA) because the dependent variables from the SDQ and CCS-R subscales had correlations that indicated mutual associations that were conceptually meaningful and consistent with current knowledge of comorbidity (Deans, et al., 2010; Frydenberg, et al., 2012; Hawes & Dadds, 2004). Moreover, MANOVA adjusts for the increased risk of a Type 1 error, as compared to the use of a series of separate analysis of variance (ANOVA) (Pallant, 2013). For hypothesis 3, Pearson product-moment correlation coefficient was used to examine the associations between social and emotional competence, and coping dimensions, and to assess the strength and direction of the relationship between these two measures. The alpha level for all three hypotheses was at 5%.

Separate preliminary data analyses were conducted on all three sets of data for Comparison and Program groups – social and emotional competence, coping repertoire, and the relationship between these two measures.

Preliminary analyses

There were no serious violations of the assumptions of normality, linearity, multicollinearity and homoscedasticity.

Hypothesis 1: Development of social and emotional competence

Two sets of mixed between-within MANOVA (Parents and Teachers) were performed to investigate differences in the development of social and emotional competence between preschoolers in two different groups (Program and Comparison), and between time (Time 1 is Pre-program and Time 2 is Post-program). The independent between-subject variable was each child's participation in the COPE-R program, and the independent within-subject variable was time. The measurement of the preschoolers' social and emotional competence was collected from parents and teachers using the SDQ. Four dependent variables were used: Prosocial, Emotional problems, Conduct problems, and Peer problems.

The means and standard deviations between both groups were compared before and after the program using independent t-tests and presented in Table 2. Both groups showed no significant differences before the program.

TABLE 2   Means, standard deviations and independent t-tests of parents' and teachers' ratings of children's social and emotional competence from Time 1 to Time 2, in both Program and Comparison groups.

	Parents							
	Pre-program				Post-program			
	Program[a]		Comparison[b]		Program[c]		Comparison[d]	
	M	SD	M	SD	M	SD	M	SD
Emotional Problems	1.61	1.68	1.67	1.58	1.22	1.22	1.67	1.69
	$t(73) = .14, p = .892$				$t(57^{\dagger}) = .22, p = .444$			
Conduct Problems	2.11	1.37	2.45	1.39	1.28	1.45	1.33	1.36
	$t(73) = .83, p = .411$				$t(67) = .16, p = .870$			
Peer Problems	1.03	1.30	1.15	1.44	1.08	1.52	1.12	1.71
	$t(73) = 1.94, p = .847$				$t(67) = .10, p = .923$			
Prosocial	8.50	1.56	7.64	2.21	8.22	1.64	7.67	2.09
	$t(60^{\dagger}) = -1.48, p = .144$				$t(60^{\dagger}) = -1.22, p = .226$			

	Teachers							
	Pre-program				Post-program			
	Program[e]		Comparison[f]		Program[e]		Comparison[f]	
	M	SD	M	SD	M	SD	M	SD
Emotional Problems	3.47	2.17	2.21	1.27	1.32	1.83	.74	1.15
	$t(30^{\dagger}) = -2.00, p = .054$				$t(37) = -1.05, p = .299$			
Conduct Problems	1.53	1.68	1.42	.90	.79	1.40	.37	.60
	$t(29^{\dagger}) = -.42, p = .678$				$t(26^{\dagger}) = -1.14, p = .266$			
Peer Problems	1.95	2.01	2.16	1.46	1.32	1.29	1.00	1.25
	$t(37) = .46, p = .647$				$t(37) = -.87, p = .391$			
Prosocial	8.21	1.58	6.84	2.41	8.26	2.23	7.05	2.37
	$t(31^{\dagger}) = -1.90, p = .066$				$t(37) = -1.77, p = .085$			

Note. M = mean. SD = Standard Deviation.
[a]n=40. [b]n=35. [c]n=36. [d]n=33. [e]n=20. [f]n=19.
† Levene's test indicated unequal variances, hence degrees of freedom were adjusted.

Effect of COPE-R on children's development of social and emotional competences as measured by parents' and teachers' ratings.

There was no significant interaction effect between the two groups and time on the children's social and emotional competence after COPE-R. However, at Time 2, there was a significant change in the two groups' social and emotional competence, as rated by parents, Wilks' Lambda = .96, $F(4, 64) = 11.39$, $p < .001$, partial $\eta^2 = .42$, and teachers, Wilks' Lambda =.31, $F(4, 33) = 18.34$, p<.001, partial $\eta^2 = .69$. Specifically, the results showed a reduction in parent- and teacher-rated Conduct problems, $F(1,67)=41.37$, $p < .001$, partial

$\eta_p^2 = 0.38$, and F (1, 36) = 23.49, p<.001, partial $\eta_p2 = 0.40$, with large effect sizes (Cohen, 1988).

In addition, there were different changes in each of the groups after COPE-R (See Table 3); in the Program group, there was significant decrease in both parent-rated and teacher-rated Emotional problems, t (35) = 2.12, $p < .05$ (two-tailed), and t (18) = 5.98, $p < .001$ (two-tailed), as well as Conduct problems, t (35) = 4.32, $p < .001$ (two-tailed) and t (18) = 2.42, $p = .03$ (two-tailed). The mean decrease in parent- and teacher-rated Emotional problems were 0.39, 95% CI [.016, .762], $d = 0.35$, and 2.16, 95% CI [1.40, 2.92], $d = 1.38$, while in parent- and teacher-rated Conduct problems were 0.83, 95% CI [1.23, 4.31], $d = 0.71$, and 0.74, 95% CI [.10, 1.38], $d = 0.56$. The Comparison group only showed a significant decrease in Conduct problems reported by both parents and teachers, t (32) = 4.72, $p < .001$ (two-tailed), and t (18) = 5.04, $p <.001$ (two-tailed). The mean decrease in Conduct problems rated by parents and teachers were 1.12, 95% CI [.64, 1.60], $d = 0.82$, and 1.05, 95% CI [.61, 1.49], $d = 1.15$, respectively.

