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Native American Caregiver–Child Shared Book Reading Interactions: A Descriptive Study and Integrative Review

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ABSTRACT

Purpose: This study included two parts: a descriptive study followed by an integrative review. The purpose of the study was to converge finding from the descriptive study and summarize relevant findings from existent literature to identify potential culturally responsive early language and literacy intervention strategies for Native American caregivers and their children.
Method: This study included a nonexperimental descriptive design and integrative review. The descriptive study analyzed the language behaviors and shared book interactions of Native American caregivers with their young children (N = 21) and included results from a caregiver teaching questionnaire. The integrative review evaluated relevant literature and identified strategies that were described in these sources. These findings were combined with the descriptive study findings to identify promising culturally consistent language and literacy strategies.
Results: Caregivers' shared book behaviors were associated with caregivers' vocabulary usage and children's shared book behaviors. Caregivers reported a number of language and teaching strategies they frequently employed; this information was integrated with other sources to identify promising approaches. A total of 20 potential strategies were identified.
Conclusions: The purpose of this study was to describe potential early language and literacy strategies for Native American families. It would be impossible to develop early language interventions to meet the needs of all Native American families and children; thus, this study is a preliminary step in identifying strategies that may be culturally responsive for some families. The integrative review supported the use of shared book reading with young Native American children. Promising language and early literacy strategies included play-based strategies, teaching new words, questioning strategies, using descriptive language, and other language and interaction enhancements. The effectiveness of these strategies should be further evaluated in future research or treatment studies.

Indigenous peoples are highly pluralistic in their ideologies, beliefs, traditions, and values. It is important to consider the preferred cultural terminology across individuals, tribes, and communities. Common and sometimes preferred cultural terms include *American Indians, First Americans*, *First Nations people*, *indigenous peoples*, and/or the specific tribe from which they identify (e.g., *Arapaho*, *Lakota*, *Shoshone*). The cultural term *Native American* will be used throughout this article to refer to individuals who have origins of any indigenous peoples of North America and whose cultural identification is established through tribal affiliation, community recognition, and/or self-recognition (National Congress of American Indians, 2020). Hundreds of recognized and unrecognized Native American tribes within the United States exist today. Currently, 574 American Indian and Alaskan Native tribes and villages are

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federally recognized by the United States (National Conference of State Legislatures, 2002). Approximately 5.2 million people identify as American Indian and/or Alaskan Native either alone or in combination with one or more races (Norris et al., 2012). Nationally, this population is expected to grow to 8.6 million by 2050 (U. S. Census Bureau, 2012). When compared to other cultural groups, Native Americans have a unique history as the first inhabitants of the Americas with a colonization history resulting in historical trauma that has translated across generations and is thought to continue to contribute to health, educational, and developmental disparities in Native American children and/or their families (Sue & Sue, 2013; Westby & Inglebret, 2012). For example, health conditions associated with communication disorders (e.g., cleft lip and palate, fetal alcohol syndrome, bacterial meningitis) are reported to occur more frequently in Native American children than average and may lead to disparities in early health, developmental, and educational outcomes (Cerecer, 2013; Roseberry-McKibbin, 2014). Speech-language pathologists (SLPs) need to be prepared to serve Native American children and their families in order to address these disparities and to support children's academic, social, and/or cognitive development through early intervention services.

Early Language Intervention Programs and Strategies

Early language and literacy interventions are commonly employed by SLPs to address early language deficits and/or slow expressive language development in the child's natural environments and daily routines (for a review, see the works of Lonigan & Whitehurst, 1998; McCauley et al., 2006). These early intervention services should be culturally responsive and should align with the family's culture, preferences, and priorities (American Speech-Language-Hearing Association [ASHA], 2008). However, most intervention programs were developed from a European American cultural framework as evidenced by the emphasis on independent and individualistic interaction strategies. Typical caregiver–child interactions of European American families frequently include behaviors that emphasize following the child's lead, describing what the child sees, engaging the child in conversation, and encouraging exploration during play (Vigil & Hwa-Froelich, 2004). Caregivers from other cultural groups may have different interaction styles and developmental priorities than European American families (Guiberson & Ferris, 2018; Vigil & Hwa-Froelich, 2004). Mainstream early language intervention strategies frequently do not consider cultural diversity and the impact of encouraging *culturally inconsistent* behaviors (Guiberson & Ferris, 2019). Implementation of these early language intervention approaches may be unnatural and uncomfortable to culturally diverse groups, which may result in ineffective implementation of strategies and a breakdown in trust between the interventionist and family. There is no evidence of the social validity and/or effectiveness of European American or mainstream treatment approaches with Native American children and their families to support their language development and/or early literacy skills (Ferris et al., 2021; Guiberson & Ferris, 2019). Without this knowledge, effective and culturally responsive early language and literacy intervention strategies for Native American children and their families do not exist.

Cultural Humility, Culturally Responsive Intervention, and Family-Centered Intervention

Culturally responsive and competent early intervention services must be accessible to children and their families as is stated in Part C of the Individuals with Disabilities Education Act (IDEA; ASHA, 2019b). Cultural competence is an ongoing and ever-developing skill that "involves understanding and appropriately responding to the unique combination of cultural variables and the full range of dimensions of diversity that the professional and client/patient/family bring to interactions" (ASHA, 2019a, para. 1). *Cultural humility* is a critical part of cultural competence. Cultural humility is a dynamic and complex process that involves clinician self-reflection, appreciation of clients' knowledge of the social and cultural context of their lives, openness to establishing power-balanced relationships with clients, and a lifelong dedication to learning (for a review, see the work of Lekas et al., 2020). Stated another way, "Cultural humility means admitting that one does not know and is willing to learn from patients about their experiences, while being aware of one's own embeddedness in culture(s)" (Lekas et al., 2020, p. 2). Cultural humility also forces the clinician to consider power balances and imbalances in interactions providing a structure to examine personal and institutional accountability. The humility aspect refers to an intrapersonal and interpersonal approach that is both person centered and family centered.

Combined, cultural competency and cultural humility are needed for SLPs to effectively implement family-centered services in a naturalistic environment that considers the family's cultural values and beliefs, developmental expectations, and natural interactive behaviors between the child and the family (ASHA, 2008, 2019b; Guiberson & Ferris, 2018). Naturalistic environments provide the optimal context for realistic learning experiences and caregiver–child interactions to promote the child's language and communication skills (ASHA, 2008; Woods et al., 2011). These naturalistic environments are often

embedded within family routines, and it has been shown that these routines are effective in the social skill building and academic achievement of the child (Spagnola & Fiese, 2007). Common family routines may include preparing and eating a meal, completing chores/errands, and reading.

