

Early childhood social-emotional learning based on the Cope-Resilience program: Impact of teacher experience

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A strong emphasis has been placed on social-emotional learning (SEL) during the preschool years; however, there is a dearth of research into the drivers of program success in this setting. This study examined the effectiveness of a formal, teacher-led social-emotional learning program, COPE-Resilience, on the development of 4 to 5-year-old children in an Australian preschool setting. Ninety-one preschool children from three classrooms in an early learning centre in Melbourne, Australia were allocated to receive the six-week COPE-Resilience intervention by experienced COPE-Resilience facilitators ($n = 33$), first-time program facilitators ($n = 29$), or participate as a non-intervention comparison group ($n=29$). Results indicated that children undertaking COPE-Resilience with an experienced teacher facilitator demonstrated the greatest improvements in teacher-rated empathy, prosocial behaviours, coping styles, inhibitory control, and problem behaviours. These results indicate that the level of program facilitation experience enhances implementation success. Consideration for the impact and implications of program delivery experience in evaluation design are discussed.

Introduction

For many years schooling has focused on the cognitive elements of education, where literacy and numeracy are considered as fundamental skills necessary to achieve success in life. However, it is also understood that schools have an important role to play in raising healthy children by fostering not only their cognitive development but also their social and emotional development. The gap between traditional cognitive knowledge (i.e. literacy and numeracy) learnt at school and the skills people need to thrive in the 21st century is becoming more evident. According to the report published by the World Economic Forum (2016), “to thrive in the 21st century, students need more than traditional academic learning. They must be adept at collaboration, communication and problem-solving, which are some of the skills developed through social and emotional learning (SEL).” (p. 4). SEL, the process through which people acquire skills, knowledge, values, and attitudes to be socially and emotionally competent (CASEL, 2017), is becoming greatly valued in our education systems.

A recent Australian mental health survey revealed that one in seven 4 to 17 year olds met diagnostic criteria for a mental disorder in the previous 12 months (Lawrence et al., 2015). Whilst it is estimated that around half of children with mental illness will not be impacted by these conditions as adults, individuals who have experienced previous mental health concerns are more vulnerable to future risk (Costello & Maughan, 2015). As American psychologist Professor Martin Seligman stated in his book *The Optimistic Child*, there is a great need to find effective ways to ‘psychologically immunize’ children against the development of mental illness (Seligman, 2007). Fifteen years on, there is still growing impetus to find effective strategies to meet this aim.

One key strategy identified to bolster mental health from childhood is via social and emotional skill development, an area of learning that has received burgeoning attention across fields of education, research and policy, as these skills have been linked with the development of adaptive coping strategies, as well as academic success (Durlak et al., 2010; Frydenberg, 2014). A seminal meta-analysis of 213 school-based, universal social and emotional learning programs demonstrated gains of up to 11 percentile points in achievement in students who undertook these programs, compared to control participants (Durlak et al., 2011). These students also demonstrated more positive social behaviours and lower emotional distress following intervention (Durlak et al., 2011).

Substantial economic benefits have also been identified from curriculum investment in this area. The Center for Benefit-Cost Studies in Education and Columbia University found an average return on investment from school-based social and emotional programs of eleven dollars for each dollar invested (Belfield et al., 2015). Gaining an understanding of the essential components that make social and emotional programs successful is, therefore, a key consideration for researchers and educators alike.

What is social emotional learning?

In 1990 Salovey and Mayer (1990) introduced the term emotional intelligence (EI). EI is defined as the ability to identify, use, understand, and manage emotions (Salovey & Mayer, 1990). The notion of EI and was later popularised by Daniel Goleman's (1995) ground-breaking book titled "Emotional intelligence: Why it can matter more than IQ". Goleman (1995) claimed that EI accounts for 80% success in work, school and relationships, and is directly linked to career progression. For many years, researchers have shown that training in EI decreases the likelihood of negative emotions, aggressive behaviours and substance abuse (Bracket & Mayer, 2003), and increases positive relationships (Lopes et al., 2005), which further influences academic achievement and success (Durlak et al., 2011).

Around the same time, in 1994, the Collaborative for Academic, Social, and Emotional Learning (CASEL) was founded in the United States. Ultimately, the mission for CASEL is to establish the training of EI, also known as social and emotional learning (SEL) as an essential part of education (Payton et al., 2008). CASEL defines SEL as the process by which children and adults "develop the knowledge, attitudes and skills to recognize and manage their emotions, set and achieve positive goals, demonstrate caring and concern for others, establish and maintain positive relationships, make responsible decisions, and handle interpersonal situations effectively" (Payton et al., 2008, p. 6). SEL is condensed into five overarching capabilities; self-awareness, self-management, social awareness, relationship skills, and responsible decision making (CASEL, 2016). Investment in these skills aims to safeguard wellbeing across the lifespan.

The importance of SEL in preschool

Interest in SEL in Australia has received increasing attention over the past decades. Educational settings are increasingly required to provide students with opportunities to not only grow academically but also to become resilient, caring, and productive members

of society (White & Waters, 2015). The primary and secondary school years are often considered the optimum period for intervention, as many mental health conditions are precipitated during high school years (Schaps & Battistich, 1991). However, less focus has been given to the seminal development of social and emotional competencies during early childhood (Frydenberg et al., 2019). Yet, the prevalence of mental health problems in preschool children is growing (Whalen et al., 2017). Studies in the United States have shown that between 10-30% of preschool children are not behaviourally and emotionally ready to succeed in school (Brauner & Stephens, 2006; Hemmeter et al., 2007), and around 16-18% of preschool-age children are experiencing mental health difficulties (von Klitzing et al., 2015). Many preschool children who have behavioural problems or low social and emotional capacity may experience long-term complications, including, difficulties in school, trouble in social situations and personal relationship, engaging in risky behaviours, and even having suicidal tendencies.

Early intervention in SEL has been found to provide tangible long-term advantages. A recently published meta-analysis found sustained educational benefits for students who received SEL intervention across 82 schools from kindergarten to high school (Taylor et al., 2017). Students with SEL program exposure demonstrated increased academic success of up to 13 percentile points at 3.5 years follow up. The same students displayed reduced conduct problems, emotional distress and drug use, compared to their peers. Positive benefits were also evident at one-year post-intervention regardless of school location, socioeconomic background or race, suggesting that SEL programs are applicable across diverse populations (Taylor et al., 2017). For preschool-aged children, levels of social competence and emotional self-regulation are also related to improved school-readiness and successful transition into primary school (Webster-Stratton et al., 2008). It is essential to identify the factors underpinning social and emotional growth for children of preschool age.

