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**The home environments of children with disabilities:
Implications for peer relationships and self-determination**

by

Cheryl Lynn Geisthardt

**A dissertation submitted to the graduate faculty
in partial fulfillment of the requirements for the degree of
DOCTOR OF PHILOSOPHY**

Major: Human Development and Family Studies

Major Professors: Mary Jane Brotherson and Christine C. Cook

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CHAPTER 1. GENERAL INTRODUCTION

Both developing relationships with others (Abery, 1994; Hartup, 1983; Rubin & Sloman, 1984; Strully & Strully, 1985) and making decisions about one's own life (Abery, 1994; Bannerman, Sheldon, Sherman, & Harchik, 1990; Guess, Benson, & Siegel-Causey, 1985; Houghton, Bronicki, & Guess, 1987; Wehmeyer, 1992) are highly valued in our society and are believed to significantly contribute to a person's quality of life. Humans are social beings and seek the company of other humans. Interactions with other people and, in particular, mutual friendships provide opportunities for intellectual growth, companionship, emotional intimacy and social support (Berndt & Perry, 1986; Guralnick, Connor, & Hammond, 1995; Hartup, 1983; Rubin, 1980). Without friends, people can experience loneliness and isolation (Guralnick et al., 1995; Parker & Asher, 1987, 1993). Humans also have a desire to exercise influence and control over the world around them (Abery, 1994; Bannerman et al., 1990; Guess et al., 1985). It is expected and valued that, as they mature, people will begin to take more responsibility for the course of their lives—from where they live and work, to what they do with their leisure time, to the clothes they wear and what they eat for breakfast.

Although many people take for granted their relationships with others and their ability to make decisions about how they live their lives, not all people experience such valued aspects of life. Individuals with disabilities have historically experienced challenges in their social relationships (Turnbull & Turnbull, 1990) and have had limited influence over their own lives (Kishi, Teelucksingh, Zollers, Park-Lee, & Meyer, 1988; Sands & Kozleski, 1994; Stancliffe & Wehmeyer, 1995; Wehmeyer & Metzler, 1995; Wehmeyer, Kelchner, & Richards, 1995). Over the recent years there has been a move away from institutionalization of individuals with disabilities and emphasis has been put on integrating individuals with disabilities into the community (Braddock, Hemp, & Howes, 1986; Taylor, Biklen, & Knoll, 1987). Children with disabilities are taught in "least restrictive environments," and many adults are residing in community-based group homes or in their

own apartments or homes. Despite these advances research indicates individuals with disabilities still experience limited social interactions and often lack the opportunity to make decisions about their own lives (Kishi et al., 1988; Wehmeyer, 1992). Even as adults, family members and paid professionals make up the majority of an individual with a disability's social interactions (Crapps & Stoneman, 1989; Hayden, Lakin, Hill, Bruininks, & Copher, 1992; Newton, Horner, Ard, LeBaron, & Sappington, 1994). In addition, it is family members and paid professionals who generally decide where people with disabilities live and work, how they spend their free time, and even what they eat and wear (Kishi et al., 1988). The lack of influence over their own lives that individuals with disabilities often experience has brought about a great deal of interest in the concept of self-determination (Abery, 1994, Ward, 1988; Wehmeyer, 1992; Wehmeyer & Metzler, 1995; Williams, 1989). The definition of self-determination will be explored in more detail in the following chapter; however, in general terms self-determination refers to making one's own decisions about how to live one's life (Schloss, Alper, & Jayne, 1993; Turnbull & Turnbull, 1985).

The skills needed to develop meaningful relationships and to become self-determined develop throughout one's lifetime (Abery, 1994; Wehmeyer, 1996b). It is during early childhood that children generally begin to experience increasing opportunities to interact with peers, exert control over the environment, make choices, and act independently (e.g., develop skills contributing to the development of self-determination) (Abery & Zajac, 1996; Doll, Sands, Wehmeyer, & Palmer, 1996). Researchers and professionals working with children with disabilities emphasize the importance of encouraging the development of social skills and skills that contribute to self-determination during childhood (Abery & Zajac, 1996; Doll et al., 1996). As a result, numerous social skills interventions have been designed for use in the school setting (Odom & Brown, 1993), and professionals are encouraging the development of similar programs aimed at increasing opportunities to develop skills contributing to self-determination (Abery & Zajac, 1996; Doll et al.,

1996). Considering that young children spend much, if not most, of their time in the home environment, it is surprising to see the majority of interventions aimed at the school environment. In fact, little information is available about the peer relationships of young children with disabilities in the home environment (Guralnick, 1997), or the opportunities these children have to develop skills contributing to self-determination in the home environment (Brotherson, Cook, Cunconan-Lahr, & Wehmeyer, 1995; Cook, Brotherson, Weigel-Garrey, & Mize, 1996). The purpose of the present research is to begin filling this gap. The research reported in the following chapters examines how the home environment impacts the development of peer relationships and self-determination in young children with disabilities. Specifically, this research examines the role of parents and the role of the physical environment on the development of peer relationships and self-determination of children with disabilities. This chapter concludes with a brief look at some of the roles parents and the physical environment can play in the development of peer relationships and self-determination in young children with disabilities. Following this discussion is a brief outline of the remaining chapters of this dissertation.

Parents play an important role in providing their children with opportunities to develop relationships with peers in the home environment (Epstein, 1989; Ladd & Le Sieur, 1995; Stoneman, 1993). For example, parents can invite other children over to play, or they can encourage their children to invite other children over to play (Ladd & Le Sieur, 1995). By providing their children with opportunities to interact with peers in the home environment, parents are providing opportunities for their children to learn and develop the social skills needed to interact effectively with others and develop relationship with others that can contribute to their social and emotional well-being (Rubin & Sloman, 1984).

Parents also influence the opportunities children have to exhibit control, make choices, and act independently in the home (Abery & Zajac, 1996). For example, parents determine whether or

not their child is provided with the opportunity to select the clothes he or she would like to wear each day or the snack he or she would like to have after school. Similarly, parents can encourage independence by allowing their child to get a cup and pour a glass of milk or by allowing the child to play in the backyard unaccompanied by a parent.

Parents also impact their children's social experiences and opportunities to exhibit control, make choices, and act independently by the environments they choose to live in and how they choose to structure those environments (Cook et al., 1996; Epstein, 1989; Ladd & Le Sieur, 1995). Environments that allow children access to spaces and items within the home increase children's opportunity to exhibit control over the environment (Brotherson, Cook, & Parette, 1996; Cook et al., 1996). In such environments, children can learn to make choices and act independently. In addition, a home that provides adequate play space and materials that encourage social interaction is likely to enhance the development of social skills and peer relationships (Cook et al., 1996; Miller, 1986).

Children with disabilities may face particular challenges in interacting with peers, exhibiting control, making choices, and acting independently in the home environment. Characteristics of the physical environment may limit a child with disability's access to spaces and materials within the home (Brotherson et al., 1995; Brotherson et al., 1996; Cook et al., 1996). For example, hallways and doorways might not be wide enough to allow a child to maneuver a wheelchair or walker from room to room; toys, clothes, snacks, and other items may be stored so they are inaccessible to children with certain limitations; or play equipment may not meet the needs of a child with a disability (Cook et al., 1996). Opportunities for these children to interact with peers and to develop skills leading to self-determination may be increased by modifications to the home (i.e., wider doorways, lower sink, toys stored on low shelves in open containers) and/or assistive devices (i.e., walkers, communication devices, switches). In order for children to benefit from home modifications

and assistive devices parents need to be aware of and willing to make home modifications and use assistive devices (Brotherson et al., 1996; Parette & Brotherson, 1996).

Both relationships with peers (Hartup, 1983; Rubin, 1980; Strully & Strully, 1985) and making decisions about one's own life (Abery, 1994; Bannerman et al., 1990; Guess et al., 1985; Kennedy, 1996; Wehmeyer, 1992) positively contribute to a person's quality of life. Research indicates people with disabilities often lack relationships with peers (Crapps & Stoneman, 1989; Hayden et al., 1992; Newton et al., 1994) and control over their own lives (Kishi et al., 1988; Sands & Kozleski, 1994; Stancliffe & Wehmeyer, 1995; Wehmeyer & Metzler, 1995; Wehmeyer et al., 1995). Since early childhood is the time when many of the skills needed to interact effectively with peers and become self-determined develop, researchers and professionals working with children with disabilities are interested in how young children with disabilities might be aided in developing these skills (Abery & Zajac, 1996; Doll et al., 1996). The research presented in the following chapters explores the peer relationships of children with disabilities in the home environment and the opportunities experienced by children with disabilities to develop skills contributing to self-determination in the home environment. Particular attention is given to the influence of parents and the physical environment on children's opportunities to develop in both areas.

Dissertation Organization

The following chapter, Chapter 2, reviews the literature pertinent to the development of peer relationships and self-determination in children with disabilities. This review includes an examination of the home environment and its impact on the development of peer relationships and skills contributing to self-determination. This examination focuses on the role of parents and the role of the physical environment in creating opportunities for children to develop peer relationships and skills contributing to self-determination.

Chapters 3 and 4 are manuscripts prepared for submission to scholarly journals. Both articles come from a larger study examining the home environments of children with disabilities. In the first article, Chapter 3, qualitative data analysis of in-depth family interviews and home observations are used to examine the experiences children with disabilities have with peers in the home environment. The second article, Chapter 4, presents the findings of two quantitative scales. The first scale examines parent attitudes towards choice, independence, and self-determination for children with disabilities. The second explores the opportunities children with disabilities have to exhibit control, make choices, act independently, and interact with peers in the home environment. Qualitative data from family interviews and home observations are used to further enhance the results reported in Chapter 4.

Finally, Chapter 5, provides a general discussion of the findings of both articles and the implications of these findings for children with disabilities and their families. Suggestions for professionals working with families as well as for future research are provided in this chapter. The references listed at the end of this dissertation are those cited in Chapters 1, 2, and 5.

