

What Typically Developing Children's Parents Say When They Read Books About Disabilities

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Abstract

The purpose of this study was to examine (a) how parents and their kindergarten-age children talk about disabilities when they read books that include characters with disabilities and (b) the relationship between the frequency of mother/child comments about disabilities and children's attitudes toward peers with disabilities, as measured by the Acceptance Scale for Kindergarten–Revised (ASK-R). Thirteen mothers and their children audiotaped their conversations when they read books that included characters with disabilities. Seventy conversations were analyzed and 12 themes were identified. The themes that appeared most frequently in the mother–child conversations about disabilities included differences in abilities and similarities between the child and the book characters with disabilities. Although the relationship between the number of words spoken by the parent–child dyads and children's attitudes toward peers with disabilities was not statistically significant, group differences between the number of words spoken and the content of the disability-related conversations were observed.

Keywords

kindergarten children, attitudes toward peers with disabilities, parent–child shared book reading

Given that experiencing positive relationships with peers of different abilities is beneficial for children with and without disabilities (Salend & Duhaney, 1999), researchers have put considerable efforts into finding ways to promote typically developing children's attitudes toward their peers with disabilities. Although attitudes are influenced by direct experience, indirect experience, and a person's social group (Allport, 1954; Triandis, Adamopoulos, & Brinberg, 1984), research has primarily investigated the influence of direct experiences (e.g., contact with people with disabilities) and indirect experiences (e.g., reading books about people with disabilities) on children's attitudes toward persons with disabilities. Many interventions are based on understanding the effects of these direct and indirect experiences (e.g., Armstrong, Rosenbaum, & King, 1987; Favazza & Odom, 1996; Salend & Moe, 1983; Westervelt, Brantley, & Ware, 1983). However, less attention has been given to the influence of social groups (i.e., family and friends), which also impact attitude development.

While studies specifically investigating parents' influence on children's attitudes toward persons with disabilities are limited, much research has demonstrated that parents have a powerful impact on their children's academic achievement, sexual attitudes, gender-role stereotyping, and attitudes toward people of different ethnicities (Castelli, Zogmaister, & Tomelleri, 2009; Jaynes, 2005; Paretti &

Sydney, 1984; Sinclair, Dunn, & Lowery, 2005; Thornton & Camburn, 1987; Weinraub et al., 1984). Parents communicate their attitudes by answering questions, talking about what they think, behaving in certain ways, and disapproving or approving certain behaviors (Innes & Diamond, 1999; Lieber et al., 1998).

Only a few studies have examined the relationship between the attitudes of typically developing children and their parents toward individuals with disabilities, and the results are variable. For example, King, Rosenbaum, Armstrong, and Milner (1989) used questionnaires to evaluate the importance of several factors including parental attitudes in predicting children's attitudes toward individuals with disabilities. They found no relationship between the attitudes of parents and children. In contrast, Katz and Chamiel (1989) found that the attitudes of 5- and 6-year-olds closely resembled their parents' attitudes toward individuals with disabilities whereas attitudes of 11- and 12-year-olds were not related to their parents' attitudes.

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These inconsistent results suggest a need for further research on this topic.

Several studies did not directly compare the attitudes of parents with their children. Rather, these researchers attempted to examine the relationship between parents' ideas and comments about disabilities and children's interactions with peers with disabilities. Using two stories depicting different situations involving a child with a disability, Okagaki, Diamond, Kontos, and Hestenes (1998) asked parents what they would do if a child with a disability struggled to interact with other children. The degree of parents' willingness to model interactions with children with disabilities for their children was closely related to the frequency of their children's interaction with peers with disabilities during free play. Similarly, Innes and Diamond (1999) asked 40 mothers to talk to their children about photographs of children with physical disabilities. The frequency of comments made by the mothers was negatively related to the frequency of the children's interactions with peers with disabilities, as rated by the teacher. Although this result was contrary to Innes and Diamond's original hypothesis, they felt that it may suggest that mothers who released the leading role during the mother-child discussion had more opportunities to influence their children's ideas and behaviors by responding to their children's comments and questions than they would have had by leading the discussion themselves. In fact, Innes and Diamond found that teachers' ratings of children's interactions with peers with disabilities were positively related to the frequency of children's comments.

Taken together, research examining parental impact on typically developing children's attitudes toward peers with disabilities is limited and dated. The most recent study (Innes & Diamond, 1999) was published more than a decade ago. In addition, the results of the previous studies are inconsistent. Finally, with a strong focus on quantitative analyses (e.g., rating scales, questionnaires), the research lacks details about the ways in which parents and children share their ideas, thoughts, or attitudes toward people with disabilities.

To address some of these gaps, the current study included qualitative and quantitative measures in its focus on natural conversations between parents and their children about disabilities. Understanding how parents transmit their ideas about disabilities can help us identify the needs that parents have when they discuss people with disabilities with their children. This information can provide direction for developing effective parent education programs.

