Young Children with and without Disabilities: Perceptions of Peers with Physical Disabilities

Abstract

Young children with and without disabilities were interviewed regarding their perceptions of other children with and without disabilities. Both groups of children were generally positive and realistic about the physical, academic and social competence of children with and without disabilities. However, compared to typically developing children, children with disabilities tended to view other children with disabilities more positively in the physical and academic areas. In the social areas, more children without disabilities responded more positively than children with disabilities. These findings have implications for successful inclusion in early childhood education.

Keywords: young children with disabilities, perceptions about physical disabilities, typically developing children’s perceptions

Increasingly, children with a wide range of special needs are included in general education early childhood programs. The goals of these programs is to foster social interactions and understanding among children with and without disabilities (Guralnick, Neville, Hammond & Connor, 2007; Han, Ostrosky, & Diamond, 2006; Odom, et. al., 2006; Scott-Little, Kagan, & Frelow, 2006). The perceptions of young, 5-8 year old children regarding the abilities of individuals with disabilities are central to making inclusion successful. There is some evidence that young children in inclusive classrooms have more accepting perceptions of children with disabilities than those in classrooms where inclusion is not experienced (Diamond, Hestenes, Carpenter, & Innes, 1997; Peck, Carlson, & Helmstetter, 1992). In creating the optimal inclusive

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environment, it has become increasingly important to understand the perceptions of all young children, with and without disabilities, about the physical, academic and social capabilities of peers with disabilities. Although several research studies (Diamond & Hestenes, 1996; Favazza, Philplesen, & Kumar, 2000; Odom, et. al., 2006; Ogakaki, Diamond, Kontos, & Hestenes, 1998) have investigated the perceptions of young children without disabilities, little or no research has investigated the perceptions of young children with disabilities regarding their perceptions of the abilities of other children with disabilities. Successful inclusion requires an accepting perception of ability on the part of both children with and without disabilities.

Early research found that young children have a basic conceptual understanding of physical and sensory disabilities (Conant & Budoff, 1983), and that children who participate in inclusive settings show a higher level of acceptance of those with disabilities (Diamond, 2001; Peck, et al., 1992). More recent research has suggested that the social acceptance or rejection of children with disabilities in inclusive classrooms was related to child characteristics and type of disability (Odom et. al., 2006). In any case, peers with disabilities are often not the preferred play partners (Stoneman, 1993; Odom et. al., 2006). The result is that even in an inclusive classroom, children with disabilities often play alone or engage in onlooker play (Hestenes & Carroll, 2000). Research also indicates that without strong programmatic and teacher guidance, social interactions are less than ideal (Diamond & Inness, 2001). For example, despite having friends with disabilities (Buysse, Goldman, & Skinner, 2002), children with disabilities are chosen as play partners less often than children without disabilities (Brown, Odom, Li, & Zercher, 1999).

A typically developing child’s decision to interact with a child with disabilities may be related to the context for the interaction as well as their perceptions regarding the capabilities of individuals with disabilities (Diamond & Hestenes, 1996; Diamond & Hong, 2010; Diamond & Tu, 2009; Magiati, Dockrell, & Logotheti, 2002). Studies indicate that children without disabilities utilize their own experiences to assess the demands of the task to determine the potential impact upon success for a child with disability. Conant & Budoff (1983) found that a large majority of 6-year-olds had an awareness of an orthopedic, highly visible disability, and used their own experience to conceptualize the disability. Likewise, Diamond (1994) and Diamond and Hestenes (1996) found that a majority of preschool children could recognize that individuals using a wheelchair would experience difficulties in specific settings. That recognition allowed them to assess the capabilities of the individual in the wheelchair based on the type and physical difficulty of the task. If a motor task is easy rather than difficult, preschool children show a positive perception of a peer with a physical disability’s capability (Diamond & Tu, 2009; Nabors & Keyes, 1997). It seems then that children without disabilities show some appreciation of the relevance of the setting or task, and its implications for a child with a particular disability.

