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Developing a Community-Based Oral Language Preventive Intervention

Exploring Feasibility and Social Validity for Families Affected by the Canterbury Earthquakes

Elizabeth Schaughency, PhD; Jessica Riordan, PgDipSci; Elaine Reese, PhD; Melissa Derby, PhD; Gail Gillon, PhD

Natural disasters are disruptive to families and communities, particularly when cascading effects continue over time. Such events, and ensuing disruptions to family life, present risks to young children's development, including oral language. Recognition of this potential vulnerability has led to calls for early childhood programming to support parenting and foster children's early learning. Therefore, we developed and trialed a research-informed home literacy preventive intervention for preschool-aged children living in communities adversely affected by devastating earthquakes. In this feasibility case study, 2 community workshops were offered. Both encouraged repeated, interactive shared reading and verbal interactions between parents and their 4- to 5-year-old children. Workshop 1 focused on scaffolding children's comprehension-related language skills through extratextual dialogue and reminiscing about shared experiences related to stories; Workshop 2 focused on promoting children's phonological awareness through playful interactions during reading and wordplay activities outside of reading. Before participation, parent-reported shared reading frequency for this sample ($n = 44$) was low (mode for shared reading was 1 or 2 days per week). Parent-report data collected after each workshop supported social validity and suggested workshop-specific benefits with medium to large effect sizes. Findings from this process evaluation support proof of concept for efforts to engage families in communities affected by ongoing stressors to support resilience in everyday interactions and promote children's early learning. **Key words:** *early childhood, environmental risks, home literacy environment, oral language, phonological awareness, preventive interventions, shared book reading*

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ON SEPTEMBER 4, 2010, a 7.1 magnitude earthquake awakened residents of Christchurch, New Zealand. The event marked the beginning of an 18-month period with more than 10,000 aftershocks and three additional large earthquakes (>6.0). In adults, the period was associated with increased mental health difficulties (Fergusson, Horwood, Boden, & Mulder, 2014), and stress affected relationships with their partners (Marshall, Kuijer, Simpson, & Szepsenwol, 2017). Adults' natural disaster-related challenges can be accompanied by challenges for their young children (Terranova, Morris, Myers, Kithakye, & Morris, 2015). Indeed, elevated behavioral concerns have been recorded for children born shortly before the Canterbury Earthquakes (Liberty, Tarren-Sweeney, Macfarlane, Basu, & Reid, 2016). Earthquake effects on children's early learning are less studied. Preschool children who experienced the 2010 Chilean Earthquake performed less well on some early language and literacy tasks, particularly when their families experienced more earthquake-related stressors (Gomez & Yoshikawa, 2017). Likewise, school entry screening in earthquake-affected communities of Christchurch, the setting for this study, revealed many children with low performance on expressive language and phonological awareness tasks (Gillon et al., 2019). These results suggest that such experiences may impact families, with potential developmental sequelae for children. Consequently, program development should consider ways to support resilience of families with young children who experience significant life stress and offset developmental risk (Murphy, Yoshikawa, & Wuermil, 2018). This article describes principles informing development of a preventive intervention focusing on parent–child interactions to support children's oral language skills in communities affected by the Canterbury Earthquakes and subsequent process evaluation of a feasibility trial.

PRINCIPLE 1: DEVELOPMENTALLY INFORMED PREVENTION EFFORTS

Events such as the Canterbury Earthquakes are extraordinary. To support resilience in adverse circumstances, program developers are urged to take a developmental perspective. A developmental perspective includes considering trajectories of typical development, particularly competencies that emerge during a given developmental window and set the stage for future positive adaptation (Yoshikawa, Whipps, & Rojas, 2017). Because preschool oral language competencies predict later reading skills, young children's oral language skills are an important developmental target (Zauche, Thul, Mahoney, & Staple-Wax, 2016). Resilience efforts should then consider processes associated with children's developing competencies (Guralnick, 2013; Masten, 2015). Parents' home literacy practices, such as shared reading and verbal interactions with their preschool children, are associated with children's oral language and early literacy skills (Zauche et al., 2016). Therefore, these parent–child interactions present potential opportunities for fostering skill development.

PRINCIPLE 2: TWO-GENERATION APPROACHES

Enhancing families' capacity to promote children's development is consistent with calls for two-generation approaches in early childhood service delivery (Shonkoff & Fisher, 2013). Traditional approaches to parent education may show limited appreciation of differences in family cultural practices and be insufficient to enhance capacity and shift developmental trajectories for families who experience high levels of stress and poverty (Shonkoff & Fisher, 2013). To inform innovations in program design and add value for children and families, integrative and culturally responsive approaches considering theories of change for shifting developmental trajectories within social contexts are recommended (Gillon & Macfarlane, 2017; Shonkoff & Fisher, 2013; Yoshikawa et al., 2017).

Several areas of scholarship could contribute to designing programs for parents, in addition to research on parent-mediated preventive interventions for oral language skills. These include parent involvement in education (e.g., Kim & Sheridan, 2015), engagement in child mental health (e.g., Becker, Boustani, Gellatly, & Chorpita, 2018), engagement of families from culturally diverse or indigenous communities (e.g., Neha & Reese, 2018), adult learning (e.g., Salas, Tannenbaum, Kraiger, & Smith-Jentsch, 2012), and implementation (e.g., Graczyk, Domitrovich, Small, & Zins, 2006; Murphy et al., 2018).

In education, *involvement* refers to ways families may be involved in, and support, children's learning. Involvement is multidimensional, including involvement at school, communication between parents and school personnel, and support for learning at home (Fantuzzo, McWayne, Perry, & Childs, 2004; McDowall, Taumoepeau, & Schaughency, 2017). Home-based support for learning may be especially protective for young children from underresourced backgrounds in early childhood (Fantuzzo et al., 2004) and help offset risk associated with socioeconomic disadvantage in early elementary school (Han, O'Connor, McCormick, & McClowry, 2017). Family involvement is also important to the education success of children who identify with indigenous peoples such as Māori in New Zealand (Gillon & Macfarlane, 2017). From a developmental perspective, aligning home literacy in early childhood with parent involvement in elementary school may provide a potential opportunity for shifting developmental trajectories by enlisting and/or extending home-based support for learning at transition to school.

Engagement in child mental health refers to the processes by which children and families come to receive services. Offering services does not guarantee children receive them; families may not attend initial appointments or discontinue before completing treatment. Engagement researchers aim to identify and address barriers and facilitators of engagement (Becker et al., 2018) and inform practitioners' efforts to enhance parents' involvement (McDowall & Schaughency, 2017). How to effectively engage at-risk and underserved populations may be particularly important to reduce disparities in service delivery and outcomes for children and youth (Khavjou, Turner, & Jones, 2018).

The adult learning and implementation literatures focus on teaching professionals new skills (e.g., Salas et al., 2012; Tonyan, Nuttall, Torres, & Bridgewater, 2017) and factors related to professionals' use of new techniques in practice (e.g., Graczyk et al., 2006). This research on adults' learning and uptake of skills in context is relevant to program design for parents. Family- or home-based child care is a practice context with features common to families with young children (one child, or a small group of children of different ages). To responsively meet the needs of providers in this sector, Tonyan et al. (2017) proposed just-in-time professional development, aligning content and modes of services with needs and interests of providers. This proposition resonates with calls for a developmental perspective in timing of program offerings and points to perceived fit with preferences and values as contributors to whether adults engage in learning opportunities.