CHAPTER 2 LITERATURE REVIEW

The purpose of this chapter is to review the existing literature about the impact of the home environment on the development of peer relationships and self-determination in children with disabilities. This review begins with a general look at the peer relationships and self-determination of individuals with disabilities. Following this general discussion is an examination of the roles parents and the physical environment play in the development of peer relationships and self-determination, particularly for children with disabilities.

Peer Relationships

Importance of Peer Relationships

Social development is viewed as an important developmental task of childhood (Buhrmester & Furman, 1986; Hartup, 1983; Odom, McConnell & McEvoy, 1992; Rubin, 1980). Relationships with peers serve many functions including opportunities for intellectual growth, companionship, emotional intimacy, and social support (Berndt & Perry, 1986; Guralnick et al., 1995; Hartup, 1983; Rubin, 1980). Research indicates that children who experience fewer positive peer relationships or friendships often experience feelings of loneliness and isolations (Asher, Hymel, & Renshaw, 1984; Parker & Asher, 1987; 1993). For example, Asher et al. (1984) found 3rd to 6th grade students seen as “unpopular” by classmates reported significantly higher levels of loneliness and social dissatisfaction than children rated as “average” or “popular” by classmates. Parker and Asher (1993) examined how group acceptance, friendship, and friendship quality related to loneliness and social dissatisfaction in a sample of 3rd to 5th graders. They found low group acceptance, lacking a friend, and poor quality friendships each contributed independently to children’s feelings of loneliness and social dissatisfaction. They conclude,

Together, these findings suggest that children’s feelings of loneliness can arise from several sources that, in combination, can seriously undermine children’s feelings of well being.

Receiving poor acceptance by peers, lacking a friend, or having a friendship that fails to meet important relationship needs each contributes. (p. 619)

Limited or negative peer relationships in childhood have also been found to be correlated with negative outcomes later on in life including dropping out of school, juvenile and adult crime, and psychological adjustment (see Parker & Asher, 1987 for a review).

Peer Relationships of Children with Disabilities

Parents of individuals with disabilities of all ages express concern over the social relationships of their children with disabilities (Hanley-Maxwell, Whitney-Thomas, & Pogoloff, 1995; Strully & Strully, 1985; Turnbull & Ruef, 1997). Strully and Strully (1985) express this concern:

For too long persons with developmental special needs have been isolated and lonely. There have been very few people to care about them except for their immediate family (in most cases), paid human service workers, and possibly other devalued people with who they associate. (p. 224)

Considerable research exists documenting these concerns (Hanley-Maxwell et al., 1995; Turnbull & Ruef, 1997). For example, in a study by Hanley-Maxwell et al. (1995), one of three major hopes parents had for their young adult children with disabilities as they finished school and entered adult life was that their child develop friendships and relationships with nonpaid, nonfamily individuals. Many of these same parents believed this would be a significant challenge as their children currently lacked social networks outside of the family. In another study, Turnbull and Ruef (1997) found most of the children in their sample of children with behavioral disabilities (2 to 17 years of age) did not have any friends. Parents of these children were disappointed with their children's lack of friends but many accepted it as inevitable.

Parents have expressed their concerns about their children with disabilities' limited peer relationships to professionals, and they have urged these professionals to assist their children in developing and maintaining friendships with other children (Grenot-Scheyer, Coots, & Falvey, 1989). The move away from segregating children with disabilities in specialized classrooms towards integrating of children with disabilities into regular classrooms is, at least in part, an attempt to address the socialization needs of children with disabilities (Guralnick et al., 1995). Parents and professionals believe integrated programs can promote social skill development and acceptance of children with disabilities (Baily & Winton, 1987; Guralnick, 1994; Reichart et al., 1989). Research finds children with disabilities do socially interact more with other children in integrated as opposed to segregated settings (Buysse & Bailey, 1993; Guralnick & Groom, 1988; Guralnick et al., 1995). However,

In general, despite the occurrence of more frequent and positive social exchanges on the part of children with disabilities in integrated as opposed to specialized settings, typically developing children actually interact with children less frequently than would be expected in terms of their availability. (Guralnick et al., 1995, p. 458)

Research also indicates that children with disabilities are less accepted and more rejected by peers and have much greater difficulty establishing reciprocal friendships than do children without disabilities (Guralnick et al., 1995; Hadley & Rice, 1991). In addition, these children are often perceived as less socially competent and are of lower social status (Guralnick & Groom, 1987). These findings suggest proximity to peers is not enough to increase the social competence and social standing of children with disabilities. This insight has lead to the development of numerous social skills programs aimed at increasing the social competence of children with disabilities (Odom & Brown, 1993).

The majority of research examining the peer relationships of children with disabilities has taken place in the school setting. Very little is known about the peer relationships of children with disabilities in the home and neighborhood environments. The limited research available has found children with disabilities interact with peers outside the school setting significantly less often than children without disabilities of the same age (Guralnick, 1997; Stoneman, Brody, Davis, & Crapps, 1988; Stoneman, Brody, Davis, Crapps, & Malone, 1991). Since children, especially young children, spend a great deal of time in the home and neighborhood environments and since children's experiences with peers in one setting impact their relationships with peers in other settings (Epstein, 1989; Ladd, Hart, Wadsworth, & Golter, 1988), it is important to understand the peer relationships of children with disabilities in the home and neighborhood environments. Stoneman (1993) goes so far as to say "it is of little value to facilitate interactions in the classroom if children with disabilities spend the rest of their time socially isolated in their homes and neighborhoods" (p. 242).

Relationships with peers contribute to the quality of life of individuals with and without disabilities directly, but also indirectly through their contribution to the development of self-determination (Abery, 1994; Abery & Zajac, 1996; Doll et al., 1996). The ability to interact with others also has been identified as a skill important to the development of self-determination. Doll et al. (1996) express this well:

Because self-determination usually occurs within a social context, and with reference to others, it follows that a self-determined person must be able to think about others and their actions if they are to create effective social interactions within which to advocate for social, vocational, or instructional choices. (p. 76).

Interactions with peers can play a particularly important role in the development of skills that lead to self-determination.

Interactions with peers also serve as a context for learning and practicing self-determination. Through observational learning and direct instruction, these interactions enhance the acquisition of skills that are necessary for the individual to exert control over his or her life. One of the most influential aspects of social interaction is the equality that exists among peers. As Hartup (1983) suggests, there are some aspects of social competence that may only be learned when participants are on equal footing. This unique characteristic of the peer group is likely to make it a fertile ground for the development of self-determination. (Abery, 1994, p. 352)

Self-Determination

The Importance of Self-Determination for Individuals with Disabilities

The ability of an individual to make decisions about how to live his or her own life is highly valued in our society and is closely linked to a person's quality of life (Abery, 1994; Wehmyer, 1996b). Individuals with disabilities often lack control over their own lives ranging from making daily decisions about what they eat and wear or how they spend their leisure time to where they live and work (Kishi et al., 1988; Sands & Kozleski, 1994; Stancliffe & Wehmeyer, 1995; Wehmeyer & Metzler, 1995; Wehmeyer et al., 1995). The lack of influence people with disabilities often experience has raised interest in the concept of self-determination (Abery, 1994, Ward, 1988; Wehmeyer, 1992; Wehmeyer & Metzler, 1995; Williams, 1989). Self-determination will be defined more thoroughly in the following section, but in general terms self-determination refers to making decisions about how one lives one's own life (Schloss et al., 1993; Turnbull & Turnbull, 1985).

Individuals with disabilities, themselves, are largely responsible for the interest in self-determination seen in the disabilities literature (Wehmeyer, 1996a). Individuals with disabilities have identified self-determination as important to them and their quality of life (Kennedy, 1993,

1996; Ward, 1996; Williams, 1989). Kennedy (1996) states “self-determination is what life is about. Without it, you might be alive, but you wouldn’t be living—you would be just existing” (p. 48). Individuals with disabilities emphasize the right they have to live their own lives as they choose (Ward, 1988; Williams, 1989). They discuss the right they have to be provided with the necessary education and opportunities to learn the skills leading to self-determination (Ward, 1996). Wehmeyer (1996a) states, “the call for self-determination by people with disabilities is, in and of itself, sufficient justification for focusing on this outcome” (p. 28). However, there are additional reasons for encouraging the development of self-determination in individuals with disabilities, including the link to a person’s quality of life as discussed above and because self-determination provides individuals with the skills necessary to live independently, or as independently as possible, decreasing their dependence on social services systems and other people (Wehmeyer, 1996a).

Wehmeyer does an excellent job of summarizing the importance of focusing on self-determination for individuals with disabilities:

The movement to support and promote self-determination is about treating people with dignity and respect. It is about enabling people with disabilities to achieve independence, integration, and inclusion to the greatest extent possible by providing them the opportunities to learn the skills they need and the chance to put those skills into action. It is about empowerment, choice, and control. (Wehmeyer, 1996a, p. 33)

Self-Determination Defined

While the interest in self-determination for individuals with disabilities is growing, a single definition of self-determination does not exist (Abery, 1994; Wehmeyer 1996a, 1996b). Ward (1988) defines self-determination as the attitudes and abilities that lead people to define goals for themselves and take the initiative to reach those goals. Turnbull and Turnbull (1985) discuss self-determination as choosing to live one’s life consistent with personal values and preferences. Schloss

et al.(1993) define self-determination as the ability of a person to consider options and make appropriate choices in the environments in which he or she lives. Wehmeyer and Metzler (1995) define self-determination as “the attitudes and abilities required to act as the primary causal agent in one’s life and to make choices regarding one’s quality of life free from undue external influence or interference” (p. 111).

