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DOES TRAINING IN THE CIRCLE OF SECURITY FRAMEWORK INCREASE RELATIONAL UNDERSTANDING IN INFANT/CHILD AND FAMILY WORKERS?

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Abstract

This paper evaluated whether attendance at Circle of Security training workshops resulted in attendees showing greater empathy and attachment related knowledge and understanding, and fewer judgmental responses to viewing a stressful parent –child interaction.

Method

Participants were 203 practitioners who attended and completed a 2-day (n = 70), 4-day (n = 106) or 10-day (n = 27) COS training workshop in Australia or New Zealand in 2015. In a pre-post design, participant reactions to a video clip of a challenging parent-child interaction were coded for empathic, judgmental, or attachment-focused language. Attachment understanding was coded in response to questions about the greatest challenge the dyad faced.

Results:

In all training conditions, participants provided significantly more attachment-focused descriptors and showed significantly greater attachment understanding after training, but significantly fewer empathic descriptors. While participants at the longer workshops provided significantly fewer judgmental/critical descriptors, there was no change for those attending the 2-day workshop.

Discussion:

Irrespective of workshop duration or professional background, participants took a more relational perspective on the vignette after the training workshops. More detailed research is required to establish the extent to which this increased knowledge and understanding is retained and integrated into infant mental health practice with parents and young children.

Keywords: Circle of Security, Attachment Theory, Infant Mental Health Training

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To work effectively in the field of infant mental health, practitioners need to shift the clinical frame from the individual child to a child developing in the context of caregiving relationships (Weatherston & Osofsky, 2009; Zeanah, Weatherston & Boris, 2011). A grounding in the principles of attachment theory (Bowlby, 1988) including understanding of the central role of the caregiver-child relationship in promoting optimal development, the practitioner's capacity to build a therapeutic relationship with the caregiver (Weatherston, 2010), and the development of reflective capacity, including through participation in reflective supervision or consultation (Tomlin, Weatherston, & Pavkov, 2014) is therefore fundamental to professional development and training.

Because the infant mental health workforce is not clearly defined by professional discipline, service setting, or traditional academic training programs (Huang, Macbeth, Dodge, & Jacobstein, 2004), ongoing inter-disciplinary professional development and training are crucial to maintaining collaborative skills and shared perspectives to enable integrated and coherent care for families of very young children. In Australia exposure to infant mental health principles and training in these competencies is often ad hoc and agency specific, serving local needs (Priddis, Matacz, & Weatherston, 2015). In this context, training in particular relationship-based intervention approaches with families of young children may therefore offer important additional opportunities to enhance infant mental health practitioner capacities and collaboration. A group of interventions that have been widely taken up by practitioners working with families of young children in Australia and New Zealand are the Circle of Security (COS) approaches (Powell, Cooper, Hoffman, & Marvin, 2014). The current paper therefore explores the effectiveness of various forms of Circle of Security training workshops in building key relationship-

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focused understandings and competencies in practitioners from a wide range of disciplinary backgrounds working in the infant mental health field.

We chose to evaluate different forms of COS practitioner training for two reasons. The first was a response to the exceptionally widespread dissemination. More than 10,000 professionals working with families (from disciplines including education, nursing, childcare, psychology, social work, allied health and medicine) have undertaken a form of Circle of Security training in Australia and New Zealand over the last 10 years (Glen Cooper, personal communication, 2016). Secondly, the Circle of Security approaches are solidly based on relational theories, principles and competencies common to an infant mental health framework. It seemed therefore timely and opportunistic to investigate whether various forms of this program focused training were effective in shifting workers to take a more relational perspective, fundamental to infant mental health practice.

The Circle of Security approaches to intervention (Powell et al., 2014) aim to help practitioners working with parents to better understand the importance of the child's experience of being cared for, and the interplay between child attachment, exploration and protection needs and caregiving responses. The quality of the parent-child attachment relationship is the primary intervention target of all Circle of Security approaches. A hallmark is the use of engaging graphics, video-clips and simple language that aim to make complex theoretical constructs understandable to both families and practitioners (from a broad range of disciplines). The therapeutic relationship is central to the approach, and consistent with key propositions of attachment theory, the role of the intervention facilitator(s) is to support parents to learn about their child's needs in the caregiving relationship. While remaining empathic and taking a non-judgmental stance, facilitators are encouraged to gently

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challenge parents to become aware of and reflect on their own defensive barriers to meeting these needs. Finally they support parents as they discover that their capacity to respond adequately to the cues of their children is influenced by their own emotional arousal, with links to their own history of being cared for. The ultimate goal is that facilitators assist parents to view and respond to their child's behavior from a relational standpoint.

Dissemination of the COS approaches has dramatically outpaced evaluation (Berlin, Lieberman & Zeanah, 2016), and there is a compelling case for research, both regarding the efficacy and effectiveness of the interventions with families and also the benefits of training in the approaches for professionals. There are two widely used versions of the intervention: 1) an intensive version (originally designed for 20-week group based delivery) (Marvin, Cooper, Hoffman, & Powell, 2002) that has a psychotherapeutic focus and includes individualized, facilitator-guided reviews with parents of videotaped interactions with their own child and 2) a shorter 8-session (group or individual delivery) DVD based parent psycho-education and reflection program (COS-P, Cooper, Hoffman, & Powell, 2009) that uses archived stock video footage to build understanding in parents of the dynamics of attachment relationships and strategies to promote emotion regulation. There are different training requirements for the different forms of the intervention discussed in more detail later.

