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Are children from different countries exposed to diverse emotions in storybooks? Comparative study between Chile and the United States

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Abstract

Children's storybooks are relevant resources for references to different emotions, both positive and negative, and provide an excellent opportunity for adults and children to discuss them, thereby promoting children's comprehension of their own and others' inner worlds. However, we know little about the emotions present in children's stories and their frequency. This study investigated references to emotions in children's storybooks for preschoolers in Chile and the United States to analyze their characteristics and the similarities and differences between the two countries. References to specific emotions in the texts of 80 children's storybooks (40 for each country) were coded according to the categories of positive, negative powerless, and negative powerful emotions, and the specific emotions considered. The results revealed more references to positive and negative powerless emotions than to negative powerful emotions in storybooks from both countries, and happiness, fear, sadness, and anger were the predominant specific emotions referenced. For both countries, similar frequencies of references to specific emotions were observed, except for surprise, disappointment, and anger, which appeared more frequently in the Chilean storybooks than in the U.S. storybooks. These results are discussed considering the emotions

to which young children are exposed and the implications of such exposure for children's socioemotional development.

KEYWORDS
children's storybooks, cross-cultural comparison, emotions, writer nationality

1 | INTRODUCTION

Children's storybooks are relevant resources for learning about positive and negative emotions (Dyer, Shatz, & Wellman, 2000; Dyer-Seymour, Shatz, Wellman, & Saito, 2004; Shatz, Dyer, Marchetti, & Massaro, 2006), and provide an excellent opportunity for adults and children to discuss these emotions. This promotes children's comprehension of their own and others' inner worlds. However, we know little about the emotions presented in children's stories, the frequency with which they are presented, and whether there are differences between different cultures that lead to different emotion socialization processes for children from different countries. Thus, considering the relevance of emotion socialization during the early years, this study investigated references to emotions in the text of children's storybooks for preschoolers in Chile and the United States to analyze their characteristics and their similarities and differences between the two countries.

Studies on emotion socialization during the early years are relevant because early conversations between children and parents about emotions and desires influence children's later understandings of the inner worlds of those around them (Bartsch & Wellman, 1995; Dunn, Brown, & Beardsall, 1991). This makes emotions more objective and helping children represent and understand others' emotions separately from their own experiences. In addition, parents' conversations about emotions with their children predict children's references to emotions (Fivush, Brotman, Buckner, & Goodman, 2000), prosocial actions (Denham, Bassett, & Wyatt, 2007; Garner, Dunsmore, & Southam-Gerrow, 2008), more co-operative and conciliatory behaviours with their siblings (Dunn & Munn, 1986) and earlier development of the theory of mind (Meins et al., 2003; Ruffman, Slade, & Crowe, 2002). Therefore, children's abilities to achieve understanding of their own and others' inner states is, at least in part, a consequence of their conversational interactions during early childhood (Dyer et al., 2000).

Parents are very relevant during this process. Through emotion socialization, parents (and other relevant adults) model emotions, discuss emotions, and react to children's emotions, which impacts the extent to which children understand and express emotions (Denham, 1998). This socialization occurs in part through parent–child interactions (Fivush, 1991). These interactions occur in different contexts such as daily routines, free-play, and storytelling. Thus, what happens in these contexts and the potential opportunities that they offer to talk about emotions are important for emotion socialization. The literature shows that among preschool children, more references to different inner states, such as emotions, emerge in the storytelling context than in the free-play context (Farkas et al., 2018), and children's books act as important artefacts that provide rich information about these inner states in their text and characters' emotional displays (Dyer et al., 2000; Vander Wege et al., 2014). Therefore, it is necessary to study children's storybooks as potential resources for emotional discussions and socialization.

1.1 | Emotions in children's books

One traditional approach to studying emotions in children's storybooks emphasizes parents' use of emotional expressions while reading books with their children. In these interactions, parents tend to use several emotional references with their infants and toddlers (Adrian, Clemente, Villanueva, & Rieffe, 2005; Brownell, Svetlova,

Anderson, Nichols, & Drummond, 2012; Ruffman et al., 2002), and the use of these references remains constant at different children's ages (Álvarez, Cristi, del Real, & Farkas, 2019; Taumoepeau & Ruffman, 2008). Studies have shown a positive correlation between emotional terms used by parents while reading books with their children and the children's performance on a false belief task and their early prosocial behaviours (Adrian et al., 2005; Brownell et al., 2012). In addition, when children are encouraged to speak about emotional references and expressions when they read, they develop a higher facial recognition of emotions and empathy (Riquelme, Munita, Jara, & Montero, 2013).

A second less explored approach involves studying the content and language used in the texts of children's books. Studies following this approach have analyzed characters' displays of emotional expressions (e.g., Tsai, Louie, Chen, & Uchida, 2007; Vander Wege et al., 2014). To address the emotional content of children's books, Vander Wege et al. (2014) analyzed physical expressions found in book drawings. The authors classified emotions into three main categories according to their intensity and valence: positive emotions (e.g., happy, surprise), negative powerless emotions (e.g., sadness, fear), and negative powerful emotions (e.g., anger, jealousy). Negative powerless emotions are emotions that are more likely to occur because of a belief that certain factors are out of one's control whereas negative powerful emotions imply the feeling that one has control over events (Timmers, Fischer, & Manstead, 1998). The distinction between powerful and powerless negative emotions has been identified to be essential in cultural comparisons (Kitayama, Mesquita, & Karasawa, 2006), and we consider it in this study as well.

Additionally, other studies following this approach have focused on the type of language used in stories (i.e., emotion references), which is the approach we took in this study. Dyer et al. (2000) analyzed 90 children's storybooks and found that references to emotional states (e.g., happy) were quite frequent, showing that books are rich sources of references to emotions, which could encourage parents to talk about emotions in their interactions with their children. Other studies showed that children's books from different cultures contain different types of words related to emotions (Dyer-Seymour et al., 2004; Shatz et al., 2006), suggesting that books are important tools for the emotion socialization of children.

It is important to recognize that the use and interpretation of different emotions in children's development differs. Emotion socialization begins in the first days of life due to babies' capacities for facial and vocal recognition and their varied reactions to caregivers' gestures (Montague & Walker-Andrews, 2002). Later, from two years of age, children have a growing ability to recognize and name their own and others' emotions (Bretherton, Fritz, Zahn-Waxler, & Ridgeway, 1986) and start to use emotional labels (Dunn, Bretherton, & Munn, 1987; Widen & Russell, 2008). At three years old, most children show advanced understandings of emotional content (Bartsch & Wellman, 1995; Denham et al., 2002) and are able to more accurately label what they feel (Adrian & Clemente, 2004); between 3 and 5 years of age, children first begin to show strategies for emotional self-regulation (Denham et al., 2002; Denham & Kochanoff, 2002a, 2002b; Lemerise & Arsenio, 2000). These strategies initially increase due to emotions such as fear and anger. Later, fear and anger begin to stabilize and decrease and secondary or moral emotions, such as shame or guilt, take hold (Adrian & Clemente, 2004; Kujawa et al., 2014).