While the perception of children without disabilities is critical, still it is half of the equation for successful inclusion of young children with disabilities. Young children
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with disabilities’ perceptions of the capabilities and the understanding of the demands of the required task are equally important for successful inclusion. To date, however, little attempt has been made to investigate the perceptions of children with disabilities regarding the capabilities of peers with disabilities. A small number of studies have probed the attitudes and perceptions of older children with disabilities. For example, Wendelborg & Kvello (2010) explored perceptions of 11-13 year old children with disabilities and their parents regarding social participation, acceptance, intimacy and perceived relationship to educational accommodations. Another study focusing on older children (Morningstar, Turnbull, & Turnbull, 1995) used focus groups to explore high-school students’ with disabilities perceptions of the role of their family in relation to transition. Elementary-aged children were included in a study by Vaughn, Schumm, and Kouzakanani (1993). In this study elementary, middle, and high school aged children with disabilities were queried about their attitudes toward group work and the classroom adaptations made by teachers. Thus, the research to date has only investigated the perceptions of older children with disabilities. The perceptions of younger children with disabilities are as yet to be investigated. Such an investigation is important because young children are still in the process of developing their perceptions about the abilities of others. However, an investigation of the perceptions of young children with disabilities has some challenges. It is often difficult to find a sample of young children with disabilities that have the cognitive and linguistic skills to assess their perceptions. However, the perceptions of children with and without disabilities are important to understand, as their perceptions fuel action and create true inclusion of children with disabilities.

Thus, the focus of this study was on the perceptions of 5 to 8 year-old children with and without disabilities regarding the physical, academic and social abilities of children with and without disabilities. Children with disabilities were selected from a pool of children receiving services from a hospital based medical-diagnostic clinic. The clinic was chosen because of its partnership with the university. Although the type of disability varied, all participating children were without cognitive impairment. Children without disabilities were enrolled in one elementary school within the same geographic area as the hospital-based medical-diagnostic clinic. The specific research questions investigated in this study were:

1. What are the perceptions of 5 to 8 year-old children without disabilities regarding the physical, academic and social abilities of children with and without disabilities?
2. What are the perceptions of 5 to 8 year-old children with disabilities regarding the physical, academic and social abilities of children with and without disabilities?
3. Do children’s perceptions about ability vary with the type of task?
Method

Participants
Researchers in this study used a convenience sample of 5-8 year-old children without disabilities who attended a local elementary school within the same geographic area as the university and hospital clinic. The inclusion of children with disabilities within the general education classroom was not a typical practice at the elementary school. The children without disabilities ranged in age from 5 to 8 years (M = 6.7 years) and included 14 boys and 16 girls. The sample of children with disabilities were 5 to 8 year-old (M = 6.4 years) children receiving services from a hospital diagnostic clinic, and included 13 boys and 12 girls. This hospital clinic serves almost 1000 children birth through adolescence, and provides multi-range services including health care, social services, mental health, and physical and occupational therapy. Children in this sample did not receive their education at the clinic but rather were enrolled in a range of special education settings including inclusive and self-contained classrooms. The type of disability varied across the sample, (e.g. speech, language, high functioning autism, physical impairments) but did not include cognitive impairments.

Procedure
Participating parents or guardians of all children included in the study were informed that participation was voluntary and that they were free to withdraw from the study at any time without penalty. No incentives were offered for participation in the study. University and hospital Institutional Research Boards approved the research. All children were interviewed individually in a naturalistic setting at either the child’s school (children without disabilities) or at the medical clinic where they receive therapy (children with disabilities). Interviewers were graduate students in a university early childhood program who received training from the researchers regarding the procedures to provide consistency. Interviewers presented a series of randomly ordered story scenarios to each participant. Children’s verbal responses to questions regarding physical, academic and social abilities were recorded both in writing and with a digital recorder.

Given the prior research indicating gender identification can be a factor in children’s decision-making, boys were shown photographs featuring a similar-aged boy and girls were shown a similar-aged girl. Each photograph had an accompanying gender appropriate scenario. Participants were presented their same gender set of five photographs and accompanying scenarios. Four photographs represented the following physical disabilities: visual impairment, hearing impairment, and two motor impairments – a wheel chair and an artificial arm. The fifth photograph represented a child without disabilities, a child with curly hair. This photograph was used for the purpose of comparison.