Evidence regarding the effectiveness of the COS interventions to date relates almost exclusively to the intensive version. Two studies have shown improvements in indices of child attachment security and disorganization in an American (Hoffman, Powell, Cooper, & Marvin, 2006) and an Australian sample (Huber, McMahon & Sweller, 2015a). The latter study also reported improvements in parent reflective functioning and representations of the child and self as parent and in child behaviour

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(Huber, McMahon & Sweller, 2015b), as well as reductions in parenting stress and parent mental health symptoms (Huber, McMahon & Sweller, 2016). Benefits of a shorter individualized version of the intensive intervention that importantly retain the individualized video feedback have also been reported for some parents and infants (Cassidy, Woodhouse, Sherman, Stupica, & Lejuez, 2011).

To date little has been published about the widely used COS-P DVD based intervention. Cassidy and colleagues (in press) found no main effects of intervention for child attachment, child executive functioning, or child behavior problems after a randomized controlled trial of 10 sessions of COS-P with low income parents with children enrolled in Headstart programs. They did find that mothers who participated in COS-P reported fewer unsupportive responses to child distress than control mothers and intervention effects emerged for some child outcomes moderated by mothers' attachment style or depressive symptoms, suggesting that further work should explore if COS-P might benefit some dyads and not others. Two small studies ($n = 15$ in each) reported different benefits with different samples: increased parent reflective functioning, decreased caregiving helplessness and reduced anger and rejection toward the child in an Australian sample (Kohlhoff, Stein, Ha, & Mehaja, 2016) and improved emotion regulation and more positive parent attributions and discipline practices in American mothers with substance abuse problems (Horton & Murray, 2015). Limitations of these studies (with the exception of the studies by Cassidy and colleagues) include very small sample sizes, no control conditions, and no follow-up assessments to see if gains are maintained. Further, research has not yet examined whether characteristics of intervention facilitators are related to outcomes.

There is even less evidence regarding the professional development benefits of any of the COS trainings for practitioners, and whether these might vary in relation to

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professional background and/or duration and content of the workshop. Two published studies have examined, albeit using different approaches, whether the exposure to a form of Circle of Security intervention itself (Gray, 2015) or a form of Circle of Security practitioner training (Avery et al., 2008) can build attachment-theory informed professional skills. Gray (2015) used a pre-post quasi-experimental design to examine the professional development benefits of childcare workers attending a Circle of Security-Parenting program (COS-P) that included reflective discussions regarding their caregiving relationships with the children in their care. Child care workers who undertook the COS-P program reported higher self-efficacy in dealing with challenging child behavior compared with those who did not receive the program. Hypothesized benefits of program participation for worker depression symptoms, job related stress and self-reported reflective functioning were not found. The small sample size and the non-randomized study design, whereby participants self-selected into the COS-P program process, were acknowledged as limitations of the study.

Avery and colleagues (2008) examined whether attendance at a 2-day professional development workshop that included an overview of the Circle of Security model improved attachment understanding in a large sample of practitioners from a wide range of backgrounds (including social work, counseling, law, education, childcare). After the workshop participants used significantly more attachment related terms, empathic words and fewer punitive/critical descriptors in response to viewing a video clip of challenging child behavior. While the sample was large ($n = 316$), a smaller number completed the follow-up assessment and cases were not matched pre and post. The current study sought to replicate and extend this work by using a repeated measures design to explore change within individual participants, probed

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more deeply regarding understanding of attachment dynamics, and also examined whether training effects differed depending on the type of COS training workshop attended.

Circle of Security Training Provided in Australia

COS training duration and content vary according to whether practitioners wish to offer the intensive (20 week) version of the intervention, the COS-P DVD (8 week) intervention or whether they seek an introductory training in a relational framework to underpin their work with parents and infants in general. A 10-day training workshop is required to learn about the assessment and treatment protocol of the intensive 20-week version of the intervention (COS-I). The COS intensive intervention is generally run as a psychotherapeutic group and involves individualized assessment and treatment using video-clips of parent-child interactions to help parents better understand the dynamics of their relationship with their own child. Therefore the 10-day training provides in-depth education about attachment theory, reflective practice and the therapeutic relationship, and practice using video-taped footage to identify relationship dynamics. Practitioners are expected to be qualified and experienced as therapists to enrol in the COS-I training, and certification as a COS-I provider requires a post-training examination and reflective supervision (by a COS-I certified supervisor) while delivering at least two COS-I groups.

In contrast, the 4-day COS-P training workshops are open to any child and family practitioner, irrespective of prior training such as a mental health or therapy background. These workshops train practitioners to use a DVD based protocol to educate parents about children's attachment related needs and to build their reflective capacity about caregiver emotion regulation challenges and relationship dynamics. COS-P trainees are taken through a similar process as parents who do the program, with the addition of more background theory on attachment and guided reflections on

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the therapeutic relationship. This training is designed to equip practitioners to run the shorter COS-P Parenting DVD intervention (typically 8 weeks) with caregivers. On completion of the workshop, participants receive a manual and certificate enabling them to conduct COS-P with groups or individuals. There are no mandated supervision requirements after COS-P training, though facilitators are encouraged to participate in reflective consultation with an experienced COS-P provider. Finally, shorter (two day) introductory COS workshops have also been offered for those wishing to use Circle of Security as a framework for understanding attachment and caregiving relationships. This provides an introduction to attachment theory with an emphasis on the dynamics of the caregiving relationship and essential features of healthy and unhealthy attachment. Training in the 2 day COS workshop does not result in certification of professionals to run Circle of Security interventions.

Given this background, the current study therefore aimed to fill an important evidence gap by identifying if some practitioner capacities, central to effective infant mental health work, may be opportunistically developed via program specific professional development (such as a COS training) based on common theories and principles.