Table 3 Summary of paired samples t-test analyses of parents' and teachers' ratings of children's social and emotional competence from Time 1 to Time 2, in both Program and Comparison groups.

Parents								
Social and Emotional Competence Measures	Program[a]				Comparison[b]			
	M	SD	t	95% CI	M	SD	t	95% CI
Emotional problems	0.39	1.10	2.12*	0.02, 0.76	.00	1.56	0.00	-0.55, 0.55
Conduct problems	0.83	1.16	4.32***	0.44, 1.23	1.12	1.36	4.72***	0.64, 1.61
Peer problems	-0.06	1.24	-0.27	-0.48, 0.36	0.03	1.49	0.12	-0.50, 0.56
Prosocial	0.28	1.70	0.98	-0.30, 0.85	-0.03	1.79	-0.10	-0.67, 0.61

Teachers								
Social and Emotional Competence Measures	Program[c]				Comparison[d]			
	M	SD	t	95% CI	M	SD	t	95% CI
Emotional problems	2.16	1.57	5.98***	1.40, 2.92	1.47	1.50	4.27***	0.75, 2.20
Conduct problems	0.74	1.33	2.42*	0.10, 1.38	1.05	0.91	5.04***	0.61, 1.49
Peer problems	0.63	1.77	1.56	-0.22, 1.49	1.16	1.61	3.14**	0.38, 1.93

Note. M = Mean difference (Time 1 – Time 2). SD = Standard Deviation.
[a]n=36. [b]n=33. [c]n=20. [d]n=20.
α = .05. *p<.05. **p<.01. ***p<.001

Hypothesis 2: Development of children's coping repertoire

Three sets of mixed between-within MANOVA (Parents, Teachers and Children) were performed to investigate differences in the development of coping strategies between preschoolers in two different groups (Program and Comparison), and between time (Time 1 is Pre-program and Time 2 is Post-program). Three dependent variables were used: Positive coping (PC), Negative Coping – Emotional Expressiveness (NEE), and Negative Coping – Emotional Inhibition (NEI) as measured by CCS-R. The independent between-subject variable was each child's participation in the COPE-R program (Program and Comparison). The independent within-subject variable was time (Time 1 is Pre-program, Time 2 is Post-program).

The means and standard deviations between both groups were compared before and after the program using independent t-tests and presented in Table 4. Although no significant differences were found between groups as reported by parents and children, teachers' report of their children's PC and NEE before the program and of their PC after the program were significantly different between the two groups. This was taken into consideration when the post-program results were interpreted.

TABLE 4 Means, standard deviations and independent t-tests of children's coping development from Time 1 to Time 2, in Programme and Comparison groups.

	Children							
	Pre-programme				Post-programme			
	Programme[a]		Comparison[b]		Programme[a]		Comparison[b]	
	M	SD	M	SD	M	SD	M	SD
Positive Coping	10.00	4.65	9.00	3.15	11.24	2.15	10.44	2.74
	$t(65^{\dagger}) = -1.09, p = .281$				$t(72) = -1.39, p = .169$			
Negative Coping – Emotional Expressiveness	1.42	1.64	1.14	1.36	.55	.80	.92	1.20
	$t(72) = .08, p = .933$				$t(72) = .06, p = .956$			
Negative Coping – Emotional Inhibition	3.03	3.05	3.08	2.75	1.92	1.58	1.94	2.00
	$t(72) = -.81, p = .424$				$t(72) = 1.54, p = .127$			

	Parents							
	Pre-programme				Post-programme			
	Programme[c]		Comparison[d,e]		Programme[f]		Comparison[g]	
	M	SD	M	SD	M	SD	M	SD
Positive Coping	51.58	11.87	49.39	10.87	53.12	13.63	49.85	11.85
	$t(69) = -.60, p = .549$				$t(66) = -.52, p = .607$			
Negative Coping – Emotional Expressiveness	17.43	8.85	20.30	7.51	15.29	7.05	18.32	8.26
	$t(68) = 1.13, p = .261$				$t(66) = 1.69, p = .095$			
Negative Coping – Emotional Inhibition	10.37	5.13	11.07	4.12	10.14	4.92	10.26	5.29
	$t(68) = .50, p = .621$				$t(66) = .30, p = .762$			

	Teachers							
	Pre-programme				Post-programme			
	Programme[h]		Comparison[i]		Programme[j]		Comparison[i]	
	M	SD	M	SD	M	SD	M	SD
Positive Coping	56.05	12.62	45.80	6.52	67.74	8.60	52.79	10.40
	$t(26^{\dagger}) = -3.15, p = .004^{**}$				$t(37) = -5.03, p < .001^{***}$			
Negative Coping – Emotional Expressiveness	8.26	5.36	4.21	3.17	4.74	4.95	8.00	6.75
	$t(36) = -2.84, p = .007^{**}$				$t(37) = 1.76, p = .086$			
Negative Coping – Emotional Inhibition	9.32	3.56	7.53	2.34	7.58	2.71	10.11	7.02
	$t(36) = -1.83, p = .075$				$t(22^{\dagger}) = 1.40, p = .175$			

Note. M = mean. SD = Standard Deviation.
[a]n=38. [b]n=36. [c]n=37. [d]n=34 for Positive Coping. [e]n=33. [f]n=35. [g]n=33. [h]n=19. [i]n=19. [j]n=20.
*p<.05. **p<.01. ***p<.001.
† Levene's test indicated unequal variances so degrees of freedom were adjusted.