The purpose of this study was to examine (a) how parents and their kindergarten-age children talk about disabilities when they read books that include characters with disabilities and (b) the relationship between the frequency of mother/child comments about disabilities and children's attitudes toward peers with disabilities. Because shared

book reading is a common, natural context for early parent-child communication, analyzing what parents and children say when they read books that included characters with disabilities provided valuable qualitative information about how parents and children share ideas about disabilities. Specific research questions addressed were as follows: (a) What themes related to disabilities emerge from the conversations between parents and children when they read books that include characters with disabilities? (b) To what extent is the frequency of parent/child comments about disabilities and children's attitudes toward peers with disabilities correlated?

Method

Participants

This study was conducted on a subsample of participants from a larger study funded by the Institute of Education Sciences. This large randomized cluster design study examined the efficacy of a classroom-wide affective intervention, the *Special Friends* program (Favazza, LaRoe, & Odom, 1999). Intervention and follow-up data were gathered in 32 kindergarten classrooms across two states. Classrooms were randomly assigned to either an experimental group, which received the 6-week *Special Friends* program, or to a control group, which received a 6-week science program.

Participants in the current study were recruited from two classrooms assigned to the *Special Friends* intervention. Thirty-two consent letters were sent to the guardians of typically developing children in two *Special Friends* classrooms, and 16 parent-child dyads agreed to participate (50%). Three dyads, however, were excluded from the final analysis because they submitted less than 50% of the data (i.e., less than 3 weeks of recorded conversations during shared book reading).

The 13 mother-child dyads who submitted at least 3 weeks worth of data were considered participants in this study (five from Classroom 1 and eight from Classroom 2). No fathers agreed to participate. All but one mother and all participating children were native English speakers. The mother who was not a native English speaker was fluent in English. Seven of the participating children were girls and six were boys. Six children received free or reduced lunch (our proxy for low socioeconomic status [SES]). Seven children were White, three were Black, one child was Asian, and two children were identified as Other in terms of race. Children with disabilities in each classroom were identified by teachers. Classroom 1 had 24 children, four of whom had disabilities (two boys and two girls with speech and language impairments, intellectual disability, or selective mutism). Classroom 2 had 18 children, 5 of whom had disabilities (3 boys and 2 girls with attention-deficit/hyperactivity disorder, behavioral disorder, other health

impairment, or autism spectrum disorder). Following completion of this study, each dyad was given two children's books as an expression of appreciation.

Research Design

Special friends program. The major components of the 6-week *Special Friends* program consisted of (a) school literacy experiences, (b) cooperative learning groups (CLGs), and (c) home literacy experiences. Each of the three program components addresses one aspect of attitude development explained by Triandis et al. (1984). School literacy experiences indirectly exposed children to disabilities through large-group book reading followed by class discussion. Immediately after the school literacy experiences, all children in the class participated in CLGs, which provided typically developing children with opportunities to interact with classmates with disabilities around hands-on, cooperative activities. The four to six members of each CLG remained consistent across the intervention. A daily session of the *Special Friends* program lasted 30 min, with 15 min of school literacy experiences and 15 min of CLGs. Three sessions were implemented each week for six consecutive weeks, totaling 18 sessions per classroom.

The third component of the *Special Friends* program is a home literacy component. This was designed to influence children's attitudes through their primary social group (i.e., family). At the end of each week, each child selected one book from the three books he or she read with the teacher during the school literacy experience time, and brought the book home to read with an adult family member. Parents were aware of the focus of the study from the consent form explaining the purpose of the *Special Friends* program as promoting more friendships with and social acceptance of children with disabilities. However, other than shared book reading, parents were not involved in the *Special Friends* program.

A *discussion guide* (DG) was placed in each book, each week. The DG provided family members with sample questions to ask and ideas for facilitating discussions around (a) the content of the story (e.g., "Who is the girl in the book?"); (b) an explanation of disability or related vocabulary (e.g., "Your brain sends messages to tell your arms and legs to move, but when you have cerebral palsy, your legs and arms don't get the message to move the right way . . . A person is born with it"); (c) similarities (e.g., "What are some things that you and Susan both do?"); (d) equipment related to the story (e.g., "What is this? Wheelchairs can help someone move around"); and (e) CLGs (e.g., "Tell me about your CLG experiences at school"). The first time a book went home, a sheet was included in the bag that described why it was important to read to children and encouraging parents to do so. No particular attention was drawn to the DGs, nor were the parents required to use

them. Each child took six books home over the course of the 6-week *Special Friends* program.

Books used for the *Special Friends* program were identified through a multistep process (see Ostrosky, Mouzourou, Dorsey, Favazza, & Leboeuf, in press). Some books represented people with specific disabilities whereas other books represented people with disabilities in general. Disabilities featured in the *Special Friends* books included physical disabilities, deafness, blindness, Down syndrome, cerebral palsy, and autism.

Current study. Because the purpose of this study was to examine what typically developing children and their parents say when they read books that include characters with disabilities, the home literacy component of the *Special Friends* intervention was the focus of the investigation. A tape recorder and an audiotape identified with parent/child names were sent home with the 13 target children each week of the intervention. Eight dyads recorded their conversations all 6 weeks, three dyads returned five audiotapes, one dyad returned four audiotapes, and one dyad sent back three audiotapes. This resulted in 70 audiotaped conversations between parents and their children.