The role of early childhood teachers

A large body of research has identified the central importance of early childhood educators and carers to the development of children's socio-emotional and psychological well-being. For example, Farquhar (2003) states that teachers are the frontrunners of the development and learning of children. As early childhood educators and carers are the primary implementers of SEL programmes in preschools, their perceptions of and attitudes towards a given intervention are likely to impact programme delivery, evaluation and outcomes. The framework by Jones and Bouffard (2012) proposes that teacher's background, social-emotional competence and pedagogical skills strongly influence the children's SEL skills. Yet, teachers' levels of content knowledge and experience in program delivery is often an overlooked factor in terms of program implementation and outcomes (Schonert-Reichl, 2017).

While SEL programs can stimulate a variety of positive outcomes, several program implementation variables may influence its impact. Studies have investigated the importance of how teachers' own self-efficacy influences the outcome of SEL programs. Domitrovich and colleagues (2010) found that greater social acceptability of SEL

programs by teachers was related to improvements in student's problem-solving, social competence and reduction in aggressive behaviour. Similarly, Durlak and DuPre's (2008) meta-analysis indicated that teachers' views of the program need, program benefit, self-efficacy, and skill proficiency are core characteristics that determine program outcomes. These studies suggest that teachers who have a positive attitude toward SEL programs, that is, they recognise a need and believe that the program is going to produce good results, will be more motivated to deliver the program with fidelity. Hence, the fidelity with which teachers implement SEL programs is underpinned by teacher beliefs, attitudes, and perceptions (Schonert-Reichl, 2017). Indeed, if teachers felt more confident in their ability to do what is expected and believed there was a need for SEL to be introduced and taught in their preschool, there would be a higher likelihood of them accepting and taking on the new idea. Likewise, if teachers felt that the goals of the program were important, appropriate and feasible, they would be more likely to implement the program as it was designed, or even at higher levels of dosage (Denham & Burton, 2003).

In summary, factors relating to teachers' own knowledge, confidence and program facilitation experience can account for the difference in outcomes in SEL program efficacy (Reyes et al., 2012; Buchanan et al., 2009). Moreover, studies have identified that teachers with stronger knowledge, confidence, and commitment in delivering SEL programs are more likely to accept the importance of such programs and implement them with fidelity (Schonert-Reichl, 2017). These findings indicate that teacher's content knowledge and experience with SEL will, in turn, increase the outcome of SEL programs. It is, therefore, important to investigate how differences in teacher-related factors impact student outcomes.

The present study

The aim of the present study was to examine the impact of an explicit teacher led SEL program on the social and emotional outcomes in preschool children. Specifically, the study investigated whether the experience of the program facilitator led to greater improvements in children's social and emotional outcomes. The study sought to investigate the impact of a 6-week explicit, teacher-led COPE-Resilience preschool program on children's empathy, prosocial behaviours, positive and negative coping, inhibitory control, problem behaviours, and emotional knowledge. Additionally, the research aimed to assess whether teachers' level of experience with COPE-Resilience program delivery impacts children's social and emotional learning outcomes.

The following research questions were devised:

1. What is the impact of a 6-week explicit, teacher led COPE-Resilience preschool program on children's empathy, prosocial behaviours, positive and negative coping, inhibitory control, problem behaviours, and emotional knowledge?
2. What is the impact of teacher's level of experience with COPE-Resilience program delivery on student outcomes?

Methodology

Participants

The participants were 91 pre-school children (46 males and 45 females) and six early childhood teachers (five female and one male) from three classrooms in an early learning centre [ELC] in inner-city Melbourne, Australia. The centre had been identified as being in an area of higher average socioeconomic status (Australian Bureau of Statistics, 2013) with a strong emphasis on SEL in its regular curriculum, including regular visits outside of the centre designed to establish connections within the local community. Examples include visiting the neighbourly residences of elderly citizens and visiting the neighbourhood disability centre to encourage caring, empathy and understanding of diverse populations. All classrooms included at least one degree-qualified early childhood education lead teacher. Approximately 75% of children were identified by their parents as Australians and/or had ancestors from Northern and Western Europe, whilst 16% identified as multi-cultural (Australian/Asian) and 9% Asian. English was the primary language spoken at home (96% households). Children's ages at the commencement of the program ranged between 44 months and 64 months.

Two of the three classrooms were assigned as the intervention group. These children received lessons from the COPE-Resilience program (Frydenberg et al., 2019), which were delivered by their regular classroom teachers (two teachers in each class) over 6 weeks. Of the two classrooms that received the COPE-Resilience program, one class ($n = 33$) had an experienced COPE-Resilience teacher facilitator (third year of delivering the program), while the other class ($n = 29$) had teachers delivering the program for the first time. Children from the remaining class ($n = 29$) were assigned to the non-intervention comparison group, and did not receive the COPE-Resilience program during the study; instead they attended their regular community outings to a nearby residential aged care facility. There were no statistically significant differences between the gender ratios or ages in the experienced facilitator group, compared to the first-time group and the non-intervention group. Table 1 presents the demographic background of child and teacher participants in each study group.