In addition, preschool children are able to perceive that the social goals of someone expressing anger are different from those of someone expressing fear or sadness. Anger (a negative powerful emotion) communicates the desire for dominance and distance and sadness and fear (negative powerless emotions) elicits prosocial behaviours and closeness (Jenkins & Ball, 2000). Another study found that children more commonly displayed sadness in situations when they wanted to share an activity or a toy with someone whereas they more frequently showed anger when they wanted distance (Strayer, 1980). Thus, the presence and diversity of emotional terms in children's storybooks is worthy of study and raises questions about possible cultural differences.

1.2 | Emotions across cultures

Emotion socialization is dependent on culture (Denham, Caal, Bassett, Benga, & Geangu, 2004; Halberstadt & Lozada, 2011), and the emotion references or expressions found in children's books tend to exhibit similarities and differences across cultures (Dyer-Seymour et al., 2004; Tsai et al., 2007; Vander Wege et al., 2014). Although some studies have focused on emotion references and others have considered emotion expressions, the aim in both cases has been to assess emotional content. Thus, in this review of similarities and differences of these studies, both types of studies are considered together. In terms of similarities, a study found that happiness, a positive emotion, was the most frequent emotion expressed by the characters in children's storybooks from the United States, Romania, and Turkey (62.6%), followed by surprise (7.5%). Additionally, positive emotions were more frequent than negative powerless and negative powerful emotions (69% vs. 31%) (Vander Wege et al., 2014). Similar results were observed in a study that compared Hispanic, Mexican, and European–American children's storybooks (Sanders, Friedlmeier, & Sanchez Gonzalez, 2018). Another study analyzed the same children's books in English and Japanese and found that both samples contained similar numbers of emotional references and frequencies of emotional terms (Dyer-Seymour et al., 2004).

Regarding differences, children's storybooks from the United States exhibited more positive emotional expressions than those from Romania (Vander Wege et al., 2014) and Taiwan (Tsai et al., 2007), but no differences were found between the storybooks from the United States and Turkey (Vander Wege et al., 2014). Additionally, the Romanian, Turkish, Hispanic, and Mexican books showed significantly higher percentages of negative powerless emotions than negative powerful emotions whereas the U.S. and European–American books displayed both emotions equally (Sanders et al., 2018; Vander Wege et al., 2014). A study that compared the same books published in both English and Japanese found more references to the term *surprise* in the Japanese versions of the books than in the English versions (Shatz, Dyer, Wellman, Bromirsky, & Hagiwara, 2001 cited by Dyer-Seymour et al., 2004). A comparison between the same books published in both English and Italian reported higher variability in the emotional concepts referenced by the Italian versions of the books (reflected in type scores) than by the English versions (Shatz et al., 2006).

These results could be interpreted in light of the role of cultural power distance in parents' emotion socialization (Halberstadt & Lozada, 2011). The concept of power distance refers to how people belonging to specific cultures view power relationships (vertical relationships) and concerns status differences and social hierarchies (Hofstede, Hofstede, & Minkov, 1991). Individuals from low power distance cultures (such as the United States, the United Kingdom, the Netherlands, Germany, and Austria) readily question authority; expect to participate in decisions that affect them; and tend to value equal power distributions, symmetrical relations, and horizontal-based interactions. Individuals from high power distance cultures (such as Chile, other Latin American and Arab countries, Turkey, China, and Malaysia) are very deferential to figures of authority and tend to accept unequal power distributions, vertical-based interactions, and asymmetrical relations. In lower power distance cultures, individual achievements are valued whereas in higher power distance cultures, rank, role, status, age, and even gender are valued more than individual performance (Hofstede et al., 1991).

Parents from cultures characterized by higher power distance tend to be more authoritarian and are concerned with teaching children to follow a specific set of behavioural standards and to be obedient and respectful from a very young age. On the contrary, parents from lower power distance cultures often have a more permissive disciplinary style, are less concerned about group conformity, and encourage children's individuality, security, and assertiveness (Schwab, 2013). How power distance is conceptualized in different cultures, for example, a preference for more horizontal or vertical relationships or the value attributed to obedience, has an effect on emotion socialization (Halberstadt & Lozada, 2011). For example, the value of *respeto* (respect), which is emphasized more frequently in Latin American families (higher power distance) than in families from other cultures, involves avoiding the expression of negative powerful emotions such as anger towards family members (Gonzalez-Ramos, Zayas, & Cohen, 1998) and could explain the lower frequency of negative powerful emotions than negative powerless

emotions (Sanders et al., 2018). On the contrary, in the United States (lower power distance), studies have shown no differences in the frequency of negative powerful emotions and negative powerless emotions (Sanders et al., 2018; Vander Wege et al., 2014).

In addition, lower power distance is more likely to be observed in individualistic cultures, which are characterized by a focus on personal achievement and personal goals rather than group interests. In contrast, higher power distance is more likely to occur in collectivist cultures, which are characterized by a focus on protecting the interests and well-being of the group and the established order rather than on personal goals (Hofstede et al., 1991). Therefore, the distinction between individualistic and collectivistic countries could help explain differences in emotion socialization. Research has suggested that individualistic countries follow an 'individualistic' model of emotional competence that encourages open emotional expression to promote children's senses of autonomy, assertiveness, and self-esteem (Vander Wege et al., 2014). Consequently, negative emotions such as anger, disgust, and disappointment are considered to support the assertion of the autonomous self and are favoured whereas emotions that threaten the child's self-esteem, such as shame and guilt, are discouraged (Markus & Kitayama, 2001). On the contrary, collectivist countries favour a relational model, according to which appropriate behaviour is prioritized within hierarchical relationships to seek social harmony and promote group interests (Vander Wege et al., 2014). Thus, emotions such as sympathy and shame are promoted to foster relational emotional competence (Chan, Bowes, & Wyver, 2009), and negative emotions, such as anger, are considered potentially disruptive to interpersonal relationships and are strictly controlled (Wang, 2003).

Other concepts suggested by Hofstede and Colleagues (1991) to mark differences between cultures can be used to distinguish Chile and the United States including masculinity and uncertainty avoidance. Masculinity refers to a culture's focus on competition, achievement, and success. Countries with higher masculinity, such as the United States, are highly competitive and value personal achievement and success, which dovetail with individualistic values. Countries with lower masculinity, such as Chile, are less competitive and value instead caring for others and for the group well-being, which dovetail with collectivist values. Finally, the concept of uncertainty avoidance refers to how each culture deals with the fact that the future can never be known. Cultures with lower scores on uncertainty avoidance, such as the United States, better tolerate ambiguity and anxiety regarding the unknown, are more open to new ideas, are more tolerant of ideas and allow freedom of expression. They do not require many rules and are less emotionally expressive than cultures with higher scores such as Chile.

Research shows that cultures with lower masculinity scores are freer with the expression of non-competitive emotions (e.g., sadness) and exhibit higher emotional expressiveness whereas in more masculine cultures, the expression of assertive emotions (e.g., anger or pride) is reinforced (Fernández, Carrera, Sánchez, Paez, & Candia, 2000; Paez & Vergara, 1995). In addition, cultures with higher scores on uncertainty avoidance are perceived as more emotionally expressive, but they also tend to regulate negative emotions more (Fernández et al., 2000).