Effect of COPE-R on children's development of coping repertoire as measured by children's interview responses, and their parents' and teachers' ratings.

From the parents' report and child interviews, the interaction effect of the groups and time did not reach statistical significance. Nonetheless, teachers' ratings showed significant interaction effect between the groups and time on the children's coping repertoire after COPE-R, Wilks' Lambda = .66, F (3, 34) = 5.82, p =.003, specifically on NEE, F (1,36) = 16.32, $p<.001$, and NEI, F (1,36) = 6.48, p = .02. This suggested that preschoolers' coping skills varied as a function of the COPE-R program over time, and that the preschoolers in the Program group used fewer NEE and NEI coping strategies as compared to Comparison group after COPE-R.

On the other hand, children's interview responses showed a significant main effect for time, Wilks' Lambda =.81, F (3, 70) = 5.67, p = .002, partial η_p^2 = 0.20. Further examination indicated that time factor was significant for all coping dimensions – PC, NEE, NEI, with respective values of F (1, 72) = 8.61, p = .004, partial η_p^2 =.11, F (1, 72) = 7.97, p = .006, partial η_p^2 =.10, and F (1, 72) = 9.36, p = .003, partial η_p^2 =.12. Pairwise comparison of the mean difference over time for the coping dimensions showed significant increase in PC, mean difference = 1.34, 95% CI [.43, 2.25], p < .001, and significant decrease in NEE and NEI, mean difference = -.55, 95% CI [-.93, -.16], p < .001, and mean difference = -1.12, 95% CI [-1.85, -.39], p < .001, respectively. However, only the overall reduction in NEE was supported by parents' ratings, which showed a significant change in both groups at Time 2, F (1, 64) = 5.09, p = .027, partial η_p^2 =.07. Pairwise comparison of the mean difference over time for the coping dimensions showed significant decrease in NEE, mean difference = 2.06, 95% CI [-3.89, - .24], p = .03.

In addition, the development of the preschoolers' coping repertoire in both groups was evaluated using a paired-samples t-test. Both children's responses and teachers' ratings presented significant reduction in NEE at Time 2 for Program group, t (37) = 2.99, p = .005 (two-tailed), and t (18) = 2.95, p = .009 (two-tailed), and significant increase in PC at Time 2 for Comparison group, t (35) = -2.21, p = .03 (two-tailed), and t (18) = -4.03, p = .001 (two-tailed) (see Table 5). The mean decrease in Program group's NEE was .87, 95% CI [.28, 1.46], d = 0.49, and 3.53, 95% CI [1.02, 6.04] d = 0.68, as reported by children and teachers, respectively. The mean increase in Comparison group's PC was 1.44, 95% CI [-2.77, -.12], d = 0.37, and PC was 7.00, 95% CI [-10.65, -3.35], d = 0.92, as reported by children and teachers, respectively.

TABLE 5   Summary of paired samples t-test analyses of children's coping development from Time 1 to Time 2, in both Program and Comparison groups.

	Children							
Coping Dimensions	**Program[a]**				**Comparison[b]**			
	M	**SD**	***t***	**95% CI**	**M**	**SD**	***t***	**95% CI**
Positive Coping	-1.24	3.94	-1.94	-2.53, 0.06	-1.44	3.92	-2.21*	-2.77, -0.12
Negative Coping – Emotional Expressiveness	0.87	1.79	2.99**	0.28, 1.46	0.22	1.51	0.88	-0.29, 0.73
Negative Coping – Emotional Inhibition	1.11	2.97	2.30*	0.13, 2.08	1.14	3.34	2.05*	0.01, 2.27

	Parents							
Coping Dimensions	**Program[c]**				**Comparison[d]**			
	M	**SD**	***t***	**95% CI**	**M**	**SD**	***T***	**95% CI**
Positive Coping	-1.53	10.83	-0.84	-5.25, 2.18	-1.35	10.99	-0.69	-5.31, 2.62
Negative Coping – Emotional Expressiveness	2.14	7.94	1.60	4.87, 1.60	1.98	6.75	1.63	-0.50, 4.46
Negative Coping – Emotional Inhibition	0.23	4.21	0.32	1.67, 0.32	0.81	4.18	1.08	-0.73, 2.34

	Teachers							
Coping Dimensions	**Program[e]**				**Comparison[f]**			
	M	**SD**	***t***	**95% CI**	**M**	**SD**	***t***	**95% CI**
Positive Coping	-11.68	12.94	-3.94***	-17.92, -5.45	-7.00	7.58	-4.03***	-10.65, -3.35
Negative Coping – Emotional Expressiveness	3.53	5.21	2.95**	1.02, 6.04	-3.79	5.93	-2.79*	-6.65, -0.93
Negative Coping – Emotional Inhibition	1.74	4.58	1.65	-0.47, 3.95	-2.58	5.80	-1.94	-5.38, 0.22

Note. M = Mean difference (Time 1 – Time 2). SD = Standard Deviation.
[a]n=38. [b]n=36. [c]n=35. [d]n=31 (Comparison group, Positive coping, n = 32). [e]n=19. [f]n=19.
*p<.05. **p<.01. ***p<.001

Hypothesis 3: Relationship between social and emotional competence and coping

The associations between the preschoolers' development of social and emotional competence and coping repertoire, as well as the strength and direction of the relationship between the two measures were investigated using the Pearson product-moment correlation coefficient. The total of eleven variables included eight variables from the social and emotional dimensions from the SDQ - Prosocial, Emotional problems, Conduct problems, and Peer problems, which were rated by parents and teachers, and three other variables were the coping dimensions from the child interviews – Positive Coping (PC), Negative Coping – Emotional Expressiveness (NEE), and Negative Coping – Negative Inhibition (NEI). The variables were calculated using the difference between Time 1 and Time 2.