The COPE-Resilience program

The COPE-Resilience program was developed in Australia by Frydenberg et al. (in press), to promote preschoolers' social-emotional competencies using an explicit, teacher-led approach (see Appendix A for examples of lessons from the 2019 COPE-Resilience manual). The program objectives are to build children's emotional knowledge, empathy, prosocial and coping skills (Frydenberg et al., 2019). The program underpins and aligns with several theoretical approaches. For example, Piaget (1952) viewed children as active learners for whom development and knowledge is based on their interactions with the world. Through exploring and interacting, they create mental representations which he called 'schema' that children use to respond and understand situations. These schemas, in turn, are linked to discrete stages of child development. In the age group under discussion, four-year-olds are, according to Piaget, in the pre-operational stage of development where

Table 1: Child and teacher participants in each study group

		Experienced COPE-R	First-time COPE-R	Non-inter- vention
Child	Number (<i>n</i>) of participants	33	29	29
variables	Age (mean)	52 months	53 months	53 months
	Gender			
	Male	16 (48%)	15 (52%)	15 (52%)
	Female	17 (52%)	14 (48%)	14 (48%)
	Ethnic			
	Western European	24 (73%)	21 (72%)	23 (80%)
	Asian	1 (3%)	4 (14%)	3 (10%)
	Multicultural*	8 (24%)	4 (14%)	3 (10%)
	Primary			
	English	29 (88%)	27 (93%)	26 (90%)
	Bi/multi-lingual	3 (9%)	1 (3%)	2 (7%)
	Language other than English	1 (3%)	1 (3%)	1 (3%)
Teacher	<i>n</i> of participants	2	2	2
variables	<i>n</i> of experienced COPE-R facilitators	1	0	0

Note: percentage in parentheses; * Children with parents from Australia and Asia

they understand the symbolic meaning as opposed to the physical and concrete. Vygotsky's (1962) theorising overcame some of the limitations of Piaget by emphasising the culture and context. Language and thought worked together as they morphed into skills of communication and understanding in a cultural context. Bronfenbrenner's (1979) sophisticated ecological approach takes into account time and context. For example, time is an important feature of development as is socioeconomic status and person-related characteristics such as ability and personality. Together, these 'classic' theories provide an understanding of how learners operate.

More recent theorising of emotional intelligence (Salovey & Mayer, 1990) and coping theory (Frydenberg et al., 2012) also underpin the program. Emotional intelligence is the way individuals understand their own emotions and that of others. Emotion language and labelling of emotions is considered to be an important feature of the learning experience and has subsequent impact on self-regulation. That is, if you can name it, then it is possible to 'tame' or control the emotion. Similarly, coping theory, which focuses on the thoughts, feelings and actions of the individual informs the content of the social-emotional program with an emphasis on skill-building both in the emotional sense and the positive action sense, such as that reflected in acts of empathy and kindness.

Evaluation of the COPE-Resilience program to date has demonstrated improved teacher-rated prosocial behaviours and emotional expression for four-year-old preschool students (Frydenberg et al., 2019). Students also demonstrated higher teacher-rated positive coping skills following intervention (Pang et al., 2018).

Procedure

The research was approved by The University of Melbourne's Human Research Ethics Committee (Ethics ID: 1648411.2). Consent was provided by the Director of the early learning centre, and promotion and information sharing about the research was facilitated via the centre's online parent communication portal. Children for whom consent was not

provided were still included in classroom activities, and children who received parental consent to participate were invited to take part in direct child measures. Child consent was sought to promote child autonomy and empowerment (Deans et al., 2017). Children were given a card which had an image from the coping card and a box for a Yes or No tick; they were also given the opportunity to write their name if they desired.

Teachers in the intervention condition were provided with the program of lessons and activities and were encouraged to modify and pick any activities in the manual to cater for the interests, needs and the developmental stage of the children. Teachers were advised to deliver a minimum of two activities per week. Before the commencement of the program, teachers in the two COPE-Resilience groups attended a one-hour workshop on COPE-Resilience program implementation. Teachers were offered ongoing consultation during the six-week program.

Data collection occurred across two-time points of baseline (three months into the school year) and post-intervention (six weeks later). Questionnaire data consisted of teacher ratings of children's social and emotional outcomes, collected from teachers at both time points. All children who provided consent to participate were also interviewed individually by one of three postgraduate researchers. Researchers were introduced to the children several times before assessment to build familiarity. Children were assessed on site by the researcher. The child-based interviews took approximately 10 minutes to administer at each time point. Prior to program implementation, teachers were also invited to complete a questionnaire to ascertain levels of experience and confidence in COPE-Resilience program facilitation.

Measurements

To capture the five components of the CASEL framework, the research adopted several sets of measures that had been used in past trials of COPE-Resilience program (e.g., Lambe, 2017; Pang et al., 2018; Yeo et al., 2014) and in other large-scale surveys and small clinical trials of children's social and emotional well-being. These measures included self-awareness (i.e., emotional knowledge), self-management (i.e., inhibitory control), social awareness (i.e., empathy), relationship skills (i.e., prosocial behaviour), and responsible decision making (i.e., positive, negative coping, and problem behaviour). A summary of the child measures used in this study is presented in Appendix B.

Empathy

The *Empathy Questionnaire (EmQue)* (Rieffe et al., 2010) was used to measure children's degree of empathy. The initial scale contained 20 items over three subscales: emotional contagion, attention to others, and prosocial responses. Teachers indicated how frequently children displayed empathic behaviours over the past two weeks on a 3-point scale ranging between 0 (never), 1 (sometimes) and 2 (often). Item 19 was removed as recommended by Rieffel et al. (2010) to increase reliability. The final scale contained 19 items, and was computed into one total empathy score, ranging from 0 to 38. High scores in this measure indicate a high level of empathy. For this sample, the EMQ showed good internal consistency (Cronbach alpha = .82).

Prosocial behaviour and total problem

Prosocial behaviour and total problem (such as emotional symptoms, conduct problems, hyperactivity/ inattention, peer relationship problems) were assessed with the *Strengths and Difficulties Questionnaire* (SDQ) (Goodman, 1997, 2001). The SDQ is a brief, 25 item behavioural screening questionnaire that can be completed in 5 minutes by teachers of children aged 4 to 16. It is designed to assess a broader area of different psychological adjustment of children. Each behavioural item is rated on a 3-point Likert scale (0 = not true, 1 = somewhat true, and 2 = certainly true) (Goodman, 2001). The SDQ comprises five scales of five items each. The four underlying subscales of emotional symptoms, conduct problems, hyperactivity/ inattention, peer relationship problems were combined into one total problem score (SDQ-TP), ranging from 20 to 40, with higher scores indicating more problem behaviours. The total prosocial subscale (SDQ-PS) ranged from 0 to 10, with higher scores indicating more prosocial behaviours. For this sample, the SDQ-TP and SDQ-PS showed good internal consistency (Cronbach alpha values .85 and .78 respectively).