PRINCIPLE 3: A SOCIAL VALIDITY PERSPECTIVE

A social validity perspective to program development and evaluation considers the subjective value of efforts within particular social contexts (e.g., communities). This approach is consistent with calls for attention to social/historical circumstances in resilience programming and need for preliminary, exploratory studies when working in new or understudied contexts (Yoshikawa et al., 2017). As classically defined (Wolf, 1978), a social validity perspective informs program development by considering social significance of *goals* (e.g., helping parents support their children's oral language skills) and perceived appropriateness of *methods to achieve them* (e.g., workshops focusing on home literacy practices). Contemporary involvement and engagement literatures expand discussion to include relational (e.g., practitioner–parent relationships) as well as practice (e.g., techniques) elements in service delivery for children and families (e.g., Kim & Sheridan, 2015; Powell, Son, File, & San Juan, 2010; Schaughency, Riordan, Das, Carroll, & Reese, 2016). A social validity perspective informs program evaluation by considering social importance of *results* achieved (Wolf, 1978).

THE PRESENT STUDY

We developed and trialed a developmentally informed parent-mediated preventive intervention to support oral language skills of preschool children living in lower socioeconomic communities affected by the Canterbury Earthquakes. The aforementioned principles and research literatures informed program development and evaluation of this initial feasibility study. Our specific research questions were as follows:

1. Is participation in each workshop associated with changes in reported home language and literacy practices?
2. To what extent do adult participants enjoy—and perceive their children to enjoy—using suggested home language and literacy practices?
3. What common themes emerged from participants' comments about participation?

METHOD

Project development

This study is part of a national initiative to develop and implement effective strategies for fostering children's early educational success, reflected in progress in beginning reading (Child Well-Being Research Institute, 2019). Consistent with recommendations for local involvement in design of services (Murphy et al., 2018), stakeholders were consulted during planning. Stakeholders conveyed that efforts should (a) engage children and their families during the preschool years and (b) offer services that facilitate families' support for their children's education (Mene, McMeeking, Jansen, & Guillemot-Mene, 2015).

Subsequently, early childhood leaders, health and education advisors, and parents from early childhood settings in suburbs disrupted by the 2010–2011 Canterbury Earthquakes (Canterbury Earthquake Recovery Authority [CERA], 2015) were invited to learn about the initiative and discuss potential early childhood projects. Building on recommendations from these meetings, national education agencies (Education Review Office, 2017), and research with NZ parents (Schaughency et al., 2014, 2016), two workshops were developed for families of preschool children. A needs assessment with NZ parents of preschool children informed workshop content (Schaughency et al., 2016). Workshops were held in community settings and offered at various times (morning or evening) to try to accommodate parents' schedules. To reduce barriers to attendance, childcare and transportation were offered (Becker et al., 2018).

Project overview

The content and sequence of project activities are depicted in Figure 1. Project activities were scheduled to align with the NZ school calendar, comprising four terms, each approximately 10 weeks long. One workshop was offered at each of the final two terms, with follow-up after the summer holidays, near the start of children's first year of primary school.

Project activities included design features to (a) engage families (e.g., specific invitations; Green, Walker, Hoover-Dempsey, & Sandler, 2007), (b) foster their involvement in regularly occurring and future instructionally valid activity settings with their children (shared reading and other interactions; Zauche et al., 2016), and (c) teach families how to scaffold skills predictive of successful reading acquisition (Shanahan & Lonigan, 2010).

Initial engagement

General invitations may not engage all families (Khavjou et al., 2018), but specific

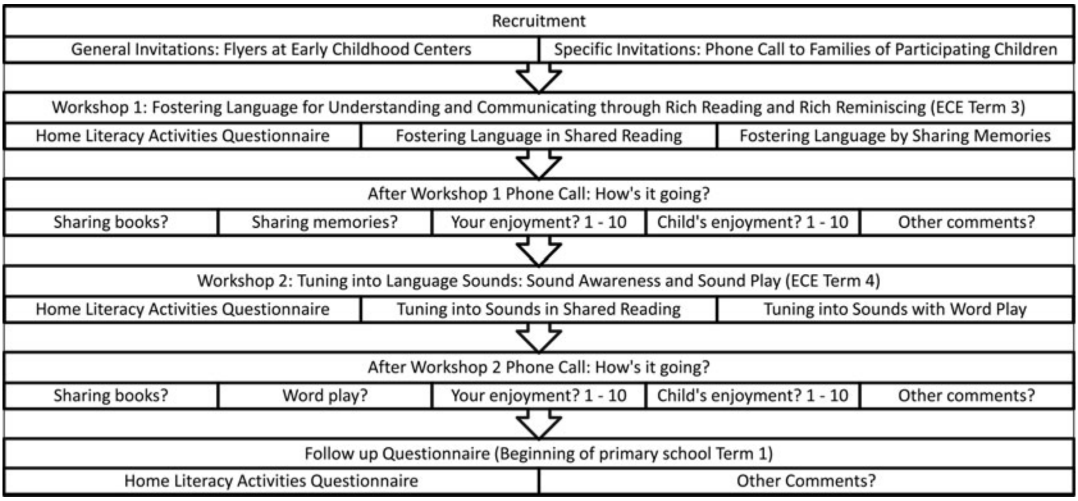
Recruitment
General Invitations: Flyers at Early Childhood Centers
Specific Invitations: Phone Call to Families of Participating Children
Workshop 1: Fostering Language for Understanding and Communicating through Rich Reading and Rich Reminiscing (ECE Term 3)
Home Literacy Activities Questionnaire
Fostering Language in Shared Reading
Fostering Language by Sharing Memories
After Workshop 1 Phone Call: How's it going?
Sharing books?
Sharing memories?
Your enjoyment? 1 - 10
Child's enjoyment? 1 - 10
Other comments?
Workshop 2: Tuning into Language Sounds: Sound Awareness and Sound Play (ECE Term 4)
Home Literacy Activities Questionnaire
Tuning into Sounds in Shared Reading
Tuning into Sounds with Word Play
After Workshop 2 Phone Call: How's it going?
Sharing books?
Word play?
Your enjoyment? 1 - 10
Child's enjoyment? 1 - 10
Other comments?
Follow up Questionnaire (Beginning of primary school Term 1)
Home Literacy Activities Questionnaire
Other Comments?

Figure 1. Overview of project activities. Project activities were informed by three research literatures and included design features to engage families (specific invitations and personal phone calls), foster their involvement in regularly occurring activity settings with their children (shared book reading and other adult–child interactions), and scaffold children's comprehension-related oral language and phonological awareness skills. Project activities were conducted during the latter half of the academic year, with follow-up at the start of the academic year in which children were in the first year of primary school. ECE = early childhood education.

invitations (McDowall et al., 2017) and preparatory strategies prior to a first session (Becker et al., 2018) increase participation and likelihood of attendance. A workshop facilitator called families who provided consent for their preschool-aged child to participate in the larger literacy project (Child Well-Being Research Institute, 2019). Phone calls were followed by a reminder call, text, or e-mail message, as preferred, a day or two before the workshop.