Measures

As part of the *Special Friends* study, research staff administered 16 measures per classroom. Among these measures, the Acceptance Scale for Kindergarten-Revised (ASK-R) is closely related to the focus of this study. The ASK-R (Favazza & Odom, 1999) measures the attitudes of kindergarten children toward their peers with disabilities. This paper and pencil tool includes 18 questions, such as "Do you play with kids even if they look different?" and "Would you like to be good friends with a kid who can't talk yet?" Children answer *yes*, *no*, or *maybe*, with higher scores representing more positive attitudes toward peers with disabilities.

Qualitative data were gathered from audiotaped conversations between mothers and their children while they read books about disabilities. On the first day of the home literacy component (i.e., Day 3 of Week 1), a packet was sent home that included the book selected by the child, a tape recorder, and a tape. A welcome letter to draw the mothers' attention to guidelines for recording was also included in the packet. The guidelines reminded parents to have the same parent read with the child across the 6 weeks, record when they read the story for the first time, read as they normally would, and record both their reading and the discussion following the reading.

On the last day of the home literacy component (i.e., Day 3 of Week 6), a thank you card and a list of 18 books that children read as part of the *Special Friends* program were sent home. The parents were asked to complete a short

survey to ascertain if any of the books had been read by their children before the study. None of the 13 dyads had previous exposure to any of the *Special Friends* books.

The 70 audiotaped conversations were transcribed verbatim by a graduate student majoring in speech and hearing science. The first author rechecked the accuracy of the transcripts by comparing the transcripts with the audiotaped conversations. Discrepancies were found to be minimal (i.e., less than five words in each transcript; transcripts were 1,294 words on average, ranging from 268 to 3,355 words and from 3 to 21 pages). Discrepancies were corrected prior to data analysis.

Several demographic factors including gender, SES (as an indicator of maternal education), and a child's history of contact with people with disabilities were analyzed because these are known determinants of attitudes toward people with disabilities (King et al., 1989; Strohmer, Grand, & Purcell, 1984). Because income and level of education tend to be highly correlated (Sirin, 2005), SES was used as a proxy for maternal education. For the purpose of group comparisons, dyads comprising children who received free or reduced lunch were considered the low-SES group while dyads comprising children who did not receive free or reduced lunch were considered the high-SES group.

Discussion guides were also used in data analysis because they were designed to facilitate parent-child discussions about disabilities. DG usage was measured by listening to the recorded parent-child conversations. Whenever the parent or child asked at least three questions from the DG, it was recorded as DG usage. The dyads were divided into two groups based on the mother's use of the DG. Mothers who used the DGs more than half of the time (e.g., 3 weeks or more out of 6 weeks) were considered the high-DG usage group, while mothers who used the DGs less than half of the time were considered the low-DG usage group.

Data Analysis

Segments about disabilities. Because the primary interest of this study was parent-child conversations about disabilities, the first step of data analysis was to separate the segments of conversations about disabilities from other segments (e.g., mother helping her child decode difficult words) so that only segments about disabilities were analyzed. A segment about disabilities could include more than one comment, question, or response. The segment *started* when the parents or child began talking about disabilities and *ended* when the parent or the child switched topics. An example of a segment follows:

Mother: *Bike* . . . [Mother stops reading the book where the picture shows the character riding an adapted bike] Does it look like she's riding with her legs or what's she doing?

Child: She has like strings up there.

Mother: Yeah. So do you see what?

It's a pulley.

So her arms are doing the work, her arms are actually turning it. So when her arms turn, it helps her legs. It helps the peddle at the bottom go.

Child: Huh.

Mother: [Started reading the book again].

The content of the book or DGs was included in a disability-related segment only when it was necessary to understand the preceding or following comments about disabilities. Therefore, in this example, the word *bike* was included in a segment because it was needed to understand the discussion about an adaptive bike, but the book content following the child saying, "Huh" was not included in the segment. Segments ranged in length from several sentences to several pages.

Reliability on the segments. Eighteen (26%) transcripts were randomly selected for reliability purposes. At least one transcript from each dyad was selected and five additional transcripts were selected from the eight dyads who returned their recorded conversations all 6 weeks. These 18 transcripts included 70 disability-related segments (31.4%). A doctoral student who worked on the *Special Friends* project, but was unfamiliar with this data set, served as a reliability coder. The reliability coder marked the *starting* and *ending* points of each disability-related segment while she read the transcripts. When the authors and the reliability coder marked the same starting and ending point of a segment, the segment counted as an agreement. Reliability for the segments about disabilities was calculated by dividing agreements by agreements plus disagreements, and then multiplying by 100. Reliability ranged from 66.7% to 100% across the children. The authors and reliability coder agreed on the exact starting and ending point for 61 out of the 70 segments, giving an average reliability of 87.1%.

Themes. Using content analysis procedures (Johnson & LaMontagne, 1993), three members of the *Special Friends* team (one faculty member and two doctoral students) independently read and reread the 70 transcriptions and separated segments about disabilities from other transcribed segments. Then they independently identified potential themes for each segment. A segment could be coded as including more than one theme. For example, a short segment might only have one theme whereas another segment might include five different themes. If a theme appeared more than once in a segment, however, the theme was counted only once. Team members met regularly to discuss, define, and redefine themes. The themes were used to answer the first research question: What themes related to disabilities emerge from the conversations between parents and children when they read books that include characters with disabilities?