Although people may be talking about the same general concept when they discuss self-determination, different individuals focus on different aspects of self-determination. For example, some people focus on the issue of empowerment or the right people have to live their lives according to their own desires (Wehmeyer, 1996a; Williams, 1989). This focus includes a heavy emphasis on self-advocacy (Wehmeyer, 1996a). Other people, such as Deci and colleagues, focus on self-determination as a motivational construct or “an internal need contributing to an individual’s performance of intrinsically motivated behaviors” (Wehmeyer, 1996a, p. 20). Wehmeyer argues that self-determination cannot be defined as a specific set of behaviors, such as problems solving or assertiveness, because any behavior can be a self-determined behavior if an individual uses the behavior as a way to achieve his or her goals. In addition, he reports “both the occurrence and nonoccurrence of a behavior can be self-determined” (p. 22). For example, a person can choose to stand up for his or her rights or choose not to stand up for his or her own rights; standing up for oneself and not standing up for oneself can be self-determining behaviors if it is the person’s choice. Again, the key is that the choice is being made by the person him or herself. Acting in a self-determined manner does not guarantee a positive or successful outcome (Schloss et al., 1993; Wehmeyer, 1996b).

Wehmeyer (1996a) suggests that it may be more appropriate to conceptualize self-determination as a “characteristic of actions or events” (p. 24). Wehmeyer suggests self-determined behavior reflects four essential characteristics: autonomy, self-regulation, psychological

empowerment, and self-realization. A behavior is autonomous if a person acts according to his or her own preferences or interests free from undue external influence or interference. Self-regulation involves deciding what skills to use in a situation, then developing, carrying out, and evaluating a plan of action, and making modifications when deemed necessary. Psychological empowerment refers to a person's belief that he or she has the skills necessary to achieve desired outcomes (e.g., personal efficacy), and that he or she can influence outcomes in his or her environment (e.g., internal locus of control) (Wehmeyer, 1996b; Wehmeyer, Kelchner, & Richards, 1996). Finally, self-realization refers to an individual's understanding of his or her strengths and limitations and how his or her abilities can be used to achieve the most desirable outcome. Wehmeyer et al. (1995, 1996) found the four essential characteristics he identified to be correlated with self-determination providing at least initial support for his conceptualization of self-determination.

Skills Contributing to Self-Determination

While self-determination is not simply a set of behaviors, there are skills and/or abilities that are often identified as being particularly important to self-determination. However, as with the definition of self-determination, there is no single, exhaustive list of these skills. Abery (1994) discusses what he believes are the most frequently cited skill clusters contributing to self-determination; these include "choice making and problems-solving abilities, self-advocacy skills, and the ability to regulate one's own behavior" (p. 348). Doll et al., (1996) explore the development of skills they identify as important for the emergence of self-determination. The skills they focus on include self-awareness and self-knowledge; self-evaluation and attributions of efficacy; choice making and decision making; metarepresentations; goal setting and attainment. Wehmeyer (1996b) identifies choice-making; decision making; problem solving; goal setting and task performance; self-observation, evaluation and reinforcement; self-awareness; and self-knowledge as skills, which he

refers to as “component elements,” that are important for the emergence of the four essential characteristics discussed above and therefore are important to self-determination.

The skills and competencies needed to become self-determined as an adult begin to develop from birth (Abery & Zajac, 1996; Doll et al., 1996; Wehmeyer, 1996b). A number of researchers and professionals emphasize the importance of providing young children with disabilities opportunities to develop the skills and competencies necessary to become self-determined (Abery & Zajac, 1996; Doll et al., 1996). Abery and Zajac (1996) report that “many, if not most, of the fundamental roots of personal control lie with the developmental processes initiated during early childhood and the elementary school years” (p. 176). In order for children to gain control over their lives, they need opportunities to experience control including opportunities to make choices and act independently (Abery & Zajac, 1996). In addition, children learn and practice the skills needed to become self-determined by observing and interacting with peers (Abery, 1994; Doll et al., 1996). Within the home environment, both parents and characteristics of the physical environment help determine the opportunities children have to make choices, act independently, and interact with peers. The following sections will explore the impact of parents and physical characteristics of the home environment on the development of peer relationships and self-determination skills.

The Role of Parents in the Development of Peer Relationships and Self Determination

The Link Between Parents and Peers

Traditionally researchers have considered families and peer groups as two separate entities and have examined each area independently from the other (Ladd & Le Sieur, 1995; Rubin & Sloman, 1984). However, largely influenced by systems and ecological theorists such as Urie Brofenbrenner (1979, 1989), researchers have recently begun to examine how these two subsystems are related and, in particular, how early family experiences impact children’s social competence and their relationships with peers (Ladd & Le Sieur, 1995). Research in this area is rapidly growing as

both the direct and indirect ways parents impact their children's peer relationships are being identified and explored.

Ladd and Le Sieur (1995) state "indirect influences occur to the extent to which behavioral and relationship patterns learned in the context of the family mediate children's competence with peers, or are carried *by the child* into the peer domain" (p. 378). Several areas have received substantial attention in the literature as possible indirect ways parents and families impact children's peer relationships; these include, but are not limited to, attachment, parenting styles, disciplinary styles, family stressors, and family pathology (Ladd & Le Sieur, 1995).

Parents also impact their child's peer competence and peer relationships directly. Ladd (1992) define direct pathways as "activities or processes that parents engage in as a means of controlling or enhancing their children's skills and relationships with peers" (p. 4). Ladd and Le Sieur (1995) discuss four roles parents play in managing their children's peer relationships; these include parents as designer, mediator, supervisor, and consultant. Each of these roles will be briefly explored.

Parent and Peers: Direct Influences

Parents as designers. First, parents as designers refers to parental acts that "control or influence the settings in which children are likely to meet and interact with peers" (Ladd & Le Sieur, 1995, p. 389). "Proximity places students in context and defines the boundaries within which friends are chosen" (Epstein, 1989, p. 159). Children, especially young children, rely on their parents to put them in proximity to other children. One way parents impact the access their children have to other children is by the neighborhoods in which they choose to live (Epstein, 1989; Ladd & Le Sieur, 1995; Rubin & Sloman, 1984). While many factors may impact where a family lives, such as proximity to work, financial resources, social opportunities, quality of life and educational opportunities (Ladd & Le Sieur, 1995; Rubin & Sloman, 1984), for some parents the availability of

peers for their children is an important factor in choosing a home (Epstein, 1989; Rubin & Sloman, 1984).

Parents also act as designers of their child's peer encounters by the environments outside the home and neighborhood they choose to put their children. Child care settings and preschools provide children with opportunities to interact with peers. Parents determine whether or not their child is involved in child care or preschool and if they choose either of these settings, parents determine the type of child care or preschool setting in which their child spends time (Epstein, 1989, Ladd & Le Sieur, 1995). In addition, parents may involve their children in community activities such as church groups, library story times, community art classes, or sports programs which provide further opportunities for peer interactions (Epstein, 1989, Ladd & Le Sieur, 1995).

Parents as mediators. Ladd and Le Sieur (1995) suggest parents act as mediators in their child's peer interactions and relationships when they "actively assist children with the process of meeting peers and managing their peer engagements" (p. 391). They identify five aspects of parents' roles as mediators of their children's relationships: "(1) find playmates and build a peer network, (2) initiate and arrange play opportunities, (3) form and maintain relationships with specific peers, (4) negotiate differing peer contexts (e.g., dyadic vs. group settings), and (5) avoid undesirable playmates or play activities" (p. 391).

Recent research has begun to explore the role parents play in initiating their children's peer contacts (Bhavnagri and Parke, 1991; Ladd & Golter, 1988; Ladd & Hart, 1992; Ladd et al., 1988). Research has found that children whose parents actively initiated peer contacts for their preschool children had children with larger peer networks and more consistent playmates (Ladd & Golter, 1988) and had children who spend more time playing in peers' homes (Ladd et al., 1988). Parents' roles in initiating peer contacts for their children appear to drop as children get older and begin to take responsibility for their own peer interactions. For example, Bhavnagri and Parke (1991) found

mothers of younger preschool children (26 to 42 months old) were more involved in arranging social contacts with other children than mothers of older preschool children (43 to 59 months old). Older preschool children in this study were more likely than younger preschool children to initiate their own social contacts. In addition, older children had larger peer networks. Ladd and Hart (1992) found parents who involved their children in the process of initiating peer contacts (i.e., the child was asked to decide who would be fun to play with, or the child was encouraged to call a peer and arrange a time to play) had children who initiated more of their own peer interactions. These findings suggest that when parents involve their children in initiating peer interactions, children learn the skills necessary to initiate such interactions on their own.

Finally, research suggests young children experience positive social outcomes when parents initiate peer interactions on their behalf (Ladd & Hart, 1992, Ladd & Golter, 1988). For example, Ladd and Hart (1992) found that preschoolers of parents who frequently initiated peer interactions had higher levels of prosocial behavior and lower levels of nonsocial behavior in preschool. Ladd and Golter (1988) reported boys were better liked and less rejected in preschool and kindergarten when parents had actively initiated peer contacts for them as preschoolers.

Parents as supervisors. The third direct role parents play in their child's social experiences with peers identified by Ladd and Le Sieur (1995) is the parent as supervisor. "Supervision as a form of parental management is defined as parents' efforts to oversee and regulate children's ongoing interactions and relationships with peers" (Ladd & Le Sieur, 1995, p. 393). Research suggests the amount and type of supervision parents provide children is related to their social competence and peer relationships (Bhavnagmi and Parke 1985, 1991; Finnie & Russell, 1988; Ladd & Golter, 1988). For example, Finnie and Russell (1988) used an experimental play situation and found mothers of preschoolers identified as unpopular by peers provided little supervision or supervision less appropriate to the play situation than did mothers of preschoolers identified as popular.

Ladd and Le Sieur (1995) discuss three levels of supervision including interactive intervention, directive intervention, and monitoring. Lollis, Ross, and Tate (1992) are credited with proposing the terms interactive and directive interventions. "Parents who employ interactive interventions supervise children's peer interactions from within the play context, often as active participants in the children's play" (Ladd & Le Sieur, 1995, p. 393). Such intervention appears to be most useful for very young children (e.g., toddlers). Two studies by Bhavnagmi and Parke (1985, 1991) provide support for this. In the first study, toddlers' social skills were examined in two situations, one in which two toddlers played with their mothers assistance and direction, and the other in which two toddlers played together without interactive intervention. The results revealed toddlers' social skills were more advanced and the children played together for longer periods of time when their mothers were interactively intervening in their play.