The Current Study

The primary aim of this study was to evaluate pre-post training changes in participants' propensity to take a relational perspective on dysregulated child behavior and associated parenting challenges and whether this differed according to whether they attended a 2-day, 4-day or 10-day COS training workshop. Following the findings and methodology of Avery and colleagues (2008) we hypothesized that compared to their initial responses, after training, participants would i) use more empathic descriptors; ii) use fewer judgmental/critical descriptors iii) use more attachment theory informed descriptors; and iv) show more understanding of attachment theory principles after viewing a video-clip of a dysregulated child interacting with a parent. We also examined whether the pattern of change differed by

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training type. In the absence of existing data, we tested a null hypothesis regarding training type.

METHOD

Participants

The protocol was approved by the relevant Institutional Ethics Committees. Participants were 202 practitioners working with families of young children (Mean age = 43.82 years, SD = 11.30, range 23-64) who attended and completed a 2-day ($n = 70$), 4-day ($n = 105$) or 10-day ($n = 27$) COS training workshop in Australia or New Zealand between January and March, 2015. A further 60 practitioners participated in the training workshops but did not complete either the pre-training or post-training questionnaire and so were excluded from data analysis (12 from the 2-day workshop, 30 from the 4-day workshop and 18 from the 10-day workshop¹). Most (95%) participants were female and involved in regular direct client contact. Approximately one third were in management roles. Detailed demographic characteristics of the sample according to type or workshop are shown in Table 1. As shown, there were no significant differences between participants in the different training types in terms of gender, educational level, or whether or not the participant had direct client contact as part of his or her job. There were, however, significant differences with regard to professional background and managerial status. Almost two thirds of participants attending the 2-day workshop were nurses, while attendees at the 10-day workshop were more likely to be psychologists, counselors or allied health professionals and involved in management roles.

INSERT TABLE 1 ABOUT HERE

Procedure

Participants who had enrolled in training prior to commencement of the study were invited at the beginning of the course to participate. They completed informed consent forms that indicated the study was evaluating “How attending a COS training workshop influences your knowledge about attachment-based approaches to interventions with families.” Some trainees chose to attend training themselves and self-funded, others were sent to the training by their employing organization. Detailed data were not available. Study participants received no remuneration. Following the

¹ In the case of the 10 day workshop a number of participants had to leave the workshop early and so were not able to complete the post questionnaire.

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approach used by Avery and colleagues (2008), and with the co-operation of the workshop facilitator, at the start (pre-training) and the end of the workshop (post-training) participants viewed a brief video clip that showed a parent trying to complete some questionnaires in the context of increasingly dysregulated behavior from her pre-school aged child. This video-clip (with a similar problematic relational dynamic to that used in the previous study by Avery and colleagues) was provided by the workshop leader. It was shown to the whole group prior to commencement of each of the three workshops, and not discussed or shown further in training, with the exception that participants attending the 4 day workshop were invited to discuss the clip at the end of the training, after the post-evaluation questionnaires were completed. In the clip the parent struggled to respond effectively to the child's increasing behavioral and emotional agitation, eventually giving in to the child's demands. Immediately after viewing the tape, workshop participants were asked to i) list five words or short phrases to describe the relationship they had seen in the video segment, and indicate ii) what they saw, if anything, that might be a challenge and iii) what they thought most needed to change. The workshop facilitator was present while participants completed the pre and post-questionnaires but questionnaires were collected by researchers and not seen by the workshop presenter. Participation was optional and consent forms were collected with the pre-workshop questionnaires. Information is not available on how many declined to participate.

Measures

Demographics. Participants provided information regarding their age, gender, professional training and education, managerial status, and whether they had direct client contact.

Coding System for responses to the video vignette. Adapting the coding approach used by Avery and colleagues (2008), two independent coders, blind to workshop type and time condition, coded each word or phrase provided as follows (i) *empathic descriptors* about the mother and/or child, (e.g., "I think the mother feels completely overwhelmed"), (ii) *judgmental descriptors* (e.g., "the mother should have given the child something to do"), or (iii) *attachment descriptors* including COS terminology (e.g., "the child needs the mother to help him calm down"; "mother needs to take charge"). A fourth category (*general descriptive*) was also included for comments that did not fit the other categories, to allow control for verbosity.

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Responses to the two additional questions about challenge and change were then coded for *attachment understanding* as follows: responses that referred only to problems with the mother (e.g., “mother lacks confidence”, “mother can’t discipline the child”); or the child (e.g., “child is out of control”, “child has poor language skills”) and those that simply used “scripted” phrases from the Circle of Security programs without elaboration to confirm understanding (e.g., “problems with shark music”) were coded 1; responses that referred to the dyad and the problem/challenge as relational, but did not elaborate to illustrate understanding of attachment theory principles (e.g., “power dynamic between mother and child”; “child uses anger to get attention from mother”) were coded 2; and responses that identified a relationship problem with elaboration that showed understanding of how relationship difficulties (particularly the need for the mother to take charge) were related to emotion regulation problems for the child and/or the mother were coded 3 (e.g., “mother needs to validate son’s feelings so he feels contained and safe. She needs to take charge without fearing her son’s anger”). The inter-rater reliability between the two coders was high (Intra-class coefficients: Empathic = .90; Judgmental = .85; Attachment = .96; Descriptive = .95; Attachment understanding = .84).

Data Analysis

Data were analyzed using SPSS for Windows (version 22). Preliminary analyses (to identify potential covariates) included Pearson’s correlations (age) and one-way Analyses of Variance ANOVA (gender, professional background, educational level, managerial status and direct client contact) to examine associations among age and pre-training responses (empathic, judgmental, attachment and general descriptive comments, and attachment understanding) to the video vignette.