Shared Book Reading

Shared book reading is an early language intervention approach that emphasizes the dialog between the caregiver and the child during a book-sharing interaction guided by picture books with themes that are interesting to the child. The overarching goal is for the child to retell the story, while the adult becomes the active listener (Tsybina & Eriks-Brophy, 2010). Specific strategies of this approach include prompting the child with questions, expanding the child's utterances, and praising the child (Tsybina & Eriks-Brophy, 2010; Zevenbergen & Whitehurst, 2003). The caregiver uses direct instruction to lead the child through joint attention (i.e., establishing attention between the adult, child, and an object), asking "what" questions (e.g., "What is this?" or "What is the boy doing?"), helping the child when it is needed (i.e., teaching them the labels of pictures or actions until the child can answer on their own), and expanding on the child's utterances (Zevenbergen & Whitehurst, 2003). Throughout the intervention process, the level of scaffolding and implemented strategies evolves as the child progresses, providing a great deal of flexibility in the strategies used. Shared book reading may be a beneficial early language intervention given its flexibility to modify strategies to fit a caregiver's existing interactional behaviors and teaching activities, while addressing the caregiver's developmental priorities that may not align with the traditionally European American–based early intervention programs.

A meta-analysis completed by Mol et al. (2008) found that the effects of shared book reading were strengthened when the dialog between the caregiver and the child was enhanced to be more interactive (e.g., eliciting verbal responses to the story with open-ended questions). These results suggest the quality of shared book reading is as important as the frequency of book reading between the child and caregiver (Mol et al., 2008). Shared book reading and early literacy activities have also been shown to provide an optimal context for adults to facilitate language learning with children, and many studies have shown that shared reading and language development are positively correlated for preschool-aged children (Ijalba, 2015; Zevenbergen & Whitehurst, 2003). Research also reveals that reading to young children supports their language acquisition, early reading performance, and later success in school (Rodríguez et al., 2009).

There is emerging evidence that shared book reading with minority groups, including Latino families, can be an effective, modified language intervention (for a review, see the work of Guiberson, 2021). Tsybina and Eriks-Brophy (2010) examined the effects of shared book reading as an intervention approach for Spanish–English bilingual preschool-aged children with expressive vocabulary delays. This study found that the shared book reading group learned more vocabulary target words in Spanish and English than the delayed treatment control group and maintained this vocabulary 6 weeks following the experiment (Tsybina & Eriks-Brophy, 2010). A systematic review showed that caregiver involvement in shared book reading and systematic language stimulation techniques (e.g., asking questions and expanding utterances) were effective in increasing home language and majority language skills in bilingual children (Durán et al., 2016). Very little is known about the effectiveness of shared book reading with young Native American children and their families; however, research with Native American parents of preschool-age children has shown that shared book reading, much like oral storytelling, is considered culturally appropriate by parents (Nelson-Strouts & Gillispie, 2017), and frequency of shared book reading is considered a predictor of academic readiness in indigenous kindergartners (Riser et al., 2020). Shared book reading and related strategies will be further explored in subsequent sections of this article.

Current Study

The purpose of this study was to (a) describe the interactive behaviors of Native American caregivers and their children during shared book reading, (b) describe associations between language behaviors and interactive book behaviors, (c) describe the reported frequency of caregiver language and teaching strategies, and (d) integrate findings from this study with existent relevant literature to identify potential culturally consistent early language and literacy intervention approaches and/or strategies. The authors applied a nonexperimental descriptive design and integrative review to this exploratory study. Informative findings from the descriptive study will be integrated with relevant findings from available research with young Native American children and will be interpreted to identify promising culturally consistent language and literacy approaches for Native American caregivers. It is important to note that it would be impractical and impossible to develop early language interventions to meet the needs of all Native American families and children. This work primarily serves as a starting point for more culturally responsive practices than what is currently in place for these families. The specific research questions were as follows.

1. What are frequent or common behaviors of Native American caregivers and children during shared book reading?

2. How do shared book reading interactions relate to language measures collected across play and two book activities?
3. What language and teaching strategies do Native American caregivers report engaging in most frequently?
4. Based on findings from each research question and an integrative literature review on this topic, what are potential culturally responsive early language and literacy intervention strategies and/or approaches for Native American caregivers and their children?

Descriptive Study

Descriptive Study Methods

Research Team

The first author identifies as a cisgender white male and is an SLP who has experience working with educational programs and tribal groups in Wyoming and Colorado. The second author identifies as a cisgender Native American and Hispanic female and is an SLP working in early intervention and with elementary age children. She is a tribal member of the Northern Arapaho tribe.

Participants

This study was approved by a university institutional review board (IRB) for the protection of human subjects and two Tribal Councils representing participants in this study. Inclusion criteria for participation in the study included caregivers who (a) identified as Native American and (b) had a child between 12 and 48 months of age. Participants were informed of the right to discontinue participation at any time. Caregivers from this sample also participated in an ethnographic interview study that was designed to gain an understanding of Native American caregivers' developmental priorities (Ferris et al., 2021).

Caregiver characteristics. The caregiver participants (N = 21) included 18 mothers, two fathers, and one aunt. The caregivers' mean age was 31 years (SD = 7.45; range: 17–48). On average, the caregiver participants had 13.6 years of education (SD = 2.37; range: 9–18). Approximately 95% (n = 20) of caregivers reported that they were enrolled in a federally recognized tribe, including Northern Arapaho (n = 11), Eastern Shoshone (n = 6), Oglala Lakota (n = 1), Osage (n = 1), and Standing Rock Sioux (n = 1). One participant identified as Native American but was not enrolled in a tribal registry. Seventeen (81%) caregivers had no concerns about their child's development, and four caregivers reported that they had some concern about their child's communication development, with one of these families enrolled in an individualized family service program.