In the second study, Bhavagri and Parke (1991) used a laboratory setting to examine the impact of direct parent intervention on the peer interactions of two groups of children including younger preschoolers (26 to 42 months) and older preschoolers (43 months to 59 months). Two children unfamiliar to one another and of the same age played in a laboratory setting with one parent of each child present. During alternating time segments, parents were asked to remain uninvolved in the children's interactions (e.g., read a magazine, pretend they weren't in the room) or one parent was asked to "supervise the children's play and help the children play together" (p. 428). They found the social competence of younger children increased significantly when parents were directly involved with the child during interactions with a peer; whereas for older children, social competence did not significantly differ under these conditions.

The next of type of supervision parents employ has been identified by Lollis et al. (1992) as directive intervention.

Directive intervention refers to a style of parental supervision that is less proximal and participatory than interactive intervention. Parents who engage in this form of supervision typically operate from outside the context of the children's play (e.g., as observers rather than as participants), and intervene only sporadically in children's ongoing interactions. (Ladd & Le Sieur, 1995, p. 394)

Parents using directive intervention generally remain outside the play interaction but intervene when they deem necessary or useful such as when a conflict arises, when objectionable behavior is occurring, or when they deem it useful to encourage specific social skills such as sharing (Ladd & Le Sieur, 1995). Lollis et al. (1992) suggest such interventions are most appropriate for children with some experience interacting with peers (e.g., older preschoolers, early elementary schoolers).

Some evidence suggests that directive interactions may be more appropriate than interactive supervision for older preschoolers. Ladd and Golter (1988) found that children whose parents reported using interactive interventions frequently during their preschoolers' play with peers in the home were less accepted and more rejected by classmates in kindergarten, and seen by teachers as hostile-aggressive in the classroom. Children whose parents relied more on directive interventions during children's informal peer interactions experienced higher levels of peer acceptance in kindergarten. The results of this study do not provide any insight into whether children who are provided with opportunities to interact with children with less direct supervision develop better social skills or whether parents allow children with better social skills greater opportunities to interact with peers without interactive supervision. A study by Mize, Pettit, and Brown (1995) provides some support for the later explanation. These researchers found that parents who rate their children as less socially competent provide more interactive supervision in their child's play with a peer than parents of children who rate their children as more socially competent.

The last type of supervision Ladd and Le Sieur (1995) identify is monitoring. They report “parents who act as monitors gather information about children’s peer activities, but have no direct involvement in them. Most researchers have defined monitoring as parents’ awareness or knowledge of children’s play activities, partners, and whereabouts”(p. 396). Monitoring is most commonly a supervision strategy used with older children and adolescents. The majority of research done in the area of parental monitoring has examined parental monitoring and problem behaviors in children. This research has found a lack of parental monitoring to be correlated with problem behaviors in children such as delinquent behavior, underachievement, and/or conduct disorders (Crouter, MacDermid, McHale, & Perry-Jenkins, 1990; Patterson, & Stouthamer-Loeber, 1984). Limited research has examined the impact of parental monitoring on children’s peer relationships, but at least one study suggests parental monitoring and children’s peer acceptance are positively correlated (Dishion, 1990).

Parents as consultants. The fourth direct way parents influence their children’s peer relationships is by acting as a consultant (Ladd & Le Sieur, 1995). Parents often discuss with their children their children’s peer relationships and friendships. Parents may offer advice to their children on initiating and maintaining peer interactions and friendships. They also provide advice and guidance when their children are facing difficulties with peers. Such advice can be proactive in nature, such as discussing and preparing a child for a new social situation before it occurs, or the assistance may come after a peer interaction takes place, or when problems arise. Parents can take an active role in helping their children generate solutions to peer problems or they can take a less active role and listen as their children come up with their own solutions to problems.

Limited research exists examining the impact of parental consulting on peer issues on children’s peer relationships. Although, there is some evidence that moderate and appropriate consulting by supportive parents is positively correlated with positive social outcomes for children

(Ladd & Le Sieur, 1995; Russell & Finnie, 1990). For example, using an experimental design, Russell and Finnie (1990) found mothers' pre and post peer group interaction consulting behavior (e.g., amount and type of advice given) were correlated with peer status of their preschool children.

Parents of children with disabilities and their children's peer relationships

As discussed above, many parents of children with disabilities are concerned about their child's social development and relationships with peers (Grenot-Scheyer et al., 1989; Strully & Strully, 1985; Turnbull & Ruef, 1997). Although it is clear that parents have taken an active role in urging professionals to assist their children with disabilities in developing and maintaining peer relationships in the school environment, it is less clear what parents are doing to enhance the peer relationships of children with disabilities in the home environment. A recent study by Guralnick (1997) begins to address these issues. Guralnick found parents of children with developmental delays and children with communication disorders initiated peer relationships for their children with disabilities less often than parents of children without disabilities. Guralnick (1997) also found mothers provided far greater monitoring of peer interactions of children with developmental delays in the home environment than they provided children with communication disorders or children without disabilities. However, the disabilities of children in Guralnick's sample were more mild in nature. In addition, his sample contained only boys. Future research is needed to examine the amount and type of parental initiating and monitoring of peer interactions parents provide to children with a wide range of disabilities as well as the relationship between parental initiation of peer contacts and monitoring of peer interactions and the social competence and peer status of children with disabilities.

Parents and Self-Determination

Parents greatly influence their young children's opportunities to make choices, act independently, and socialize with peers, particularly in the home environment. Parents determine

whether their child is provided with the opportunity to select the clothes he or she would like to wear each day, the snack he or she would like to have, or how he or she will spend free time. Parents can provide opportunities for children to act independently by allowing their child to get a cup and pour a glass of milk or allowing the child to play in the backyard unaccompanied by parent. Finally, as discussed above, parents can also impact the opportunities a child has to interact with peers by the neighborhoods they choose to live in or by encouraging and/or assisting their child to extend play invitations to other children (Ladd, & Le Sieur, 1995).

Parents can also influence the development of skills contributing to self-determination by the way they structure the physical environment. The arrangement of the physical environment can enhance or limit opportunities for children to make choices, act independently and interact with peers in the home environment. The way in which home environments can impact the development of skills contributing to self-determination will be discussed later in this chapter. The important point, at this time, is to recognize that parents are largely responsible for shaping this environment.

Two variables that are likely to impact the opportunities parents provide their children to make choices, act independently, and interact with peers and how they structure the environment to support these opportunities, include the value parents place on their children developing these skills and the knowledge they have about how to assist their child in developing these skills. The following sections will briefly explore these issues.

Parents may view the importance of peer relationships and access to and control over the environment differently for children with and without disabilities. Parents of children with disabilities often see their children as vulnerable and in need of extra protection (Doss & Hatcher, 1996; Scholoss et al., 1993; Wehmeyer, 1996b). As a result, parents of children with disabilities may focus their attention more on keeping their children safe and less on providing their children with opportunities to interact with others and experience control over the environment. As Wehmeyer

(1996b) states “family needs for protection and safety eventually win out over the risk-taking and exploration needed to develop independence and autonomy” (p. 126).

In addition, the value parents place on the development of self-determination in their children with disabilities is influenced by their cultural background (Turnbull & Turnbull, 1996). For example, some cultures value independence of their members, whereas other cultures value interdependence in their members (McCollum & McBride, 1997; Turnbull & Turnbull, 1996). A culture that values interdependence in its members may be less likely to value self-determination. In fact, Turnbull and Turnbull (1996) suggest that “self-determination itself is largely rooted in the cultural values of middle- and upper-middle class Anglo American professionals and families” (p. 199).

Even if parents value the development of social skills, choice-making, and independence, they might not know how to best provide their children with disabilities opportunities to develop these skills. They may also not be aware of how to best structure the home to encourage these skills to develop (Brotherson et al., 1996; Cook et al., 1996). Parents of children with disabilities may require more child-specific knowledge about how to assist their child in developing both social relationships and skills leading to self-determination, as well as, how to structure the environment to meet these needs. In some instances specialized equipment and/or modifications to the home environment may be useful. In order for children with disabilities to benefit from home modifications and/or assistive devices, parents need to be aware that technologies exist and be willing to use such technologies to increase their child’s opportunities for socialization and exploration in the home environment (Brotherson et al., 1996; Parette & Brotherson, 1996).

The Role of the Physical Environment in the Development of Peer Relationships and Self Determination

The Physical Environment and Self-Determination

The home environment plays a critical role in providing these opportunities for young children. A child's earliest opportunities to make choices, experience control, exhibit competence, and interact with others occur in the home environment (Cook et al., 1996). The physical environment sets parameters for available choices and, consequently, the ability of individuals to make choices (Altman & Wohlwill, 1978; Lang & Sullivan, 1986; Lewis, 1986; Miller, 1986). The choices children have and the opportunities they have to act on their choices are affected by the amount of control they experience over the physical environment. Children learn by acting on their environment and observing the consequences of those actions. Children learn about their own abilities and learn to become autonomous and independent by completing tasks on their own. Experiencing mastery over the environment can help children feel their lives are under their own control, which may contribute to the development of an internal locus of control as well as to children's sense of self-competence and self-esteem (Abery, 1994).

The opportunities children have to make choices in the environment are closely linked to the structure of the environment. Home environments that are structured to be child-oriented allow "children to solve their own problems, assess their own competence, and provide a considerable degree of freedom within adult-set limits with respect to what children do, when they do it, and the manner in which it is accomplished" (Abery & Zajac, 1996, p. 177). Unfortunately many home environments are not child-oriented or even child-friendly. After a brief review of the literature, Johnson (1987) states, "it is clear that, at least in North America, the home can be a restrictive, inappropriate environment for young children" (p. 143). Children are often encouraged to engage in activities that place the fewest demands on the home environment such as quiet, passive, fine motor

activities rather than noisy, active, gross motor, or potentially messy activities (Gaunt, 1980). Home environments that restrict activity and inhibit exploration do not provide young children with the opportunity to act on the environment which inhibits learning and opportunities to make choices and to experience control. As a result, development of independence and autonomy, internal locus of control, self-competence, and self-esteem are negatively impacted.