Table 1. Percentage of Disability-Related Segments Where Each Theme Was Identified.

Themes	Definitions
Disabilities 89/223 (40%)	People with disabilities can't do typical behaviors (e.g., talking, walking), do them differently, or take more time to do them. "She can't talk."
Similarities 88/223 (39.5%)	Relating the character with disabilities to the child or talking about similarities between children with and without disabilities in general. "But in the end, she [a girl with Down syndrome] does all the things the other kids do."
Sign language 69/223 (31%)	Different types of communication including sign language, Braille, and lip reading "Have you ever heard of sign language?"
Equipment 59/223 (26.5%)	Equipment (e.g., wheelchair, walker, cane) and adaptations (e.g., ramp, pulley) "If someone is different than you, what do you think about that? Like if someone is in a wheelchair."
Specific disabilities 54/223 (24%)	The parent or the child mentions a disability category "She is blind."
Cause 34/223 (15%)	A biological cause, or an accident/illness is discussed as a cause "Did not grow properly in their mother's stomach."
Personal experiences 30/223 (13.5%)	Family, classmates, or someone they know with disabilities "You know Uncle Joe was in a wheelchair after he had his surgery."
Explanation by reading the book 17/223 (7.6%)	Providing explanations by reading the book Child: "What's cerebral palsy?" Mother: "Okay I will tell you. Cerebral palsy is . . . [starts reading the book]"
Services 14/223 (6%)	Services and assistance that people with disabilities receive "See she will be going to a speech therapist, I think."
Acceptance 12/223 (5.4%)	Social interaction or friendship with peers with disabilities; accepting people with disabilities as they are "I bet the school is for all different kids, but we are all friends."
Avoiding 9/223 (4%)	The parent avoids responding to the child's comments or questions Child: "I'm not on a wheelchair. Mom why is he on a wheelchair?" Mother: "Just listen."
Value loaded 6/223 (2.7%)	Emotional, negative comments about having a disability "Is he normal?"

Reliability for the themes. After the 12 themes were defined by the three-member research team, 30% of randomly selected segments (across and within the participants; on average 2 weeks of transcripts per participant) were independently coded by the reliability coder. Twenty-five transcripts were selected for reliability, and six additional transcripts were added later because the first 25 transcripts included less than 10 instances of certain themes (i.e., services, avoiding, value loaded). The six additional transcripts were purposively selected to include these themes (see Table 1 for definitions of each theme).

The reliability coder received training on three randomly selected transcripts before she independently coded the transcripts. The first author explained the definitions and examples

of each theme, and she coded one transcript with the reliability coder. The reliability coder then coded two transcripts independently (averaging 97.6%; range = 95.2%–100%).

To assess reliability, the reliability coder read and code transcript, with the segments about disabilities highlighted. As a segment could include more than one theme, reliability was conducted segment by segment. Overall reliability for transcripts was 90%, ranging from 77.1% to 100%. Reliability for themes was 83.9%: 100% for specific disabilities and acceptance, 96.7% for sign language, 92.1% for similarities, 86.7% for personal experiences, 85% for cause, 84.6% for disabilities, 83.3% for value loaded, 82.4% for equipment and explanation by reading the book, 80% for avoiding, and 78.6% for services.

Relationship between comments about disabilities and attitudes toward peers with disabilities. The second research question involved mixed methods analysis. Pearson's r correlation tests were used to measure the extent that the frequency of parent/child comments about disabilities and child's attitudes toward peers with disabilities were correlated. The frequency of comments about disabilities was obtained by counting the number of words in each disability-related segment. This process converted the existing qualitative data (disability-related segments) to a quantitative data set (number of words). Using the word count function of Microsoft Word™, the number of words spoken by each mother and child in each segment was calculated. The average number of words that mothers and children used in discussing disabilities across the 6 weeks was examined in relation to each child's attitudes toward peers with disabilities (as measured by ASK-R scores).

Results

Themes Identified in the Disability-Related Conversations

From the 70 audiotaped conversations, 223 disability-related segments were coded. The average number of disability-related segments ranged from 0.8 to 8.2, and the number of words per segment ranged from 18 to 698 across the 13 dyads. Twelve themes were identified from the 223 segments. The percentage of segments that contained each theme was also calculated (see Table 1). The theme that appeared most frequently in parent-child conversations about disabilities was disabilities (40%), followed by similarities (39.5%), sign language (31%), and equipment (26.5%). Themes that appeared less often included explanation by reading the book (7.6%), services (6%), acceptance (5.4%), avoiding (4%), and value loaded (2.7%).

When mothers and children discussed disabilities, they often talked about what people with disabilities could not do or had difficulty doing (i.e., disabilities theme). Their discussion about disabilities, however, was often followed by discussion about how the book characters with disabilities were similar to them and other typically developing children (i.e., similarities theme), as is seen in the following quote:

Mother: What was his problem?

Child: He couldn't hear.

Mother: Yep. He can still do lots of the same stuff as you though, right? He just has to learn to sign. All those signs we were doing because he couldn't hear. What are some things that you do that are just like Moses [The book character with hearing impairment]?

Child: Play drums.