To test study hypotheses a series of 2 (time: pre/post) by 3 (training type: 2-day/4-day/10-day workshops) repeated measures ANOVA analyses were conducted to assess change in the number of descriptors (empathic, attachment, judgmental) and sophistication of attachment understanding, respectively.

RESULTS

Preliminary Analyses

Participant age was not significantly correlated with any of the pre-training responses to the video vignette. There were also no significant differences in pre-training responses to the video vignette related to gender, educational levels, managerial status or client contact ($ps > .05$). There was, however a significant difference in

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understanding of attachment concepts at the pre-training assessment according to professional background, $F(6, 189) = 3.79, p = .001$. Post hoc tests indicated that psychologists scored significantly higher than nurses. As this was the only difference and there was a broad range of professions ($n = 20$) in the sample with unbalanced cell sizes across different workshops (See Table 1) no demographic variables were included as covariates in further analyses. Scores for the two questions on attachment understanding (greatest challenge, what needs to change) were summed to yield a composite score (range 2-6).

Table 2 shows the mean numbers of empathic, judgmental, descriptive and attachment-related descriptors and the mean score for the attachment understanding composite variable provided at pre- and post-training by participants who attended the 2-day, 4-day and 10-day workshops. At pre-training, there were no significant differences among training types in the number of empathic, judgmental or attachment-related responses to the video vignette: empathic descriptors: $F(2, 199) = 1.80, p = .168$; judgmental descriptors: $F(2, 199) = .59, p = .553$; attachment-related descriptors: $F(2, 199) = 1.20, p = .305$. There were, however, significant differences between groups at pre-test for attachment understanding, $F(2, 198) = 8.67, p < .05$, with participants in the 10-day workshop showing significantly more sophisticated attachment understanding than participants in the 2-day ($p < .001$) and the 4-day ($p < .05$) training.

INSERT TABLE 2 ABOUT HERE

Hypothesis Testing

Empathic descriptors. There was a significant main effect for time, $F(1, 199) = .33.68, p < .001, \eta_p^2 = .015$, but no significant main effect for training type, $F(2, 199) = 1.70, p = .180, \eta_p^2 = .017$, and the interaction effect was not significant, $F(2, 199) = 1.49, p = .277, \eta_p^2 = .018$. Figure 1 shows that for all three groups the number of empathic comments decreased. Effect sizes were small.

Judgmental descriptors. There was a significant main effect for time, $F(1, 199) = 13.08, p < .001, \eta_p^2 = .062$, indicating that overall, participants provided fewer judgmental descriptors after the training. A significant effect was also found for training type, $F(1, 199) = 3.87, p < .05, \eta_p^2 = .040$, with pairwise comparisons showing that participants in the 2-day workshop made more judgmental comments averaged over time than participants who attended the 4-day workshop ($p < .05$), but

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no other between group differences (see Figure 2). Effect sizes were small. The time x training type interaction effect was not significant, $F(2, 199) = 1.62, p = .20, \eta_p^2 = .016$, however inspection of means (see Table 1 and Figure 2) indicated that the post-training data were very skewed with a floor effect (mean scores < 1 judgmental comment, many made none) for participants in the 4 day and 10 day training.

Attachment descriptors. There was a significant main effect for time, $F(1, 199) = 203.41, p < .001, \eta_p^2 = .50$, indicating that participants provided more attachment descriptors after the training, with a large effect size. Pairwise comparisons showed the improvement to be statistically significant for all workshop types, $ps < .001$. A significant effect was also found for training type, $F(2, 197) = 3.61, p < .05, \eta_p^2 = .035$, (small effect size) with pairwise comparisons showing that participants in the 10-day workshop provided more attachment descriptors averaged over time compared to participants who attended the 2-day workshop ($p < .05$) but no other between group differences (see Figure 3). The interaction between time and training type was not significant, $F(2, 197) = 1.38, p = .254, \eta_p^2 = .014$.

Attachment understanding. There was a significant main effect for time, $F(1, 199) = 109.94, p < .001, \eta_p^2 = .359$, indicating that overall participants showed more attachment understanding after the training (large effect size). Pairwise comparisons showed the improvement in attachment understanding was statistically significant for all workshop types, $ps < .001$. A significant effect was also found for training type, $F(2, 196) = 22.23, p < .001, \eta^2 = .185$, with pairwise comparisons showing significant differences in attachment understanding averaged over time between all groups ($ps < .001$, medium effect size). The time x training type interaction was also significant, $F(2, 196) = 3.40, p < .05, \eta_p^2 = .034$, indicating that improvement in attachment understanding varied by training type (small effect size). The mean change was largest for the participants in the 10-day workshop, but note that there was a large confidence interval, and only 27 participants completing post measures in this group, see Figure 4.

Insert Figures 1-4 about here

Discussion

One of the primary objectives of the Circle of Security training workshops is to encourage child and family practitioners to take a relational perspective on challenging child behavior and parenting difficulties and to provide them with the

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required understanding of core principles of attachment theory to enable them to do so. Current findings suggest that this objective was generally achieved for practitioners from a wide range of backgrounds for all three training workshop types (2, 4 and 10 day). In all cases, compared with their initial responses, at the end of the workshop practitioners used more attachment terminology to describe what was happening in the video-clip. Further, their responses to questioning about the key challenge for the dyad indicated an improved understanding that the problem was relational, rather than located in the child or the parent. There appeared to be some additional benefits with attendance at the longer workshops. Attendees at the 4 day and 10 day workshops made very few judgmental or critical comments about the mother and/or the child after completing the training, and the average number of judgmental comments over time was higher for those attending the 2- day workshop. Given there were no significant differences prior to the workshop, these findings suggest a “dose” effect whereby a longer duration of training is required to change a tendency to be judgmental toward parents and/or children. It is possible that because the longer trainings include repeated exercises in which trainees practice taking a relational stance, 4 and 10 day trainees were more able to incorporate these understandings into their attitudes and thinking than the participants in the shorter, more theoretical training.