Children with disabilities are likely to experience more limited opportunities to act on the environment if characteristics of the child's disability and the structure of the environment inhibit freedom to explore and manipulate the home environment (Brotherson et al., 1996; Cook et al., 1996). For example, narrow hallways or steep stairs limit the spaces a child requiring the use of a wheelchair for mobility can access on his or her own. Modifications to the home environment and/or assistive devices can provide greater access to the home environment thereby providing greater opportunities for children to make choices and act independently.

Modifications to the home environment. Modifications to the home environment that provide children with greater access to and control over the environment are likely to provide a child with a disability greater opportunities to make choices, act independently and socialize in a developmentally appropriate manner within the home (Brotherson et al., 1995; Brotherson et al., 1996; Cook et al., 1996). For example, a child with a physical disability which limits mobility may have increased opportunities to make choices about where to spend time in the home if the home is arranged so he or she can maneuver a wheelchair or walker throughout the home. This same child is going to be able to act more independently if items such as toys, snacks, and clothing are accessible to him or her. This may mean storing these items low enough for the child to reach and/or in easy to open containers, cabinets, or drawers (Brotherson et al., 1996; Cook et al., 1996). Finally, accessible play spaces and adaptive play equipment (i.e., adaptive swing or bicycle) may make it easier for children with disabilities to interact with other children in the home environment (Cook et al., 1996).

Many simple modifications in the way the environment is organized can be made to increase a child with a disability's choice and independence in the home environment (Brotherson et al., 1996; Cook et al., 1996; Parette & Brotherson, 1996). For example, a child who is unable to reach and/or pull out a dresser drawer might benefit from adaptive drawer pulls or clothes being placed in baskets on the floor. Similarly toys on open shelves or in low open containers may provide a child with a disability greater access to these items. In order for children to benefit from home modifications, parents may need information on types of modifications that might benefit their child and how these modifications can be made.

Assistive devices. Technological advances have helped make it possible for homes to be more accessible for children with disabilities, and increase the opportunities these children have to exert control, make choices, act independently and interact with peers (Brotherson et al., 1996; Cook et al., 1996; Parette & Brotherson, 1996). Assistive devices (i.e., wheelchairs, walkers, ramps, communication devices, switches) can provide children with greater access to both physical spaces and items within the home environment. Greater access can lead to increased opportunities for a child to make choices, act independently, and interact with others in an age-appropriate manner. For example, a communication device can enable a child with communication difficulties to express his or her preferences, or an electronic switch can provide a child with the opportunity to exercise some control over the physical environment such as turning on and off lights or operating a cassette player. In order for children to benefit from assistive devices parents need information about available technologies (Brotherson et al., 1996; Parette & Brotherson, 1996). In addition, it is important for families and professionals working with these families to consider how a modification to the home or an assistive device can impact family functioning; that is how can a home modification or assistive device impact other family members? Parette and Brotherson (1996) state, "the introduction of assistive technology may improve mobility or communication, but if it limits family interactions or

leads a family to become more isolated, the tradeoffs becomes questionable” (p. 35). These researchers identify four areas, that may be pertinent to the needs of the family, that should be explored when a family is considering the use of assistive technologies. These include: (1) the impact of the technology on caregiving demands; (2) the impact of the technology on family needs and routines; (3) the impact on family financial and human resources; and (4) travel and transportation needs to maintain the device.

The Physical Environment and Psychological Needs

Feelings of positive self-worth and self-competence contribute to the development of skills leading to self-determination (Abery, 1994; Doll et al., 1996). The physical environment can contribute to positive feelings of self-worth and self-competence. Miller (1986) states, “the home plays a very important role in the development of a clear, stable, definition, and a positive evaluation of the self for children” (p. 83). Miller (1986) identifies seven psychological needs the home environment meets for children including identity, territoriality, privacy, nurturance, stimulation, manipulation, and sociability. Each of these areas will be defined with examples as to how the home might be structured to meet these needs.

Identity. The home environment plays an important role in a child’s development of self-identity (Miller, 1986). An environment that allows a child to experience choice and control and helps a child feel unique and valued positively impacts a child’s self-identity and feelings of self-worth. Personalization is an important contributor to identity formation (Cook et al., 1996; Miller, 1986). Photographs of the family and child, the child’s art work hung at his or her eye level, and a mirror that allows a child to see his or her whole body contribute to the formation of positive identity (Brotherson et al., 1996; Cook et al., 1996; Dodge, Koralek, & Pizzolongo, 1989). In addition, opportunities to participate in the selection of toys, furnishings, decorations, or color schemes for

their personal spaces contribute to children's feelings of self-worth and confidence (Brotherson et al., 1996; Cook et al., 1996; Miller, 1986).

Territoriality. Territoriality refers to the desire children have to own, control, and occupy space. Places children may more commonly experience some feeling of control and ownership include bedrooms, playrooms, and corners of the home; however is often limited space within the home that children can consider their own (Brotherson et al., 1996; Cook et al., 1996). Children with disabilities may be particularly limited in their territoriality, particularly if they experience limited mobility and/or require certain assistive devices (i.e., wheelchairs, walkers) to help them access such spaces.

Privacy. Children need some defined space of their own that they can regulate to ensure privacy. Privacy allows a child to set up and control boundaries between him or herself and others; for this reason it has been identified important to the development of self-identify and autonomy (Laufer & Wolfe, 1977). Privacy needs can be met by closing a bedroom door, building a tent with pillows and sheets, listening to headphones, day dreaming while looking out the window, or any other space or activity that allows a child to physically or psychologically withdrawal from others for a period of time (Brotherson et al., 1996; Cook et al., 1996; Weigel-Garrey, Cook, & Brotherson, 1998).

Nurturance. Children feel nurtured when the environment is secure, safe, protected, warm, comfortable, snug, and cozy (Cook et al., 1996; Miller, 1986). When children feel comfortable, safe, and secure, they are more likely to explore their environment contributing to their cognitive and emotional development (David & Weinstein, 1987). An environment that is warm in temperature and color, and where young children have access to play areas near adults (i.e., in the kitchen or an adjacent living area), can contribute to a feeling of nurturance (Miller, 1986). Items such child-sized

furnishings, family photographs, children's artwork, pillows, and plush rugs or carpets are other examples of ways to make to children feel nurtured (Brotherson et al., 1996; Cook et al., 1996).

Stimulation. Children need home environments that provide opportunities for external stimulation. Decorations throughout the home, pets, windows that allow in sunlight and that allow visual access to outdoors, and a variety of sights, sounds, and textures are all examples of stimulation (Brotherson et al., 1996; Cook et al., 1996; Miller, 1986).

Manipulation. "Children derive satisfaction from actively manipulating and changing the environment" (Miller, 1986, p. 55). As previously mentioned, children learn by acting on the environment around them. Access to both space and materials in the home provide children with opportunities to manipulate their environment. Toys stored on low shelves or cabinets in the kitchen that provide children with access to such items such as snacks or pots and pans are examples of how the home environment can be structured to allow children to manipulate it (Brotherson et al., 1996; Cook et al., 1996). Children should be able to easily move from room to room. Children with disabilities may require modifications to the home environment to allow them to move about more easily; for example, wide hallways and doorways may provide a child who uses a wheelchair access to parts of the home he or she might otherwise have been unable to access (Brotherson et al., 1996; Cook et al., 1996).

Socialization. Finally, home environments provide a context for socializing with family members and friends. Family members interact with each other in diverse ways in the home including, but not limited to, sharing meals, playing games, or sharing conversation (Miller, 1986). Such interactions can occur in rooms throughout the home. Spaces that encourage parent-child interactions as well as encourage interactions between children (e.g., siblings and friends) contribute to children's social development. For example, a large kitchen/dining area where children and adults can interact with each other (i.e., talk about a child's day) while each is involved in a different

activity (i.e., parent cooking while a child colors at the kitchen table) encourages interactions (Miller, 1986).

The Physical Environment and Peer Relationships

Characteristics of the neighborhood. The neighborhoods in which children live impact their social experiences. “Young children, especially, spend much of their time within the confines of the neighborhood, and their opportunities for peer interaction and relationships are likely to be influenced by both the physical and interpersonal features of this context” (Ladd & Le Sieur, 1995, p. 389). For example, child density and physical characteristics of the neighborhood have been identified as impacting children’s access to peers as well as impacting the quality of these interactions. Children who live “in neighborhoods with a dense child population have greater access to peers and form larger social networks” (Ladd & Le Sieur, 1995, p. 389). Physical features of the neighborhood also may influence accessibility to peers. Contact with peers is more common in neighborhoods with sidewalks and/or play areas (Berg & Medrich, 1980; Ladd & Le Sieur, 1995) in contrast to neighborhoods with lots of hills and/or busy streets (Berg & Medrich, 1980). For children with physical, cognitive, and/or behavioral limitations, physical features of the home and neighborhood environments may play an even greater role in peer relationships. For example, for a child with a physical disability requiring the use of a wheelchair, the physical features of the environment (i.e., sidewalks, ramps, and wide doorways) may be even more crucial in his or her access to peers; likewise parents of a child with behavioral limitations, who is at risk of running into traffic, may limit this child’s play in neighborhoods with busy streets.

Characteristics of the home. The home environment is the place in which early socialization occurs. Home environments can encourage or discourage peer interactions. Accessible play spaces both indoors and outdoors are likely to encourage play (Brotherson et al., 1996; Cook et al., 1996). For example, a play area with easily accessible toys or a safe play structure in the

backyard provides a context for peer interaction in the home environment. Spaces for play should be accessible to children with disabilities and should include toys that children with and without disabilities can use together (Brotherson et al., 1996). Research indicates that children interact more with one another when items that encourage interactions between children are available and easily accessible such as materials for dramatic play, large building blocks, vehicles, (cars, trucks, wagons, etc.), or multi-purpose gross motor play equipment (i.e., climbing equipment) (Weinstein, 1987). Parents should consider whether the organization of the play space and the items within it encourage peer interactions. Children with disabilities may have special needs for play. Modifications to the home environment that provide children with disabilities access to toys and play spaces may make peer interactions easier for these children.