1.3 | The present study

The literature review indicates that children's storybooks are a viable source of emotional references. However, questions remain regarding how diverse emotions are presented in these storybooks and the possible differences due to cultural variations. The aims of the present study were to describe the emotional references included in a sample of 80 preschool storybooks, 40 from Chile and 40 from the United States, and to analyze their similarities and differences, particularly with regard to cultural differences. Based on the literature reviewed above, we expected to observe a predominance of positive emotions, followed by negative powerless emotions, in both samples. Regarding specific emotions, we expected to observe higher frequencies of references to happiness, sadness, and anger. In terms of differences, we expected fewer references to negative powerful emotions in Chilean storybooks than in U.S. storybooks.

The preschool years were chosen because they are a very relevant stage in children's development; during this stage, children develop their cognitive skills, and they need to be ready to enter primary education, where they will face more contextual and academic demands (Baker, 2006; Burchinal et al., 2000). From a socioemotional perspective, children confront higher demands from groups that include pairs and other non-familiar adults and hence need to develop proper skills. However, during these years, children from both countries have different exposure to children's books. In an international study, Chile ranked last in literacy proficiency and the percentage of people who reported reading books. The United States ranked in the middle but higher than Chile (OECD, 2000). Studies showed that literacy practices at home were less frequent in Chile than in developed countries, where half of parents reported not sharing books with their preschool children (Susperreguy, Strasser, Lissi, & Mendive, 2007). Another study showed that 41% of low-SES parents reported never reading to their children or reading with them just one to two times per month, 10% reported owning no children's books, and an additional 60% reported owning 10 or fewer books (Mendive, Lissi, Bakeman, & Reyes, 2017).

In the United States, these practices were more frequent but varied widely based on factors such as family SES, maternal education, ethnicity, and language spoken at home. Some results showed that 84% of mothers who spoke English, compared with 48% of mothers who did not, read three or more times a week to their preschool children (Nord, Lennon, Liu, & Chandler, 2000) and that among mothers who had at least a bachelor's degree, 69% of White/non-Hispanic mothers reported reading daily to their preschoolers whereas only 28% of non-English speaking Hispanics reporting doing so (Yarosz & Barnett, 2001).

Regarding the storybooks analyzed in this study, we selected the literature to which children in Chile and the United States are most frequently exposed. These books provide children with certain views of their social realities, and thus, shape their approaches to different emotions. They also provide children with opportunities to talk about these emotions with other adults. Research analyzing such references in children's storybooks is very limited, and previous studies have focused on U.S. storybooks; however, no previous studies have analyzed and compared storybooks written in Spanish that are available for Chilean children. Hence, this exploratory study will provide novel results and enhance the knowledge in this field.

2 | METHOD

2.1 | Sample of materials

The data reported here are part of a larger research project analyzing references to mental states in storybooks from different countries. The present study analyzed verbal references to emotions in 40 storybooks written in Spanish for Chilean children and 40 books written in English for U.S. children (see online supplement 1). The 40 Chilean storybooks were randomly selected from a larger database of approximately 280 books compiled by the authors of the main project. This database included bestsellers and suggested books from the main libraries and bookstores in Chile and books suggested as part of the national plans to promote literature among Chilean preschoolers (the *Chile Crece Contigo* or Chile Grows with You) programme, the national book catalogue for Chilean public childcare centres (*Junta Nacional de Jardines Infantiles [JUNJI]*), the Centre of Resources for Learning (abbreviated CRA in Spanish; a project that aims to improve quality and equity in education), and different foundations and organizations. The inclusion criteria were books considered to be storybooks that included images and Spanish text and that were suggested for children between 3 and 4 years old. Activity or poetry books, compilations of different stories, classic stories (e.g., Cinderella) or books based on TV programmes were excluded from the study.

The 40 U.S. storybooks were randomly selected from a larger database of approximately 270 books compiled by the authors of the main project. This database included suggested or award-winning books from the Horn Book Guide, the School Library Journal 2017 list of best books, the Association for Library Service to Children (ALSC) 2017 notable children's books, Scholastic bestsellers and teachers' picks, the Goodreads choice award winners,

and the New York Times and Time Magazine bestsellers, as well as books that won Caldecott, Newbery, Coretta Scott King, and Pura Belpré awards, among others. The inclusion and exclusion criteria were the same as those used for the Chilean sample.

To ensure that the books were appropriate for preschoolers aged 3–4 years, we considered the age recommendation for each book from the original source, the editorial suggestion and a broader source, such as Amazon. To be included in the database, each book had to meet two of these three criteria with regard to the age mentioned. We characterized the selected books according to the writer's gender and nationality, the publication year of the book, and the numbers of pages and words. We obtained this information from the books, information from the editorials, and other websites. We organized writers' nationalities into the following regions based on the regions traditionally used in the literature and the nationalities observed in these samples: Europe, United States, Ibero-America, and Asia.

Regarding gender, 35% of the writers of the Chilean storybooks and 40% of the writers of the U.S. books were male. The Chilean books were published from 2002 to 2017, and the U.S. books were published from 1996 to 2018. A total of 58% of the writers of the Chilean books were from Ibero-America, 26% were from Europe, 11% were from the United States, and 5% were from Asia. Regarding the U.S. books, 85% of the writers were from the United States, 10% were from Europe, and 5% were from Asia. Finally, the Chilean books had an average of 22.2 pages (*SD* = 11.7, range of 1–56) and 425 words (*SD* = 346.6, range of 43–1460), and the U.S. books had an average of 33.2 pages (*SD* = 10.2, range of 13–66) and 395 words (*SD* = 253.9, range of 66–1120).

Comparative analyses between the samples showed no differences between the Chilean and U.S. books in writer gender, publication year, and number of words. We found differences between the groups in the number of pages and the writer's region of origin. The U.S. books had more pages than the Chilean books ($t = -4.51$, $p \leq .000$), and more Ibero-American and European writers were observed in the Chilean sample than in the U.S. sample ($\chi^2 = 48.24$, $p \leq .000$) (see Figure 1).

2.2 | Procedure to identify and code the references to emotions

To identify references to emotions in the storybooks, we consulted the lists of emotional references in Spanish and English previously compiled in the research literature on children's books and adults' conversations with