Relationship between children's development of social and emotional competence and coping repertoire as measured by children's interview responses, parents' and teachers' ratings, after COPE-R.

There was a moderate, positive correlation between change in teacher-rated Prosocial behaviour and change in child's Positive Coping, $r = .33$, $n = 38$, $p = .043$ (See Table 6). Hence, a child's increased demonstration of prosocial behaviour was associated with the child's increased use of positive coping strategies. However, this correlation had to be interpreted with caution as the more stringent alpha value of $p < .01$ was not met. It was also worth noting a small, negative correlation between change in parent-rated Conduct problems and change in child's Positive Coping, $r = .23$, $n = 67$, $p = .058$, although it was approaching significance. This suggested that a reduction in a child's conduct problems was associated with the child's increased use of positive coping.

TABLE 6   Correlations of parent- and teacher-rated social and emotional competence scores and the coping repertoire from the child interviews

	Parents[a]				Teachers[b]			
	Emotional	**Conduct**	**Peer**	**Prosocial**	**Emotional**	**Conduct**	**Peer**	**Prosocial**
Positive Coping	.04	.23[+]	.17	-.06	-.02	.01	-.23	.33*
Negative Coping – Emotional Expressiveness	.23	-.13	-.11	-.19	-.08	.02	.16	.00
Negative Coping – Emotional Inhibition	-.02	-.11	-.08	.19	-.06	-.16	.16	-.05

Note. [a]n=67. [b]n=38. *p<.05.
[+]Approaching significance, $p = .058$

Discussion

This pilot study investigated preschoolers' social and emotion competence, as well as adaptive coping knowledge after the implementation of COPE-R. The investigation utilised a multimethod, multiple informant evaluation of the change in social and emotional competence, and coping development between preschoolers in both groups. In addition, the associations between social and emotional competence, and coping dimensions were examined to provide insights on their correlations. Expectedly, the responses from all the informants varied, which could be due to many reasons, like the children's age, contextual variations, fundamental differences between raters, and rating process (Verhulst & Akkerhuis, 1989; Walker & Bracken, 1996; Winsler & Wallace, 2002). Therefore, the findings were more significant and conclusive when supported by two or more informants (See Table 7). The main results and interpretations, as well as the evaluation and future recommendations for this study were discussed.

TABLE 7   Summary of significant results across three studies

	Children	Parents	Teachers

Study 1: Social & Emotional Competence		o Main effect for time:
		  o Conduct ↓
		
		o Program group:
		  o Emotional ↓
		  o Conduct ↓
		
		o Comparison group:
		  o Conduct
			o Main effect for group:
			  o For Prosocial, Program group > Comparison group
			
			o Main effect for time:
			  o Emotional ↓
			  o Conduct ↓
			  o Peer ↓
			
			o Program group:
			  o Emotional ↓
			  o Conduct ↓
			
			o Comparison group:
			  o Emotional ↓
			  o Conduct ↓
			  o Peer ↓

Study 2: Coping	o Main effect for time:
	  o PC ↑
	  o NEE ↓
	  o NEI ↓
	
	o Program group:
	  o NEE ↓
	  o NEI ↓
	
	o Comparison group:
	  o PC ↑
	  o NEI ↓
		o No main effect for time; Statistically significant change from Time 1 to Time 2:
		  o NEE ↓
			o Significant Group x Time interaction effect:
			  o NEE ↓
			  o NEI ↓
			
			o Significant main effect for group:
			  o PC ↑
			
			o Significant main effect for time:
			  o PC ↑
			
			o Program group:
			  o PC ↑
			  o NEE ↓
			
			o Comparison group:
			  o PC ↑
			  o NEE ↑

Study 3: Social & Emotional Competence and Coping	• Moderate, positive correlation between change in teacher-rated Prosocial and change in child's Positive Coping • Small, negative correlation[+] between change in parent-rated Conduct problems and change in child's Positive Coping[+]		

Note. PC = Positive Coping. NEE = Negative Coping – Emotional Expressiveness. NEI = Negative Coping – Emotional Inhibition. ↑ = significant increase. ↓ = significant decrease.
[+]Approaching significance, *p* = .058

Social and emotional competence development

The primary aim of this research was to verify that the COPE-R program would increase preschoolers' development of social and emotional competence. The results suggested both groups showed significant changes in social and emotional competence at Time 2, specifically on conduct problems. However, results revealed significant changes in different social and emotional dimensions between groups over time. Both parents and teachers reported both groups improved in their conduct, but for program group, they agreed that the children exhibited fewer emotional problems.

Both COPE-R activities in the program group, and the community activities in the comparison group were successful in reducing problem behaviours, like temper tantrums and non-compliancy. This was contributed by the strong emphasis of empathic and prosocial behaviours in both groups.