The structure of the home environment is largely determined by the adults residing in it. Parents have the ability to organize a home environment so that it is more or less child-oriented. Both the importance parents place on their children developing choice-making skills, independence, and socialization skills and the knowledge they have about how to structure the environment to assist their child in developing these skills are likely to impact the opportunities children with disabilities have to develop these skills in the home environment. Parents of children with disabilities may need child-specific information about the types of modifications and assistive devices that might be particularly useful in assisting their child in developing these skills (Brotherson et al., 1996; Cook et al., 1996).

Conclusions

Both the attitudes and behaviors of parents and characteristics of the physical environment have the potential to impact the development of peer relationships and self-determination of children with disabilities. Both children's relationships with peers and their level of self-determination contribute to the quality of life children with disabilities experience. Limited research has explored

the opportunities children with disabilities have to develop peer relationships and self-determination skills in the home environment. The research reported in the following chapters is an attempt to begin filling this void.

CHAPTER 2. PEER RELATIONSHIPS OF CHILDREN WITH DISABILITIES IN THE HOME ENVIRONMENT

A paper to be submitted to Exceptional Children

Cheryl L. Geisthardt, Mary Jane Brotherson, Christine C. Cook

Abstract

Family interviews and home observations were used to examine the peer relationships of children with disabilities (3 to 10 years old) in the home environment. Results indicate many children with disabilities spend limited time with peers in the home environment. Parents of children with disabilities believed that the more exposure to and knowledge about their children with disabilities peers and their parents had, the more opportunities children with disabilities had to interact with peers in the home environment. Children with the greatest amount of peer contact had disabilities that were mainly physical in nature, while children with behavior problems and cognitive limitations were among the children who experienced the fewest peer interactions. Children living in isolated areas and/or off busy roads had more limited peer contact than children residing in neighborhoods with lots of children. However, living in close proximity to other children did not guarantee frequent peer interactions. The impact of characteristics of the home and neighborhood and parents' roles in initiating children's peer interactions and supervising of peer interactions on the peer relationships of children with disabilities are explored and discussed. Recommendations for increasing opportunities for children with disabilities to interact with peers in the home environment are provided.

Introduction

Relationships with peers can serve many functions including opportunities for intellectual growth, entertainment, companionship, and social support (Falvey & Rosenberg, 1995; Guralnick, Connor, & Hammond, 1995; Hartup, 1983). Without social interactions and/or friendships, people

can experience isolation and loneliness (Guralnick et al., 1995; Parker & Asher, 1987, 1993).

Research indicates that individuals with disabilities often experience limited social interactions and friendships (Guralnick et al., 1995; Turnbull & Ruef, 1997). Parents of individuals with disabilities believe it is important that their children develop social relationships (Grenot-Scheyer, Coots, & Falvey, 1989; Guralnick et al., 1995; Hanley-Maxwell, Whitney-Thomas, & Pogoloff, 1995; Strully & Strully, 1985), and they are concerned about the negative impact a lack of social relationships may have on their children's quality of life (Hanley-Maxwell et al., 1995; Strully & Strully, 1985). Since it is during childhood that peers relationships become increasingly more central to a child's life (Berndt, 1982), it is important to explore the peer relationships of young children with disabilities.

Existing research on the peer relationships of children with disabilities has generally examined these relationships in the school setting, however, children spend a great deal of time in informal peer interactions in the home and neighborhood environments (Ladd & Le Sieur, 1995; Stoneman, 1993). Research suggests children's experiences with peers in one setting impact their relationships with peers in other settings (Epstein, 1989). For example, Ladd, Hart, Wadsworth, and Golter (1988) found older preschoolers (41 to 55 months) who spent more time playing in peers' homes had higher levels of peer acceptance in their preschool classrooms. For this same sample of preschoolers, children involved with a greater number of play groups outside of school experienced higher levels of classroom adjustment, as reported by their teachers, and greater social visibility in the classroom.

Since young children spend a great deal of time in the home environment and since peer relationships in one setting impact peer interactions in other settings, it is important to examine the social experiences of children with disabilities in the home environment. Therefore, it is the purpose of this study, to begin examining the peer relationships of children with disabilities in the home environment. In particular, this research will explore the roles parents of children with disabilities,

parents of peers of children with disabilities, peers of children with disabilities, characteristics of a child's disability, and characteristics of the home and neighborhood environments play in the peer relationships of children with disabilities in the home environment. Each of these areas will be addressed following a brief examination of parents' roles in children's peer relationships and some of what is already known about the peer relationships of children with disabilities.

Parents and Peer Relationships

Researchers have become increasingly interested in the role parents play in their children's social development (Ladd & Le Sieur, 1995). The peer relationships of young children are heavily guided by parents. Parents determine when and under what circumstances their young children come in contact with other children (Ladd & Le Sieur, 1995; Stoneman, 1993). Two areas receiving recent attention include parents' role in initiating and monitoring informal peer interactions (e.g., interactions in the child's home, peers' homes, and the neighborhood) of their young children. Researchers have reported positive outcomes for children whose parents actively initiate informal peer interactions for their children. For example, Ladd and Golter (1988) found when parents actively initiated peer contacts, their preschoolers had larger peer networks and more consistent playmates and boys were better liked and less rejected in preschool and kindergarten. Ladd and Hart (1992) found that preschoolers of parents who frequently initiated peer interactions had higher levels of prosocial behavior and lower levels of non-social behavior in preschool. The role parents play in initiating peer contacts for their children appears to drop as children get older and begin to take more responsibility for their own peer relationships. Bhavnagri and Parke (1991) found mothers of younger preschool children (26 to 42 months old) were more involved in arranging social contacts with other children than mothers of older preschool children (43 to 59 months old). Older preschool children were more likely than younger preschool children to initiate their own social contacts. Older preschool children also had larger peer networks. Ladd et al. (1988) found older preschoolers

(41 to 55 months old) to have more regular contact with peers and a larger number of peers in their nonschool peer network than younger preschoolers (23 to 40 months old).

Parents also directly impact children's relationships with peers by the type of supervision they provide their children during peer interactions. Research in this area suggests developmental differences in the impact of interactive or direct supervision on children. Bhavnagri and Parke (1991) used a laboratory setting to examine the impact of direct parent intervention on the peer interactions of two groups of children including younger preschoolers (26 to 42 months) and older preschoolers (43 months to 59 months). Two children unfamiliar to one another and of the same age played in a laboratory setting with one parent of each child present. During alternating time segments, parents were asked to remain uninvolved in the children's interactions (i.e., read a magazine, pretend they weren't in the room) or one parent was asked to "supervise the children's play and help the children play together" (p. 428). They found the social competence of younger children increased significantly when parents were directly involved with the child during interactions with a peer; whereas, for older children, social competence did not significantly differ under these conditions. Ladd and Golter (1988) found kindergartners whose parents used more direct monitoring of their children's informal peer interactions were less accepted and more rejected by classmates and seen by teachers as hostile-aggressive in the classroom. It appears younger children benefit from direct supervision; however, with increasing age, direct supervision may be less helpful and may also be associated with negative outcomes for children.

Children with Disabilities and Peer Relationships

Children with physical, cognitive, and/or behavioral disabilities may face special challenges in developing peer relationships. This issue has received significant attention in the school setting. One goal of mainstreaming or the integration of children with disabilities into regular classrooms is to increase their exposure to peers and improve their social relationships with peers (Guralnick et al.,

1995). Research has found children with disabilities do interact more with peers in integrated settings when compared to specialized programs (Buysse & Bailey, 1993; Guralnick & Groom, 1988; Guralnick et al., 1995); however, these children interact with typically developing children “less frequently than would be expected in terms of their availability” (Guralnick et al., 1995, p. 458). They are also less accepted and more rejected by peers and “have far more difficulty establishing reciprocal friendships than do developmentally matched typically developing children” (Guralnick et al., 1995, p. 458). In addition, they are often perceived as less socially competent and are of lower social status (Guralnick & Groom, 1987). These findings, as well as the concerns of parents and professionals working with children with disabilities, have prompted the development of social skills programs to help children with disabilities to improve their social skills and social competence with peers in the school environment (for a review see Odom & Brown, 1993).

Existing research on the peer relationships of children with disabilities has focused on these relationships in the school setting. Little is known about the peer relationships of children with disabilities in the home and neighborhood environments. The limited research available finds children with disabilities interact with peers outside the school setting significantly less often than children without disabilities of the same age (Stoneman, Brody, Davis, & Crapps, 1988; Stoneman, Brody, Davis, Crapps, & Malone, 1991). While this information is useful, it does not reveal anything about the nature of the interactions of children with disabilities in the home environment or the role parents and peers play in the social experiences of children with disabilities. The peer relationships of children with disabilities in the home environment might be affected by the parents of children with disabilities, parents of peers of children with disabilities, peers of children with disabilities, characteristics of a child’s disability, and characteristics of the home and neighborhood environments. The following sections will explore the potential impact of each of these variables on the peer relationships of children with disabilities.

Parents of Children With Disabilities

Many parents of children with the disabilities feel it is important for their child to develop relationships with peers (Falvey & Rosenberg, 1995; Guralnick, et al., 1995; Stully & Strully, 1985). Parents of children with disabilities often discuss peer relationships as important in the school setting and believe developing social skills and friendships at school are important goals for their children (Gregnot-Scheyer et al., 1989). These same parents often fear that their child will be rejected by peers because of his or her disability (Guralnick et al., 1995). Researchers have found parents of children without disabilities place varying degrees of importance on their young children developing peer relationships (Ladd & Hart, 1992; Rubin & Sloman, 1984), and they vary in the amount of initiative they take in helping their young children develop these relationships in the home and neighborhood (Ladd & Golter, 1988). It is likely that there is significant variability in the amount of importance parents of children with disabilities place on their young child developing peer relationships in the home and neighborhood, as well as variability in what parents do to assist in the development of these relationships.