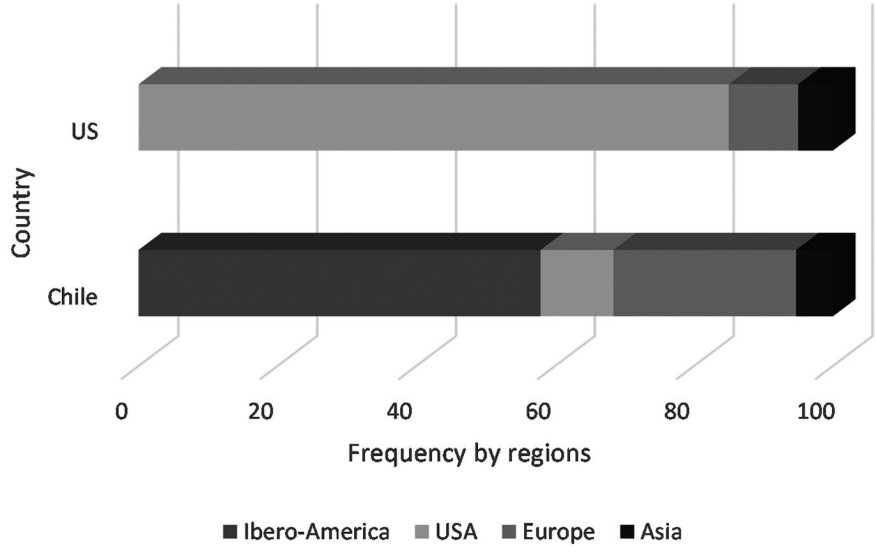

FIGURE 1 Distribution of writers' nationalities by region for each sample

children (Dyer et al., 2000; Dyer-Seymour et al., 2004; Farkas et al., 2018; Farkas, Strasser, Badilla, & Santelices, 2017; Shatz et al., 2001, 2006; Vander Wege et al., 2014). In addition, we added the references to emotions detected in the first read of the selected books and the Spanish/English translations of the emotions represented in only one language. When questions arose regarding whether a reference was an emotion that was not included in a previous list, a group of four experts in developmental psychology made the decision. These experts were all psychologists with PhDs, expertise in early infancy and development psychology, and knowledge of the analysis of references to emotions in adult speech.

The final list contained 21 distinct emotions classified into three types of emotions, following Vander Wege et al.'s (2014) classification strategy: *positive emotions* (e.g., happiness, pride), *negative powerless emotions* (e.g., fear, sadness), and *negative powerful emotions* (e.g., anger, jealousy) (see online supplement 2). To assess the inter-coder reliability, five Spanish/English bilingual coders coded 10 randomly selected books, and the agreement rate was 91% (range of 89%–94%). Then, four coders coded the storybooks in both samples, and the fifth coder, who was considered the "expert", reviewed their codes. All disagreements were discussed and resolved among the coders.

For each emotion, the overall frequency of terms used and the rate at which these terms occurred per 100 words (considering the total number of words in each storybook) were calculated to control for heterogeneity in the number of words per book. These terms were counted in two ways: first, as *tokens*, and then, as *types* as proposed by other authors (e.g., Dyer et al., 2000). Tokens referred to all occurrences of the terms within a category (the number of times the words were mentioned regardless of whether they were repeated, which was similar to the frequency of the term). Types referred the number of occurrences of different terms within a category or subcategory (the different concepts mentioned, which provided information about the heterogeneity in the use of each category or subcategory). For example, for the specific emotion "happiness", the occurrences of *happy*, *happiness*, *glad*, and *happy face* produced four tokens (four words mentioned) but only two types (happy [*happy*, *happiness*, and *happy face*] and glad) (for more details, see online supplement 2). For the specific emotion "anger", a book could contain the word "angry" 10 times, the word "mad" four times, and the word "furious" one time. This would yield a score of 15 for tokens (15 words mentioned in the "anger" category) and a score of three for types (three concepts: angry, mad, and furious). Finally, these scores were summed to create total scores for tokens and types for the three types of emotions: positive emotions, negative powerless emotions, and negative powerful emotions.

2.3 | Data analyses

For the descriptive analyses of the storybooks, frequency, and comparative analyses were conducted with a non-parametric-related sample test (*Wilcoxon test*). For the comparative analyses between the two countries, a non-parametric independent sample test (*Mann–Whitney U test*) was conducted. Non-parametric tests were chosen because the data distribution was not normal.

3 | RESULTS

3.1 | Descriptive results for references to emotions

The first aim of the study was to describe the emotional references included in a sample of Chilean and U.S. storybooks. Thus, in this section, we first present the descriptive results for the books (whether they contained references to emotions and the three types of emotions considered), and we then present the results for the references (for tokens first and then for types). In the total sample, 72.5% of the storybooks included at least one

TABLE 1 Presence of references to emotions (single and combined) in the Chilean and U.S. samples

	Chile (n = 40)		US (n = 40)		
	Freq.	Percent	Freq.	Percent	X^2 (p)
Frequency of emotional references per book					n.s.
None	9	22.5	13	32.5	
1	8	20.0	7	17.5	
2	5	12.5	7	17.5	
3	3	7.5	5	12.5	
4	3	7.5	2	5.0	
5	1	2.5	1	2.5	
6	0	–	1	2.5	
7	2	5.0	1	2.5	
8	1	2.5	1	2.5	
9	2	5.0	1	2.5	
10	2	5.0	1	2.5	
11	2	5.0	0	–	
12	0	–	0	–	
13	1	2.5	0	–	
14	0	–	0	–	
15	0	–	0	–	
16	0	–	0	–	
17	1	2.5	0	–	
Frequency of books with emotional references					
Emotions (any type)	31	77.5	27	67.5	n.s.
Positive emotions	20	50.0	19	47.5	n.s.
Negative powerless emotions	21	52.5	19	47.5	n.s.
Negative powerful emotions	10	25.0	3	7.5	4.50 (.033)
Frequency of books with emotion combinations					
Negative powerless + negative powerful emotions	6	15.0	2	5.0	n.s.
Positive + negative emotions	14	35.0	12	30.0	n.s.
Positive + negative powerless + negative powerful emotions	6	15.0	2	5.0	n.s.

reference to emotions; 48.8% of the books had positive emotions, 50.0% had negative powerless emotions, and 16.3% had negative powerful emotions. Considering the combinations of the different types of emotions, 56.3% had negative powerless and powerful emotions, 32.5% had positive emotions and one form of negative emotion, and finally, 10.0% had all three types of emotions. Considering the frequency of references in each book, in the Chilean sample, the frequency of references ranged between 1 and 17, although 22.5% of the books had no references to emotions. In the U.S. sample, the frequency of references ranged between 1 and 10, although 32.5% of the books had no references to emotions (see Table 1 for the details for each country). We compared both samples with chi-square tests, and the results showed differences only for negative powerful emotions, with more Chilean storybooks than U.S. storybooks including this type of emotion (χ^2 = 4.50, p = .033).

Regarding the references, we first present the results for tokens, which refer to all occurrences of the terms within a category (or the frequency of the terms). In the Chilean storybooks, 154 references to emotions were coded (M = 3.9 tokens, SD = 4.35) whereas 89 references to emotions were coded in the U.S. books (M = 2.2 tokens, SD = 2.63). The frequency distribution of the different types of emotions showed that positive emotions were most frequent (43.6%, n = 106 tokens), followed by negative powerless emotions (40.7%, n = 99 tokens), and negative powerful emotions (15.6%, n = 38 tokens). This order was the same for both countries, as shown in Figure 2.

Comparisons between these different types of emotions for each country revealed that the frequency of negative powerful emotions was significantly lower than the frequency of positive emotions for both countries (Z = −2.29, p = .022 for tokens in the Chilean books; Z = −3.28, p = .001 for tokens in the U.S. books) and the frequency of negative powerless emotions in the United States only (Z = −3.40, p = .001 for tokens in the U.S. books). No significant differences were observed between positive emotions and negative powerless emotions for either country.