In addition to a reduction in conduct problems, the children from the COPE-R program were observed to show fewer emotional problems (e.g., many worries, often unhappy, nervous or clingy, many fears) at home and in school. This is an indication that the first aim of COPE-R was achieved – to develop children's knowledge and skills in recognising feelings and emotions of themselves and others. It is suggested that the acquisition of emotional knowledge and skills enabled the children to recognise emotions more accurately, thus understand themselves and others more, and better manage their feelings and expression of emotions. Similar to research findings on the hallmarks of effective SEL programs (CASEL, 2012; Durlak, et al., 2011), and that intentional teaching facilitates development of targeted domains (*KidsMatter Early Childhood Mental Health Initiative,* Commonwealth of Australia, 2012; Moore, 2008), COPE-R program's sequenced approach, explicit instructions, and deliberate learning opportunities and experiences that focused on specific social and emotional skills, have fostered development in the preschoolers' social and emotional competence.

Coping development

The second aim of this study was to investigate the effect of COPE-R on children's development of coping repertoire as reported by the child, parent, and teacher. The results from all three informants were mixed, and the prediction was supported only by the teachers' responses. Teachers reported fewer observations of less adaptive strategies, Negative Coping – Emotional Expressiveness (NEE), and Negative Coping – Emotional Inhibition (NEI), in the program group after COPE-R (at Time 2), while teachers observed greater use of NEE and NEI in the comparison group at Time 2. Meanwhile, consistent to the child interviews, teachers in both groups observed increased use of Positive Coping (PC) over time. Collectively, all the preschoolers reported a significant increase of PC responses, and decrease of NEE and NEI responses at Time 2. When the groups were considered separately, preschoolers in the program gave significantly fewer NEE and NEI

responses, and those the comparison group gave significantly more PC and fewer NEI responses. The results from parents only reported significant decrease in use of NEE in both groups over time.

The findings relating to inconsistent data from multiple informants are not uncommon. Previous findings on children assessments found that reports were dependent on the raters' involvement in treatment delivery, investment in the treatment being a success, and understanding of the measured items, as well as the children's stage and rate of development, and the ecological validity of the measurements (Campbell & James, 2007; Sonuga-Barke, et al., 2013; Walker & Bracken, 1996). Specifically, parents and teachers of preschoolers were found to show similarities in ratings for externalizing problems (e.g., anti-social behaviours), and differences for items associated with internalizing problems (e.g., social withdrawal) (Verhulst & Akkerhuis, 1989; Winsler & Wallace, 2002). This is consistent to this study's results, where both parents and teachers reported a significant decrease in negative externalized coping behaviour, NEE in both groups, which corroborated the children's responses.

Despite the mixed results from all the informants, most observations and responses indicated greater use of positive coping and less of negative coping in both groups. Specifically, both the children's interviews and teachers' reports reflected that children who participated in COPE-R presented significantly less negative coping like crying (emotional expression) and giving up (emotional inhibition) after the program. These results corroborated with findings to hypothesis 1, that COPE-R's emphasis on emotional knowledge and skills reduced overt negative emotional expressions.

In addition, consistent to the exploration study on preschoolers' coping skills by Chalmers, Frydenberg and Deans (2011), the child interviews in this study showed that four- and five-year-old children developed, and continued to develop a range of ways to manage stresses and challenges. The interview responses revealed that young children were able to report a variety of coping strategies (e.g., "sit on the bench for a while and calm down, then play with someone else"), and some responses were a combination of positive and negative coping strategies (e.g., "take a deep breath and have some water, and cry, and tell mum").

Relationship between coping and social and emotional competence

The final aim of this study examined whether the improvements in social and emotional competence will be positively correlated with increased use of adaptive coping. The results partially supported this prediction, since changes in teacher-rated prosocial skills was positively correlated with changes in preschoolers' PC responses. In addition, changes in parent-rated conduct problems were negatively correlated with changes in preschoolers' PC responses. Both of these results suggested preschoolers' increase in PC responses were associated with improvements in their prosocial skills and fewer conduct problems. However, the results have to be interpreted with caution because assumption of

independence of observations was violated for teachers' ratings, and the correlation between parent-rated conduct problems and child's PC responses was approaching significance (p = .058). There was some indication that parents and teachers observed and rated their children's positive coping skills based on different types of overt behaviours. At home, parents perceived positive coping as appropriate behaviour and compliance, while in school, teachers perceived positive coping as helpful and cooperative behaviour towards peers. This may explain some of the discrepancies between teachers' and parents' ratings.

Improving coping repertoire and promoting social and emotional competence in preschoolers

The findings confirmed the importance and efficacy of early years SEL programs for children (Moore, 2008). The results demonstrated that preschoolers developed social and emotional competence, and coping skills over time. The development of social and emotional skills was associated with greater use of adaptive forms of coping and less use of unhelpful behaviour when faced with challenging situations. Hence, young children benefit from engagement in activities with explicit teaching of social-emotional skills.

Another important finding is how the focus of early years programs and activities implemented during this crucial development period impacted the learning outcomes, and enhanced particular areas of development. For example, the reduction of emotional problems may be attributed to COPE-R's focus on emotional knowledge and understanding, and this was observed across settings by parents and teachers. This highlights the importance of identifying the learning outcomes when designing a program, so that targeted aspects of development are focused on and supported effectively.

Strengths, limitations and future directions

There are multiple strengths of this study, such as the inclusion of multiple informants. The use of various informants provided a comprehensive understanding on the children's social and emotional competence and coping repertoire development across different settings (Achenbach, McConaughty, & Howell, 1987; Achenbach & Rescorla, 2007; Edwards, 2005; Renk, 2005; Richardson & Day, 2000; Sointu, Savolainen, Lappalainen, & Epstein, 2012). Other strengths include the use of a mixed-method approach which included interviewing children for a direct retrieval of their understanding and experiences (Seidman, 2013), and a comparison group to provide a point of reference for the program group.