Positive and negative coping

The *Children's Coping Scale-Revised* (CCS-R) contains 29 items to assess child coping practices (Yeo et al., 2014). Each item assesses how frequently a child utilises common coping strategies (e.g. "cry or scream", "get a teacher or grown-up to help"), on a 3-point-scale between 0 (never), 1 (sometimes), and 2 (a lot). The CCS-R contains an underlying three-factor structure, namely positive coping, negative coping - emotional expression (NCEE), and negative coping - emotional inhibition (NCEI) (Yeo et al., 2014). The NCEE and NCEI subscales were combined in this study to create a total negative coping subscale. Positive coping scores ranged from 0 to 28, and negative coping scores ranged from 0 to 30; a higher score indicating more frequent use of that form of coping. For this sample, the positive coping subscale and negative coping subscale showed adequate internal consistency (Cronbach alpha values .79 and .79 respectively).

Inhibitory control

Inhibitory control was assessed with the inhibition subscale of the *Childhood Executive Function Inventory* (CHEXI) (Thorell & Nyberg, 2008). The CHEXI includes 24 items that form four subscales: working memory, planning, inhibition and regulation. Factor analysis in preschool children has yielded only two broad factors named working memory (sum of working memory and planning subscales) and inhibition (sum of inhibition and regulation subscales) (Camerota et al., 2016). Teachers rated each item on a 5-point-scale (from 1 = definitely not true to 5 = definitely true). Higher scores indicate greater inhibition difficulties. For this sample, the inhibition subscale showed high internal consistency (Cronbach alpha = .95).

Emotional knowledge

Children were invited to complete face-to-face interviews to assess their emotional knowledge. Structured child interviews were verbally administered using two situation cards ("feeling hurt" and "left out") from the *Early Years Coping Cards* set (Frydenberg & Deans, 2011). Questions such as "How is the child [in the situation] feeling?", "Tell me another word to describe how the child is feeling?" and "Why is the child feeling this

way?” were asked to assess children’s ability to identify, name and explain the causality of feelings (see Appendix C for the coding rubric). Children were also asked to identify their own feelings if this was to happen to them, “How would you feel if you [got hurt/nobody wants to play with you]?”. Children’s accurate responses from questions in both scenarios were added to provide a total score for emotional knowledge. Presentation order of visual stimuli was reversed for every second child to reduce order effects. Verbatim responses were coded according to a previously designed coding rubric (Pang et al., 2018). Scores ranged from 0 to 22 for the emotional knowledge scale. Two researchers coded half of the data each, and inter-rater reliability calculations revealed high inter-rater agreement at both pre-test and post-measures (97.3%; 89.8%)

Results

Baseline comparisons

Before running the 3 x 2 ANOVAs, one-way ANOVAs were first undertaken to examine baseline differences on outcome variables. There were significant differences in teacher-rated empathy $F(2,88) = 8.14, p = .001$, prosocial behaviour $F(2,88) = 9.85, p < .001$, and inhibition $F(2,88) = 30.13, p < .001$ among classes at baseline. A post hoc Tukey test showed that the experienced facilitator group ($M = 14.33, SD = 3.99$) and the first-time facilitator group ($M = 15.24, SD = 4.17$) had higher teacher-rated empathy compared to the non-intervention group ($M = 10.55, SD = 5.86$). Teacher-rated prosocial behaviour was also significantly higher in the experienced facilitator group ($M = 6.33, SD = 1.88$) and the first-time facilitator group ($M = 6.76, SD = 1.99$) compared to the non-intervention group ($M = 4.45, SD = 2.47$). On the inhibition measures, the experienced facilitator ($M = 16.33, SD = 6.11$) had significantly lower scores compared to first-time facilitator ($M = 26.31, SD = 7.68$) and non-intervention group ($M = 30.21, SD = 8.10$). Where groups significantly differed at baseline on variable measures (i.e. teacher-rated empathy, prosocial behaviour and inhibition), a series of one-way ANCOVA was conducted to determine a statistically significant difference between each group on children’s post-test scores controlling for children’s baseline scores.

To provide information about the magnitude of intervention effects, individual effect sizes for observed changes between pre- and post-test were also calculated using Cohen’s d (Tabachnick & Fidell, 2013). Table 2 presents the mean, standard deviation and the effect sizes of the observed changes in each group between pre- and post-test.

Empathy scores

After adjusting for children’s baseline empathy scores, there was significant difference between the three groups on post-intervention scores, $F(2, 87) = 66.21, p < .001$, with a large effect size ($partial\ eta\ squared = 0.60$). Further analyses indicated that there was a significant difference between experienced facilitator compared to first-time facilitator ($p < .001$) and non-intervention group ($p < .001$). There was a marginally significant difference between first-time facilitator and control group ($p = .63$). Comparing the estimated marginal means showed that children’s post-empathy scores were most

improved with the experienced facilitator ($M = 23.38$) compared to first-time facilitator and non-intervention group ($M = 13.50, 10.48$ respectively).

Table 2: Effect sizes of the observed changes in each group between pre- and post-test (un-adjusted means)

Group		<i>n</i>	Pre-test M(SD)	Post-test M(SD)	<i>F</i>	<i>d</i>
Empathy [^]	COPE-R (Experienced)	33	14.33 (3.99)	23.55 (3.25)	195.87***	2.53###
	COPE-R (First-time)	29	15.24 (4.17)	13.83 (5.30)	1.95	-0.30 #
	Non-intervention	29	10.55 (5.86)	9.96 (5.12)	0.15	-0.11
Prosocial [^]	COPE-R (Experienced)	33	6.33 (1.88)	9.00 (1.28)	88.00***	1.66 ###
	COPE-R (First-time)	29	4.45(2.47)	6.66 (3.15)	0.03	0.78 ##
	Non-intervention	29	6.76 (2.00)	5.34 (3.00)	2.73	-0.56 ##
Positive coping	COPE-R (Experienced)	33	19.32 (3.23)	23.55 (1.39)	64.55***	1.70 ###
	COPE-R (First-time)	29	18.69 (3.34)	19.31 (4.59)	0.66	0.15
	Non-intervention	29	17.97 (4.20)	18.72 (3.95)	3.41 ⁺	0.18
Negative coping	COPE-R (Experienced)	33	4.97 (3.46)	2.58 (1.73)	13.49**	0.87 ###
	COPE-R (First-time)	29	4.74 (3.55)	6.04 (2.92)	4.85*	-0.40 #
	Non-intervention	29	6.52 (3.97)	6.77 (4.96)	0.77	0.056
Inhibitory control [^]	COPE-R (Experienced)	33	16.33 (3.22)	13.18 (4.70)	6.58*	0.78 ##
	COPE-R (First-time)	29	26.31 (7.69)	25.93 (9.05)	0.13	0.042
	Non-intervention	29	30.21 (8.10)	28.18 (8.56)	1.55	0.24 #
Total problems	COPE-R (Experienced)	33	5.15 (4.48)	2.12 (3.22)	17.93***	0.78 ##
	COPE-R (First-time)	29	7.34 (4.61)	7.72 (4.49)	0.24	-0.084
	Non-intervention	29	8.24 (6.32)	8.81 (5.82)	0.69	-0.094
Child emotional knowledge	COPE-R (Experienced)	33	14.34 (3.33)	16.31 (3.22)	13.92***	0.61 ##
	COPE-R (First-time)	29	14.59 (2.87)	15.97 (2.18)	5.79*	0.54 #
	Non-intervention	29	14.00 (2.33)	16.66 (2.72)	13.61***	1.05 ###