The frequency distributions of the specific emotions showed that among the positive emotions, happiness was the most dominant emotion in both countries (18.2%, n = 28 tokens in the Chilean books; 31.5%, n = 28 tokens in the U.S. books), followed by surprise in the Chilean books (9.7%, n = 15 tokens) and love in the U.S. books (4.5%, n = 4 tokens); interestingly, pride and gratitude were rarely displayed in the Chilean books whereas surprise was rarely displayed in the U.S. books. Among the negative powerless emotions, fear was the most prevalent emotion in the books from both countries (20.1%, n = 31 tokens in the Chilean books; 18.0%, n = 16 tokens in the U.S. books), followed by sadness (8.4%, n = 13 tokens in the Chilean books; 15.7%, n = 14 tokens in the U.S. books). On the contrary, emotions such as shame and guilt were rarely referenced in the Chilean books and never referenced in the U.S. books. Among the negative powerful emotions, anger occurred more often (19.5%, n = 30 tokens in the Chilean books; 5.6%, n = 5 tokens in the U.S. books) than envy (1.3%, n = 2 tokens in the Chilean books), which never appeared in the U.S. books, and jealousy (1.1%, n = 1 tokens in the U.S. books), which never appeared in the Chilean books. Contempt, dislike and disgust were the only three emotions that never occurred in either sample (see Table 2).

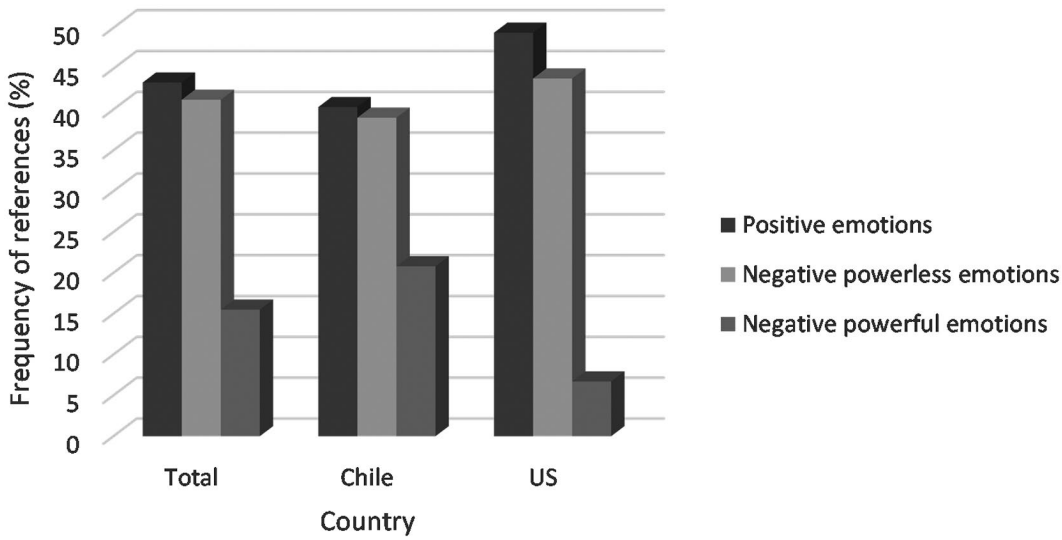

FIGURE 2 Frequency of types of emotions by country.
Note: Because the results were very similar for tokens and types, only tokens are presented in the figure

TABLE 2 Frequency (tokens) of specific emotions in Chilean and U.S. children's books

		Total (*N* = 243)		Chile (*n* = 154)		US (*n* = 89)	
Type	**Specific emotions**	**Frequency**	**Percent**	**Frequency**	**Percent**	**Frequency**	**Percent**
Positive emotions		106	43.5	62	40.1	44	49.5
	Happiness (*Alegría*)	56	23.0	28	18.2	28	31.5
	Love (*Amor*)	13	5.3	9	5.8	4	4.5
	Excitement (*Excitación*)	9	3.7	6	3.9	3	3.4
	Hope (*Esperanza*)	5	2.1	3	1.9	2	2.2
	Pride (*Orgullo*)	4	1.6	1	0.6	3	3.4
	Surprise (*Sorpresa*)	16	6.6	15	9.7	1	1.1
	Gratitude (*Agradecido*)	3	1.2	0	0	3	3.4
Negative powerless emotions		99	40.6	60	38.7	39	43.8
	Fear (*Miedo*)	47	19.3	31	20.1	16	18.0
	Sadness (*Tristeza*)	27	11.1	13	8.4	14	15.7
	Nostalgia (*Nostalgia*)	3	1.2	3	1.9	0	0
	Worry (*Preocupación*)	9	3.7	3	1.9	6	6.7
	Loneliness (*Soledad*)	4	1.6	1	0.6	3	3.4
	Shame (*Vergüenza*)	2	0.8	2	1.3	0	0
	Disappointment (*Decepción*)	5	2.1	5	3.2	0	0
	Guilt (*Culpa*)	2	0.8	2	1.3	0	0
Negative powerful emotions		38	15.6	32	20.8	6	6.7
	Anger (*Rabia*)	35	14.4	30	19.5	5	5.6
	Envy (*Envidia*)	2	0.8	2	1.3	0	0
	Jealousy (*Celos*)	1	0.4	0	0	1	1.1
	Disgust (*Disgusto*)	0	0	0	0	0	0
	Dislike (*Aversión*)	0	0	0	0	0	0
	Contempt (*Desprecio*)	0	0	0	0	0	0

3.2 | Comparative analyses between the Chilean and U.S. storybooks

The second aim of the study was to analyze the similarities and differences between these samples of Chilean and U.S. storybooks. To accomplish this goal, we conducted preliminary analyses to examine whether the storybooks from Chile and the United States were equivalent in terms of the quantity of words in the text. The number of words in the Chilean books (M = 422.2, SD = 344.87) did not differ statistically from that in the U.S. books (M = 394.5, SD = 253.87). However, considering the high level of heterogeneity in the storybooks (range of 43–1460 words in the Chilean books and 66–1120 words in the U.S. books), we calculated the proportion of emotional terms per 100 words (considering the total number of words in each book) for each code (types of emotions and specific emotions). We used these proportions in the following analyses (which allowed us to control for the number of words in each storybook).

The total number of references to emotions did not vary significantly between the two countries in terms of the scores for tokens. Similarly, there were no significant differences observed for the categories of positive emotions and negative powerless emotions. However, significant differences were observed for negative powerful

emotions (*Mann–Whitney U* = 659.00, *p* = .035 for tokens), with more references to this type of emotion observed in the Chilean than in the U.S. storybooks (see Table 3).

Regarding specific emotions, compared with the U.S. books, the Chilean storybooks included more frequent references to the emotions of surprise (*Mann–Whitney U* = 663.00, *p* = .016 for tokens), disappointment (*Mann–Whitney U* = 720.00, *p* = .042 for tokens), and anger (*Mann–Whitney U* = 658.00, *p* = .033 for tokens) (see Figures 3 and 4 and Table 3 for the descriptive information). No significant differences were observed between the two countries for the other emotions.