Knowing the difficulties children with disabilities face developing peer relationships in integrated classrooms, it may be reasonable to expect similar difficulties in the home and neighborhood environments. Due to development delays and/or decreased social competence children with disabilities may require greater assistance from parents in developing and maintaining peer relationships in the home and neighborhood environments than children without disabilities of the same age. In a recent study, Guralnick (1997) found parents of children with developmental delays and children with communication disorders initiated peer relationships for their children with disabilities less often than parents of children without disabilities. Guralnick (1997) also found mothers provided far greater monitoring of peer interactions of children with developmental delays in the home environment than they provided children with communication disorders or children without

disabilities. However, the disabilities of children in Guralnick's sample were more mild in nature. In addition, his sample contained only boys. Research is needed to examine the amount and type of parental initiating and monitoring of peer interactions parents provide to children with a wide range of disabilities as well as the relationship between parental initiation of peer contacts and monitoring of peer interactions and the social competence and peer status of children with disabilities.

Parents of Other Children

The attitudes of parents of peers of children with disabilities are likely to impact the social experiences of children with disabilities in the home environment, especially for young children. Green and Stoneman (1989) report that parents of preschool children without disabilities are more supportive of mainstreaming if they have had a child in an integrated setting, particularly if the mainstreaming experience was positive. Green and Stoneman (1989) also found younger mothers to be more supportive of mainstreaming than older mothers. They state, "this appears to be a cohort effect, with younger mothers more exposed to societal changes in services to handicapped children, and thus more likely to see benefits that might come to their children from participation in mainstreamed programs" (p. 302). Such findings suggest that the attitudes of parents of children without disabilities hold towards their child's interactions with children with disabilities are impacted by their exposure to and knowledge about these children. Parent attitudes towards children with disabilities may have an impact on whether parents of children without disabilities encourage interactions with children with disabilities in the home and neighborhood environments.

Peers of Children With Disabilities

The peers of children with disabilities will affect the amount and type of informal social interactions children with disabilities experience. As mentioned above, even in integrated settings, research has found children with disabilities are less accepted (Guralnick et al., 1995) and are perceived as less competent and of lower social status (Guralnick & Groom, 1987). However, recent

research has found teachers, parents, and children themselves report that children without disabilities benefit from their relationships with children with disabilities (Peck, Donaldson, & Pezzoli, 1990; Staub, Schwartz, Gallucci, & Peck, 1994). Research suggests that children without disabilities are more accepting of children with disabilities when they have exposure to and experience interacting with them (Biklen, Corrigan, & Quick, 1989). Parents and teachers can play an important role in children's acceptance of children with disabilities by the way they behave towards children with disabilities and by their willingness to take time to discuss with their children the nature of another child's disability (Biklen et al., 1989; Stoneman, 1993).

Characteristics of the Disability

Characteristics of a child's disability also are likely to play a role in the peer relationships of children with disabilities. Green and Stoneman (1980) found parents of children without disabilities feel most comfortable with the integration of children with physical disabilities and least comfortable with the integration of children with severe mental retardation, emotional disabilities and behavioral disabilities. Parents often recommend their child avoid children with aggressive behavior problems (Rugg & Stoneman, March, 1988 cited in Stoneman 1993). Given these attitudes in the school setting, it might be reasonable to expect to find that parents of children without disabilities are less likely to encourage peer relationships in the home and neighborhood environments between their children and children with severe mental retardation, emotional disorders, or behavior problems.

Characteristics of the Neighborhood

Features of the physical environment are likely to impact the peer relationships of children with disabilities. Another way parents directly influence their child's social development is through the environments they choose to raise their children, as well as how they organize those environments (Berg & Medrich, 1980; Ladd & Le Sieur, 1995; Wohlwill & Heft, 1987). The

neighborhoods in which children live can impact their social experience. “Young children, especially, spend much of their time within the confines of the neighborhood, and their opportunities for peer interaction and relationships are likely to be influenced by both the physical and interpersonal features of this context” (Ladd & Le Sieur, 1995, p. 389). For example, children who live “in neighborhoods with a dense child population have greater access to peers and form larger social networks” (Ladd & Le Sieur, p. 389). Physical features of the neighborhood also may influence accessibility to peers. Contact with peers is more common in neighborhoods with sidewalks and/or play areas (Berg & Medrich, 1980; Ladd & Le Sieur, 1995) in contrast to neighborhoods with lots of hills and/or busy streets (Berg & Medrich, 1980). For children with physical, cognitive, and/or behavioral limitations, physical features of the home and neighborhood environments may play an even greater role in peer relationships. For example, for a child with a physical disability requiring the use of a wheelchair, sidewalks, ramps, and wide doorways may be even more crucial in his or her access to peers; similarly parents of a child with behavioral limitations, who is at risk of running into traffic, may limit this child’s play in neighborhoods with busy streets.

Characteristics of the Home

The type and amount of play space, both inside and outside of the home environment, is likely to have an impact on the peer interaction of children with disabilities. For example, play areas with easily accessible toys or safe play structures in the backyard provide contexts for peer interaction in the home environment. A child with a disability may require modifications to play areas and/or equipment in order to utilize them (Brotherson, Cook, & Parette, 1996; Cook, Brotherson, Weigel-Garrey, Mize, 1996). Children with disabilities may have special needs for play. Modifications to the home environment that provide children with disabilities access to toys and play spaces may make peer interactions easier for these children.

Summary

While there is a significant amount of research examining social interactions and relationships of children with disabilities in the school environment, there is very limited information available on the social lives of children with disabilities in the home and neighborhood environments. The purpose of this study is to begin examining the social experiences of children with disabilities in the home and neighborhood environments.

Research Questions

This study will attempt to address the following questions. What access do children with disabilities have to peers in the home and neighborhood environment? How important is it to parents that their child with a disability interact with peers in the home and neighborhood settings? What do parents do to facilitate peer relationships in the home and neighborhood environments? What characteristics of the home and neighborhood environments support or create barriers for children with disabilities to interact with others?

Method

The research reported here is part of a larger study examining the home environments of children with disabilities. This study was reviewed and accepted by the Human Subjects Committee at Iowa State University and family consent forms were obtained. Measures were taken to assure confidentiality of the families in data collection and reporting.

Participants

The original sample was selected to include children with a wide range of physical, cognitive, and/or behavioral limitations in order to explore issues that are both common and unique to the type of disability. Families were recruited with the assistance of early childhood educators and related service therapists in public schools in surrounding areas. The research team presented the

study to public school educators and therapists, and they, in turn, shared the information with families with whom they worked. If parents had an interest in participating, they contacted the research team directly. Characteristics that distinguish families who chose to participate from those who did not choose to participate are unknown and result in sampling bias. The participants in this study include 26 families with 28 children with disabilities. The children ranged in age from 3 to 10 years ($M = 6.0$) and include 16 females and 12 males with a wide range of physical, cognitive, and/or behavioral disabilities. All families were paid \$50 dollars for their participation. Family demographics appear in Table 1. Child information appears in Table 2.

Procedure

For this study, multiple methods of data collection were used including family interviews, home observations, and written questionnaires. After a family agreed to participate, an interview date was set. Prior to the interview a packet containing several paper and pencil assessment devices was sent to the family. Parents were asked to complete the assessment devices, which included demographic information, information about the characteristics of the child's disability, modifications made to the home, a Parent Attitude Survey, and the In-Home Checklist, prior to the interview.

The home visit consisted of an in-depth family interview and a home observation lasting from about 90 minutes to 2 hours. A team of at least two researchers visited the home of each of the participants. One researcher primarily focused on the interview, while another focused on observing the home environment. Families were asked in advance if photos could be taken, and they were asked again at the time of the interview where photographs could be taken. Parents sometimes joined in touring the home pointing out how the environment was used. All researchers were present for the beginning of the interview, which involved getting to know the family as well as the characteristics of the target child. The researcher responsible for home observation toured the home room by room,

systematically examining the features of each room and noting how accessible the room and items within the room were to the child with a disability as well as what, if any, modifications had been made for that child. Pictures were taken in the home for a visual record of home characteristics. The same procedure was used outdoors to make note of characteristics of the home and neighborhood.

During the family interview, open-ended questions were used to gather information on a variety of issues including the daily routine of the child with a disability, the child's activities in the home and neighborhood, opportunities for the child to make decisions and act independently in the home environment and modifications made to/in the home for the child with a disability. Peer relationships were addressed at several points throughout the interview, particularly during discussions of daily routines, levels of supervision the child needed, and discussion of the child's neighborhood.

Immediately following each interview, researchers discussed the interview and the home observation. Information and issues that were most salient were noted. The team also worked together to complete a summary sheet, noting the child with a disability's access to toys, clothes, bed, mirrors, snacks, dishes, windows, and special equipment indoors and outdoors. Transcribed interview data and photographs were used to confirm the accuracy of these summary sheets.

Analysis of Data

Rigorous qualitative research requires that steps be taken to assure the data collected and reported accurately reflects the experience of the participants. The following techniques were used to increase the credibility of this research.

Triangulation. Multiple methods of data collection and multiple researchers were used to increase our understanding of the peer relationships of children with disabilities in the home and neighborhood environments. Three types of data were collected including interview, observational and written questionnaire data. This form of triangulation allows the strengths of one method to

compensate for the weakness of another (Brotherson & Goldstein, 1992). It also allows researchers to look for consistency of data across methods (Guba, 1981).

Multiple researchers were involved in the data collection and data analysis. The research team consisted of persons with varying backgrounds, including early childhood special education, housing, early childhood education, and child development. The different perspectives of researchers with varying backgrounds limits the potential bias of only one researcher (Brotherson & Goldstein, 1992; Guba, 1981).

Finally, through the use of multiple methods and multiple researchers, “thick” descriptive data about the children, families, and home environments involved in this study was gathered. The results include substantial contextual information about the families and the children in this study to provide readers with a greater understanding of the context from which these data were drawn, thus allowing for greater transferability of our findings (Brotherson & Goldstein, 1992; Guba, 1981).