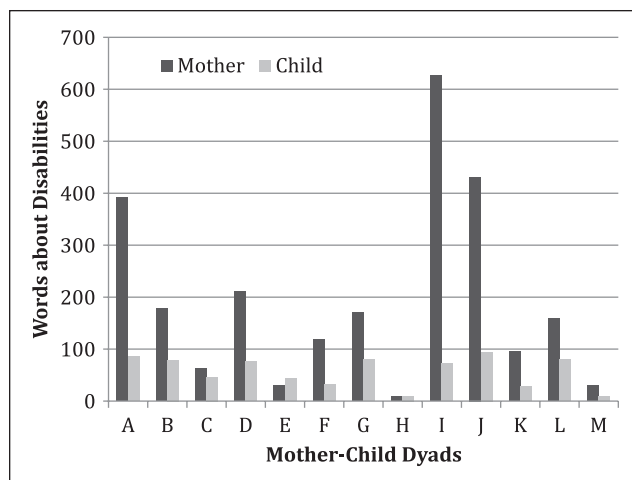


Figure 1. Mean number of words about disabilities spoken by mothers and children across the 6 weeks.

Participants' discussion about what people with disabilities could not do or had difficulty doing was frequently accompanied by a discussion on different types of communication (e.g., sign language), equipment (e.g., wheelchair), and adaptations (e.g., ramp). For example, one mother explained to her child:

It shows braces on her feet, doesn't she? I don't know what they do. Probably keep the backs of her legs straight it looks like. Maybe her calf muscles aren't real strong and she has hard time walking.

Mothers and children talked about specific disabilities such as blindness and deafness in approximately 1 out of 4 disability-related segments, sometimes along with a biological cause or an accident/illness as a cause. For example, one mother attempted to describe spina bifida to her child in this segment:

Spina bifida means sometimes baby is growing in the mom's tummy, their back doesn't grow properly. That means people can't save them. The spine. You know the spine . . . This is the back of this bone. Spinal column. That doesn't grow. Some kids it doesn't grow properly. That's why they have to use the wheelchair. Okay? They have a problem with walking and running. Okay? That is spina bifida.

Mothers and children rarely discussed the services that people with disabilities receive or being friends with peers with disabilities. In a few instances, mothers avoided responding to children's comments or questions. Occasionally, mothers and children made emotional or negative comments about having a disability, such as feeling *sad* or a person *being abnormal*.

The Number of Words About Disabilities and Children's Attitudes

The number of words about disabilities was obtained by counting the words in each disability-related segment. The average number of words about disabilities per transcript spoken by mothers was 193 (0–431.1) and by children was 57 (0–94.5). There were large differences in the number of words about disabilities across dyads. Three dyads (Dyads A, I, and J) talked about disabilities at much higher frequencies than the other dyads (see Figure 1). Statistically significant correlations were found between the number of words about disabilities used by mothers and children. In other words, mothers who talked more about disabilities tended to have children who talked more about disabilities while they read books that included characters with disabilities, $r(11) = .68, p < .05$.

Correlation between number of words and attitudes. Pearson's r correlation tests were implemented to examine the relationship between (a) the number of mothers' words about disabilities and children's attitudes toward peers with disabilities, as measured by the ASK-R; (b) the number of children's words about disabilities and children's ASK-R scores; and (c) the combined number of words (mother plus child) about disabilities and the child's ASK-R scores. One participant who joined the study after pretesting (no pre-ASK-R) was excluded from this analysis and so this analysis only included 12 dyads. Contrary to our expectations, neither the mothers' nor children's frequency of comments about disabilities was correlated with children's attitudes toward peers with disabilities, as measured by the ASK-R.

Comparison between high- and low-ASK-R score groups. Although statistical analyses did not reveal significant correlations between the number of words about disabilities and children's ASK-R scores, further analysis was conducted by grouping the 12 children with ASK-R scores into two groups. Because this study was conducted on a subsample of the larger *Special Friends* study, the group mean of this larger study was used to divide the dyads into high- and low-ASK-R score groups. The group mean of the pre- and post-ASK-R scores was 22.35 and 22.12, respectively. The dyads comprising children who scored equal to or above the means on both pre- and post-ASK-R were considered part of the high-ASK-R score group ($n = 5$). The dyads comprising children who scored below the mean on either the pre- or post-ASK-R were considered part of the low-ASK-R score group ($n = 7$).

Mean number of words. Mothers of children in the high-ASK-R score group talked more about disabilities than the mothers of children in the low-ASK-R score group (253 vs. 161 words on average across the 6 weeks; see Figure 2). The number of words about disabilities spoken by children in both groups, however, was comparable (60 vs. 58 words).

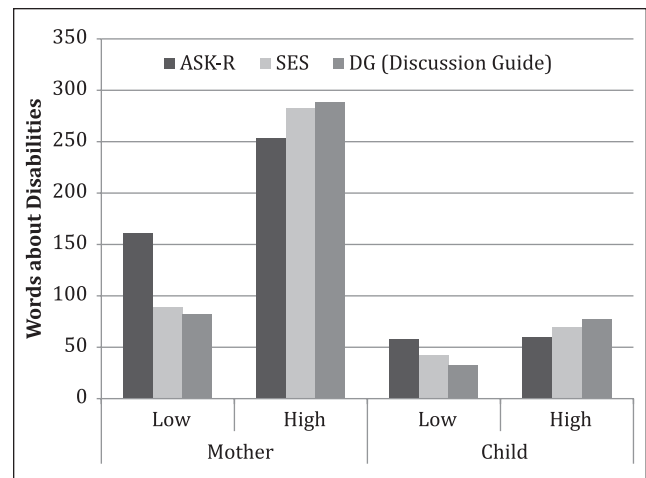


Figure 2. Mean number of words about disabilities across the 6 weeks by high- and low-ASK-R/SES/DG groups.