One of the limitations of the study is the modest number of participants and the homogeneity of the sample. A larger sample size would have increased the power of the study. Moreover, the implementation of COPE-R in a larger, and more culturally and social-economically diverse sample may have a different impact on the children's development of social and emotional competence, and coping repertoire (Moore, 2006).

For future studies, it is recommended that this pilot study be replicated in a larger sample across multiple early learning settings that are representative of the preschool population. Secondly, whilst acknowledging that having a control group to understand the normal development of social and emotional, as well as coping competencies in young children would be ideal for research purpose. This however is an increasing challenge for SEL research in the naturalistic early years educational settings where SEL now forms part of the educational curriculum. Furthermore, other data collection methods such as the inclusion of direct observations of the children may provide a more ecologically valid form of outcome measure, and would not be dependent on the child's ability to communicate coping strategies.

Conclusion

A key factor to greater success and wellbeing in life is the ability to cope with challenging situations and problems. Positive social interactions and self-regulation of emotions are two important competencies for effective coping. As with many interventions, programs focused on developing social and emotional competence, and coping skills should be offered at an early age. The results of this pilot study showed that the development of social and emotional competence and coping strategies begin at a young age. There is also preliminary support for the efficacy and benefits of early childhood programs like COPE-R, in promoting preschoolers' social and emotional competence, and improving their repertoire of coping strategies for dealing with challenging situations. The inclusion of both program and comparison group in this study exemplified the impact and necessity of identifying learning objectives to facilitate growth in targeted areas of development when implementing activities and programs. Therefore, it is important for more programs with strong emphasis on various aspects of social, emotional and coping skills be made available for preschool children.

References

Achenbach, T. M., McConaughty, S. H., & Howell, C, T. (1987). Child/adolescent behavioural and emotional problems: Implications of cross-informant correlations for situational specificity. P*sychological Bulletin, 101*(2), 213–232. doi: 10.1037/0033-2909.101.2.213

Achenbach, T. M. & Rescorla, L. A. (2007). *Multicultural understanding of child and adolescent psychopathology*. New York: Guilford Press.

Australian Government Department of Education, Employment and workplace relations for the council of Australian governments (2009). *Belonging, being and becoming: The early years learning framework for Australia*. Retrieved from https://docs.education.gov.au/system/files/doc/other/belonging_being_and_becoming_the_early_years_learning_framework_for_australia._v5_docx.pdf

Bandura, A. (1971). *Social learning theory*. Retrieved from
http://www.asecib.ase.ro/mps/Bandura_SocialLearningTheory.pdf.

Bronfenbrenner, U. (1979). *The ecology of human development*. Cambridge, MA: Harvard University Press.

Campbell, J. M. & James. C. L. (2007). Assessment of social emotional development in preschool children. In B. A. Bracken & R. J. Nagle (Eds.), *Psychoeducational assessment of preschool children* (4th ed., pp. 111–135). Mahwah, NJ: Lawrence Erlbaum.

Chalmers, K., Frydenberg, E., & Deans, J. (2011). An exploration into the coping strategies of preschoolers: Implications for professional practice. *Children Australia, 36,* 120–127. doi:10.1375/jcas.36.3.120

Cohen, J. W. (1988). *Statistical power analysis for the behavioral sciences* (2nd Ed.). Hillsdale, NJ: Lawrence Erlbaum Associates.

Collaborative for Academic, Social, and Emotional Learning. (2012). *Effective Social and Emotional Learning Programs - Preschool and Elementary school edition.* Retrieved from http://casel.org/wp-content/uploads/2016/01/2013-casel-guide-1.pdf

Commonwealth of Australia (2012). *KidsMatter early childhood component 2 literature review.* Retrieved from https://www.kidsmatter.edu.au/sites/default/files/public/KMEC-Component2-Literature-Review.pdf.

Compas, B. E., Connor-Smith, J. K., Saltzman, H., Thomsen, A. H., & Wadsworth, M. E. (2001). Coping with stress during childhood and adolescence: problems, progress, and potential in theory and research. *Psychological Bulletin, 127*(1), 87–127. doi:10.1037//0033-2909.127.1.87

Deans, J., Frydenberg, E., & Tsurutani, H. (2010). Operationalising social and emotional coping competencies in kindergarten children. *New Zealand Research in Early Childhood Education Journal*, *13*, 113–124.

Denham, S. A. (2006). Social-emotional competence as support for school readiness: What is it and how do we assess it? *Early Education and Development, 17*(1), 57–89. doi:10.1207/s15566935eed1701_4

Denham, S. A. & Burton, R. (2003). *Social and emotional prevention and intervention programming for preschoolers.* New York: Kluwer/Plenum Press. doi: 10.1007/978-1-4615-0055-1

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.

Durlak, J. A., Weissberg, R. P., Dymnicki, A. B., Taylor, R. D., & Schellinger, K. B. (2011). The impact of enhancing students' social and emotional learning: A meta-analysis of school-based universal interventions. *Child Development, 82*(1), 405–432. doi:10.1111/j.1467-8624.2010.01564.x

Edwards, M. C. (2005). Agreeing about disagreements: A personal reflection on Achenbach, McConaughy, and Howell (1987). *Clinical Child Psychology & Psychiatry, 10*(3), 440–445.

Eisenberg, N., Fabes, R. A., & Guthrie, I. (1997). Coping with stress: the roles of regulation and development. In S. A. Wolchik & I. N. Sandler (Eds.), *Handbook of children's coping: Linking theory and intervention* (pp. 41–70). New York, NY: Plenum Press.