Note: Direct effect sizes for observed changes between pre- and post-test in different groups, calculated by using Cohen's *d*. ### *d*=large effect size, ##*d*=medium effect size, #*d*=small effect size. [^]ANCOVA analysis, with significant baseline difference controlled as covariate.
⁺*p*<0.1, **p*<0.05, ***p*<0.01, ****p*<0.001

Prosocial behaviour scores

For teacher-rated prosocial behaviour, controlling for baseline differences ($M= 8.77$), there was a significant group difference on post-intervention scores, $F(2, 87) = 12.86, p < .001$, with a large effect size (*partial eta squared* = 0.23). Further analyses indicated that there was a significant difference between experienced facilitator compared to first-time facilitator ($p < .001$) and non-intervention group ($p < .001$). Comparing the estimated marginal means showed that children's post-prosocial scores were most improved with the experienced facilitator compared to first-time facilitator and non-intervention group ($M = 6.21, 6.05$ respectively).

Positive coping scores

Results showed a significant group by time interaction effect in teacher-rated positive coping, $F(1,88) = 30.91$, $p < .001$, $partial\ eta\ squared = 0.23$. Further analyses indicated greater improvements in children's positive coping strategies from baseline ($M = 19.32$, $SD = 3.23$) to post-test ($M = 23.55$, $SD = 1.39$) in the experienced facilitator group only, $F(1,32) = 64.55$, $p < .001$, with a large effect size ($Cohen\ d = 1.70$). There was no significant change over time in children's positive coping strategies for the first-time facilitator and non-intervention group, $p > 0.05$.

Negative coping scores

Teacher-rated negative coping also showed significant group by time interaction effect, $F(1,88) = 7.36$, $p = .001$, $partial\ eta\ squared = 0.14$. Further analyses revealed greater reductions in children's negative coping strategies from baseline ($M = 4.97$, $SD = 3.46$) to post-test ($M = 2.58$, $SD = 1.73$) in the experienced facilitator group only, $F(1,88) = 64.55$, $p = 0.001$, with a large effect size ($d = 0.87$). In contrast, there was a significant increase of children's negative coping strategies from pre ($M = 4.97$, $SD = 3.46$) to post-intervention ($M = 2.58$, $SD = 1.73$) in the first-time facilitator group, $F(1,88) = 4.85$, $p = .03$, with a small effect size ($d = 0.40$). There was no significant change over time in children's negative coping strategies for the non-intervention group, $p > .05$.

Inhibition control scores

After adjusting for children's baseline inhibition scores (mean 23.93), there was a significant difference between the three groups on post-intervention scores, $F(2,87) = 10.53$, $p < .001$, with a large effect size ($partial\ eta\ squared = 0.20$). Further analyses indicated that there was a significant difference between experienced facilitator compared to first-time facilitator and non-intervention group ($p < .001$). Comparing the estimated marginal means showed that children's post-inhibition scores were most reduced for the experienced facilitator ($M = 16.90$), compared to first-time facilitator and non-intervention groups ($M = 24.77$, 25.10 respectively).

Problem behaviour

Teacher-rated problem behaviour also showed a significant group by time interaction effect, $F(1,88) = 8.19$, $p = .001$, $partial\ eta\ squared = 0.16$. Further analyses revealed greater reductions in children's problem behaviour from baseline ($M = 5.15$, $SD = 4.48$) to post-intervention ($M = 2.12$, $SD = 3.22$) in the experienced facilitator group only, $F(1,88) = 17.93$, $p < .001$, with a medium effect size ($d = 0.78$). In contrast, there was no significant change over time in children's problem behaviour for the first-time facilitator and non-intervention group, $p > .05$.

Child emotional knowledge

There was a significant main effect for time observed for direct child measures of emotional knowledge $F(1,88) = 32.55$, $p < 0.001$, $partial\ eta\ squared = 0.27$. This indicates

improvements across time for all children, irrespective of having received the COPE-Resilience intervention or not.

Comparison of first-time COPE-Resilience program facilitator versus non-intervention regular SEL curriculum

A series of one-way ANCOVAs and 2x2 ANOVAs were conducted to determine the effect of the COPE-Resilience program on the first-time facilitator and the non-intervention group. After adjusting for baseline difference in teacher-rated empathy ($t(56) = -3.51, p = .01$) and prosocial ($t(56) = -3.92, p < .001$); children in the first-time facilitator group significantly out-performed the non-intervention group on their post-empathy scores $F(1,55) = 4.91, p = .03$, with intermediate effect size (*partial eta squared* = 0.082). There were no other differences on the rest of the measurements.

Comparison of experienced versus first-time program facilitator

Results of the teacher pre-survey (Table 3) indicated both the experienced and first-time COPE-Resilience classroom teachers consider SEL as highly important to their work. Teachers in the experienced facilitator group indicated that they were 'very confident' at teaching SEL, and were 'very likely' to attend PD on SEL. Teachers in the first-time facilitator group suggested that they were 'fairly confident' in teaching SEL, and also 'very likely' to attend PD on SEL. Experienced COPE-Resilience teachers indicated that they knew 'a lot' about the COPE-Resilience program; were 'very confident' in delivering the program and believed it to be 'very useful'. Whereas the first-time facilitators indicated they knew 'a fair amount' about the program, were 'fairly' confident in delivering the program, and believed it to be 'very useful'.