Finally, the results for types, which refer to the number of occurrences of different terms within a category or subcategory (or the different concepts mentioned, providing information about the heterogeneity of the use of each category or subcategory) were similar to those described for tokens. Again, comparison between the different types of emotions showed that the heterogeneity of negative powerful emotions was significantly lower than that of positive emotions for both countries (*Z* = −3.21, *p* = .001 for types in the Chilean books; *Z* = −3.66, *p* ≤ .000 for types in the U.S. books). It was also lower than that of negative powerless emotions for both U.S. and Chilean books (*Z* = −2.89, *p* = .004 for types in the Chilean books; *Z* = −3.30, *p* = .001 for types in the U.S. books).

The same differences reported for tokens were also observed in the comparison between countries. Considering the different types of emotions, significant differences were observed for negative powerful emotions (*Mann–Whitney U* = 663.00, *p* = .040 for types), with more heterogeneity in this type of emotion observed in the Chilean than in the U.S. storybooks (see Table 3). Regarding specific emotions, compared with the U.S. books, the Chilean storybooks included more heterogeneous concepts of the emotions of surprise (*Mann–Whitney U* = 663.00, *p* = .016 for types), disappointment (*Mann–Whitney U* = 720.00, *p* = .042 for types), and anger (*Mann–Whitney U* = 658.00, *p* = .033 for types).

4 | DISCUSSION

The main purpose of this study was to describe the references to emotions in a sample of Chilean and U.S. preschool storybooks and to analyze the possible cultural differences. Few studies have explored this topic, and most have focused on the emotional expressions found in drawings in children's books or references to mental states in general rather than to emotional references specifically (see, e.g., Dyer et al., 2000; Dyer-Seymour et al., 2004; Tsai et al., 2007; Vander Wege et al., 2014).

The most frequent type of references found in the storybook samples were for positive and negative powerless emotions, with a significantly lower frequency of references to negative powerful emotions. This result is consistent with those of Vander Wege et al. (2014), who analyzed the emotional expressions of book characters and found that negative powerful emotions were less frequent. Although norms for positive and negative emotions may vary across cultures, studies have shown that adults in all cultures mostly encourage positive emotions in young children (Cole & Tan, 2006). Research has also indicated that negative powerless emotions are widely accepted in both individualistic and collectivistic cultures because they do not convey any harm to the group. In contrast, negative powerful emotions are seen as disruptive and threatening to the group, and therefore, as needing to be suppressed (Vander Wege et al., 2014).

Regarding specific emotions, the most dominant emotions observed in the text of these storybooks were happiness, fear, sadness, and anger, which is consistent with the basic emotions described in the literature and addressed by other studies. With respect to happiness, some studies have found that individualistic societies have a higher regard for emotions such as happiness than collectivist societies (Eid & Diener, 2001; Tsai, Knutson, & Fung, 2006). However, studies on parents speaking about universal emotions found that even if some cultures express happiness more openly than others, happiness is a desirable emotion across different cultures (Denham et al., 2004) because it fosters social interaction and the formation and strengthening of social bonds and attachments (Abe & Izard, 1999).

TABLE 3 Descriptive statistics of the proportion of references to specific emotions in the Chilean and U.S. books

		Chile			US			
Emotions		**Min–Max**	**Mean**	***SD***	**Min–Max**	**Mean**	***SD***	**Mann–Whitney U test (*p*)**
Types of emotion								
Positive emotions	Token proportion	0–3.3	0.39	0.658	0–3.4	0.29	0.585	744.50 (.566)
	Type proportion	0–1.7	0.23	0.362	0–0.7	0.16	0.204	761.50 (.690)
Negative powerless emotions	Token proportion	0–10.2	0.58	1.665	0–1.4	0.26	0.364	765.50 (.723)
	Type proportion	0–2.0	0.23	0.415	0–1.4	0.19	0.289	789.50 (.914)
Negative powerful emotions	Token proportion	0–4.5	0.22	0.731	0–0.7	0.04	0.136	**659.00 (.035)**
	Type proportion	0–0.9	0.07	0.171	0–0.7	0.03	0.129	**663.00 (.040)**
Specific emotions								
Happiness	Token proportion	0–3.3	0.21	0.555	0–3.4	0.19	0.566	747.50 (.544)
	Type proportion	0–2.5	0.18	0.435	0–0.9	0.08	0.168	728.00 (.405)
Love	Token proportion	0–0.9	0.05	0.174	0–0.3	0.02	0.077	761.00 (.514)
	Type proportion	0–0.9	0.05	0.174	0–0.3	0.02	0.077	761.00 (.514)
Excitement	Token proportion	0–0.3	0.02	0.063	0–0.4	0.02	0.076	798.50 (.975)
	Type proportion	0–0.2	0.01	0.032	0–0.4	0.02	0.076	797.50 (.958)
Hope	Token proportion	0–0.9	0.03	0.135	0–0.4	0.01	0.056	760.50 (.314)
	Type proportion	0–0.9	0.03	0.135	0–0.2	0.00	0.028	760.50 (.314)
Pride	Token proportion	0–0.1	0.00	0.017	0–0.3	0.02	0.065	758.50 (.290)
	Type proportion	0–0.1	0.00	0.017	0–0.3	0.02	0.065	758.50 (.290)
Surprise	Token proportion	0–1.7	0.08	0.272	0–0.7	0.02	0.105	**663.00 (.016)**
	Type proportion	0–1.7	0.06	0.264	0–0.7	0.02	0.105	**663.00 (.016)**
Gratitude	Token proportion	0–0.0	0.00	0.000	0–0.4	0.01	0.067	760.00 (.155)
	Type proportion	0–0.0	0.00	0.000	0–0.2	0.01	0.037	760.00 (.155)
Fear	Token proportion	0–9.3	0.45	1.550	0–1.0	0.09	0.215	784.50 (.838)
	Type proportion	0–2.3	0.17	0.457	0–0.7	0.07	0.157	786.50 (.859)

(Continues)

TABLE 3 (Continued)