Overall these findings are consistent with those reported by Avery and colleagues (2008) who used a similar methodology, with the exception that in the current study the number of empathic descriptors decreased. One possible explanation for this counter-intuitive finding is that, as respondents were restricted to five descriptors, they replaced empathic descriptors focused on mother or child with attachment terminology, capturing the dyadic nature of the problem. Further the effect size of this finding was very small, so it is possible that this may not be a very meaningful change.

Findings extend the earlier research in several ways. First, we used a repeated measures design, with data linked for pre and post measures, indicating change within individuals rather than for the group overall. Second, the inclusion of questions that were coded for understanding of attachment constructs allowed us to tentatively conclude that participants did not simply learn to use scripted attachment phrases. Rather the Circle of Security trainings achieved a paradigm shift whereby practitioners were more inclined to take a relational perspective on dysregulated child

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behavior and on parenting challenges. After training, some, but not all participant responses suggested understanding of the complex role reversals related to caregiving helplessness that may characterize disorganized attachment, exemplified in the vignette used in this study and in the previous research. Answers to the “challenge and change” questions also indicated that some participants at the end of the workshops appreciated the ways in which caregiving behavior could support emotion regulation in the child, and the ways in which emotion dysregulation and defensive reactions in the parent could compromise this caregiving capacity.

Finally, our study design allowed us to compare patterns of change across the three training conditions. As noted above, there were some improvements in all training conditions with the reduction in judgmental comments particularly noteworthy in the 4 and 10 day workshop participants. Importantly, there was significant improvement in their attachment knowledge and understanding, even for those who began with a working knowledge of attachment theory. Participants in the 10-day workshop are required to have some psychotherapy background, likely to include prior exposure to attachment theory and this was apparent in their higher scores pre-training, so a ceiling effect might have been anticipated. In fact, this group made the largest improvements, indicating a return on the considerable time and financial investment for this intensive workshop, however these findings should be interpreted with some caution because of the relatively small number who reported after the 10-day training.

Study Limitations

These findings are only the first step. It remains unclear whether the knowledge and perspectives gained would be retained and integrated into routine work with families. The move from a theoretical approach, even one with a well-articulated model of change, to implementation of attachment theory principles in practice is challenging (Oppenheim & Goldsmith, 2007; Blome et al., 2007). Practitioner reflective capacity was not evaluated in the current study. Taking a reflective stance is a key objective of all infant mental health approaches, considered to be a hall mark of best practice (Weatherston & Osofsky, 2009) and one of the explicit COS training targets. Future studies could therefore also examine changes in practitioners’ reflective functioning, evaluate changes in practitioners’ self-efficacy, shown to improve in Gray’s (2015) study with child care workers, and examine the extent to which the approach is actually implemented in field work with families,

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perhaps by incorporating observational and practice log book methodologies. COS-P trainees are encouraged to use a reflective journal (Quinlan, 2016) once they begin using the intervention in their work, and encouraged to undertake reflective consultations.

Our sample was opportunistic. Data were therefore not available on differences between those who chose to participate (this appeared to be the vast majority, when collecting questionnaires, but formal counts were not conducted) and those who declined. It is possible that those who participated were more motivated regarding attachment based work and/or had higher prior knowledge about attachment theory principles and reflective practice. Although our sample was quite large overall, the smaller number who completed the post-training assessment in the 10 day training limits conclusions that can be drawn as noted above. Infant, child and family practitioners come from a wide range of discipline backgrounds and this was certainly reflected in our sample, with more than 20 professions represented. There were different professional profiles at the different workshops, for example two thirds of participants at the 2-day training were nurses, with only five psychologists, but only two nurses attended the 10-day training. Diverse professions were represented in the allied health category (occupational therapists, counselors, therapists), and there were very small numbers of medical practitioners. Future research would need balanced samples with more even representation of different professional training to explore whether any training effects are moderated by discipline background.

We also found a methodological limitation with a floor effect on the decrease on judgmental comments. Many participants in the ten and four day trainings made no judgmental comments, so the differences between training types may have been greater if we had used a different approach to measuring judgmental stance.

Clinical Implications and Future Directions

Notwithstanding these limitations, it seems reasonable to conclude that though designed primarily to enable COS program facilitation, the various forms of COS training also have opportunistic professional development value in providing a common language and model for change for the diverse range of practitioners who work in the infant mental health field. These opportunities have the potential to promote practices which are consistent with infant mental health principles through collaborative teamwork and a coherent intervention model for families (Huang et al., 2004; Priddis et al., 2015), given the diverse discipline backgrounds of participants in

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the current study. Knowledge of attachment theory principles, is a necessary, but not sufficient foundation for infant mental health work. Reflective and relational capacities that enable practitioners to work therapeutically with families are also crucial. Results suggest that there may be incremental benefits to practitioner development with longer durations of training, however studies would need to assess more sophisticated relational skills such as reflective functioning to confirm this. In the 2-day training, there is very little time or opportunity to practice relational and reflective responses.