Apart from the differences in teachers' views on SEL and the COPE-Resilience Program between the experienced and first-time facilitator, significant differences were also found on measures of children's social emotional outcomes. Compared to the first-time facilitator, children in the experienced facilitator group improved dramatically. Between group differences ranged from small effect sizes (inhibitory control) to medium (total problem) and large effect sizes (empathy, prosocial, positive and negative coping). The interaction table is presented in Appendix D.

Table 3: Teachers' view on SEL and the COPE-Resilience program

Domain	Experienced facilitator	First-time facilitator
How important is SEL	5	5
How confident at teaching SEL	5	4
How likely to attend PD	4.5	4.5
Knowledge on the program	4.5	3.5
Confidence in delivering the program	4.5	3.5
Usefulness of the program	5	4.5

Note: the mean scores of two teachers in each group (from 1 = low score to 5 = high score)

Discussion

The present study aimed to determine the impact of teacher's experience on a 6-week explicit, teacher-led COPE-Resilience preschool SEL program on children's social and emotional outcomes. There is evidence that the explicit SEL program was successful in promoting children's social emotional skills, such as children's empathy, prosocial behaviours, coping styles, inhibitory control, problem behaviours, and emotional knowledge. However, when compared with a non-intervention group where SEL is not explicitly taught, but embedded in children's regular classroom activities, improvements are seen only in the classroom with teachers who are experienced at facilitating the explicit SEL program. That is, only children exposed to an experienced COPE-Resilience program facilitator experienced significant gains in teacher-rated empathy (large effect size), prosocial behaviour (large effect size), positive coping (large effect size) from Time 1 (before the intervention) to Time 2 (about six weeks later). These children also showed a significant reduction in teacher-rated total problem behaviours (medium effect size), negative coping (large effect size) and inhibitory control (negligible effect size) during the six-week intervention.

Results of the current study, therefore, suggest that the effects of COPE-Resilience are enhanced through experienced program facilitation. This finding can be affirmed through previous research which indicated that training, number of lessons, and implementation quality affects SEL program outcomes (Reyes et al., 2012). Reyes and colleagues also found that "high-quality" program implementers, as measured by an external coach's rating of teacher attitudes towards the program (i.e. program buy-in) and effectiveness in program delivery, led to higher student outcomes on social and emotional variables. In contrast, "low-quality" program implementers were associated with reduced program outcomes, with these teachers also reporting feeling less effective and confident in implementing the SEL curriculum (Reyes et al., 2012).

Corroborating research has also indicated that the level of a teacher's commitment to SEL is a key factor for successful program implementation (Martinez, 2016). Furthermore, practical factors such as dedicated classroom time towards SEL has been raised as crucial in determining program impact (Buchanan et al., 2009). This is particularly relevant to early learning educators, as teachers are increasingly required to implement social and emotional learning programs to meet Victorian curriculum requirements (DEEWR, 2009). The results of the current study, therefore, indicate that program experience may be necessary to effect demonstrable impact. Teachers undertaking a structured SEL program for the first time are likely to need time and support to build their experience and confidence, and in turn, become efficacious in this space.

Finally, the lack of significant interaction effects for direct child measures indicates that the development of emotional knowledge was similar across both of the COPE-Resilience and non-intervention groups. All groups significantly increased in emotional knowledge across time, suggesting that explicit and embedded approaches to SEL are equally effective in building this foundational competency. Development also plays a part. This result aligns with previous research that showed equivalent gains in emotion knowledge in

preschool children exposed to both explicit and embedded SEL approaches (Pang et al., 2018).

Limitations and future directions

Whilst the findings of the study provide support for the benefit of SEL being taught by a confident experienced teacher who is committed to the undertaking, a limitation of the current study is the single follow-up of outcomes across a 6-week period. It is conceivable that program impact may be delayed in the first-time COPE-Resilience group, as newly learnt skills are practised and embedded. In contrast, experienced facilitators may be infusing aspects of the program into daily practice, resulting in significant improvements over a shorter period. Incorporation of a longitudinal study design would therefore assist in elucidating the trajectory of growth on outcome measures across both explicit and embedded programs.

Additionally, the results of the current study are limited in generalisability to other settings, due to the high socioeconomic status of the early learning centre's population (Australian Bureau of Statistics, 2013). As up to a third of studies on SEL neglect to consider the impact of socioeconomic status on program outcomes (Durlak et al., 2011), replication of this study in an area of lower socioeconomic status is warranted. As students from disadvantaged backgrounds are more vulnerable to academic underachievement and mental health challenges (Becker & Luthar, 2002), early interventions in SEL could conceivably result in enhanced program gains in these populations. Lastly, as the six teachers who were involved in this study were also those who rated children's social emotional skills pre- and post-intervention, teachers may show bias towards the impact of their own teaching practice on children's outcomes. Further research could, therefore, include multiple informants to more clearly elucidate program gains, as well as scope for a mixed-method approach to gain more qualitative insights into SEL program efficacy, and privilege student voice in SEL research.

The findings of the current study have important and practical implications for preschool and kindergarten in integrating evidence based SEL approaches. The result that experienced facilitators show the most beneficial outcomes in undertaking explicit SEL programs suggests that teachers need to be provided with adequate time and opportunity to become confident in program implementation. As such, it is therefore recommended that teachers be provided with a detailed briefing on the program, to increase teacher buy-in before they implement a formal SEL program. The briefing should focus on capturing the essence of SEL and understanding each of the components of the chosen SEL program. Ongoing support is essential, especially throughout the program for first time implementers. Likewise, SEL programs may need to be invested in for more extended periods before measurable gains become evident. These results may also hold promise for the integration of universal SEL approaches into preventative interventions, such as those indicated for anxiety and problem behaviours (Anticich et al., 2013; Morgan et al., 2016).

Current findings also indicate avenues for future research. To overcome limitations of a single follow up, integration of a longitudinal study design would be valuable to track

long-term gains. More broadly, it is also important to consider the impact of program implementation from a systemic level. Cohesive SEL implementation is more effective than fragmented delivery, as use of multiple non-integrated SEL programs can result in burnout among teachers and a potential washout of intended effects (Bradshaw et al., 2014; Merrell et al., 2007). Integrating aspects of COPE-Resilience within a school-wide SEL approach may, therefore, enhance the generalisability of desired social and emotional skills (Durlak et al., 2015; Weare, 2013). Long-term coordinated approaches are also associated with enhanced program implementation and sustainability (Bradshaw et al., 2014; Devaney et al., 2006).