Note. ASK-R = Acceptance Scale for Kindergarten-Revised; SES = socioeconomic status; DG = discussion guide.

Themes identified in the disability-related segments. The number of words as well as the content of the disability-related segments differed between the high- and low-ASK-R score groups. The themes that appeared in each group's conversations were rank ordered by frequency. More disability-related segments were identified in the conversations of the high-ASK-R score group than the low-ASK-R group (3.45 vs. 2.82 segments on average). As Figure 3 shows, dyads in the high-ASK-R score group talked the most about similarities between the book characters with disabilities and themselves whereas dyads in the low-ASK-R score group talked most often about factual information such as equipment and adaptations.

Number of Words About Disabilities in Relation to Other Variables

The number of words about disabilities identified in the prior analysis was further investigated in relation to the child's gender, SES, child's history of contact and discussion guide usage. The point biserial correlation was used to measure the correlation between the combined number of mother's and child's words about disabilities and child's gender (boy/girl), SES (high/low), and child's history of contact with people with disabilities (yes/no). Pearson's r correlations examined the relationship between the combined number of words about disabilities and mother's DG usage (0%–100%). No significant correlation was found between the combined number of words about disabilities and gender or child's history of contact. The combined number of words about disabilities, however, was correlated with SES, $r(11) = .56, p < .05$. The correlation between the combined number of words about disabilities and mother's DG usage was also statistically significant, $r(11) = .65, p < .05$.

Rank	High ASK-R (3.45 segments/week)
1	<i>Similarities</i> (1.48)
2	Sign language (1.43)
3	Disabilities (1.28)
4	Specific disability (0.86)
5	<i>Equipment</i> (0.54)
6	<i>Cause</i> (0.44)
7	Personal experience (0.36)
8	<i>Acceptance</i> (0.28)
9	Service (0.18)
10	Value-loaded (0.08)
11	<i>Reading</i> (0.04)
12	<i>Avoiding</i> (0)

Low ASK-R (2.82 segments/week)	Rank
<i>Equipment</i> (1.71)	1
<i>Cause</i> (1.6)	2
<i>Similarities</i> (1.29)	3
Disabilities (1.25)	4
Sign language (0.85)	5
Specific disability (0.74)	6
Personal experience (0.47)	7
<i>Reading</i> (0.41)	8
<i>Avoiding</i> (0.24)	9
Service (0.21)	10
Value-loaded (0.12)	11
<i>Acceptance</i> (0.1)	12

Figure 3. Rank order comparison of the average number of segments for each theme that appeared between high- and low-ASK-R score groups.

Note. The italicized themes indicate group differences. ASK-R = Acceptance Scale for Kindergarten-Revised.

Rank	High SES (4.2 segments/week)
1	<i>Equipment</i> (1.79)
2	Similarities (1.62)
3	Disabilities (1.41)
4	Sign language (1.38)
5	Specific disability (1)
6	<i>Personal experience</i> (0.66)
7	<i>Cause</i> (0.28)
8	<i>Acceptance</i> (0.27)
9	Service (0.27)
10	<i>Reading</i> (0.17)
11	Value-loaded (0.09)
12	<i>Avoiding</i> (0.07)

Low SES (1.96 segments/week)	Rank
Disabilities (0.88)	1
Similarities (0.84)	2
Sign language (0.56)	3
Specific disability (0.42)	4
<i>Equipment</i> (0.37)	5
<i>Reading</i> (0.32)	6
<i>Avoiding</i> (0.19)	7
<i>Cause</i> (0.18)	8
Value-loaded (0.11)	9
Service (0.08)	10
<i>Personal experience</i> (0.08)	11
<i>Acceptance</i> (0.03)	12

Figure 4. Rank order comparison of the average number of segments for each theme that appeared between high- and low-SES groups.

Note. The italicized themes indicate group differences. SES = socioeconomic status.

Mothers (283 vs. 89 words on average) and children (69 vs. 42 words on average) in the high-SES group ($n = 7$) talked more about disabilities than mothers and children in the low-SES group ($n = 6$; see Figure 2). Mothers (288 vs. 82 words on average) and children (77 vs. 33 words on average) in the high-DG usage group ($n = 7$) talked more about disabilities than the mothers and children in the low-DG usage group ($n = 6$; see Figure 2).

Themes Identified in the Disability-Related Segments in Relation to Other Variables

Further analyses were conducted to examine the relationship between the content of the conversations, SES, and DG

usage. The frequency with which the 12 themes were found in the high- and low-SES groups is presented in Figure 4. The average number of disability-related segments was 4.2/week for the high-SES group, whereas the average number of disability-related segments was 1.96/week for the low-SES group. Dyads in the high-SES group talked more about personal experiences with people with disabilities than the dyads in the low-SES group.