Workshops

General workshop format

The workshop format is outlined in Table 1. Workshop elements attended to process (i.e., fostering engagement) as well as content (e.g., psychoeducation). Engagement strategies ranged from informal (informal greetings and conversations over refreshments) to formal (Māori introductions and blessings before eating). Taking time to connect can be important for engagement, particularly with parents from some cultural backgrounds in New Zealand (e.g., Neha & Reese, 2018). Personally delivered cultural acknowledgments, exemplified here by including *mihimihi* (introductions) or *karakia* (blessings), are also engagement facilitators (Becker et al., 2018).

General strategies and resources to support adult learning and skill development

To provide background knowledge (Salas et al., 2012) and cognitive preparation for implementation (Becker et al., 2018), workshops began with a rationale for the workshop's focus (e.g., introduction to, and importance of, the skills targeted and opportunities to foster development of these skills in daily life). Teaching was supported by modeling (video clips) and materials (handouts), followed by opportunities to practice strategies introduced to facilitate skill development (Salas et al., 2012) and implementation (Graczyk et al., 2006).

Parents' involvement in designing out-of-session activities may contribute to

Table 1. Workshop Elements

Workshop Agenda

1. Individual greetings and informal conversations with participants on arrival
2. *Mihimihi* (formal introductions)
    - A. Workshop facilitators
    - B. Participant introductions
3. Didactic introduction to shared book reading strategies
4. Small group breakout, parents working together to find learning opportunities in gift books
5. *Karakia* (Māori blessing) (led by Māori coleader or parent), followed by shared refreshments and informal interactions
6. Didactic introduction to oral language interaction strategies
7. Small group breakout, parents working together to consider learning opportunities in other everyday interactions
8. Wrap-up, opportunity for questions and invitation to get in touch with future questions

implementation. Education, combined with collaborative and empowering interactions, is associated with parents' participation in planning out-of-session homework (Martinez & Haine-Schlagel, 2018). Parents of preschool children in New Zealand also indicated they preferred "hands-on" learning, with and from other parents (Schaughency et al., 2016). Moreover, participation with other parents who are perceived to be similar, with whom participants identify and connect, may be a promising approach for serving parents who have not traditionally participated in parent programs (e.g., Chacko, Fabiano, Doctoroff, & Fortson, 2018). Therefore, workshops included small group breakout activities with other parents.

General approaches to fostering children's development

Workshops included (a) a research-informed focus on intentionally fostering a specific oral language skill set, (b) the view that naturally occurring interactions with adults provide opportunities for scaffolding children's learning and development, (c) efforts to convey a positive family-centered perspective, and (d) features to reduce barriers and enhance facilitators of implementation. Positive family-centered approaches acknowledge and build on families' strengths to foster children's development (Kim & Sheridan, 2015). When teachers hold positive beliefs about parents' effectiveness in supporting their children's education, parents increase involvement in their children's learning (McDowall et al., 2017). Other implementation facilitators include alignment with parents' priorities (Schaughency et al., 2016) and children's initiation of activities (Green et al., 2007): Parents are more likely to implement activities with their children when activities are something parents want their children to do and their children want to do them (Chacko et al., 2018). Conversely, perceived time and effort are barriers to parents' involvement in New Zealand (McDowall et al., 2017; Schaughency et al., 2016) and the United States (Green et al., 2007); therefore, time demands were considered.

Repeated interactive shared reading

Parents of preschool children in New Zealand report that shared reading is common (Morton et al., 2017) and a desired area for program development in parent education (Schaughency et al., 2016), suggesting shared reading may fit with parents' priorities while not adding significant time burden. After children enter primary school and begin reading instruction in New Zealand, parents' listening to children read provides important home-based support of learning (McDowall et al., 2017; Sénéchal & LeFevre, 2014).

Consequently, shared reading may promote parents' continued involvement in their children's schooling (Timperley et al., 2019).

Children benefit from interactive and repeated readings of the same book (Aram, Fine, & Ziv, 2013). Therefore, workshop facilitators encouraged participants to select two books to read three times with their child each week, incorporating strategies to intentionally stimulate higher level interactions with each successive reading (following Schaughency et al., 2014, 2019). To help generate and incorporate strategies for interactive shared reading with their child, participants were provided with laminated tip sheets to use in the workshop and take home as handouts for reference. To communicate progression across readings, tip sheets used the metaphor of plant growth (seeds, seedlings, saplings), conveyed through imagery and labels in English and Māori. During each workshop, participants were provided with strategies encouraging children's active participation (e.g., pausing after a comment to allow opportunities to respond, providing "just enough" help to scaffold successful responses from their children). Finally, participants were provided with sticky notes to use in breakout sessions with other parents for jotting down ideas to prompt children's participation in shared reading, which they could stick in picture books to take home and read with their child.

Workshop participants were gifted three picture books across the two workshops. All were identified as favorites by participants in previous shared reading preventive interventions in New Zealand (e.g., Schaughency et al., 2014). All were also narrative stories featuring repetition and rhyme. The classic narrative in which protagonists experience a problem to be solved by the end of the story provided opportunities for adults to use shared reading techniques introduced in Workshop 1, focusing on comprehension-related extratextual comments and discussion, whereas texts' use of rhyme provided a rich sound context, potentially facilitating greater use of language sounds in parent–child book reading interactions (Riordan, Reese, Rouse, & Schaughency, 2018) emphasized in Workshop 2.

Oral language interactions outside of book reading

Shared reading approaches may not effectively reach all children and families (Reese, Leyva, Sparks, & Grolnick, 2010). There are opportunities to foster children's language skills in other naturally occurring adult–child interactions such as conversations (Reese et al., 2010) and play (Reese, Robertson, Divers, & Schaughency, 2015). Therefore, both workshops included strategies for fostering targeted skills outside shared reading, building on ideas introduced during shared reading.

Specific workshop content and activities

Workshop 1: Rich Reading and Rich Reminiscing

Workshop 1 focused on comprehension-related language skills. Following a rationale for fostering oral language, participants were introduced to *Rich Reading*—interactive shared reading using extratextual comments and discussion to deepen children's understanding through scaffolding over successive readings (adapted from Whitehurst et al.'s, 1994, dialogic reading techniques; see Reese & Cox, 1999; Reese et al., 2010). When reading a story with their child for the first time, participants were encouraged to use descriptive extratextual comments to familiarize children with story content (e.g., talking about illustrations, pointing out pictures of vocabulary introduced in the story, or labeling emotions displayed by the story character). Over successive readings, interactions progressed from those likely familiar to adults and children (talking about story content and pictures) to scaffolding higher level responses, possibly newer to both adults and children (see Price, Van Kleeck, & Huberty, 2009, for parents' talk during reading). Using a story set in New Zealand in the workshop facilitated opportunities for connections to children's experiences during shared reading (Rouse, McDonald, Reese, & Schaughency, 2017). In the breakout session, parents looked through books for opportunities for extratextual talk.

In the second half of the workshop, parents were introduced to interactive reminiscing—conversing about past shared experiences—as another means for fostering children's language skills (Reese et al., 2010; Reese & Newcombe, 2007). Intentionally pairing prompts for reminiscing with shared reading builds on preventive intervention trials in New Zealand (e.g., Schaughency et al., 2014). Elaborative reminiscing is not dependent on access to books or parents' literacy practices, increasing accessibility in cultures where shared reading is less typical (Reese et al., 2010). Parents and children may converse in whatever language(s) they prefer, enhancing cultural responsivity (McIntosh et al., 2011). Reminiscing approaches acknowledge parents' unique expertise about their experiences with their children. Pairing shared reading with reminiscing may convey relevance of "book learning" to "real life" for parents and children. To scaffold elaborative reminiscing, referred to in the workshop as *Rich Reminiscing*, in the breakout session participants considered conversations they might have about shared experiences related to the story, such as when they saw a *tui* (indigenous bird) on a family walk.