Child characteristics. The child participants included 11 females and 10 males, with a mean age of 27 months (SD = 10.35; range: 14–46 months of age). Approximately 71% (n = 15) of the child participants had exposure to one language other than English (i.e., tribal language), whereas four child participants (19%) had exposure to more than one tribal language other than English. Two of the children had exposure to English only. No other languages were reported. Most caregivers indicated that they taught some select words and phrases on occasion to their children and that they did not speak tribal languages frequently. In terms of educational experiences, five (24%) of the children were enrolled in the Early Head Start program, one (5%) was enrolled in the Head Start program, and the remaining 15 (71%) were not enrolled in preschool programming. Both the Early Head Start and the Head Start programs support literacy, but no details on specific methods, activities, or other information were available. Early Head Start services included bimonthly home visits by a parent mentor, whereas Head Start was a 9-month program of three half-days a week. The authors visually inspected the Adult–Child Interactive Reading Inventory (ACIRI) and other variables of the parents who had children enrolled in programs and did not detect any skewedness in the distribution of responses or scores. Their scores essentially were very similar to that of the other participants.

Procedure

This study was conducted in collaboration with local early intervention programs, Head Start programs, and an elementary school. Participants were recruited through distribution of flyers, online and radio advertisements, and word of mouth. Caregivers who showed interest and met the inclusion criteria were presented with an informed consent form. Native American research assistants (the second author and a Master's in Social Work student) conducted the study visits. During study visits, caregivers and their child engaged in three caregiver–child interactions. First, the caregivers and their children were given a set of toys to play with for approximately 10 min. The caregivers were asked to play as they normally would with the toys at home. Next, they looked at a *My First Words* (Wilkes, 1999) board book together for approximately 5 min. The caregivers were asked to show their child the book. Finally, they looked at *Baby Rattlesnake Gets Her Rattle* (Ferris et al., 2018) for approximately 5 min. They were informed that the research assistant would notify them when the 5 min had passed. Caregivers were asked to read the book with their child and then give the child the opportunity to "read" the book to the caregiver. No instruction was provided on language that caregivers used (e.g., caregivers were not told to use English or to use their tribal language(s). These interactions were recorded

with a compact video recorder that was on a small tripod. Prior to the end of the visit, caregivers also completed a 15-item survey (see caregiver teaching questionnaire items, listed in Table 3).

Materials and Measures

Baby Rattlesnake Gets Her Rattle. The use of culturally responsive and sensitive books with families and children has been shown to increase the rapport established between the professional and the family, as well as demonstrate respect and understanding of the families' cultural background (Inglebret et al., 2008). Given the limited culturally sensitive, age-appropriate children's book for Native American families located in the Mountain West Region of North America, *Baby Rattlesnake Gets Her Rattle* (Ferris et al., 2018) was created. The 10-page board book was created in collaboration with the authors and a Native American Social Work student. The second author is a tribal member of a federally recognized tribe. Illustrations were by a Native American high school student from the reservation where data were collected. *Baby Rattlesnake Gets Her Rattle* was inspired by traditional native oral stories about a baby rattlesnake who was a trickster. In addition, it was inspired by the story *Baby Rattlesnake* (Ata & Moroney, 1989), told by Chickasaw actor and storyteller Te Ata and adapted by Chickasaw author Lynn Moroney. *Baby Rattlesnake Gets Her Rattle* was developed to serve multiple purposes, such as providing a developmentally appropriate book that included story grammar elements for this study's child participants, utilizing animal characters to support representation across multiple tribes, and including fable-like elements that are often seen in Native American stories. See Appendix A for the book's illustrations and text.

The ACIRI. The ACIRI was used to describe caregiver behaviors during the shared book reading interaction of *Baby Rattlesnake Gets Her Rattle.* The ACIRI is an inventory that is used to assess the behaviors and frequency of behaviors of adults during a shared book reading activity (for a review, see the work of Debruin-Parecki, 2007). The ACIRI was developed with a sample of ethnically diverse families from low-income households. It considers caregiver behaviors during shared book reading within three categories: (a) *enhancing attention to text*, (b) *promoting interactive reading and supporting comprehension*, and (c) *using literacy strategies*. ACIRI coding considered a total of 12 shared book reading behaviors for caregivers and 12 parallel items for children (see Tables 1 and 2). The ACIRI authors provided further description and examples of behaviors that assist in observing and scoring each subcategory item in the scoring manual. High levels of criterion validity when compared to other behavioral observation procedures were reported by Debruin-Parecki (2007). Boyce et al. (2010) found moderate internal consistency reliability for each category, with alphas of .59–.70 for their sample. Though the ACIRI has not been used to describe the early literacy experiences of Native American caregivers and their children, based on the authors' knowledge of Native cultures, they believed the ACIRI was culturally appropriate for use with this population. The authors also hoped the use of this framework would serve as a starting point to begin to understand the behaviors that characterize shared book reading with this population. The ACIRI behaviors that occur during a shared book-

Table 1. Percentage of caregivers demonstrating Adult–Child Interactive Reading Inventory behavior at different frequency levels.

Category and related behaviors	Frequency			
	Not evident	Infrequent	Occasional	Frequent
Enhancing attention to text				
Promotes and maintains physical proximity with child	67%	19%	14%	—
Sustains interest and attention through child-adjusted language, positive affect, and reinforcement	5%	14%	24%	57%
Gives child opportunity to hold book and turn pages	9%	24%	19%	48%
Shares book with child and displays sense of audience during book handling	5%	—	9%	86%
Promoting interactive reading and supporting comprehension				
Poses and solicits questions about the book's content	38%	24%	24%	14%
Points to pictures and words to assist in identification and understanding	5%	14%	5%	76%
Relates the book's content and the child's responses to personal experiences	67%	24%	9%	—
Pauses to answer questions the child poses	71%	10%	14%	5%
Using literacy strategies				
Identifies visual cues related to story reading	14%	24%	29%	33%
Solicits predictions	100%	—	—	—
Asks child to recall information from the story	95%	5%	—	—
Elaborates on the child's ideas	76%	10%	14%	—

Note. Not evident (did not occur), infrequent (occurred 1 time), occasional (occurred 2–3 times), frequent (occurred 4 or more times). The dashes indicate "value not observed." $N = 21$. Rounded to the nearest integer.

Table 2. Percentage of children demonstrating each Adult–Child Interactive Reading Inventory behavior at different frequency levels.