While COS based training is not intended as a substitute for a more comprehensive infant mental health training, the reality in Australia and New Zealand is that far more practitioners appear to be accessing program specific training opportunities such as COS workshops than are enrolling in more formal infant mental health training courses, partly because of the limited availability of, and lack of recognition of the need for the latter (Priddis et al., 2015). Future research could also compare COS training approaches with other approaches to training infant mental health practitioners that seek to develop a relationship-based clinical perspective (such as enrolment in infant mental health certification courses or professional development seminars), and evaluate the relative costs and benefits of these different approaches. Research could also follow-up trainees to see if they went on to undertake more infant mental health training to further develop their skills.

The training in, and adoption of the relational framework underpinning the Circle of Security approaches may also foster a shift in organizational culture and climate (Blome et al., 2010; Greenhalgh, Robert, Macfarlane, Bate, & Kyriakidou, 2004) offering a more sustaining environment for effective infant mental health practice in general. A relationship-oriented culture that includes reflective supervision is crucial to providing effective mentoring and support for staff engaged in emotionally demanding work with vulnerable families of infants and young children, as such families often have complex needs (Priddis et al., 2015; Weatherston & Osofsky, 2009).

Future studies from an organizational framework could evaluate the benefits of an understanding of attachment theory principles in leadership (Blome et al., 2010; Davidovitz, Mikulincer, Shaver, Izsak, & Popper, 2007) and public policy development (Graham, Nagle, Wright, & Oser, 2012) in order to enable and support this cultural change. There has been a considerable investment in training in the

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Circle of Security approaches by a large number of organizations in Australia and internationally, therefore it is important for research to examine the impacts, including inadvertent ones, of the dissemination and implementation of the Circle of Security model (Blome et al., 2010). Workforce capacity building is one fruitful area for future research including considering how organizational characteristics can support or interfere with not only the effective delivery of attachment-based interventions but also effective infant mental health practice more broadly.

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Table 1. Descriptive statistics

Category		2-day workshop (n=70)		4-day workshop (n=105)		10-day workshop (n=27)		Total (n=202 ¹)		X ²
		n	%	n	%	n	%	n	%	
Gender	Male	0	0	7	6.7	2	7.4	9	4.5	4.85
	Female	67	100	97	93.3	25	92.6	189	93.6	
Professional background	Psychologist	5	7.2	29	27.6	7	28	41	20.3	112.69**
	Social Worker	6	8.7	37	35.2	4	16	47	23.6	
	Allied Health & Counseling	5	7.2	4	3.8	10	40	19	9.5	
	Nursing	44	63.8	9	8.6	2	8	55	27.6	
	Medical Practitioner	2	2.9	5	4.8	2	8	9	4.5	
	Education	6	8.7	8	7.6	0	0	14	7.0	
	Other	1	1.4	13	12.4	0	0	14	7.0	
Educational level	Non-tertiary	0	0	2	1.9	0	0	2	1	14.91
	Diploma or Graduate certificate	18	26.1	10	9.6	5	19.2	33	16.6	
	Bachelor Degree	35	50.7	68	65.4	11	42.3	114	57.3	
	Masters/PhD/Doctorate	13	18.8	22	21.2	8	30.8	43	21.6	
	Other	3	4.3	2	1.9	2	7.7	7	3.5	
Manager	Yes	15	22.1	24	23.1	15	55.6	54	27.1	12.78*
	No	53	77.9	80	76.9	12	44.4	145	72.9	
Direct client contact	Yes	58	89.2	96	96	27	100	181	94.3	5.25
	No	7	10.8	4	4.0	0	0	11	5.7	

* $p < .05$; ** $p < .001$

Table 2. Number of empathic, judgmental, attachment-related and descriptive comments, and attachment understanding by training type

Comment type	2-day training (n=70)		4-day training (n=105)		10-day training (n=27)		Total (n = 202)	
	Mean (SD)	Mean (SD)	Mean (SD)	Mean (SD)	Mean (SD)	Mean (SD)	Mean (SD)	Mean (SD)
	Pre	Post	Pre	Post	Pre	Post	Pre	Post
Empathic	1.34 (.98)	.71 (.87)	1.41 (.94)	.98 (1.17)	1.78 (1.45)	.85 (.77)	1.44 (1.03)	.87 (1.03)
Judgmental	1.29 (1.16)	1.14 (1.20)	1.13 (.94)	.67 (.77)	1.30 (.87)	.74 (.86)	1.21 (1.01)	.84 (.97)
Attachment	.56 (.88)	2.1 (1.45)	.63 (.80)	2.46 (1.42)	.85 (.91)	2.96 (1.22)	.64 (.84)	2.40 (1.43)
Descriptive	1.64 (1.06)	.79 (.88)	1.70 (1.25)	1.05 (1.20)	1.04 (.94)	.67 (.78)	1.59 (1.17)	.91 (1.06)
Total number of descriptors	4.73 (1.01)	4.73 (1.19)	4.91 (.88)	5.14 (1.40)	4.93 (1.07)	5.26 (.59)	4.85 (.95)	5.02 (1.26)
Attachment understanding score	2.57 (1.05)	3.30 (1.13)	2.92 (1.03)	4.08 (1.10)	3.56 (1.15)	4.93 (1.07)	2.89 (1.10)	3.93 (1.22)