Interviewers began by presenting the photograph and asking participants the open-ended question, “Tell me about the picture.” The interviewer then described the photograph and scenario to the child. Children were then interviewed using ten closed-ended
questions: four relating to the perception of physical ability (throw a ball, swim, play tag, and climb), four relating to academic ability (tell a story, write their name, do a science experiment, add numbers), and two relating to social activities (invite to play at their house, be a friend). Interviewers probed participant responses to questions relating to social activities with the follow-up open-ended query, “Tell me more.” The following are the five questions and scenarios:

Interviewer: I am going to introduce you to some children who are about your age and ask you some questions about them.

1) This is (name). Tell me about ____ in the picture. He/she uses a cane to help him/her ________.
2) This is (name). Tell me about ____ in the picture. He/she uses a hearing aid to help him/her hear.
3) This is (name). Tell me about ____ in the picture. He/she uses a wheelchair to move around.
4) This is (name). Tell me about ____ in the picture. He/she has an artificial arm to touch things.
5) This is (name). Tell me about ____ in the picture. He/she has difficulty with her curly hair and uses a hat to keep it out of his/her eyes.

The following questions relating to physical, academic and social activities were asked:


Questions one through eight were asked in a random order followed by question nine and ten.

Results

This study included both quantitative (frequency of closed-ended responses) and qualitative (analysis of open-ended responses) research methods. Participant responses to each closed ended question was coded as “yes,” “no” or “maybe.” Only the “yes” responses were considered for further quantitative analysis. The percentage of children in each group, children with disabilities (CWD) and children without disabilities (CW/OD), who responded yes to each of the questions, is found in Table 1. Further analysis of responses did not yield significant differences between the groups. In addition, the size of the sample limited the statistical tests that were appropriate. Consequently, findings are presented as percentages.

Abilities of Typically Developing Child

As seen in Table 1, children in both groups responded in a positive manner regarding the abilities of a child without disabilities. Both groups of children scored the typically developing child with curly hair as having the highest ability of all the children across all
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three categories of activity. The positive responses on the closed ended questions for the typically developing child ranged from 79% to 100%. One interesting comment made by a typically developing child to the open-ended question of whether the child with curly hair can be invited to play showed an awareness that she did not have a disability: "I will let her play at my house because she has nothing bad on her." The responses to the typically developing child scenarios can serve as a baseline for comparing across both groups and measuring internal validity.

Table 1
Percentage of Children Responding “Yes”

<table>
<thead>
<tr>
<th>Picture</th>
<th>Group</th>
<th>Task</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td>Ball</td>
</tr>
<tr>
<td>Blind</td>
<td>CWD</td>
<td>54</td>
</tr>
<tr>
<td></td>
<td>CW/OD</td>
<td>70</td>
</tr>
<tr>
<td>Hearing</td>
<td>CWD</td>
<td>92</td>
</tr>
<tr>
<td></td>
<td>CW/OD</td>
<td>90</td>
</tr>
<tr>
<td>Curly</td>
<td>CWD</td>
<td>96</td>
</tr>
<tr>
<td></td>
<td>CW/OD</td>
<td>93</td>
</tr>
<tr>
<td>Wheelchair</td>
<td>CWD</td>
<td>88</td>
</tr>
<tr>
<td></td>
<td>CW/OD</td>
<td>80</td>
</tr>
<tr>
<td>Arm</td>
<td>CWD</td>
<td>92</td>
</tr>
<tr>
<td></td>
<td>CW/OD</td>
<td>83</td>
</tr>
</tbody>
</table>

* Children with disabilities (CWD) and children without disabilities (CW/OD)