Category and related behaviors	Frequency levels			
	Not evident	Infrequent	Occasional	Frequent
Enhancing attention to text				
The child seeks and maintains physical proximity.	86%	14%	—	—
The child pays attention and sustains interest.	—	33%	48%	19%
The child holds the book and turns the pages on his or her own and when asked.	—	5%	19%	76%
The child initiates or responds to book sharing that takes his or her presence into account.	34%	—	9%	57%
Promoting interactive reading and supporting comprehension				
The child responds to questions about the book.	76%	14%	5%	5%
The child responds to adult cues or identifies pictures and words on his or her own.	52%	5%	—	43%
The child attempts to relate the book's content to personal experiences.	90%	10%	—	—
The child poses questions about the story and related topics.	71%	10%	14%	5%
Using literacy strategies				
The child responds to the adult and/or independently identifies visual cues related to the story.	86%	14%	—	—
The child is able to guess what will happen next based on picture cues.	95%	5%	—	—
The child is able to recall information from the story.	100%	—	—	—
The child spontaneously offers ideas about the story.	71%	5%	—	24%

Note. The dashes indicate "value not observed."

reading episode are tallied by number of occurrences and then scored using the ACIRI frequency scale guidelines: *not evident* (did not occur), *infrequent* (occurred one time), *occasional* (occurred 2–3 times), and *frequent* (occurred 4 or more times).

ACIRI coding and reliability. Behaviors were scored by frequency of observation during the 5-min shared book interaction using *Baby Rattlesnake Gets Her Rattle.* If interactions continued beyond 5 min, they were not included in analysis. Frequency of behaviors (i.e., mean and standard deviation) was used to describe commonly observed behaviors. The second author and a graduate student in speech-language pathology were trained by the first author in ACIRI coding. Procedures and guidelines established by the ACIRI authors were used. Training included a comprehensive review of the ACIRI coding manual/protocols and careful review of definitions and exemplars of behaviors for each category. For training purposes, coders completed joint coding of two videos of caregiver behaviors and independent coding of three videos that were scored by the first and second authors. For any disagreement, discussion to reach consensus for each behavior coded was conducted. Coders obtained interrater reliability of greater than 80% prior to beginning independent coding. Interrater reliability was calculated for a total of six videos (29% of the sample) that were independently coded. Cohen's kappa, a reliability statistic that corrects for chance agreement, was calculated for the ACIRI coding and found to be .82. The strength of consensus criteria established by Landis and Koch (1977) indicate that kappa values of $.80 < \kappa \leq 1$ are *almost perfect* consensus. Furthermore, the value obtained in this study is comparable to or better than other studies that have used the ACIRI (Guiberson, 2021; Rodríguez et al., 2009). Analysis of the disagreements showed that 90% of disagreements were due to coders selecting from two similar behaviors in the adult *enhancing attention to text* category. The items were: *adult sustains interest and attention through use of child-adjusted language, positive affect, and reinforcement* and *adult shares the book with the child (displays sense of audience in book handling when reading)*. At times, these behaviors may have overlapped, for example, displaying a sense of audience may have included behaviors of child-adjusted language, positive affect, and reinforcement. Because these two behaviors were in the same category of *enhancing attention to text*, and were viewed as very similar, the authors determined that these disagreements were not concerning.

Language transcription and reliability. The Systematic Analysis of Language Transcripts (SALT; Miller & Iglesias, 2015) computer software program was used to obtain language sample analysis (LSA) measures from the entire study visit including 10 min of caregiver–child play, 5 min of the *My First Words* book, and 5 min with *Baby Rattlesnake Gets Her Rattle*. LSA across the entire study visit was selected over an individual interaction (e.g., one book interaction or only the play interaction) because the goal of the research question was to compare ACIRI scores to standard language measures that are routinely used for screening or other assessment purposes. Three measures were obtained from SALT transcripts using the automated analyses program to obtain *standard measures*. Total number of words (TNW) is a measure of word use or general talkativeness that typically increases as children mature. Number of different words (NDW) is a measure

of vocabulary diversity that captures child linguistic development and may be useful in identifying language delays or disorder (Miller, 1987; Miller & Klee, 1995; Ukrainetz & Blomquist, 2002). NDW is calculated by counting the NDW roots (without inflection). Mean length of utterance (MLU) is a common LSA measure. MLU is a global measure of syntactic complexity that is often used with preschool-age children (Brown, 1973; Fenson et al., 1994; Pezold et al., 2020). MLU was calculated in morphemes (MLU-M). MLU-M is considered a sensitive index of grammatical development for toddlers and preschool children (Miller & Chapman, 1981).

SALT transcription was completed by the second author and two graduate students in speech-language pathology. Coders received 6 hr of training in language transcription and completed transcription of three training videos. Before independently coding, they achieved 90% or higher point-by-point interrater agreement for word agreement and C-unit segmentation agreement. Interrater reliability checks were completed with 29% (n = 6) of the language sample data. Interrater reliability for word agreement was 91%, and interrater reliability for C-unit segmentation agreement was 94%. The language samples were 5 min in and varied in terms of number of child utterances (M = 109, SD = 78) and adult utterances (M = 262, SD = 90).

Caregiver teaching questionnaire. In order to better understand Native American caregivers' developmental priorities and teaching styles, the authors created a 15-item survey. Items were developed to gain a sense of caregiver language and teaching strategies and to contrast different approaches parents may use when interacting with children. The survey included seven items on frequency of language teaching behaviors and eight items on teaching behaviors (items are listed in Table 3). For each item, caregivers were asked to indicate if they engaged in the behaviors *not often, sometimes,* or *frequently*. Each of the questions and the percentage of respondents who provided each response are presented in Table 3.

Descriptive Study Results

Shared Book Interactions

The first research question aimed to describe frequent or common behaviors of Native American caregivers and children during shared book reading interactions. *Enhancing attention to text* was the most frequently observed category for both caregivers and children. *Promoting interactive reading and supporting comprehension* behaviors were also observed, but less frequently, and behaviors from the *Using literacy strategies* category were infrequently observed. To understand more specific details on frequency of behaviors, items within each category were analyzed and the frequency of the individual observed behavior was calculated using the ACIRI frequency scale (i.e., *not evident, infrequent, occasional, frequent*).

Caregiver behaviors. Table 1 displays frequency of caregiver ACIRI behaviors by category. Of the individual coded behaviors, sharing the book with the child, displaying a sense of audience during book handling, and using child-adjusted language, positive affect, and reinforcement were the most common caregiver behaviors. Another behavior that was frequently observed was caregivers pointing to pictures and words to assist in identification and

Table 3. Caregiver teaching questionnaire items and responses.