Eisenberg, N., Fabes, R. A., Bernzweig, J., Karbon, M., Poulin, R. & Hanish, L. (1993). The relations of emotionality and regulation to preschoolers' social skills and sociometric status. *Child Development, 64*(5), 1418–1438. doi: 10.2307/1131543

Fields, L. & Prinz, R. (1997). Coping and adjustment during childhood and adolescence. *Clinical Psychology Review, 17*(8), 937–976. doi:10.1016/S0272-7358(97)00033-0

Frederickson, N. & Cline, T. (2009). Promoting emotional and social competence and well-being. *Special Educational Needs, Inclusion and Diversity* (2nd ed.) (pp. 454–495). Maidenhead, UK: McGraw Hill/Open University Press.

Frydenberg, E. (2008). *Adolescent coping: Advances in theory, research and practice.* New York, NY: Routledge.

Frydenberg, E. (2014). Coping research: Historical background, links with emotion, and new research directions on adaptive processes. *Australian Journal of Psychology, 66*(2), 82-92. Doi:10.1111/ajpy.12051.

Frydenberg, E. & Deans, J. (2011). *The early years coping cards.* Melbourne, Australia: Australian Council for Educational Research.

Frydenberg, E., Deans, J., & Liang, R. (2012). The early years coping project: Building a shared language of coping. In B. Molinelli & V. Grimaldo, (Eds.), *Handbook of psychology of coping: New Research* (pp. 225–242). Hauppauge, NY: Nova Science.

Frydenberg, E., Deans, J., & O'Brien, K. (2011). *Developing everyday coping skills in the early years: proactive strategies for supporting social and emotional development.* New York, NY: Continuum International Pub. Group.

Frydenberg, E. & Lewis, R. (1993). *The adolescent coping scale (Manual)*. Melbourne, Australia: Australian Council for Educational Research.

Goleman, D. (1995). *Emotional intelligence*: New York, NY: Bantam Books.

Goodman, R. (1997). The Strengths and Difficulties Questionnaire: A research note. *Journal of Child Psychology and Psychiatry*, *38*, 581–586.

Goodman, R. (2001). Psychometric properties of the Strengths and Difficulties Questionnaire. *Journal of the American Academy of Child and Adolescent Psychiatry, 40*, 1337-1345.

Gresham, F. M. & Elliott, S. N. (1993). Social skills intervention guide: Systematic approaches to social skills training. *Special Services in the Schools, 8*(1), 137–158. doi:10.1300/J008v08n01_07

Hawes, D. J. & Dadds, M. R. (2004). Australian data and psychometric properties of the Strengths and Difficulties Questionnaire. *Australian and New Zealand Journal of Psychiatry, 38*, 644 – 651.

Lazarus, R. S. & Folkman, S. (1984). *Stress, appraisal, and coping*. New York, NY: Springer Publishing Company.

Losoya, S., Eisenberg, N., & Fabes, R. A. (1998). Developmental issues in the study of coping. *International Journal of Behavioural Development, 22*(2), 287–313. doi:10.1080/016502598384388

Moore, T. G. (2006). *Early childhood and long-term development: The importance of the early years.* Perth, Western Australia: Australian Research Alliance for Children and Youth.

Moore, T. G. (2008). Towards an early years learning framework for Australia. *Centre for Community Child Health Working Paper 4.* Parkville, Victoria, Australia: Centre for Community Child Health.

Pallant, J. (2013). *SPSS Survival Manual: A step by step guide to data analysis using IBM SPSS* (5th ed.). Sydney, Australia: Allen & Unwin.

Pang, I., Frydenberg, E., & Deans, E. (2015). The relationship between anxiety and coping in preschoolers. In P. Buchenwald, & K. S. Moore (Eds.), *Stress anxiety* (pp. 27–36). Berlin, Germany: Verlag.

Piaget, J. (1952). *When thinking begins. In: The origins of intelligence in children.* New York, NY: International Universities Press.

Raver, C. C. & Knitzer, J. (2002). Promoting the emotional well-being of children and families policy paper no. 3. *Ready to enter: What research tells policymakers about strategies to promote social and emotional school readiness among three- and four-year-old children*. New York, NY: National Center for Children in Poverty. Retrieved from http://www.nccp.org/publications/pdf/text_485.pdf

Renk, K. (2005). Cross-informant ratings of the behaviour of children and adolescents: The "Gold standard". *Journal of Child & Family Studies, 14*(4), 457–468.

Richardson, G. A. & Day, N. L. (2000). *Epidemiologic considerations*. (2nd ed.). Mahwah, NJ: Lawrence Erlbaum.

Rose-Krasnor, L. (1997). The nature of social competence: A theoretical review. *Social Development, 6*(1), 111–135. doi:10.1111/j.1467-9507.1997.tb00097.x

Rothbaum, F., Weisz, J. R., & Snyder, S. S. (1982). Changing the world and changing the self: A two-process model of perceived control. *Journal of Personality and Social Psychology, 42*(1), 5–37.

Saarni, C. (1999). *The development of emotional competence*. New York, NY: Guilford Press.

Salovey, P. & Mayer, J. D. (1990). Emotional intelligence. *Imagination, cognition and personality, 9*(3), 185–211. doi:10.2190/DUGG-P24E-52WK-6CDG

Salovey, P. & Sluyter, D. J. (1997). *Emotional development and emotional intelligence: educational* implications*.* New York, NY: Basic Books.

Sandler, I., Wolchik, S. A., Cruden, G., Mahrer, N. E., Ahn, S., Brincks, A., & Brown, C. H. (2014). Overview of meta-analyses of the prevention of mental health, substance use, and conduct problems. *Annual Review of Clinical Psychology*, *10*, 243–273. doi:10.1146/annurev-clinpsy-050212-185524.