Physical and Academic Abilities of Children with Disabilities
Children with and without disabilities generally were positive and realistic about the physical and academic abilities of children with disabilities. As seen in Table 1, on 47 of the 64 physical and ability, there was a 70% or more response rate that “yes” the child with disability could perform the task. Children with and without disabilities also were realistic in their responses. Children in both groups responded that the children who have physical disabilities may have difficulty on physical tasks but not on academic tasks. For example, a child who is blind might have difficulty swimming, playing tag and climbing, or a child in a wheelchair may have difficulty swimming or climbing. Comments by two children without disabilities commented in regard to the photograph

of the child who is blind as follows: “She can’t climb because she doesn’t know where she is going then she might fall;” and “Blind, she can’t swim because she needs to walk with her cane.” In regard to the child in the wheelchair, a child without disabilities explained that “She can't swim because she has to stay in the wheelchair because if she swims then she wouldn't have her wheelchair and if she doesn’t have her wheelchair, she can't walk in the water. That's why she needs her wheelchair.” An interesting comment made by a child with a disability who responded “yes” the blind child could swim but “He needs a special para-pro [paraprofessional] to teach him to swim with a cane.”

An interesting finding was that even though both groups were generally positive about physical and academic abilities, there was a trend for more children with disabilities to respond positively about the ability of their peers with disabilities than children without disabilities. While not statistically significant, seven to fifteen percent more children with disabilities responded positively about their peers with disabilities than typically developing children. Viewing the data as a whole, on 60 of the 64 close-ended questions, more children with disabilities responded “yes” about the capability of their peers with disabilities than children without disabilities; on only four questions did children with disabilities respond the same or lower than children without disabilities.

The data indicated that the children in both groups may have perceived a hierarchical pattern of ability linked to the perceptual visibility of a disability and adaptive device. In physical ability, the children in both groups scored the child in the wheelchair and the blind child the lowest (percentages ranged from 23% to 88%), the child with the prosthetic arm was second (73% to 92%), and the child with the hearing aid was the highest (67% to 96%). This pattern may have emerged because children may perceive that the more physically involved the disability, the less able the child is to engage in physical activities. Both groups of children scored children with physical disabilities more positively in the academic area than the physical area. Children may perceive that disabilities may interfere more with physical activities than academic activities. Somewhat similar to the pattern seen in the physical category, in academic abilities both groups scored the blind child the lowest (percentages ranged from 67% to 96%), and the child with the hearing aid the highest (76% to 96%). This pattern may correspond to what children perceive as the level of involvement of the physical disability.

**Social Abilities of Children with Disabilities**

With respect to the two social questions, both groups were very positive in their responses. On these two questions, responses varied from 79% to 100%. Unlike the pattern seen for physical and academic abilities, children with disabilities tended to be somewhat less positive about their peers with and without disabilities. Again not statistically significant, there was a seven to fourteen percentage point difference between children with and without disabilities in their responses across the social category.
A higher percentage of children without disabilities responded positively to all of the social questions except for the question regarding inviting the child in a wheelchair to play at their house. Interesting comments were made regarding a child in a wheelchair when asked “tell me more.” Child without disabilities responded: “Yes, but I have stairs so he can’t get upstairs so I would have to help him”; a second child said “Yes. I can show her my room but I don’t think she can get in my house because I have a gate”, and a third child said, “He can show me tricks on the wheelchair.” Another child commented that “I would invite her to my house, but not if she roll her chair so fast,…she really hit her head and she has to wear something else on her head.” A child with disability responded, “Yes, but I would make a ramp for him.”

Discussion

When five to eight year old children with and without disabilities were asked about their perceptions regarding the abilities of peers with and without disabilities, their responses were generally positive. The research findings were consistent with previous research investigating the perceptions of children without disabilities (Conant & Budoff, 1983; Diamond, 1994; Wendelborg & Kvello, 2011). In this study both groups, children with and without disabilities, were more positive about the physical, academic and social skills of the child without disability, the curly haired boy or girl. In addition, both children with and without disabilities viewed children with disabilities as generally competent in physical, academic and social tasks.