Similar to the comparison of the high- and low-ASK-R score groups, mothers in the low-SES group tended to avoid responding to their children's comments more often than mothers in the high-SES group, and they tended to provide explanations about disabilities by reading the book more often than mothers in the high-SES group. Compared with

Rank	High DG usage (4 segments/week)	Low DG usage (2.2 segments/week)	Rank
1	Similarities (1.64)	Similarities (0.82)	1
2	Disabilities (1.5)	Disabilities (0.73)	2
3	Equipment (1.49)	Equipment (0.72)	3
4	Sign language (1.39)	Sign language (0.56)	4
5	Specific disability (1)	Specific disability (0.38)	5
6	Personal experience (0.55)	Personal experience (0.2)	6
7	Cause (0.32)	<i>Reading</i> (0.18)	7
8	<i>Acceptance</i> (0.29)	<i>Avoiding</i> (0.16)	8
9	Service (0.23)	Cause (0.15)	9
10	<i>Reading</i> (0.2)	Service (0.13)	10
11	Value-loaded (0.12)	<i>Acceptance</i> (0.1)	11
12	<i>Avoiding</i> (0.1)	Value-loaded (0.08)	12

Figure 5. Rank order comparison of the average number of segments for each theme that appeared between high- and low-DG usage groups.

Note. The italicized themes indicate group differences. DG = discussion guide.

the high-SES group, mothers in the low-SES group discussed interacting and being friends with peers with disabilities less often.

Themes about disabilities and DG usage. The frequency with which the themes were observed in high- and low-DG usage groups is presented in Figure 5. The high-DG usage group averaged twice as many disability-related segments compared with the low-DG usage group (4 vs. 2.2). Interestingly, the order of the themes between the high- and low-DG usage groups was comparable from the first through the sixth most common themes, but each theme appeared twice as often in the conversations of the high-DG usage group than the low-DG usage group. Not surprising, these themes reflected the questions on the DGs (i.e., disability-related vocabulary, similarities, equipment).

Similar to the results of the other two comparisons (i.e., high- and low-ASK-R score and high and low SES), high- and low-DG usage groups differed on the themes of avoiding, reading, and acceptance. For instance, mothers in the low-DG usage group tended to avoid responding to their children's comments more often, and they tended to provide explanations about disabilities more often by reading the book, rather than by using their own words. In addition, mothers in the high-DG usage group talked more frequently about being friends with peers with disabilities than mothers in the low-DG usage group.

Discussion

This study extends the research on the relationship between parents' comments about disabilities and their children's attitudes toward peers with disabilities. It also highlights how parents and their children share ideas about disabilities. This is one of a few studies to use mixed methods

research methodology to understand qualitative and quantitative patterns identified in mother-child conversations around individuals with disabilities.

The two most common themes that emerged from this study were *disabilities* and *similarities*, which occurred at similar frequencies across dyads (40% and 39.5%). This suggests the importance of providing a context for mothers and children when they talk about disabilities (i.e., the focus of the *Special Friends* program was on similarities and differences). The mothers and children tended to talk about the book characters who were the children's age and who were part of a *story* rather than talking about photographs of children in wheelchairs, for example. Having a storyline seemed to help the dyads discuss how the book characters were similar to them and could do many of the same things that other children did.

SES and DGs

While the average number of words spoken by mothers and children when they read a book was 1,294 words, the average number of words about disabilities was only 250. Similarly, the average number of disability-related segments was only 3.2 segments per dyad. However, there was a huge variance across dyads. The large differences between the number of words spoken by Dyads A, I, and J and the other dyads are evident in Figure 1. Dyad I, where the mother was a teacher, spoke more than 38 times as often compared with Dyad H. The conversations between the mother and child in Dyad I showed that this *teacher mom* not only used a variety of questioning strategies and was knowledgeable about disabilities, but she also had personal experiences with students with disabilities to share. The following quote is an example of the type of conversation heard from Dyad I:

Mother: [Reads the book] *Sometimes blind people use canes or specially-trained dogs to get around.* [starts discussion] So like one of the kids at my school is visually impaired and he's almost blind, not quite. One eye he's completely blind and the other eye he can see like some shapes and see light and dark. And he even walks to school by himself sometimes. So that's kind a big deal.

Child: Does he have anybody that has a special ed? Do you guys have special ed teachers?

Mother: Yes. We have lots of special ed teachers. And he has people who help him out specifically that help him with vision stuff . . . yeah that help him with his Braille.

Child: What about the boy with the wheelchair?

Mother: Um. He is an eighth grader this year. He is not in my class but yeah he has people that help him. His physical therapist helps him stand up.

Interestingly, Dyads A, I, and J all were from high-SES families who frequently used DGs. Meanwhile, Dyads H, K, and M who were from low-SES families did not use DGs. Two of these dyads (Dyads H and M) talked the least about disabilities. In fact, the high-DG usage group used three times as many words compared with the low-DG usage group, and the high-SES group used twice as many words compared with the low-SES group. However, it is important to note that the three low-SES dyads who used the DGs (Dyads B, C, and L) talked more than the high-SES dyads who did not use DGs (Dyads D, E, and F; 202 vs. 170 words on average across the 6 weeks).