Workshop 2: Sound Awareness through Sound Play

Phonological awareness (awareness of a word's sound structure) is a predictor of reading acquisition (Gillon, 2017; Shanahan & Lonigan, 2010). Workshop 2 focused on helping parents support children to become attuned to sounds in words through repeated interactive shared reading and wordplay. Participants were introduced to the rationale for the workshop's focus, referred to as *sound awareness*, followed by an introduction to techniques for fostering children's sound awareness during shared reading. Young children like rhyming books (Hayes, Chemelski, & Palmer, 1982). Moreover, parents may be more likely to talk about word sounds when they read rhyming books (Riordan et al., 2018) and children may develop greater phonological sensitivity when rhyming books are read to them (Hayes, 2001). Therefore, parents were introduced to literary devices such as rhyme and alliteration as vehicles for supporting developing phonological awareness, and techniques for helping children tune into sounds (e.g., reading rhyming words or onset sounds with emphasis), and engaging children's participation. Participants were provided with examples of how to use techniques to scaffold phonological awareness, a rhyming book to use in Workshop 2, and a list of sound-rich children's books. The first half of the workshop ended with a small-group breakout in which participants looked through books for opportunities to use suggested techniques to bring children's attention to sounds in words.

The second half of the workshop introduced participants to *sound play* to nurture children's sound awareness, building on ideas introduced in shared reading. Children's phonological skills may be supported via exposure through nursery rhymes (Dunst, Meter, & Hamby, 2011) or incidental playful teaching (Reese et al., 2015). Parents were provided with a list of games and songs to support sound awareness and ideas for incorporating sound play in daily life, such as on outings or around the house. The breakout portion for this section of the workshop involved parents brainstorming and sharing possibilities for sound play.

Postworkshop phone contacts

Successful strategies for supporting implementation include providing activities for families to do at home, with face-to-face or telephone follow-up to see how activities went (Becker et al., 2018). After each workshop, the facilitator contacted participants to check on use of strategies during and outside of shared reading. Phone calls provided opportunities to collect social validity data on strategies suggested (see the "Measures" section), address barriers to implementation, and, after Workshop 1, extend personal invitations to Workshop 2. To encourage early implementation and allow troubleshooting, postworkshop phone contacts were planned for approximately 1.5 weeks following each workshop. Following Workshop 2, New Zealand's South Island experienced another major earthquake north of Christchurch. Because this event potentially triggered earthquake-related stress for participating families, post-Workshop 2 phone calls were postponed by a week.

Follow-up

At the start of the next school year, families were invited to complete a follow-up questionnaire (see the "Measures" section), either online or via paper copy and return mail.

Participants

The preschool phase of the larger project was reviewed by the Education Research Human Ethics Committee of the University of Canterbury (2016/21/ERHEC). Participants in this feasibility study were recruited through 11 early childhood centers participating in the larger project. Early childhood centers opted into the project. Most participating early childhood centers were located in relatively more deprived communities according to a Ministry of Education-used deprivation index (Education Counts, 2017), and all but one are eligible for additional funding according to an Equity Index based on the extent centers serve children from lower socioeconomic communities, non-English-speaking backgrounds, and/or with early childhood special education needs (Ministry of Education, 2017).

Families were invited to sessions via their early childhood centers, using general (signs posted at centers) and specific invitations (phone calls) to parents of 48 children (22 boys; 26 girls) participating in the larger study. At time of participation, children in the larger project were 4–5 years old (4 years 3 months to 4 years 11 months) and expected to start primary school the following school year. A team member successfully contacted families of most (45/48) participating children by phone. All but one family contacted expressed interest in attending workshops ($n = 44$; 98% of those contacted, 92% of families participating in the larger project). Contact notes indicate that parents or other family members (e.g., grandparents) of 34 children in 33 families (one pair of siblings) attended Workshop 1 and 24 children (23 families) attended Workshop 2 (Figure 2). Questionnaire data on home literacy practices (see the "Measures" section) prior to participation

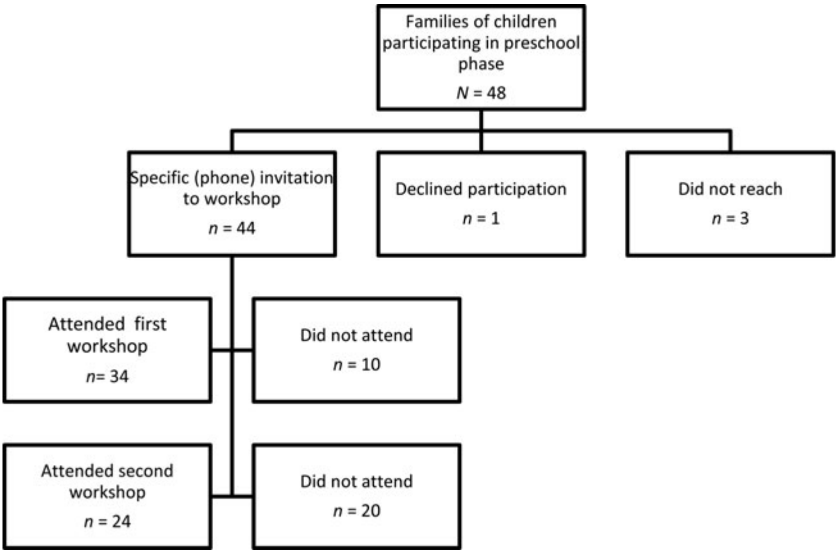

Figure 2. Flowchart of recruitment and workshop attendance of families of children participating in the preschool phase. Reasons provided for not attending included illness in family and scheduling difficulties.

were available for 32 of the 33 families who attended Workshop 1. Before participating, participants' frequency of shared reading ranged from less than once per week to at least once per day, consistent with our previous studies in New Zealand. The modal frequency was low (one to two times per week); however, compared with high modal levels observed in studies in another South Island city unaffected by the Canterbury Earthquakes (modes of 5–6 days per week in a study using the same rating measure or 7 days per week in a daily diary study; e.g., Riordan et al., 2018). Families who did ($n = 20$) and did not complete questionnaires ($n = 12$) at Workshop 2 did not differ in reported frequency of shared reading before participation ($p = .37$).

Measures

Home literacy activities questionnaires

Items were identified from research on shared reading and the home literacy environment. Shared reading items assessed frequency of shared reading (Sénéchal & LeFevre, 2014), strategies used during shared reading (Audet, Evans, Williamson, & Reynolds, 2008), and frequency of types of books read because different types of books may encourage different types of parent–child talk and different learning opportunities (e.g., Price et al., 2009; Riordan et al., 2018). Other items assessed types of verbal interactions outside of shared reading, including reminiscing conversations (Reese et al., 2010), nursery rhymes (Dunst et al., 2011), wordplay (Reese et al., 2015), and parent teaching of emergent literacy skills (Sénéchal & LeFevre, 2014). All items were included in questionnaires at the start of Workshop 1, to assess participants' baseline frequency of listed home literacy activities, and after participation in both workshops (Table 3). An abbreviated questionnaire, containing items theoretically related to the content of the first workshop, was administered at the start of Workshop 2 to assess specific parent-reported changes following Workshop 1 (Table 2).