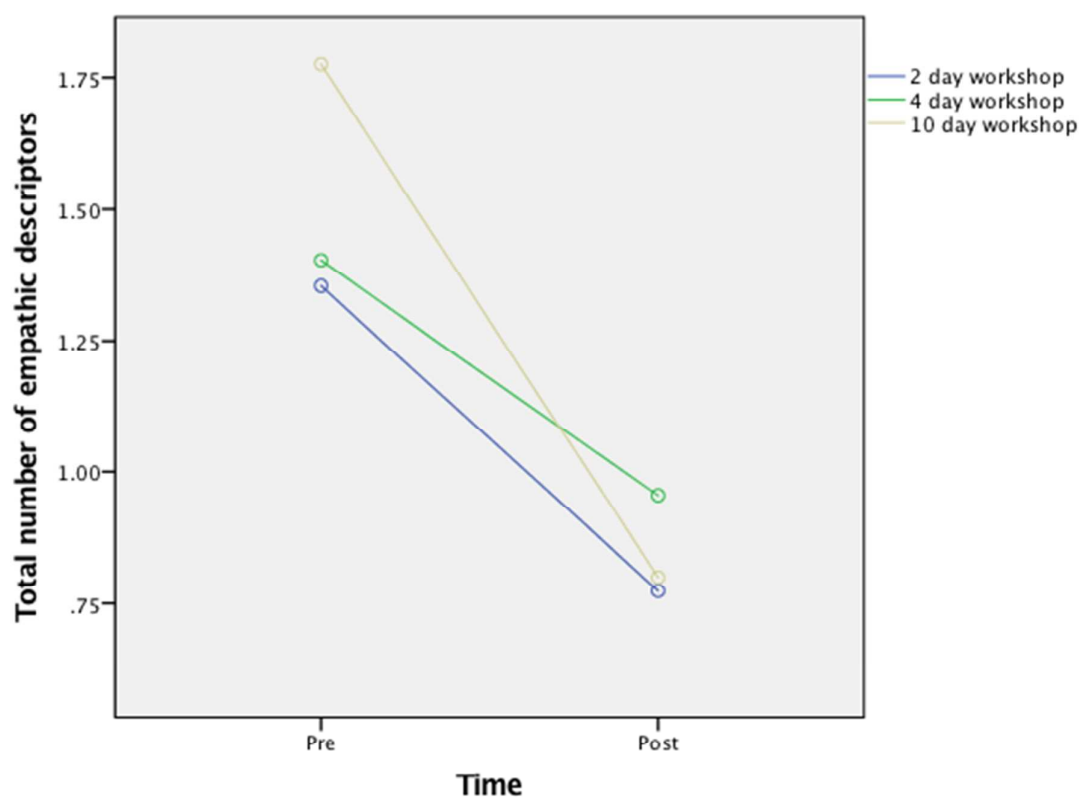


Figure 1. Mean number of empathic descriptors provided pre-and post-test, by training type

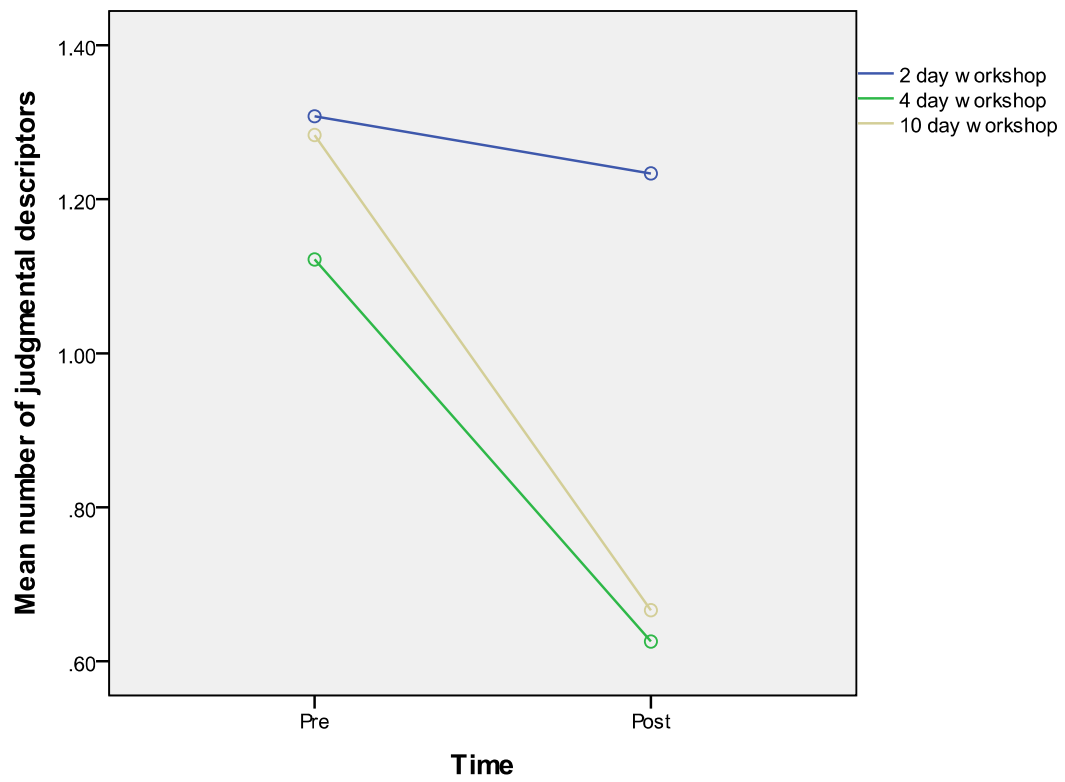


Figure 2. Mean number of judgmental descriptors provided pre-and post-test, by training type