The finding that dyads from the low-SES group used less words about disabilities than dyads from the high-SES group is consistent with the classic study by Hart and Risley (1995), who found significant quantitative and qualitative differences in children's household language use based on SES. They noted that future academic success and language abilities are associated with the diversity of vocabulary a child hears early in life.

Mothers from the low-SES group in the current study not only used fewer words, but also tended to avoid responding to their children's comments and questions more often than mothers from the high-SES group. For example, when a child asked, "Mom why is he on a wheelchair?", a mother from the low-SES group ignored this question and said, "Just listen," and finished reading the book without addressing her child's question. Mothers from the low-SES group also tended to explain disabilities by reading the exact words from the book more often than mothers from the high-SES group. The high rate of not responding to children's questions and explaining disabilities by reading the books seems to suggest that these mothers might not have had enough knowledge to discuss disabilities in detail. However, given that these dyads used comparable or more

words than dyads from the high-SES group if they attended to the DGs, providing well-developed DGs might be a promising way to help mothers engage in discussions with their young children.

Although there is no specific research measuring the effects of DGs on parents' book reading or children's attitudes, many studies have suggested that parents can be more effective facilitators with a few supports. For example, Lonigan and Whitehurst (1998) found that when parents from low-income backgrounds received a shared-reading intervention (including training and guidelines around steps to follow when reading with children), children's oral language improved more compared with children in an experimental condition whose intervention only involved reading by the teacher. Similarly, Huebner and Meltzoff (2005) found that parents' dialogic reading behaviors increased more than four times after training sessions. Together, these studies suggest that parent-child conversations during shared book reading can improve when supports are provided.

Limitations

This study, conducted on a subsample of participants from the *Special Friends* study, has several limitations. First, across the 6 weeks, the children participated in the *Special Friends* program at school, and therefore they had already heard their teacher read the same book that they brought home to read with their parents. Children also participated in small group activities that were designed to increase children's positive attitudes toward peers with disabilities. Although neither the mothers' nor the children's number of words about disabilities increased from Week 1 to Week 6, children's exposure to the *Special Friends* program could have influenced their conversations at home as well as their ASK-R scores.

Second, as a component of the *Special Friends* program, children were allowed to choose one of the three books that they read at school in a given week to take home. Therefore, not all 13 children picked books featuring characters with similar disabilities. The number of words used by dyads and the themes discussed might have been influenced by the type of disabilities featured in books as well as the storylines.

Third, the possibility of a social desirability bias exists. Parents knew that the purpose of the *Special Friends* program was to promote friendships with and social acceptance of children with disabilities. Thus, they might have purposefully made positive comments about disabilities when the audiorecorder was on to promote the goals of the larger study.

Fourth, since only 13 mother-child dyads participated in this study, the results should be viewed with caution. Future research that includes a larger sample will help researchers and practitioners better understand the relationship between the ideas of parents and their children toward people with disabilities.

Fifth, additional measures would have been helpful to demonstrate maternal impact on children's attitudes toward peers with disabilities. For example, a measure of parental attitudes toward people with disabilities would show the relationship between these attitudes and children's attitudes toward people with disabilities. In addition, given the potential relationship between mother's literacy skills, education level, and their discussions about disabilities, the information about literacy skills and education level should have been gathered.

Suggestions for Future Research and Practice

Given the importance of parents in shaping children's attitudes, more research is needed to examine the relationship between parents' comments and their children's attitudes toward peers with disabilities, and how parents and children share their ideas about disabilities. A larger sample size and measures of parents' attitudes toward people with disabilities and observational measures of children as they play with peers with disabilities would deepen our understanding of this complex process.

This study and similar studies (e.g., Innes & Diamond, 1999) only included mother-child dyads. No studies have examined fathers' influence on children's attitudes toward peers with disabilities. Because fathers also play an important role in shaping children's attitudes, future research should involve this understudied group.

Future research should also examine what children with disabilities and their parents say when they read books that include characters with disabilities. Although it was not the focus of this study, one child who participated in the *Special Friends* study told her mother that a book character with autism was exactly like her (i.e., the participating child had Asperger syndrome) and her sibling (who had autism). Future research should examine how reading books, such as those associated with the *Special Friends* program, impacts children's understanding of self.

One of the most important suggestions that emerged from this study was that using discussion guides seemed to help dyads from the low-SES group talk more. The DGs looked like small bookmarks that included several questions and information about disabilities (see Ostrosky et al., in press, for sample). It is encouraging that a simple prompt like a bookmark can make a difference in the quality and the quantity of mother-child conversations. While parents were not specifically asked to use the DGs, it is possible that if parents were prompted to use them or told how important it was to use them, the results might have been different. Our findings suggest that professionals who work with young children can help parents who have limited knowledge and skills by providing them with well-developed DGs to facilitate discussions with their children.

This study contributes to the literature on the relationship between parents' comments about disabilities and their

children's attitudes toward peers with disabilities, and how they share their ideas about disabilities with one another, using qualitative and quantitative methodologies. The results draw our attention to the huge variability across dyads in the number of words about disabilities they spoke, based on their SES. At the same time, the results highlight how a support like a DG can serve as a powerful resource to facilitate the conversations between mothers and their young children.

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