Questionnaire items	Caregiver response		
	Not often	Sometimes	Frequently
Language strategies			
How often do you encourage your child to interact with you or others?	—	14%	86%
How often do you ask your child questions?	9%	29%	62%
How often do you ask your child to label things?	5%	14%	81%
How often do you describe what you or child is doing?	19%	33%	48%
How often do you talk about your surroundings during play?	19%	29%	52%
How often do you comment on your child's interest?	—	48%	52%
How often do you teach new words	5%	19%	76%
Teaching strategies			
How often do you teach your child to play with a toy correctly?	38%	48%	14%
How often do you let your child explore toys?	—	14%	86%
How often do you ask your child to pay attention?	43%	33%	24%
How often do you let your child use toys in the way he/she wants to?	—	19%	81%
How often do you let your child pretend play?	—	20%	80%
How often do you tell your child what to do while playing?	48%	29%	23%
How often do you pretend play with your child?	—	48%	52%
How often do you join in with what your child is interested in?	—	19%	81%

Note. The dashes indicate "value not observed."

understanding. Infrequent behaviors included encouraging questioning behaviors, elaborating on the child's ideas, eliciting child recall of information, and soliciting predictions.

Child behaviors. Table 2 displays the frequency of child ACIRI behavior by category. Of the individual-coded child ACIRI behaviors, common or frequently observed behaviors included the child holding the book and turning pages, initiating or responding to book sharing, and responding to adult cues or identifying pictures and words on his or her own. Infrequently observed behaviors included child questioning or responding to questions, predicting what will happen next based on pictures, and recalling information from the story.

Associations Between Shared Book Interactions and Language Measures

One of the aims of this study was to identify possible associations between ACIRI measures observed during shared book interactions and traditional language sample measures collected across play and book activities, as well as to establish if there was an association between parent ACIRI and child ACIRI measures. Spearman nonparametric correlations were completed with these measures in order to establish if the ACIRI scores were associated with traditional language sample measures. Cohen's (2013) guidelines were used to describe effect size based on correlation magnitude. Table 4 presents the coefficients obtained for caregiver and child measures. Caregiver composite ACIRI scores were significantly associated with caregiver TNW ($r = .68$, $p \leq .01$) and NDW ($r = .49$, $p \leq .05$) with large and medium effect sizes detected, respectively. Caregiver ACIRI scores were not significantly associated with caregiver MLU. Child composite ACIRI scores were significantly associated with child TNW ($r = .73$, $p \leq .01$), child NDW ($r = .64$, $p \leq .01$), and child MLU ($r = .64$, $p \leq .01$) with large effect sizes detected. Adult ACIRI and child ACIRI scores were significantly associated with a medium effect size detected ($r = .47$, $p \leq .05$).

Frequency of Reported Language and Teaching Strategies

Next, responses from the caregiver teaching questionnaire were reviewed. The aim of this research question was to establish how often Native American caregivers engaged in a variety of language and teaching strategies. Table 3 presents the caregivers' response. Of the language strategies, the three most frequently reported behaviors include encouraging their child to interact with others, asking their child to label items/objects, and teaching their child new words. Strategies that are similar to parallel talk (i.e., describing the child's action, describing surroundings, and commenting on the child's interest) were less frequently reported behaviors. Of the teaching strategies, pretend play, joining in what the child is interested in, and letting the child explore toys were frequently reported. Infrequent behaviors included more directive style interactions, such as teaching children how to play correctly, asking children to pay attention, or instructing children what to do while playing.

Integrative Review Method

The aim of the final research question was to integrate findings from the descriptive study and a literature review with the goal of identifying potentially culturally consistent early language and literacy strategies for Native American caregivers of young children. Thus, an integrative review was conducted to identify relevant sources describing early literacy strategies for use with this population. Established integrative review steps (Creswell, 2014; Whittemore & Knafl, 2005) were applied and specific details listed in Appendix B. These steps included the following.

Step 1. Database search.
Step 2. Identify articles that met inclusion criteria.

Table 4. Nonparametric correlations between child shared book reading measures and language sample measures.

Measures	1	2	3	4	5	6	7	8
1. Caregiver composite ACIRI	—							
2. Caregiver TNW	.68**	—						
3. Caregiver NDW	.49*	.84**	—					
4. Caregiver MLU	.28	.55**	.51*	—				
5. Child composite ACIRI	.47*	.44*	.48*	.25	—			
6. Child TNW	.13	.33	.44*	.03	.73**	—		
7. Child NDW	.12	.40	.53*	.12	.64**	.95**	—	
8 Child MLU	.03	.32	.40	.48*	.64**	.62**	.61**	—

Note. *p* values were adjusted for multiple comparisons using a Benjamini—Hochberg correction. ACIRI = Adult–Child Interactive Reading Inventory; TNW = total number of words; NDW = number of different words; MLU = mean length of utterance.

*$p \leq .01$. **$p \leq .05$.

Step 3. Evaluate sources/report reliability.
Step 4. Chart data.
Step 5. Present findings and potential strategies map.

Integrative Review Results

Identified Articles

Six sources met the integrative review inclusion criteria. Sources are described below, and Table 5 presents charted details on these sources and the descriptive study. Fayden (1997) examined the effects of exposure to shared book reading strategies (e.g., eliciting predictions, asking open-ended questions, repeated readings) with 5-year-old Native American (n = 16) and Latino (n = 16) kindergarten children living in rural New Mexico. The children in this study participated in shared reading for 10 weeks and actively participated in activities related to the story such as book making, cooking, singing, choral reading, and other activities. The children were also encouraged to use literacy skills, such as making predictions and drawing inferences about the story. Over the course of 10 weeks, the teacher gradually reduced scaffolding while giving more responsibilities to the children to read the book. After the 10-week intervention, children demonstrated a significant improvement in the tested reading skills (e.g., story retell, reading from left to right, self-correcting incorrectly read words).

Riser et al. (2020) examined the overall home literacy context relationship to later literacy skills of Native American children. They used a longitudinal database of children born in 2001 from the *Early Childhood Longitudinal Study, Birth Cohort* (ECLS–B), which purposively oversampled Native American children (N = 850). The home literacy context for each family in this study was collected by having caregivers report weekly frequency of child engagement of three types of home literacy activities when their children were 24 months old: shared book reading, singing songs, and telling stories. This information was used to establish the association between early home literacy context and later preschool reading and math skills. The investigators controlled for a number of variables, including family poverty, maternal education, and child cognitive abilities, and found that the overall home literacy context was significantly and positively associated with both reading and math skills. Shared book reading emerged as a significant predictor of reading skills after controlling for child and family characteristics and other individual home literacy indicators.