To further meet its aims, COPE-Resilience could be incorporated into an early learning centre's wider operating framework. This could include consideration of the optimal time for program delivery within a calendar year, as well as systemic roll-out of coordinated parenting programs (Frydenberg, 2015). Future research could also evaluate factors such as teacher's attitudes towards SEL, which have been associated with program success (Brackett et al., 2012). Once teachers are confident in the delivery of an explicit SEL program, there is also scope to build more embedded or infused SEL practice within educational settings, allowing skills to be reinforced within the course of daily practice and teaching, which in turn can be generalised to other settings and situations (Zins, 2004).

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Appendix A: Sample lessons from the 2019 COPE-Resilience program manual

Additional examples can be found using the following link, which provides free access to the 2015 COPE-R manual.

https://elc.unimelb.edu.au/__data/assets/pdf_file/0003/2245980/COPE-R-Program.pdf

The 2019 manual is a revision to the 2015 manual and is currently in press.

Topic 1: Caring for others

Activity: Feelings explorer: Noticing feelings in others



Aims

- To be able to identify feelings in others.

Instructions

1. **Explain:** We are now going to talk about how our friends and family express their feelings.
2. **Ask:** What clues should we look for when trying to find out what another person is feeling?

Key Messages to Share

- It is important to watch and listen carefully to others to notice their feelings.
- You can tell how people are feeling by:
 - *Looking at their face.*
 - *Looking at their body.*
 - *Listening to their voice.*
 - *Look at what's happening around them.*

3. **Discuss:** Lead a discussion on what different feelings look like in another person. Some examples are provided below; extend on these examples. You may like to ask the children to show the feeling on their face and their body during this activity.

Feeling	Ask	Possible Responses
If a person were feeling happy :	What tone of voice might they use?	Light, easy, soft or energised. Laughter.
	What might their body look like?	Smiling. Animated gestures. Stand up straight. Walk with a "bounce".
	What might have happened?	Having fun with friends. Playing with their favourite toy/game.
If a person were feeling angry :	What tone of voice might they use?	Loud, bossy.
	What might their body look like?	Tight and tense body. Tight eyes and mouth. Hold hands in a fist.

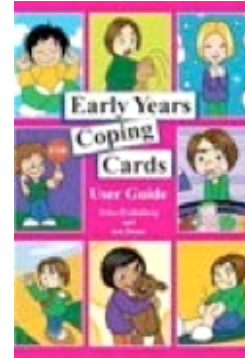
	What might have happened?	Someone has snatched their favourite toy while they were playing with it.
If a person were feeling sad :	What tone of voice might they use?	Soft and low. Nervous voice.
	What might their body look like?	Slumped shoulders and hung head. Frown. Slow and heavy body.
	What might have happened?	Had to leave their parents. Fell over and got hurt.
If a person were feeling excited :	What tone of voice might they use?	Loud, energised. Laughter.
	What might their body look like?	Animated and moving around a lot. Eyes and mouth wide.
	What might have happened?	Receiving a present. About to go on a favourite outing.
If a person were feeling scared or frightened :	What tone of voice might they use?	Soft and low. Nervous voice. Whimper.
	What might their body look like?	Look away/down. Tense. Arms around their chest. Shake.
	What might have happened?	Had a bad dream. Nervous about first day of kinder. Heard a very loud noise.

Key Messages to Share

- When you know how another person is feeling, you can then decide how to act towards them so they feel understood and you can show you care.
- Some people might feel different feelings in response to the same situation. Discuss examples of this with the children e.g. Some people might be excited on their first day of kinder, others may be scared. Some people might be sad when their toy is taken off them, others may be angry.
 - Use puppet-play to illustrate how people might have different feelings in response to the same situation.

Topic 2: Open Communication

Activity: Early Years Situation Card: Wanting to Play with Others



Aims

- To be able to communicate something important.

Materials

- Early Years Situation Card “Wanting to Play with Others”.

Instructions

1. **Explain:** Sometimes we feel like we want to say something that is important to us but we find it difficult to say it.
2. **Ask:** What are some examples of things that are important but difficult to say?

Key Messages to Share

Allow for individual responses from the children, some examples might be: needing to go to the toilet, wanting to join in a game, letting someone know they have hurt your feelings, sharing an opinion, saying no to something.

3. **Do:** Show the children the situation card “Wanting to Play with Others”.

4. **Ask:**

- What is happening in this picture?
- What do you think the girl in the green top is feeling?
- How would you feel?
- Has this situation ever happened to you?
- What could the girl in the green top say?



Key Messages to Share

- The girl could respond accurately about her feelings and say: “That looks like fun, could I play too?”
- The girl could respond not according to her feelings, or defensively, and say: “I don’t want to play with you guys, what you’re doing looks dumb”.
- It’s important to communicate accurately about our feelings so that people know and understand what we want them to know, people are not mind readers!

Topic 3: Politeness

Activity: Movement: Bucket Filling



Aims

- To teach children the concept of being "bucket fillers" (i.e., being kind and thoughtful to others).

Materials

- A bucket.
- Colourful small objects (that can be placed into a bucket).
- Uplifting music (optional).

Instructions

1. **Explain:** A bucket can represent how we feel about ourselves - when our bucket is full, we are more likely to feel friendly, confident, calm and positive. However, when our bucket is empty, we are more likely to feel sad, unconfident and worried. We can help fill each other's buckets by becoming "bucket fillers".
2. **Ask:** What could we do to fill another person's bucket and help them feel good? What might empty their bucket?

Key Messages to Share

- How to fill a bucket - e.g., Doing or saying something that is kind, thoughtful that shows you care; Helping others; Smiling at each other; Being polite and respectful.
- How to empty a bucket - e.g., Doing or saying unkind things; Teasing; Cruel words; Being unhelpful; Being impolite and disrespectful.

3. **Do:** Have the children form a circle around the bucket. Have them skip around the bucket until the music stops (or when you say "stop"). Have each child (one at a time) move to the bucket to pick it up. Ask the rest of the group to say something kind and thoughtful about that child and then place a colourful object in the bucket in order to fill his/her bucket. You may also like to ask the child with the bucket to share a kind word about him/herself.