Postworkshop phone contacts

Participants were asked open-ended questions regarding use of suggested strategies in shared reading and other interactions specific to each workshop (Figure 1). They were also asked for two enjoyment ratings—one estimating how much their children were enjoying project activities, and the other how much they were enjoying using suggested activities with their children—using 10-point Likert scales (1 = *really not enjoying the program at all*; 5 = *fine, no problems with the program*; 10 = *enjoying the program very much*). After Workshop 2, participants were also asked about continued use of strategies from Workshop 1 and thoughts about whether and how content from workshops should be presented (e.g., One workshop or two? If two workshops, in what order should they be presented?). Phone contacts concluded by asking for other comments.

Data analysis

Data were analyzed using quantitative and descriptive qualitative approaches. Independent-samples t tests explored differential attrition; paired-samples t tests compared participants' responses before and after participation (Research Question 1). Although this approach to evaluating Research Question 1 resulted in a large number of comparisons, we wished to investigate whether participants' reported changes in home literacy practices were specific to each workshop's content. In conducting analyses, we used bootstrapping with 1,000 samples and considered confidence intervals as well as p values. When $p < .05$ and/or bias-corrected and -accelerated 95% confidence intervals did not cross zero (Field, 2013), we calculated effect sizes using Cohen's d to interpret findings. With one exception, findings were consistent according to both p value and bootstrapped confidence interval criteria. Results discussed reached statistical significance according to both criteria. Complete results are presented in tables. Notes from phone contacts and comments from the

Table 2. Descriptive Statistics and Comparisons of Participant-Reported Home Literacy Activities Before and After Participating in Workshop 1: Comprehension-Focused Interactive Shared Book Reading and Conversations (Rich Reading and Rich Reminiscing)

	All Participants Who Attended Workshop 1 (*N* = 32)	**Participants Who Attended Both Workshops (*n* = 20)**			
Questionnaire Item	**Before Participation, *M* (*SD*)**	**Before Participation, *M* (*SD*)**	**After Workshop 1, *M* (*SD*)**	***t* [BCa 95% CI]**	***d***
1. How often do you or other members of your family read with your child?	3.25 (1.19)	3.40 (1.27)	3.45 (1.10)	−0.33 [−0.35, 0.25]	
During reading *how often do you*:					
2. Read the book as it is written?	4.00 (1.00)	4.00 (1.11)	3.74 (0.81)	1.00 [−0.16, 0.74]	
3. Read the book but also talk about the pictures and/or story while reading?	3.44 (1.01)	3.45 (1.10)	4.05 (0.83)	−2.18* [−1.05, −0.20]	0.61
During a typical week how often do you:					
4. Talk with your child about things you have done together in the past?	3.91 (0.89)	3.90 (1.03)	4.05 (1.15)	−0.57 [−0.65, 0.40]	
5. Talk with your child about things you will do in the future?	3.75 (1.19)	3.65 (1.39)	3.95 (1.05)	−1.10 [−0.85, 0.25]	
6. Talk with your child about their own feelings?	3.91 (0.89)	3.95 (0.95)	3.75 (0.85)	1.29 [0.00, 0.45]	
7. Talk with your child about others' feelings (including fictional characters from books or television)?	3.72 (1.02)	3.75 (1.16)	3.65 (0.88)	0.40 [−0.30, 0.50]	

Note. Questionnaires were completed at the beginning of both workshops. Participants' responses were compared using paired-samples t tests with 1,000 bootstrapped samples. Effect sizes (d) were calculated when $p < .05$ and BCa suggested statistically significant differences. BCa = bias-corrected and -accelerated confidence intervals.
*$p < .05$.

Table 3. Descriptive Statistics and Comparisons of Participant-Reported Home Literacy Activities Before and After Participating in Workshop 2: Phonological Awareness-Focused Interactive Shared Book Reading and Wordplay (Sound Awareness and Sound Play)

	All Participants Who Attended Workshop 1 ($N = 32$)	**Participants Completing Baseline and Follow-Up Questionnaires ($n = 17$)**			
Questionnaire Item	**Before Participation, *M* (*SD*)**	**Before Participation, *M* (*SD*)**	**After Workshop 2, *M* (*SD*)**	***t* [BCa 95% CI]**	***d***
1. How often do you or other members of your family read with your child?	3.25 (1.19)	3.35 (1.12)	3.65 (1.00)	−1.00 [−0.82, 0.19]	
***During reading** how often do you*:					
2. Read the book as it is written?	4.00 (1.00)	3.94 (0.85)	4.13 (0.96)	−0.61 [−0.69, 0.38]	
3. Read the book but also talk about the pictures and/or story while reading?	3.44 (1.01)	3.59 (0.94)	3.94 (0.56)	−1.38 [−0.82, 0.07]	
4. Read the book but also talk about sounds of words while reading, emphasizing first sounds or rhyme?	2.97 (1.03)	3.18 (1.07)	4.00 (0.61)	-3.00^{**} [−1.35, −0.35]	0.93
5. Read the book but also talk about letters or how to read words with your child (e.g., That is an “A” or that says “cat”)	2.94 (0.88)	3.18 (0.88)	3.88 (0.86)	-2.63^{*} [−1.24, −0.18]	0.81
6. Talk mostly about pictures and read some of the text?	2.47 (0.95)	2.41 (0.87)	2.24 (0.97)	0.72 [−0.29, 0.77]	
*During a typical week, how often do you **read***:					
7. Rhyming story books with your child?	2.69 (0.86)	2.76 (0.83)	3.47 (0.72)	-2.95^{**} [−1.12, −0.29]	0.91
8. Books that don’t rhyme with your child?	3.69 (0.82)	3.65 (0.86)	3.59 (0.62)	2.51 [−0.35, 0.53]	
9. Nonfiction picture books with your child?	2.87 (0.94)	2.65 (0.79)	3.18 (0.81)	$-1.78^{\dagger}$ [−1.06, −0.06]	0.55
10. Alphabetic books with your child?	2.94 (1.01)	3.41 (0.94)	3.41 (1.12)	0.00 [−0.24, 0.24]	
11. Poetry books with your child?	2.00 (0.98)	2.24 (1.03)	2.82 (0.88)	-2.16^{*} [−1.12, −0.06]	0.61

(*continues*)

Table 3. Descriptive Statistics and Comparisons of Participant-Reported Home Literacy Activities Before and After Participating in Workshop 2: Phonological Awareness-Focused Interactive Shared Book Reading and Wordplay (Sound Awareness and Sound Play) (*Continued*)