Nelson-Strouts and Gillispie (2017) described the home literacy practices of 21 caregivers of toddler and preschool-age children from the Prairie Band Potawatomi Nation. The researchers used a caregiver survey to gain a better understanding of Native American caregivers' impressions of shared book reading activities and oral storytelling. Respondents reported that they valued both oral storytelling traditions, as well as shared booked reading and related literacy activities. When looking specifically at the frequency of different early home literacy activities sampled, most families read several times a week and engaged in some behaviors (singing and telling rhymes) daily. Over 70% of respondents indicated that they did not think oral storytelling was more culturally appropriate than shared book reading, suggesting that both practices were considered culturally consistent ways to support language and literacy by this sample of parents. The majority of respondents also reported that pointing out letters/sounds and encouraging student comments and questions by the adult during both times of shared book reading were appropriate, and 90% of respondents believed that commenting and questioning behaviors by the child would be appropriate during times of oral storytelling.

Ferris et al. (2021) conducted ethnographic interviews with Native American caregivers of toddler and preschool-age children from a reservation in the Mountain-West region of North America. The first author is a tribal member of one of the tribes of this region and developed a series of ethnographic questions in order to gain a better understanding of caregivers' developmental priorities for their children. Caregivers identified several areas of development that they viewed as priorities, including Native culture and Native language preservation, preacademic skills (colors, numbers, shapes, and letters), learning new vocabulary, and shared book reading as a primary method to support their child's development and preparation for school.

Table 5. Charting of sources and details.

Source	Source type	Rigor
Fayden (1997)	Treatment study	High theoretical rigor and high methodological rigor
Ferris et al. (2021)	Nonexperimental descriptive qualitative study	High theoretical rigor and high methodological rigor
Gillispie (2021)	Clinical tutorial	High theoretical rigor and low methodological rigor
Guiberson & Ferris (current study)	Nonexperimental descriptive behavior and survey study	High theoretical rigor and high methodological rigor
Nelson-Strouts & Gillispie (2017)	Nonexperimental descriptive survey study	High theoretical rigor and high methodological rigor
Riser et al. (2020)	Nonexperimental associational study	High theoretical rigor and high methodological rigor
Peterson & Horton (2019)	Program description	High theoretical rigor and low methodological rigor

Peterson and Horton (2019) described practices in 4-year-old and 5-year-old preschool classrooms in Poplar Lake First Nations. In this program description, Anishinaabe tribal teachers provided cultural classes that included learning important traditions of the land and histories of the people, Ojibway language, and interaction with tribal elders. Children then had the opportunity to explore and reenact what they have learned in a child-led dramatic play. Teachers created accompanying texts and literacy exposure related to this play to reinforce cultural identity and support literacy.

In a clinical tutorial, Gillispie (2021) described the Culturally Responsive Early Literacy Instruction (CRELI) program, which was developed as a personnel preparation and training program preparing SLPs to work with native communities. The program coordinated with American Indian preschool programs in the Midwest and involved developing curricular units that featured culturally relevant storybooks as thematic centerpieces and activities to facilitate early language and literacy development. This curriculum applied evidence-based early reading instruction that included a focus on vocabulary, asking questions, story grammar, story retelling, phonemic awareness, phonics, word recognition, and early writing skills. These skills were taught in a cultural-based context of rich storybooks with important cultural themes, group discussion of themes, dramatic play, and art representation of those themes.

Evaluate Sources/Report Reliability

The authors applied a simple coding framework adapted from Whittemore and Knafl (2005). This coding framework was selected because it allowed for a variety of types of sources ranging from data-based treatment studies to program description sources. Eligible sources were coded by two criteria: theoretical rigor and methodological rigor with data on a two-point scale (high or low). Appendix C is a scoring protocol that was used for scoring. The first and second authors coded each of the sources and had 100% agreement for both theoretical and methodological coding determinations. Table 5 presents information on the sources.

Charting Data

Next, findings from all sources, including the integrative review sources and the descriptive study, were charted. This involved listing all strategies and interventions, sorting these and identifying themes or similar strategies, and adopting terms for strategies that consider various terms used to describe the strategy. The themes and terms that emerged from the integrative review were grouped into the following strategy categories: play-based strategies, teaching new words and print, questioning, other language enhancements, and enhanced interactions.

Presenting Findings and Potential Strategies Map

As a final step, a potential strategies map was created that presented individual strategies, sources that support the use of the strategy, and individual examples. The overall strategy of shared book reading was described across all sources. The five strategy categories were play-based strategies, teaching new words and print, questioning, other language enhancements, and enhanced interactions. A total of 20 individual strategies were identified. Table 6 presents these strategies and indicates which of the sources described or mentioned the given strategy.

Discussion

The purpose of this study was twofold: to complete a descriptive study and an integrative review. The goal of the descriptive study was to describe the behaviors of Native American caregivers and children during shared book interactions, to describe associations between shared book behaviors and language measures collected across play and two book activities, and to describe the reported frequency of caregiver language and teaching strategies. The goal of the integrative review was to identify potential culturally consistent early language and literacy intervention approaches and/or strategies based on existent literature and the findings from the descriptive study.

The descriptive study used a shared book coding framework to describe the interactions of caregivers and children and used a caregiver survey to describe the language and teaching strategies caregivers' reported they used most frequently. When considering the frequently observed behaviors, caregivers in this study not only encouraged a dialog between themselves and their child but also showed the ability to utilize the book's content (i.e., pictures and text) to guide the interaction. They did this by enhancing their child's attention to the text/pictures and posing questions about the book. Children frequently demonstrated attention-to-text behaviors. Behaviors within the *using literacy strategies* category were less frequently observed in both adults and children, which may have been due to the short book interaction observed or other variables (e.g., unfamiliarity with the research team and tasks being observed). From the caregiver survey, several language and teaching strategies emerged as more prevalent. Frequent language strategies included labeling items and teaching new words, interacting with others, and asking their child questions. Following the child's interest and joining in the child's play were both frequently reported teaching strategies. It should be noted that the caregiver survey and the behavioral coding together flushed out a picture of what the sample demonstrated or reported in terms of shared book, language, and teaching behaviors. Given the short interaction observed

Table 6. Map of potential strategies from integrative review.