Seidman, I. (2013). *Interviewing as qualitative research – A guide for researchers in education and the social sciences* (4th ed.)*.* New York, NY: Teachers College Press.

Skinner, E. A. & Wellborn, J. G. (1997). Children's coping in the academic domain. In S. A. Wolchik & I. N. Sandler (Eds.), *Handbook of children's coping: Linking theory and intervention* (pp. 387–422). New York, NY: Plenum Press.

Skinner, E.A., Edge, K., Altman, J., & Sherwood, H. (2003). Searching for the structure of coping: A review and critique of category systems for classifying ways of coping. *Psychological Bulletin, 129*(2), 216–269. doi:10.1037/0033-2909.129.2.216

Skinner, E. A. & Zimmer-Gembeck, M. J. (2007). The development of coping. *Annual Review of Psychology, 58*, 119–144. doi:10.1146/annurev.psych.58.110405.085705

Skinner, E. A. & Zimmer-Gembeck M. J. (2009). Challenges to the developmental study of coping. In E. A. Skinner & M. J. Zimmer-Gembeck (Eds.), *Coping and the development of regulation. New Directions for Child and Adolescent Development* (pp. 5–17). San Francisco, SF: Jossey-Bass. doi: 10.1002/cd.239

Sointu, E. T., Savolainen, H., Lappalainen, K., & Epstein, M. H. (2012). Cross informant agreement of behavioral and emotional strengths between Finnish students and teachers. *Scandinavian Journal of Educational Research*, *56*(6), 625-636.

Sonuga-Barke, E. J., Brandeis, D., Cortese, S., Daley, D., Ferrin, M., Holtmann, M., Stevenson, J., Danckaerts, M., van der Oord, S., Döpfner, M., Dittmann, R. W., Simonoff, E., Zuddas, A., Banaschewski, T., Buitelaar, J., Coghill, D., Hollis, C., Konofal, E., Lecendreux, M., Wong, I. C., & Sergeant, J. (2013). Nonpharmacological interventions for ADHD: Systematic review and meta-analyses of randomized controlled trials of dietary and psychological treatments. *American Journal of Psychiatry, 170,* 275–289.

Sorin, R. (2005). Who's afraid of the fire alarm or of going to preschool? A comparative study of early childhood fears and caregivers' responses to fear in Australia and in Canada. *Australian Journal of Early Childhood, 30*(4), 34–42.

State of Victoria, Department of Education and Early Childhood Development (2011). *Victorian early years learning and development framework.* Retrieved from http://www.vcaa.vic.edu.au/earlyyears

State of Victoria, Department of Education and Early Childhood Development (2016). *Victorian early years learning and development framework.* Retrieved from http://www.education.vic.gov.au/Documents/childhood/providers/edcare/veyldframework.pdf

State of Victoria, Department of Education and Training. (2016). *Building resilience: A model to support children and young people.* Retrieved from http://www.education.vic.gov.au/about/department/Pages/resilienceframework.aspx.

Stone, L. L., Otten, R., Engels, R. C. M. E., Vermulst, A. A., & Janssens, J. M. A. M. (2010). Psychometric properties of the parent and teacher versions of the Strengths and Difficulties Questionnaire for 4- to 12-Year-Olds: A Review. *Clinical, Child and Family Psychology Review, 13,* 254–274. doi: 10.007/s10567-010-0071-2

Suls, J. & Fletcher, B. (1986). The relative efficacy of avoidant and non-avoidant coping strategies: A metal-analysis. *Health Psychology, 4*, 249–288.

Tobin, D.L., Holroyd, K.A., Reynolds, R.V., & Wigal, J.K. (1989). The hierarchical factor structure of the Coping Strategies Inventory. *Cognitive Therapy and Research, 13*(4), 343–361.

Verhulst, F. C. & Akkerhuis, G. W. (1989). Agreement between parents' and teachers' ratings of behavioral/emotional problems of children aged 4-12. *Journal of Child Psychology and Psychiatry, 30*, 123–136.

Vygotsky, L. S. (1962). *Thought and language.* Cambridge, MA: MIT Press.

Weare, K. & Nind, M. (2011). Mental health promotion and problem prevention in schools: What does the evidence say? *Health Promotion International, 26*(S1), 29–69. doi:10.1093/heapro/dar075

Walker, K. C. & Bracken, B. A. (1996). Inter-parent agreement on four preschool behavior rating scales: Effects of parent and child gender. *Psychology in the Schools, 33*, 273–283.

Winsler, A. & Wallace, G. L. (2002). Behavior problems and social skills in preschool children: Parent-teacher agreement and relations with classroom observations. *Early Education & Development*, *13*, 41–58.

Yeo, K., Frydenberg, E., Northam, E., & Deans, J. (2014). Coping with stress among preschool children and associations with anxiety level and controllability of situations. *Australian Journal of Psychology, 66*(2), 93–101.

Zeitlin, S. & Williamson, G. G., (1994). *Coping in Young Children: Early intervention practices to enhance adaptive behavior and resilience.* Baltimore, MD: Paul H. Brookes Publishing.

Zeman, J., Klimes-Dougan, B., Cassano, M. & Adrian, M. (2007). Measurement issues in emotion research with children and adolescents. *Clinical Psychology: Science and Practice, 14*(4), 377–398. doi:10.1111/j.1468-2850.2007.00098.x

Zimmer-Gembeck, M. J., Lees, D., & Skinner, E. A., (2011). Children's emotions and coping with interpersonal stress as correlates of social competence. *Australian Journal of Psychology, 63,* 131–141. doi:10.1111/j.1742-9536.2011.00019x