Emotions		Chile			US			
		Min–Max	Mean	*SD*	Min–Max	Mean	*SD*	Mann–Whitney U test (*p*)
Sadness	Token proportion	0–0.9	0.05	0.159	0–0.9	0.09	0.188	735.00 (.358)
	Type proportion	0–0.4	0.04	0.107	0–0.5	0.07	0.135	732.00 (.337)
Nostalgia	Token proportion	0–0.2	0.01	0.032	0–0.0	0.00	0.000	780.00 (.317)
	Type proportion	0–0.1	0.00	0.011	0–0.0	0.00	0.000	780.00 (.317)
Worry	Token proportion	0–0.3	0.02	0.064	0–1.4	0.05	0.220	760.50 (.465)
	Type proportion	0–0.3	0.02	0.064	0–1.4	0.05	0.220	760.50 (.465)
Loneliness	Token proportion	0–0.1	0.00	0.022	0–0.5	0.03	0.112	779.00 (.539)
	Type proportion	0–0.1	0.00	0.022	0–0.5	0.02	0.091	779.00 (.539)
Shame	Token proportion	0–0.4	0.01	0.059	0–0.0	0.00	0.000	780.00 (.317)
	Type proportion	0–0.2	0.00	0.029	0–0.0	0.00	0.000	780.00 (.317)
Disappointment	Token proportion	0–0.2	0.02	0.050	0–0.0	0.00	0.000	**720.00 (.042)**
	Type proportion	0–0.2	0.02	0.050	0–0.0	0.00	0.000	**720.00 (.042)**
Guilt	Token proportion	0–0.2	0.01	0.029	0–0.0	0.00	0.000	760.00 (.155)
	Type proportion	0–0.2	0.01	0.029	0–0.0	0.00	0.000	760.00 (.155)
Anger	Token proportion	0–4.5	0.21	0.728	0–0.5	0.03	0.102	**658.00 (.033)**
	Type proportion	0–0.9	0.09	0.190	0–0.5	0.02	0.091	**658.00 (.033)**
Envy	Token proportion	0–0.3	0.01	0.049	0–0.0	0.00	0.000	780.00 (.317)
	Type proportion	0–0.2	0.00	0.025	0–0.0	0.00	0.000	780.00 (.317)
Jealousy	Token proportion	0–0.0	0.00	0.000	0–0.3	0.01	0.053	780.00 (.317)
	Type proportion	0–0.0	0.00	0.000	0–0.3	0.01	0.053	780.00 (.317)

The bold values were significant considering the *p* values (lower than .05).

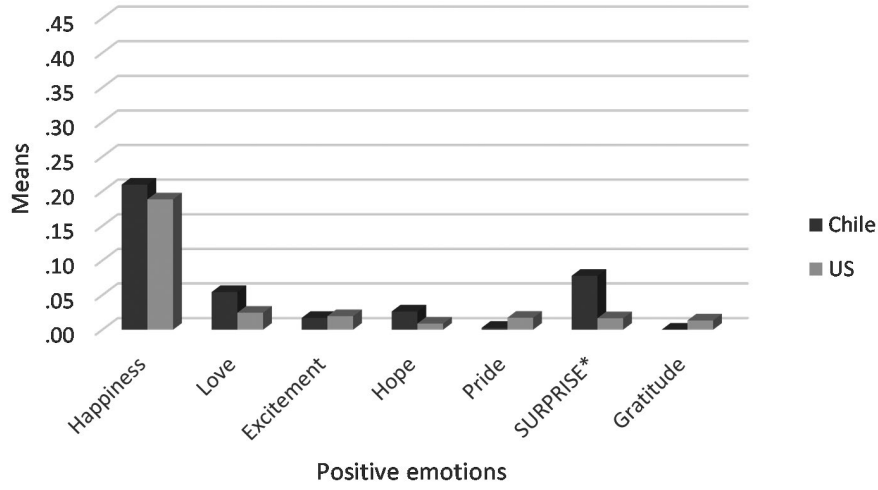

FIGURE 3 Distribution of specific positive emotions by country.
Note: *$p \leq .05$. Because the results were very similar for tokens and types, only tokens are presented in the figure

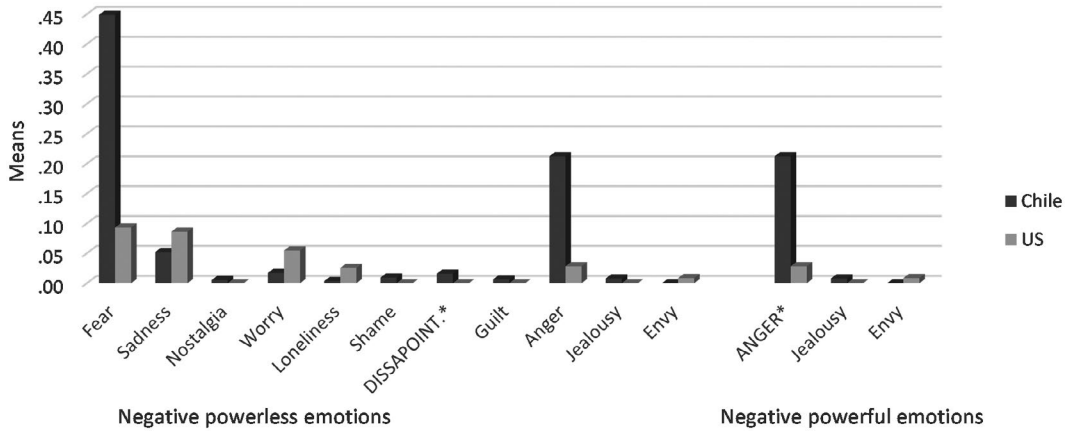

FIGURE 4 Distribution of specific negative emotions by country.
Note: *$p \leq .05$. Because the results were very similar for tokens and types, only tokens are presented in the figure

Sadness and fear (negative powerless emotions) are also relevant emotions, especially during infancy. Sadness invites empathy and helping behaviours, which are very important during the time when a child is most helpless and dependent on others whereas fear elicits protective and comforting behaviours from adults (Abe & Izard, 1999). These emotions appear to be responses to perceived negative events; for example, sadness is a response to loss, and events perceived as dangerous or threatening elicit the emotion of fear (Levenson, 1999).

The main social function of anger (a negative powerful emotion) has been argued to be the attainment of a better outcome through forced changes in another person's behaviour. Although anger could be considered a negative emotion because of its consequences, it could also be beneficial. For example, anger could be a signal to other people that a person feels that he/she has been treated unfairly, or it could enhance self-esteem because the person could confront an irritating situation (Fischer & Roseman, 2007). Studies on parents speaking about universal emotions found that parents agreed that anger is a negative emotion that should be controlled, but there were cultural differences regarding how to manage it (Denham et al., 2004). Although in this study, negative

powerful emotions were referenced less frequently than positive emotions, anger was referenced with the same frequency as happiness in the Chilean sample.

Emotions such as happiness, fear, sadness, and anger, which appeared frequently in both samples of books, are emotions that have unique purposes and are therefore important for children to learn, which makes storybooks a resource for children's emotion socialization. Emotion socialization impacts how children learn to identify, express, and regulate their emotions (Brownell et al., 2012). Cultural artefacts such as children's storybooks are rich in emotional content (Dyer et al., 2000), act as a specific pathway through which emotions are presented, and provide an important resource for children to learn about culturally appropriate emotions and how to control or manage inappropriate emotions (Adrian et al., 2005; Ruffman et al., 2002; Vander Wege et al., 2014).

The second aim of this study was to analyze the similarities and differences between Chilean and U.S. storybooks. Similarities were mainly found between the two samples of books in relation to the distribution of positive, negative powerless, and negative powerful emotions, and the frequencies of each of these categories and specific emotions. Differences between the countries were found only in relation to negative powerful emotions and the specific emotions of surprise, disappointment, and anger, with the Chilean books having higher frequencies of these emotions than the U.S. books.