Type of strategy	Specific strategy	Sources of strategy						
		Fayden (1997)	Ferris et al. (2021)	Gillispie (2021)	Guiberson & Ferris (current study)	Nelson-Strouts & Gillispie (2017)	Riser et al. (2020)	Peterson & Horton (2019)
Shared book reading		+	+	+	+	+	+	+
Play-based strategies	Comment on what your child is interested in or enjoys.				+			
	Join in when the child is playing or interested in a certain topic.				+			+
	Pretend with your child, including reenacting parts of a story.	+		+	+			+
	Encourage child-directed dramatic play and create accompanying texts to reinforce cultural identity and support literacy.	+		+	+			+
Teaching new words and print	Ask your child to name or label things (in your environment or in books).		+		+			
	Highlight new words in book, by repeating them several times, and bringing the word up again.	+	+	+	+		+	
	Point to pictures in books to explain new words.	+		+	+			
	Point to printed words or pictures in books when teaching new words.	+	+	+	+	+		
Questioning strategies	Ask questions to support comprehension or attention (e.g., *what* and *who* questions).	+		+	+	+		
	Ask questions to support attention (book engagement questions).	+		+	+	+		
	Ask inferential questions (*why* and *how* questions) or open-ended questions.	+		+	+	+		
	Encourage your child to ask questions.	+		+	+	+		
Other language enhancements	Describe things in your environment to your child.			+	+			
	Describe what your child is doing.				+			
	Describe pictures and what is happening in books.			+	+			
	Explain things if your child doesn't understand.				+			
	Encourage your child to interact and make comments.	+	+		+	+		
Enhanced interactions	Show your child your enjoyment in looking at books together.			+	+			
	Praise your child and encourage them to look at and handle books.				+			
	Maintain your child's interest and create a shared experience.			+	+		+	

Note. + = strategy described in source.

and the simplistic nature of the *Baby Rattlesnake Gets Her Rattle* story, it is not surprising that some behaviors were reported by parents but not observed (e.g., questioning behaviors were infrequently observed during shared book interactions but frequently reported by caregivers as a teaching behavior).

The integrative review involved combining findings from the descriptive study with findings from existent research to identify promising intervention approaches. Shared book reading interventions often focus on the dialog between the caregiver and the child and are guided by picture books with themes that are interesting to the child. The integrative review indicated that shared book experiences can provide a foundation for meaningful and contextualized interactions that are culturally consistent with caregivers' developmental priorities for children. Through the integrative review, the authors identified 20 potential shared book strategies that may be useful when working with Native American families. The finding that shared book interactions are a promising format to address the early language and literacy needs of young Native American children aligns with findings from a review of descriptive studies of literacy-promoting instructional approaches with Native American school-aged children (August et al., 2006). Culturally tailored literacy approaches that include both established reading instruction practices and culturally consistent practices (culturally relevant materials, opportunities for discussion and dialog, and rich language interactions) are heartily supported by this study and the review conducted by August et al.

This knowledge of culturally tailored literacy approaches is important because, up until recently, early intervention approaches have been primarily based upon European American interaction styles, with little attention given to other cultural groups. Researchers have identified problems with the cross-cultural validity and cultural relevance of early intervention language programs that are based upon European American frameworks (Guiberson & Ferris, 2018; Wing et al., 2007). An important guiding principle is that early intervention services should be culturally responsive and should align with the family's culture, preferences, and priorities (ASHA, 2008). Another important guiding principal is that early intervention services and SLPs need to demonstrate cultural humility when working with Native American families. This includes awareness of power balances and imbalances, personal and institutional accountability, and the historical trauma that Native Americans live with. These guiding principles will help when planning *culturally congruent* interventions that build upon caregivers' natural teaching patterns and developmental priorities (Wing et al., 2007; Guiberson & Ferris, 2018). By first encouraging caregivers to use strategies that they are already using, interventionists reinforce teaching behaviors that feel natural and can be easily adopted by Native American caregivers. In some instances, parents may not be engaging in a strategy that could potentially be useful. Following family-centered and culturally responsive practice tenets, SLPs can engage parents in dialog about a potential mainstream strategy, including why the strategy may be useful and ways to adapt the strategy (Cycyk & Huerta, 2020). For example, data from this descriptive study indicated that the parents in this sample did not ask children to recall information from the stories or solicit predictions. An SLP could describe how these strategies are sometimes used with young children to help them develop comprehension and storytelling skills. Then, the SLP could ask the caregiver, "Are there any new things you'd like to try out during shared book times? How do you feel about _____? Is there something else that might work better?" It may be helpful when preparing families from culturally diverse backgrounds for the transition to kindergarten to acknowledge the importance of their home culture and to discuss school culture and skills that may be highlighted once children begin kindergarten (Guiberson & Ferris, 2018). The idea is not to replace the home culture but to begin a dialog about cultural identity, cultural practices, and being a part of two or more cultural communities. Cultural pride, identity, and preservation should always be at the heart of these discussions. Using texts and storybooks that celebrate the home culture and home language can be effective ways to convey cultural respect. Based on clinical experience and knowledge from the literature base (Ferris et al., 2021; Gillispie, 2021; Nelson-Strouts & Gillispie, 2017; Peterson & Horton, 2019), the authors recommend using texts that were authored by Indigenous authors, that include Indigenous culture, and/or that present a wide range of traditional and modern Indigenous experiences. Unfortunately, there simply are not enough storybooks that feature Indigenous culture, characters, or languages. However, describing Indigenous peoples from across different areas of North America is in itself enriching and could support Indigenous pride. This type of discussion with children would lead to dialog about storybooks and the Indigenous characters, customs, and or words from tribal groups across North American and perhaps other tribal groups as well (Gillispie, 2021).

Limitations

Several limitations exist in this study. First, the families who participated in this study were primarily recruited through flyers in early education environments and word of mouth from other participants and

educational staff on the reservation. Therefore, the results of this study may exemplify the behaviors and reported priorities and preferences of families who are highly engaged in the education and development of their children and who have the resources and time to invest in such a project, which may not be characteristics of all Native American families within this community. Second, the use of the ACIRI is not a standardized tool and has not been used when describing behaviors of Native American caregivers during a shared book reading interaction. Common shared book reading behaviors described in this study may not fully represent the interactional behaviors of the studied Native American caregivers. In addition, some of the behaviors from the ACIRI may have not been observed, given the short interactions, the stimuli, and its simplicity; the stimuli itself may have been a factor. The developmental level and range of age of children included in this study varied. Children's age ranged from 14 to 42 months, the average age was 27 months, and most children in the study were between 24 and 35 months of age. This range of ages and developmental levels likely influenced caregivers' behaviors with books. In addition, it is unclear how caregivers' views and beliefs about disabilities, including developmental language disorders, may impact their practices with children, and if these beliefs would influence language and literacy practices. More research on caregivers' perceptions of disabilities is needed to better understand this. Despite these shortcomings, this study can serve as a starting point to begin to understand the behaviors that describe shared book reading with this population. In addition, the families consisted of a small sample of Native American children and caregivers from a reservation located in the Mountain West region of North America. Given this, generalizing the results of these findings to other Native American families, tribes, and communities may be inappropriate due to the heterogeneity that exists among Native American culture, behaviors, and beliefs. Finally, high-quality and well-designed treatment studies need to be conducted to evaluate the strategies described in this study in order to establish their effectiveness. There simply is not enough research describing language and literacy interventions for Native American populations; this knowledge is needed in order to develop culturally tailored literacy and language approaches that will assist families in supporting the early literacy of Native American children.