Facilitator note

- You may like to have pictures and/or words that could be placed in the bucket by the other children.

Modification suggestions for 3-year old group

- You may want to get each student to decorate the bucket as well.
- You may prepare some concrete objects made with felt materials for students to fill up the bucket (e.g. smiling sun, a helping hand, an angry dragon...)

Appendix B: Structured child interview - coding rubric to assess children's emotional knowledge

Question	Coping card: Getting hurt	Coping card: Left out
1. How is this child feeling?	0 Inaccurate, irrelevant, don't know, no response, describing action (eg. tears coming down) 1 Pointing to knee, non-specific emotional words (eg. good, bad, alright, okay, unhappy, not happy, ouchy) 2 Accurate emotional words (e.g. sad, angry, mad, upset) 3 Extended emotional words (e.g. scared, worried, frustrated)	0 Inaccurate, irrelevant, Don't know, no response, describing action 1 Pointing to friends, non-specific emotional words (e.g. good, bad, alright, okay, unhappy, not happy.) 2 Accurate emotional words (eg. sad, angry, mad, upset) 3 Extended emotional words (e.g. scared, worried, frustrated, interested, shy, lonely/left out, jealous, surprised, nervous)
2. Tell me another word to describe how this child is feeling?	0 Same as previous, Inaccurate, irrelevant, Don't know, no respond. 1 Pointing to knee, non-specific emotional words (eg. good, bad, alright, okay, unhappy, not happy, ouchy) 2 Accurate emotional words (e.g. sad, angry, mad, upset) 3 Extended emotional words (e.g. scared, worried, frustrated)	0 Same as previous, Inaccurate, irrelevant, Don't know, no respond. 1 Pointing to knee, non-specific emotional words (eg. good, bad, alright, okay, unhappy, not happy, ouchy) 2 Accurate emotional words (e.g. sad, angry, mad, upset) 3 Extended emotional words (e.g. Scared, worried, frustrated, interested, shy, lonely/left out, jealous, surprised, nervous)
3. Why is this child feeling this way?	0 Inaccurate, irrelevant 1 point, non-specific (eg. blood) 2 Accurate (e.g. someone hurt him, fell over, bruise knee)	0 Inaccurate, irrelevant 1 point, non-specific (e.g. he wants to play, he is not playing, they are playing/ having fun, sharing the ball, the girl took the ball, he wants the ball) 2 Specific and accurate (e.g. he wants to play but they don't let him, they are not sharing, nobody is playing with him, he can't play)

4. How would you feel if this happened to you?	0	Don't know, no response	0	Don't know, no response
	1	non-specific emotional words	1	non-specific emotional words (e.g. bad, alright, okay, feeling not sure, unhappy/ not happy, sick)
	2	Accurate emotional words (e.g. good, bad, alright, okay, unhappy/ not happy, ouchy, pain)	2	Accurate emotional words (e.g. sad, happy, angry, mad, grumpy, upset)
	3	extended emotional words(e.g. afraid, scared, worried, frustrated, brave)	3	Extended emotional words (e.g. scared, worried, frustrated, interested, shy, lonely/left out, jealous, surprised, nervous, bored)
Emotional knowledge composite score: Sum of coding for questions 1, 2, 3, and 4 (for responses to both 'getting hurt' and 'left alone' coping cards)				

Appendix C: Summary of child measures in the study

SEL construct	Social emotional competencies	Measure	Meaning of scores	Mode
Self-awareness	Emotional knowledge	Early Years Coping Cards	High scores indicate higher levels of emotional knowledge	Child interview
Self-management	Inhibition	Childhood Executive Function Inventory (CHEXI)	Low scores indicate fewer regulation problems	Teacher-rated
Social-awareness	Empathy	Empathy Questionnaire (EmQue)	High scores indicate higher level of empathy	Teacher-rated
Relationship skills	Prosocial	Strengths and Difficulties Questionnaire (SDQ)	High scores indicate more prosocial behaviour.	Teacher-rated
Responsible decision making	Coping style - Positive coping - Negative coping	Children's Coping Scale – Revised (CCSR)	High scores indicate more frequent use of that form of coping.	Teacher-rated
	Problem behaviour	Strengths and Difficulties Questionnaire (SDQ)	Low scores indicate fewer problems	

Appendix D: Interaction of time and group for each dependent variable (experienced compared to first-time COPE-Resilience facilitator)

Variable	COPE-R (Experienced)		COPE-R (First-time)		F	Between group <i>d</i>
	Pre-test <i>M (SD)</i>	<i>Post-test</i> <i>M (SD)</i>	Pre-test <i>M (SD)</i>	Post-test <i>M (SD)</i>		
Empathy	14.33 (3.99)	23.55 (3.25)	15.24 (4.17)	13.83 (5.30)	81.15***	2.60###
Prosocial	6.33 (1.88)	9.00 (1.28)	4.45(2.47)	6.66 (3.15)	20.54***	2.11###
Positive coping	19.32 (3.23)	23.55 (1.39)	18.69 (3.34)	19.31 (4.59)	15.75***	1.10###

Negative coping	4.97 (3.46)	2.58 (1.73)	4.74 (3.55)	6.04 (2.92)	17.27***	1.05###
Inhibitory control [^]	16.33 (6.11)	13.18 (4.70)	26.31 (7.69)	25.93 (8.05)	2.86**	0.40#
Total problem	5.15 (4.48)	2.12 (3.22)	7.34 (4.61)	7.72 (4.49)	10.66**	0.75##
Child interview	14.34 (3.33)	16.31 (3.22)	14.59 (2.87)	15.97 (2.18)	0.57	0.19
Emotion knowledge						

Notes: COPE-R experienced facilitator group (n = 33);

COPE-R first-time facilitator group (n = 29).

[^] ANCOVA analysis, with significant baseline difference controlled as covariate.

** $p < 0.01$, *** $p < 0.001$, ## $p < 0.01$, ### $p < 0.001$

Between group d calculated by using effect size d (ppc2); (Morris, 2008); ### $d =$ large effect size;

$d =$ medium effect size; # $d =$ small effect size (Tabachnick & Fidell, 2013).

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