Perception of ability was not equal across all tasks but rather children differentiated and made specific decisions about the effect of the task. For example they responded that a child with a prosthetic arm or a child in a wheel chair may have difficulty swimming or climbing but not have difficulty in the academic area. They also perceived that a child with a hearing impairment would have less difficulty on the physical tasks than children with a more involved physical disability, e. g. in a wheel chair or with an artificial arm. Like previous research (Diamond & Hestenes, 1996; Diamond & Tu, 2009; Nabors & Keyes, 1997) children, when asked about a child with a physical disability, made judgments about competency based on the physical demands of the task. It seems that young children with and without disabilities may have realistic views about the impact of the demands of different physical motor tasks upon children who have physical disabilities. Realism may be apparent in the social arena as well. They responded that though they may be friends with a peer in a wheelchair. However, they may have difficulty inviting them over to play. It is likely that their realism may be well grounded. Young children have limited knowledge of the adaptations or accommodations available through assistive technology or universal design that may facilitate competence in children with physical disabilities.

Another interesting finding of this research is that children with disabilities’ tended to perceive the physical and academic abilities of children with disabilities more positively than children without disabilities. This did not seem to be true however for the social questions of whether a child with disabilities could be a friend or be invited to play.
There could be a number of hypotheses explaining this finding. One hypothesis may be that children with disabilities may identify with other children with disabilities and make their judgments based on this identification (Odom, et al., 2006; Peck et al., 1992). It may be that children with special needs themselves feel more competent or accepted in the physical and academic areas because of their experiences of success in these areas. They may perceive a disability as less hindering or limiting performance on physical and academic tasks. They may find that on physical or academic tasks that they can achieve and/or be seen positively by others.

In the social area, however, children with disabilities may feel either less competent or less accepted. They themselves may have had fewer positive experiences of friendship or invitations for play (Okagaki, et. al., 1998). Children with disabilities are less likely than their peers without disabilities to initiate or receive an invitation for play. Consequently, children with disabilities may have less positive views about the possibility of friendship or a play invitation for children with disabilities or even for a child without disabilities. Identifying with the other child with disability, children with disabilities may find the social arena more daunting than the physical or academic areas.

Another possible hypothesis is that children with disabilities may be less insightful and have less metacognitive ability. They may be then more like developmentally younger children who are less discriminating in their judgments and realistic about their abilities. Research has supported the position that children with disabilities have less metacognitive skills than their peers without disabilities (Paris & Winigrad, 1990). This hypothesis may explain their higher positive responses in the physical and academic areas but not necessarily the lower responses to the social questions.

The results of this study are exploratory and are an initial investigation into the perceptions of children with disabilities about their peers with disabilities. Findings and implications are limited due to the small sample size and limited investigation into the rationales behind children’s responses. Further in-depth investigations with larger samples of children with and without disabilities, as well as qualitative research that probes children’s understanding and their reasoning about how the context and nature of the task influences competence is important. Additionally, in future studies, the role of development, age and the amount of experience in inclusive settings should be variables of investigation. Also children’s knowledge of adaptive equipment and problem solving skills which may facilitate the performance of children with disabilities needs further study. Further investigation of the differences in responses between children with and without disability in the social area is particularly important. Given that past research has suggested that friendship and inclusion in play is still a missing component in inclusive classrooms, this line of research seems particularly critical. In any case, it seems that future research needs to include all children, children with and without disabilities. Understanding of the perceptions of both groups is essential for successful inclusion of children with disabilities in early childhood classrooms.
The findings from this study lay the groundwork for positive interventions for inclusive programming. Becoming informed about children’s perceptions regarding the physical, academic and social competency of children with and without disability will provide insights for the development of effective inclusive programs. Further, these encouraging results of children’s positive, realistic perceptions differentiated based on type of disability and task demands can help us better understand how to encourage the acceptance and competency of children with disabilities in inclusive classrooms. These results also point to the need to continue efforts in the social acceptance area. Extending social opportunities for young children with and without disabilities to interact, to play together and to potentially develop friendships is central for successful inclusion (Buysse, et al., 2003; Favazza & Odom, 1997; Favazza, Phillipsen, & Kumar, 2000; Trepanier-Street & Romatowski, 1996). Children with disabilities need to feel confident in their social skills and see possibilities for themselves as a friend of other children. This study underscores the value and importance of presenting young children with the opportunity to interact with peers with disabilities so that children may grow in their ability to realistically evaluate the capabilities of peers with disabilities. Finally, this study begins to give a voice to young children with disabilities about their thinking regarding the competencies of children with disabilities.
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References