	All Participants Who Attended Workshop 1 ($N = 32$)	**Participants Completing Baseline and Follow-Up Questionnaires ($n = 17$)**			
Questionnaire Item	**Before Participation, *M* (*SD*)**	**Before Participation, *M* (*SD*)**	**After Workshop 2, *M* (*SD*)**	***t* [BCa 95% CI]**	***d***
12. Recite or sing nursery rhymes (e.g., *Humpty Dumpty*) with your child?	3.44 (1.08)	3.53 (1.13)	3.47 (1.07)	0.22 [−0.47, 0.53]	
13. Sing other rhyming games (e.g., *Do your ears hang low?*) with your child?	3.16 (1.19)	3.12 (1.22)	3.47 (0.72)	−1.69 [−0.71, 0.01]	
14. Recite tongue twisters (e.g., *She sells seashells by the seashore*) with your child?	1.84 (1.05)	2.12 (1.27)	2.82 (0.73)	-2.95^{**} [−1.18, −0.24]	0.62
15. Play other word games (e.g., I spy) or other games involving naming the first sound in a word with your child?	2.97 (1.33)	3.18 (1.38)	3.29 (0.92)	−0.42 [−0.53, 0.35]	
16. Teach your child to recognize letters?	3.53 (1.22)	4.12 (0.78)	4.24 (0.83)	−0.70 [−0.46, 0.24]	
17. Teach your child to print letters	3.31 (1.09)	3.65 (1.06)	4.06 (1.09)	−1.69 [−0.82, 0.00]	
18. Teach your child about letter or word sounds	3.22 (1.13)	3.47 (1.23)	4.06 (1.03)	-2.79^{*} [−0.94, −0.24]	0.51
19. Talk with your child about things you have done together in the past?	3.91 (0.89)	3.94 (0.75)	4.18 (0.95)	−0.70 [−0.78, 0.41]	
20. Talk with your child about things you will do in the future?	3.75 (1.19)	3.76 (1.09)	4.18 (0.81)	−1.38 [−1.00, 0.12]	
21. Talk with your child about their own feelings?	3.91 (0.89)	4.12 (0.86)	4.06 (0.83)	0.32 [−0.29, 0.41]	
22. Talk with your child about others' feelings (including fictional characters from books or television)?	3.72 (1.02)	3.88 (0.99)	3.88 (0.86)	0.00 [−0.24, 0.24]	

Note. Questionnaires were completed at the beginning of both workshops. Participants' responses were compared using paired-samples *t* tests with 1,000 bootstrapped samples. Effect sizes (*d*) were calculated when $p < .05$ and BCa suggested statistically significant differences. BCa = bias-corrected and -accelerated confidence intervals.
$^{\dagger}p < .10$. $^{*}p < .05$. $^{**}p < .01$.

follow-up questionnaire were transcribed and separately reviewed by multiple authors as a cross-check on collation of responses into common themes.

RESULTS

Research Question 1: Is participation in each workshop associated with changes in reported home language and literacy practices?

Comparisons of reported home language and literacy practices before and after participation in Workshop 1

Descriptive statistics for home language and literacy items obtained at the start of both workshops are presented in Table 2. Because not all parents attended Workshop 2, this table includes baseline data for all parents who attended Workshop 1 and the subsample of participants who attended both. Although there was no shift in the average reported frequency of shared reading in this subsample, there was a specific change in shared reading strategies targeted in Workshop 1. After participating in the "rich reading" workshop, parents reported talking more about story content than they had prior to participation, a shift from talking about the story *sometimes*, on average, to *often* talking about the story ($d = 0.61$).

Comparisons of reported home language and literacy practices before and after participation in Workshop 2

Descriptive statistics for home language and literacy items obtained at the start of Workshop 1 and in the follow-up questionnaire after Workshop 2 are presented in Table 3, for all participants who attended Workshop 1 and the subset of participants who attended Workshop 1 and completed the follow-up questionnaire. There was again no change in average reported frequency of shared reading overall, but there were changes in reported reading strategies targeted in Workshop 2. After participating in a workshop on phonological awareness, parents reported reading more rhyming and poetry books, with an increased emphasis on language sounds during shared reading ($d = 0.61$-0.93). In addition, parents reported more print-related talk in reading than before participating ($d = 0.81$).

Moreover, there were reported changes in home literacy interactions outside shared reading following Workshop 2. Consistent with the workshop emphasis on sound play, parents reported more wordplay (e.g., tongue twisters) with their children after participation in Workshop 2 than before participation ($d = 0.62$). Parents also reported teaching children about letter and word sounds more often after participation ($d = 0.51$).

Research Question 2. To what extent do adult participants enjoy—and perceive their children to enjoy—using suggested home language and literacy practices?

Average ratings were high for parents' ratings of their own enjoyment and perceptions of their children's enjoyment (all means >8.00; see Table 4). Modal ratings for enjoyment questions at follow-up were at the top of the scale (10), indicating respondents reported enjoying workshops and activities *very much* and perceived their children to enjoy them.

Research Question 3. What common themes emerged from participants' comments?

Responses provided examples of implementation and information about social validity about the program (workshops, content, and resources) and perceived benefits of participation for participants and their children. Moreover, they pointed to potential barriers and facilitators of implementation. Examples of participants' responses are presented in Table 5. Although topics are presented separately, responses suggested topics overlapped.

Implementation

Participants' examples of implementation at each time point illustrated quantitative

Table 4. Ratings of Adults' and Children's Enjoyment of Strategies and Activities Introduced in Each Workshop and Overall

Ratings of	Adults, *M* (Range)	Children, *M* (Range)
Workshop 1 strategies/activities (*n* = 29)	8.07 (3–10)	8.35 (3–10)
Workshop 2 strategies/activities (*n* = 17)	8.44 (5–10)	8.36 (3–10)
Follow-up questionnaire (*n* = 17)		
Workshops	8.76 (6–10)	-
Strategies/activities	8.53 (6–10)	8.76 (6–10)

Note. Ratings for specific workshops were obtained via phone contacts at least 1.5 weeks after each workshop; overall ratings were obtained via the follow-up questionnaire, approximately 3 months following participation in the second workshop. Participants were asked to separately rate their enjoyment and their child's enjoyment using 10-point scales, from 1 = *really not enjoying at all*, 5 = *fine, no problems*, to 10 = *enjoying very much*.

differences on home literacy questionnaire items. After the workshop on comprehension-related skills, responses during the phone call mentioned asking questions and having conversations with their children. After Workshop 2 on phonological awareness, responses referred to reading rhyming books, talking about rhyme, and wordplay. In the call after Workshop 2, most respondents (15/17) indicated using a combination of strategies, continuing those from Workshop 1, along with strategies introduced at Workshop 2.

Phone calls also afforded clues into implementation process. Contacts suggested that the perceived course of implementation differed across families: Implementation was seen as an extension of typical practice for some families and a departure for others.

Participants' responses suggested factors perceived to be related to uptake and implementation. Some were external (time/timing), others related to adult participants (comfort/confidence) and/or their children (engagement/response), or a combination. Some participants considered ways to address these issues, such as starting bedtime routines earlier to allow for longer shared reading. Similarly, although several adults made comments that referred to discomfort with suggested strategies, some referred to increasing comfort as strategies became more familiar.

Responses suggested that some families perceived project activities and materials supported implementation during this skill acquisition phase. Responses suggested that gift books facilitated implementation in several ways. Some commented that children were excited to receive books and eager for participating adults to read to them. Others noted that particular books fostered different types of interactions. Several noted tip sheets to be helpful resources. Some commented that sticky notes reduced the perceived burden to come up with things "on the spot." Moreover, some observed that sticky notes prompted further interaction by their children. The perceived need for and reported uptake of these resources varied across families, however.

Perceived benefits

Perceived benefits for adults and children

Perceived benefits for adults included reassurance, increased awareness, and learning. Perceived benefits for children included increased engagement and active participation in shared reading, as well as increased language and literacy competencies.