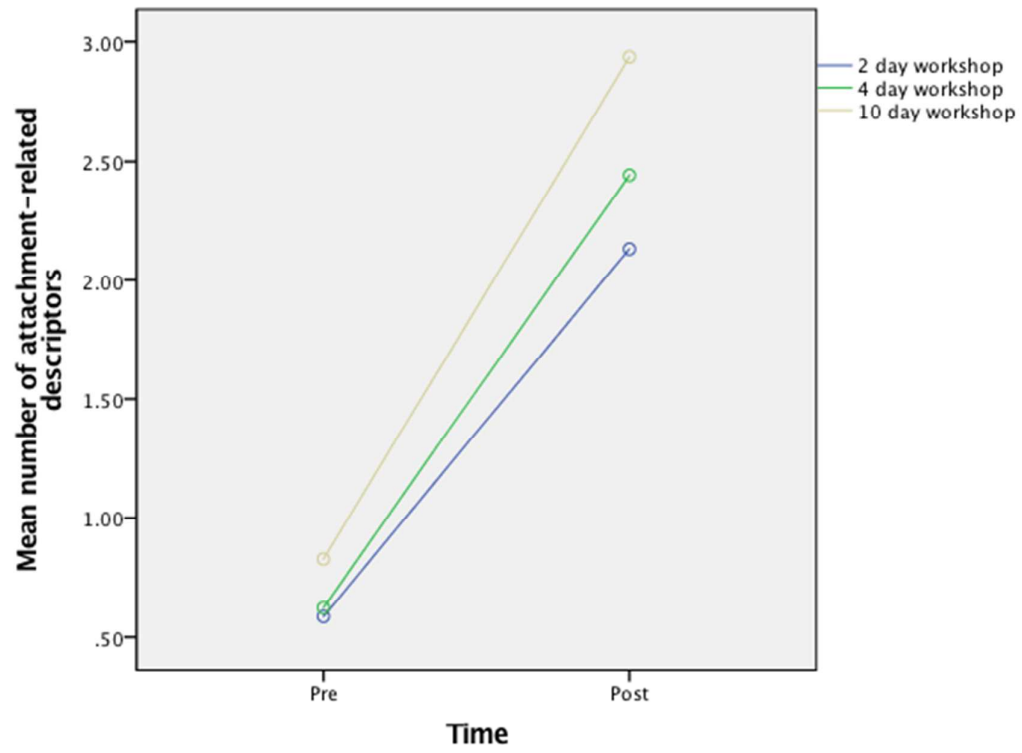


Figure 3. Mean number of attachment-related comments provided pre-and post-test, by training type

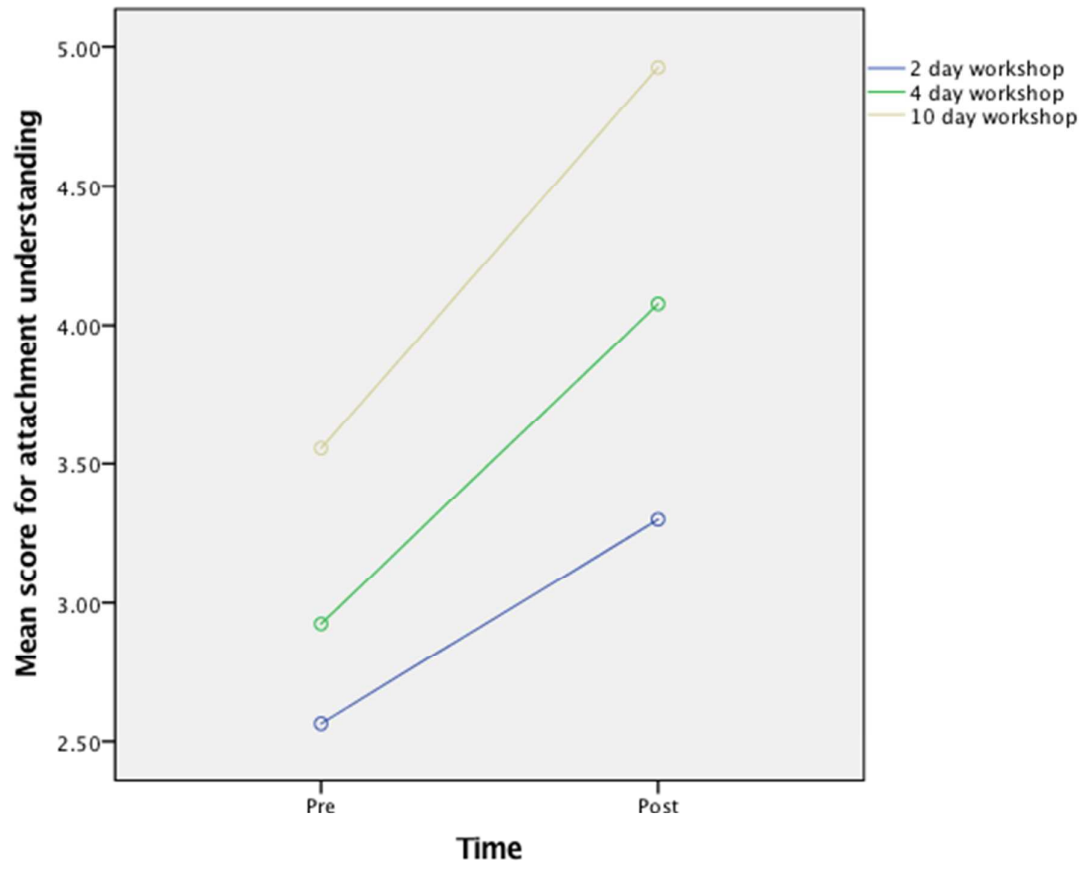


Figure 4. Mean score for attachment-understanding pre-and post-test, by training type