Considering Hofstede's dimensions, the Chilean culture has higher scores on power distance and uncertainty avoidance and lower scores on individualism and masculinity than the U.S. culture (Hofstede et al., 1991). Cultures with this profile are characterized as more expressive of their emotions, but tend to avoid the expression of negative powerful emotions such as anger; thus, the higher frequency of negative powerful emotions in the Chilean books was initially surprizing because we expected the opposite results. Our expectation was based on cultural studies on different countries (Hofstede et al., 1991). Regarding power distance and its effect on emotion socialization, Latin American families (higher power distance) avoid the expression of negative emotions such as anger (Gonzalez-Ramos et al., 1998) whereas people in countries such as the United States (lower power distance) show a higher proportion of negative powerful emotions (Vander Wege et al., 2014). In addition, in more individualistic countries, negative emotions such as anger, disgust, and disappointment are considered to support the assertion of the autonomous self and are favoured (Markus & Kitayama, 2001) whereas in collectivist countries, these emotions are considered potentially disruptive and are strictly controlled (Wang, 2003). This latter profile appears in countries with lower scores for masculinity and higher scores for uncertainty avoidance, such as Chile (Fernández et al., 2000; Paez & Vergara, 1995).

Throughout history, the Chilean culture has been more collectivistic than U.S. culture (Hofstede et al., 1991) and still differs from the United States in its higher power distance and uncertainty avoidance and lower masculinity. Thus, the intention to control disruptive emotions such as anger and negative powerful emotions is generally favoured in Chile. This intention is reflected in the higher levels of self-regulation observed in Chilean infants than in U.S. infants (Farkas & Vallotton, 2016) and in the higher use of regulatory references among Chilean mothers interacting with their children than among U.S. dyads (Santelices et al., 2020). However, these studies were conducted with a focus on children's competences and parent–child communication and did not consider book content. Thus, it could be hypothesized that the storybooks that are available to/chosen for Chilean preschoolers (compared with U.S. books) have a higher frequency of references to negative emotions, such as anger and disappointment, which provides dyads with more opportunities to discuss the expression and consequences of these emotions, thereby enhancing children's emotion regulation. However, these interpretations are only speculative; to examine this hypothesis, future studies could code (the presence and function of) emotion regulation in children's books and could also analyze in which contexts and how these references are presented (e.g., as inappropriate or not).

The emotion of surprise has been less studied, so it is difficult to understand the difference in references to this emotion between the Chilean and U.S. books. However, Chile scores higher in the dimensions of collectivism and uncertainty avoidance (Hofstede et al., 1991), which are related to higher emotional expressiveness, especially of positive emotions and non-competitive (or powerless) emotions (Fernández et al., 2000; Paez &

Vergara, 1995). Thus, these characteristics are consistent with the more frequent references in the Chilean books to surprze and disappointment, considered by this study as a positive emotion and a negative powerless emotion, respectively. In addition, a study that compared the same books published in both English and Japanese found more references to surprise in the Japanese versions of the books (Shatz et al., 2001 cited by Dyer-Seymour et al., 2004), and Japan has similar scores as Chile for power distance and uncertainty avoidance (Hofstede et al., 1991). Surprise occurs when there is a mismatch between belief and reality (Hadwin & Perner, 1991) and when a person confronts unexpected events. Considering that Chile is a more unstable country than the United States, as countries in Latin America have been continually shifting between political crises and democracy (Lagos Cruz-Coke, 2001), "surprising" events are probably more frequent in Chilean people's lives, and the inclusion of references to surprise in Chilean storybooks may also provide more opportunities for dyads to discuss this emotion and the situations related to it. Future studies could analyze the valence of this emotion (e.g., a surprise could be positive, negative, or neutral depending on the context) and in which contexts these references appear.

Some limitations of this study must be mentioned. This study considered storybooks only for children between 3 and 4 years old, which limits the generalizability of the results. Future research should consider storybooks for children of different ages. In addition, only the emotional references in the text of the books were considered, but the emotional expressions of the characters could tell a different story. This is also related to the fact that in 27.5% of the books, no reference to emotions was detected, which was surprizing. Thus, indirect descriptions of emotions in the texts, as well as characters' expressions and the coherence between the text and the characters' expressions, should be considered in future studies, to provide a richer analysis of this issue. This study excluded classic stories and books based on TV programmes, which could introduce bias in the analysis because TV programmes could expose children to alternate cultures at an early age. Future studies could analyze these other types of books and determine if the results differ from those of this study. In this study, our findings about the similarities and differences between the references to emotions in the children's books from these two countries were descriptive, and they did not provide conclusive evidence about how these differences could affect children's emotional development, especially due to the existing differences between the two countries in reading practices with children. Further studies should examine the different emotions that are addressed in children's books across cultures and their impacts on children's ability to obtain a deeper understanding of emotion socialization in different contexts.

The storybooks analyzed in this study were selected from those to which children in Chile and the United States are most frequently exposed. However, children from these countries have differential exposure to children's books. Studies show that Chile ranks last in literacy proficiency and the percentage of people who reported reading books, and the U.S. ranks in the middle but higher than Chile (OECD, 2000). In addition, studies show that literacy practices at home are less frequent in Chile than in developed countries; half of parents reported not sharing books with their preschool children, and 60% of parents reported owning 10 or fewer children's books (Mendive et al., 2017; Susperreguy et al., 2007). Thus, children's books are relevant tools for cultural emotion socialization, but their impact varies according to the frequency that children from each culture are exposed to books as well as family literacy practices. Future studies could consider the impact that storybooks have on children's emotional socialization, taking into account family literacy practices and exposure to books, and future interventions, especially in Chile, should consider how to increase children's book reading during infancy.

Despite these limitations, the findings add knowledge to the scarce but growing literature in the field, providing novel results by examining Chilean culture and raising new questions for future research. Additionally, the study provides support for the notion that books are relevant sources of emotional references and could be considered important for emotion socialization (Dyer et al., 2000). During the emotion socialization process, children must learn to understand, express, and self-regulate emotions in social contexts, which is relevant for their future social competences, academic achievement, and psychological well-being (Thompson, 2015). This socialization occurs within the family and in educational settings though different routines, practices, and interactions, and children's books may act as tools for cultural emotion socialization.

Children's books not only contain emotional terms, allowing children to talk about different emotions, but also include richer and more complex language than that in other contexts and depict a set of possible situations, in which children could relate to these emotions. Studies have demonstrated that when books contain emotional content, adults talk more about emotions during book sharing with children (Goetsch, 2016), indicating that the emotions referenced in storybooks encourage conversations that promote reflective understanding of emotional states (Kristen & Sodian, 2014). However, this study indicated that not all the children's storybooks include emotional references in their written stories; 22.5% of the Chilean books and 32.5% of the U.S. books did not include any emotional references. In addition, the range of emotional references was heterogeneous between the books; some books had only one emotional reference whereas one book had 17 references. Therefore, the selection of books is relevant, and books richer in emotional references (in terms of both frequency and heterogeneity) will enhance emotion socialization between adults and children during book sharing, helping children label different emotions, understand the causes and consequences of these emotions, and learn by modelling and reflecting on how to self-regulate emotions in social contexts.

CONFLICT OF INTEREST

The authors have no conflicts of interest relevant to this article to disclose.

DATA AVAILABILITY STATEMENT

The data that support the findings of this study are available from the corresponding author upon reasonable request.

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SUPPORTING INFORMATION

Additional Supporting Information may be found online in the Supporting Information section.

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