Benefits in the broader social ecology

Responses also included examples of project resources and activities being shared beyond the immediate participating adult and the preschool-aged child. Two reported sharing tip sheets with their husbands, and one noting that her husband used the sticky note

Table 5. Selected Comments Illustrating Common Themes Emerging in Participants' Responses

Topic	Theme	Example Comments
Implementation factors	Comfort/confidence	• "*Both of [our] confidence is growing over time—more used to it now.*" • *"It gave me more ideas when reading with the wee man, But also I got more confidence, he loved doing Cat in the Hat but leaving the last word for him to guess* [Sound Awareness], *it was as if we had been doing it all the time."*
	Prompts	• "[Child] *asked me what the sticky notes were doing in there so it started conversations."* • "[Child] *is even making up questions for the Post-its."*
	Books	• *"Getting new books which excited my child to read them."* • *"Talk more about rhyme in rhyming books."*
Perceived benefits	For adults	• *". . . It was nice as it was reinforcing what were already doing. It's always nice to know you are doing something right."* • *"I really learnt so much and it has helped me a lot. Reading is more enjoyable now."*
	For children	• *Before it was a chore trying to fit it in and get the books over and done with, and* [child] *wasn't attentive. She enjoyed the new books and it has now drawn her in to reading. She has perked right up. Before she wasn't so keen. She even got new books for her birthday a week or so ago and they were her favorite present . . . whereas before books would be seen as secondary—'where's my real present?'"* • *She is absolutely loving it. Especially the questions and discussions. She asks 'give me a clue* [adult family member]*' or 'give me a hint.' She is really responding—even the back cover is sparking conversations."* • "[Parents] *especially enjoy asking questions about new words, as* [child] *now uses those words in day-to-day life. Last night [child] said, 'That is super delicious.' She didn't know that word before."* • *"You have made a great programme; it is very easy to follow and get excellent results as my child has improved so much in his literacy."*
	For social ecology	• "*Took it* [tip sheet] *to the* [early childhood centre] *and they thought it was helpful too*."
Workshops	Size and composition	• *"Talking with other parents and teachers about the experience and having new ideas around home learning."* • *"Really liked the group sizes too. Any more than 5, parents would get shy and feel lost. It felt more personal this way . . . felt everyone could participate."*

prompts she had prepared and inserted into a book in reading with their child. Another noted that her child recruited her father (and sister) to read interactively with her.

Three parents mentioned communicating with their early childhood personnel about the project. Two referred to discussions about project content, about which parents received positive feedback from early childhood personnel. The third reported bringing up concerns about her son's limited progress in phonological awareness activities with staff at his early childhood center who indicated that they would "work on" this with him.

Evaluation and future program development

Participants' responses at each time point suggested that project activities were positively received by adults and children.

Workshops

Respondents unanimously endorsed having two workshops versus one. When asked whether there was a best order (Rich Reading/Reminiscing first or Sound Awareness/Sound Play first), responses were mixed. The majority (9/17) indicated Rich Reading/Reminiscing should be first. Reasons included the idea Rich Reading/Reminiscing may provide a foundation on which to add Sound Awareness for both parents and children. Several (6/17) indicated Sound Awareness could be first. Reasons included perceptions that sound play was "easier" and "fun." Two indicated order did not matter or may vary by family.

Participants also commented on other aspects of the workshops, including instructors'/instructional strategies and group format/size. Some responses indicated that participants found modeling and examples provided by the facilitator (in video and in the workshop) to be helpful; some referred to helpfulness of support provided (e.g., assistance with development of sticky note prompts in the breakout sessions). Participation with other parents was identified as a benefit of participation, with some commenting on group size.

Additional contact

Participants mentioned contacts and interactions beyond the workshops. Talking with teachers/facilitators about the experience was identified as a benefit of participation, and two participants requested additional support after the first contact**.**

DISCUSSION

Participating children and parents were from early childhood centers serving families from underresourced backgrounds (Ministry of Education, 2017) in areas affected by the Canterbury Earthquakes (CERA, 2015). Descriptive results extend research on potential links between disaster-related stress and developmental risk. Before participating, participants endorsed a range of home literacy practices, consistent with research in other NZ communities. Yet, possible differences were apparent: Despite variability in the range of shared reading frequency, modal frequency reported in other NZ samples is high, with the majority of parents in a large, broadly representative sample indicating reading to their 4.5-year-olds daily (Morton et al., 2017); in this sample, modal reported frequency was low (one to two times per week). Such findings raise the hypothesis that earthquake-related stress may disrupt the home literacy environment for some families. This possibility suggests a potential mechanism for the correlation between earthquake exposure and children's developing language and literacy skills reported in Christchurch (Gillon et al., in press) and elsewhere (Gomez & Yoshikawa, 2017). It is clear that efforts to support home literacy environments of children in affected communities are warranted.

We developed and trialed a research-informed, parent-mediated preventive intervention to support preschool children's oral language skills. We took a social validity approach to program development and evaluation of this initial pilot, obtaining participants' perspectives of their—and their children's—experiences via quantitative (ratings) and qualitative (open-ended responses) methods. Available information from these methods supported proof of concept and suggest considerations for future program development.

Reported changes in home literacy practices

Participants completed questionnaires about home literacy practices at the start of both workshops and at follow-up. Although average reported *frequency* of shared reading did not change, open-ended responses during phone contacts and on the follow-up questionnaire suggested that participants were spending more *time* in shared reading and oral language interactions with their children. This finding is encouraging, given links between limited time spent in shared book reading and poor vocabulary in preschoolers (Farrant & Zubrick, 2013).

Moreover, comparisons of questionnaire responses collected across the study indicated specific changes during these interactions, in line with workshop content, with medium to large effect sizes. After Workshop 1, focusing on fostering comprehension-related skills through interactive shared reading and reminiscing conversations, participants' reported extratextual talk about the pictures and story during shared reading increased ($d = 0.61$). Similarly, after Workshop 2, focusing on phonological awareness skills through sound play during and outside of shared reading, items related to workshop content increased. Participants reported reading more rhyming ($d = 0.91$) and poetry ($d = 0.61$) books and talking more about phonological concepts during shared reading ($d = 0.93$). They also reported reciting tongue twisters ($d = 0.62$) and teaching their children about letter/word sounds ($d = 0.51$) more often. Finally, not specifically targeted in either workshop, participants reported engaging in more print-related talk during shared reading ($d = 0.81$).

Increased print-related talk at follow-up could reflect the developmental transition to primary school and beginning reading instruction (Audet et al., 2008). Yet, results suggesting specific changes in home literacy practices associated with specific workshop content are consistent with evidence from experimental and controlled intervention studies. Aram et al. (2013) found increases in parent–child dialogue in response to coaching on how to extend comprehension-related extratextual dialogue through repeated readings. In a within-case comparison study, Riordan et al. (2018) found that parents engaged in more extratextual talk about phonological concepts when reading rhyming versus nonrhyming narrative storybooks, suggesting increased reading of rhyming—and by extension perhaps poetry—texts may elicit more attention to phonological aspects during shared reading. Finally, in a comparative design, Timperley et al. (2019) found that parents and children who participated in a version of Rich Reading and Reminiscing increased meaning-related talk during shared reading, whereas parents and children in a condition similar to Sound Awareness showed increases in a broad observational category that included print- and sound-related talk.