Conclusions

The goal of this study was not to provide levels of evidence for given interventions and strategies but rather to identify a potential set of strategies that may be useful for parents of young Native American children based on integrating findings from a descriptive study with the limited available research on Native American children. The strategies that are described here may be useful in designing pilot intervention programs and future studies to test the effectiveness of early language and literacy strategies for parents of young Native American children. Even so, more treatment research to establish the effectiveness of these strategies is clearly needed.

Data Availability Statement

Due to agreements with tribal councils, neither the data nor the source of the data can be made available.

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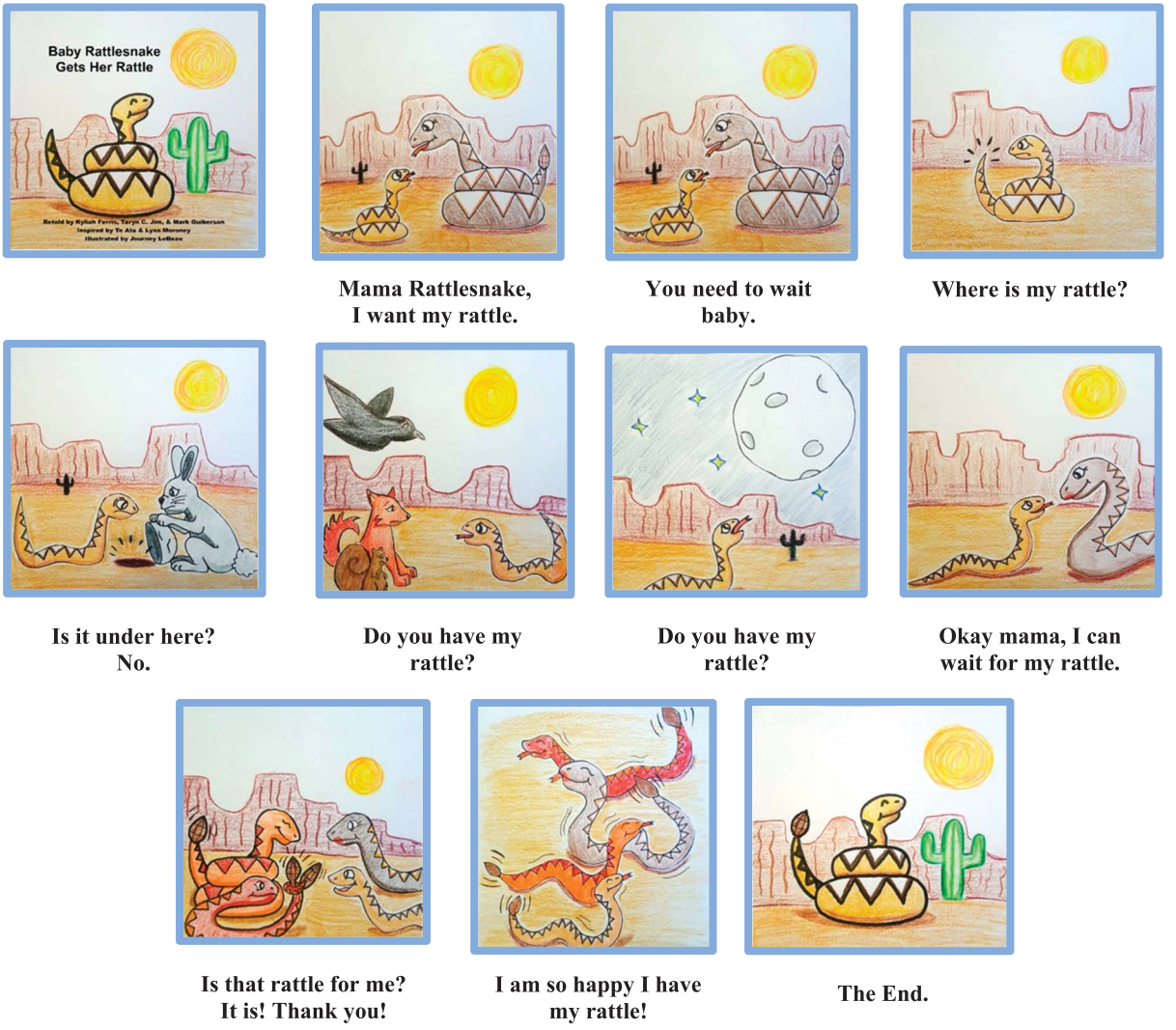
Appendix A

Baby Rattlesnake Gets Her Rattle Images and Text



Note. From Ferris et al. (2018). Appendix A images are original to this study and not previously published.

Appendix B

Integrative Review Steps

Step 1: Using EBSCO Academic Search Premier, ERIC, and PsycINFO databases with the following terms:

Term 1: Native American OR American Indian OR Indigenous OR First Nations OR Alaskan Natives
Term 2: literacy OR emergent literacy OR read*
Term 3: toddler OR preschool OR early intervention OR child OR pediatric

Step 2: Identify articles that met the following inclusion criteria:

a) The intervention or practice had to be intended for Native American children aged 5 or younger.
b) If participants were included, at least half the children in the sample had to be Native American.
c) Interventions/strategies had to address literacy.

Step 3: Evaluate sources for theoretical and methodological rigor. A two-point scale was used (high or low) to rate these items.

Step 4: Chart data.

a) List strategy/intervention applied.
b) Identify themes and develop codes for a strategy that takes into account various terms used to describe the strategy.
c) Create categories for similar strategies or strategies that target specific areas.

Step 5: Present findings and potential strategies map.

Appendix C

Protocol Used for Scoring Integrative Review Sources

	Theoretical rigor	**Methodological rigor**
High (2)	Included a rationale or justification for an approach or programming	Included data
Low (1)	Did not include rationale	Did not include data