Subjective experience and perceived benefits

Ratings and participants' open-ended responses suggested that participation was a positive experience for parents and children. Open-ended responses identified perceived benefits for parents (increased awareness of opportunities for, and confidence with, supporting children's learning) and children (increased interest and successful participation in literacy activities), with potential benefits extending beyond target participant–child interaction contexts.

Positive subjective evaluations indicate social validity and point to feasibility (Wolf, 1978). Children's enjoyment and their invitations for their parents' involvement, via requests for stories or questions about literacy concepts, may further engage parents' implementation and support for home learning (Green et al., 2007). Both home literacy practices (Zauche et al., 2016) and child interest in literacy activities (Baroody & Diamond, 2012) correlate with children's emergent literacy skills in preschool and reading acquisition in primary school. Home-based support for learning may be particularly protective for children from underresourced backgrounds (Han et al., 2017), and child-led home literacy learning, which includes *children's* initiation of their *parents'* teaching interactions, contributes to children's progress in beginning reading (Schaughency, McDowall, & Reese, 2013).

From an ecological perspective, effects emanating beyond immediate participating parent–child dyads are also promising. Within the home, engaging *fathers* in interactive shared reading with their preschool children can benefit children's developing language skills (Chacko et al., 2018). Moreover, communication between parents and early childhood personnel reflects the interface between important influences on children's development (McDowall et al., 2017, Powell et al., 2010). When these systems are aligned, they may support and complement each other, enhancing developmental outcomes.

Phone calls, however, revealed reported differences in the course of implementation across families. Consistent with research on contributors to involvement (Green et al., 2007; Han et al., 2017; McDowall et al., 2017; Schaughency et al., 2016), factors related to uptake included perceived practical constraints such as time and effort and psychosocial processes such as participants' comfort and confidence and child engagement. Some participants' responses suggested rapid uptake, with little need for external supports, perceiving project activities to be natural extensions of current language and literacy interactions with their children. Others' responses suggested that they perceived activities differed from their typical shared reading style. In these instances, material supports were reported to be helpful, particularly initially, when activities felt new. With continued implementation and positive response from their children, some participants' comments suggested increased comfort and confidence, adding to the emerging literature on the dynamic nature of parents' sense of efficacy for involvement and links between increased efficacy and increased home support for beginning reading in primary school (McDowall et al., 2017). Others suggested implementation challenges and need for support beyond the scope of this limited, researcher-led trial to adapt strategies for scaffolding children's language development to their context.

Limitations and future directions

Limitations include design (open trial), methods (single informant), and sample size, compounded by attrition/missing data. Findings may not reflect views of participants who did not attend Workshop 2 or complete the follow-up questionnaire. Further research is needed using controlled designs with multiple methods to assess implementation, parent–child interactions, and children's language and early literacy development (Shanahan & Lonigan, 2010). Our questionnaire provided information about parent-reported frequency of shared reading and oral language experiences; however, this method may be less sensitive to depicting aspects of interaction quality (see Pomerantz & Monti, 2015). Observations of parent–child interactions can provide information about the degree to which workshops effectively promote interactions to enhance oral language and emergent literacy skills (Timperley et al., 2019) or broader socioemotional competencies (Salmon & Reese, 2016). Findings of increased behavioral concerns among children from families living in areas affected by the Canterbury Earthquakes (Liberty et al., 2016) indicate that these latter competencies merit consideration in future research. Such research could consider contributions of book content (e.g., socioemotional themes or experiences) as well as adult–child interactions about the story to supporting children's developmental functioning (see Veneziano & Nicolopoulou, 2019). Moreover, although we incorporated cultural elements, we did not assess this aspect of our work. Future work should evaluate cultural responsiveness as well as effectiveness with families from the communities programs aim to serve (McIntosh et al., 2011).

Potential implications for service delivery

This study supports the social validity of developmentally informed prevention efforts that aim to support the resilience of families to foster their children's development. Project activities, informed by research on language and literacy development, were generally well received by participants and, anecodotally, the early childhood communities from which they were drawn. All informants contacted after the second workshop endorsed having two workshops, with responses suggesting they perceived learning new things at both workshops. Consistent with the notion of "just-in-time" professional development (Tonyan et al., 2017), one participant commented that the timing of the workshop on sound awareness, in particular, made sense as children approached school entry (and beginning reading instruction).

Participants' responses support encouraging language interactions in multiple settings, including, but not limited to, shared reading. Although positive changes were reported in shared reading, parents' responses suggested that shared reading was sometimes perceived as a time burden or something to which children were not always receptive. In such instances, participants often reported project activities in other contexts such as wordplay in the car. After Workshop 2, participants commented on stress triggered by the Kaikōura Earthquake. A parent noted that her son displayed uncharacteristic emotional and behavioral difficulties that she perceived to interfere with shared reading. Nevertheless, she reported incorporating language interactions daily and shared examples of his engagement and developing skills.

Participants' comments support including elements (offering workshops at various times of day, provision of food) to enhance engagement and strength-based approaches to set a positive climate for involvement. Available data highlight potential contributions of considering parent involvement activities embedded in relationships (Kim & Sheridan, 2015; Schaughency et al., 2016). Participants indicated that they valued social contexts of learning with adults (parents and facilitators) and implementing activities with their children, consistent with findings with another NZ sample (Schaughency et al., 2016). Repeated interactions with parents, such as phone contacts in this study, afforded opportunities to check on implementation, learn about challenges or points of confusion, and try to address them.

From a relational perspective, this study was limited by its scope as a one-off, time-limited, researcher-led trial. Some families who did not participate here, or only attended one workshop, may have been successfully engaged over time by someone with whom they have a relationship in their early childhood or other community setting. Thus, practice-based initiatives may have the potential to extend reach to more families. Moreover, additional contacts may have been beneficial to support and adapt implementation to meet the needs of some families and children. That is, another potential practice-based role is ongoing follow-up with families beyond recruitment and general parent education when needed.

Such suggestions are in line with multi-tiered approaches to support parent involvement (Lines, Miller, & Arthur-Stanley, 2010). For some families, general approaches to encouraging involvement and parent education may be sufficient, whereas others may benefit from additional supports, whether social and/or material. In their comparative study, Timperley et al. (2019) loaned parents two books per week for 6 weeks, each containing prompts to encourage comprehension- or phonological-related interactions in repeated readings. In that study, retention and implementation were high, with changes observed in shared reading 1 year after implementation. Comments in this study suggest that this level of support may not be needed by all families but such an approach may be beneficial for some families. In addition to reducing perceived challenges and burden of implementation for parents, weekly books might potentially build children's engagement in shared reading with their parents, supporting implementation and skill development, for parents and children. For parents and children needing more individualized support, promising practices for supporting professional learning and practice (Greenwood, Abbott, Beecher, Atwater, & Petersen, 2017) and iteratively adapting interventions (Barton et al., 2016) may enhance effectiveness.

CONCLUSION

For families affected by natural disasters, early childhood programming is recommended to support parenting and early learning (Murphy et al., 2018). Social validity considerations provide a framework for model development and evaluation (Strain, Barton, & Dunlap, 2012). Social validity data collected during and after implementation in this pilot suggest increased resilience in the home literacy environment. Future practice-based research is recommended to formally evaluate approaches piloted in this researcher-led trial.

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