Peer debriefings. Peer debriefings followed each interview and at periodically scheduled research meetings. These debriefings allowed for the exploration of different researchers’ perceptions and interpretations of the data gathered. The use of photographs, transcripts and notes from the interviews helped the researchers get to know and reflect on each of the families.

Member checks. In order to further ensure the data and interpretations accurately reflect the families and their experiences, four families were contacted to review the information pertaining to peer relationships in the home environment gathered and summarized in this study to provide feedback on the accuracy and clarity of the data and results. All four families confirmed the accuracy of the data collected during the initial interview. In addition, these families made additional comments relating to the peer relationships of their child with a disability, this additional information was incorporated into the data analysis.

Internal audit. The data collection and analysis procedures were reviewed by an individual experienced in qualitative research to assure rigorous data collection procedures were adhered to as well as to confirm “that data exist in support of every interpretation and that the interpretations have been made in ways consistent with the available data” (Guba, 1981, p. 88).

Analysis Procedure. The data analysis followed established qualitative research procedures to identify themes and issues reported by families (Glesne & Peshkin, 1992, Patton, 1990; Taylor & Bogdan, 1984; Tesch, 1990). The following steps were used to identify major themes and issues concerning peer relationships of children with disabilities in the home environment.

1. All interviews were transcribed verbatim. Each transcript was read and reread, and any information pertaining to peer relationships was highlighted.
2. A first researcher summarized each statement about peer relationships in the form of “synthesis statements,” which were then used to identify major themes and issues.
3. A second researcher read the transcripts and validated the original synthesis statements, adding additional themes or issues as she deemed appropriate. Any discrepancies in the themes and issues identified were discussed until a consensus was reached using input from additional research team members when necessary.
4. As each additional transcript was read and reread, synthesis statements and the themes and issues emerging from these statements were compared with themes and issues that had previously emerged allowing researchers to combine, divide, or identify new themes and issues. Glaser and Strauss (1967) refer to this as a “constant comparative method.”
5. Upon reaching a point where no new themes or issues emerged, several families were contacted to confirm the accuracy of the findings and provide any additional information and feedback.

Results

Fifteen themes related to the peer relationships of children with disabilities emerged from the data and were grouped together into five larger categories. These categories include: 1) access to other children, 2) influence of parents and peers, 3) characteristics of the neighborhood, 4) characteristics of the home, and 5) characteristics of the disability. A discussion of the themes and issues related to the peer relationships of children with disabilities are presented below by category. Specific examples and direct quotes are used to enhance the reader's understanding of the experiences of these children and their families.

Access to Other Children

Neighborhood children visit the home of a child with a disability. There was great variability in how frequently children in this sample had children from the neighborhood over to play in their homes. Three (C2,C7,C19) children played with neighborhood children almost daily with much of that time being in their own homes either indoors or outdoors. One mom spoke of an average afternoon, after school, for her child with a moderate physical disability: "she has now got two girlfriends that live right out here and typically one or the other will call and get together at our house or their house or back up at the school on the playground" (C7). She discussed where the children play when they were at her home:

A lot of times they just play outside. They ride their bikes up and down the sidewalk. They are not allowed off the block or up and down the street. They play basketball in the garage. She can use the computer downstairs quite a bit and they have computer games that they play.

Seven (C1,C5,C13,C14,C23,C25,C27) other children have neighborhood children over to play occasionally. One mom discussed how neighborhood children would ask if her child could come out and they would push the child in her adaptive swing or take her for a walk in her

wheelchair (C13). Another mother reported that neighborhood children come over occasionally in the summer and play indoors. She said “I like to try and keep her inside where I can see what she’s doing” (C14). One child is just beginning to increase relationships with neighbors. This child’s mother discussed an incident involving a neighbor girl who came over when she saw the child playing outside with a large therapy ball:

She came out and played with him, and he had a blast with her. That is probably the first time since we moved here that he has shown an interest in playing with somebody outdoors. I think a lot of that is really coming . . . We are not going to be dealing with the sickness we did last year so he will be out and about more (C25).

Fourteen children (C3,C4,C6,C8,C9,C10,C11,C15,C16,C17,C18,C20,C22,C26) did not ever or very rarely had neighborhood children over to play.

Visiting a Neighbor’s Home. Fewer children played at neighbors’ homes than had neighbor children over to play. The parents of only eight children (C1,C2,C5,C7,C16,C19,C23,C27) reported that their children with disabilities played in the home of a neighbor, and of those that did visit neighbors’ homes, most parents reported they did this less often than other children visited them in their own homes. Two (C7,C19) of the three children who had nearly daily contact with neighborhood children played equally in their homes and the homes of neighborhood friends, while the third child (C2) has been to many other homes but plays most often with other children in her own home.

Parents of four of the children who did visit the neighbors’ homes (C1,C2,C5,C23) reported walking or carrying their child to the other child’s home. These parents emphasized leaving their child only after knowing there was adult supervision.

Extended family and peers outside the neighborhood. Parents of seven children (C6,C9,C10,C13,C14,C18,C24) discussed the importance of extended family (i.e., cousins) as playmates for

their children. Four children had contact with their cousins in their home and/or their cousins' home often. One mom discussed her twin boys access to their cousins: "they do have a lot of cousins. I have a lot of nieces and nephews that I babysit. They are around them all the time" (C9,C10). Another mom reported that her nieces who were about the same age as her daughter often came over to play. These girls were very good with Sally and played with her inside and outside. Mom said, "there's quite a bit of my family, and everybody is pretty much used to Sally" (C13). Mom would sometimes bring these children along on trips to the store to help push the wheelchair. Another child played with his cousins close in age. Mom says, "He participates just like the other ones do. And they are real good with him. They have grown up with him" (C18).

The other three children have occasional visits with a cousin or cousins (C6,C14,C25). For example, one child had a couple of cousins who spent the night at the child's home once a month on average (C6). Another child played once in a while with her same-aged nephew in her home or his (C14).

Three (C11,C18,C25) parents and one custodial grandparent (C6) reported their child played with a child, or in one case the grandchild, of a close friend of the parents or guardian who live outside the neighborhood. "We've had some friends that, his godparents have kids that came last night. Their little girl has been here the most, or he has gone to see the most and play together" (C25). Another child's only real peer contact is the 2 ½ year old child of mom's friend (C11). A custodial grandmother talks of a friend who is trained to care for the child and does so once every couple of months or so who "has a granddaughter that is a little bit younger than her [the child], and when she goes over to her house she has her granddaughter come, and they do play together, and that's good for her" (C6).

Eight children (C3,C4,C11,C12,C17,C18,C21,C22,C23) had occasional contact with other children from their school or daycare. For most of these children such contact was not regularly

occurring but rather for a special occasion such as a birthday party or specially planned visit. The parents of one child had this to say:

She has been invited to 5 parties in the last 2 weeks. This year all of a sudden the kids love her in school. And one kid invited her to a birthday party, then it seemed like all the other kids wanted to invite her. . . All this time she never got invited to parties, and it was kind of sad; why can't anyone think of Cassie? But now all of a sudden she is going. Now she knows what birthday parties are. She is so proud to take a present" (C21).

Another child who has not received any invitations to other children's homes will invite children from preschool, ballet, and a child a few blocks over to birthday and Christmas parties.

One child's social contacts involved regular visits from friends from church (C12). In a somewhat unique situation, another mother discussed her son's contact with friends from school:

One of them calls him on the phone, and its a riot . . .She asked at school if she could call him. The nurse brought that home to me, and I thought, "she knows he can't talk." But she kept asking and asking, and finally I said to give her the number. I said it will give new meaning to the phrase, "I'm sorry, Sam can't talk right now." So she calls him, and the nurse holds the phone up to him. He squeals and kicks and giggles. You ask him if he is going to see Alice today, and he gets a big grin on his face (C22).

Siblings. Many parents discussed the peer relationships of both their child(ren) with a disability and their child(ren) without disabilities. With the exception of the three children who had daily contact with peers in the home environment, children with disabilities spent less time with peers than their older (C9,C10,C11,C16,C22,C23,C24) or younger (C13,C28,C21,C26) siblings. In addition, several parents reported the type of interactions were sometimes quite different. For example one mother reported,

When he is outside he will play with other kids. He parallel plays a lot. If they are all in the sand box he will play in the sand box with other kids. But it's not the same as my other kids, who go find a friend to play with. If they are out there, he'll be out there too (C23).

Two families (C21,C24) reported that while their children with disabilities did not have any friends of their own over to play, they were exposed and sometimes interacted with friends of their siblings. One of these children would occasionally play with the friends of her younger sister. The other mother stated that her child "is so far out there she doesn't have a friend" (C24). This mother reported that two children often come to visit her son and,

Sara usually runs right up to the little girl because she likes to touch her hair. But they don't interact with her so much. She sits and watches them, and she tries to go up to Haley's hair and touch it. As soon as she hears Haley's voice, she runs over to the door (C24).

Influence of Parents and Peers

Parents of children with disabilities. Parents varied in the amount of importance they placed on and their encouragement or discouragement of their child's interactions with other children in the home and neighborhood environment. A few (C3,C4,C17,C28,C21) parents specifically mentioned their disappointment in the number of invitations to play with other children their child(ren) received. One mom said,

David has three boys that have invited him over to their houses. He loves it when he goes and does pretty well. I'd say its a lot more limited than most kids. . . I would like to have David do more of that (C3).

Another mom said her child had never received an invitation to another child's home even though she has extended invitations to other children for birthday and Christmas parties. She said, "I guess I just wish she'd get invited to parties in other people's homes" (C17). In a follow-up interview she said, "I pray every night that Melissa would make just one long term friend."

Parents listed a variety of ways they were trying to increase their child's peer relationships. A couple of parents mentioned plans to get to know the neighbors better (C22,C25). A couple other parents mentioned involving their child in community activities such as girl scouts (C17) and adaptive little league (C25). One parent was fighting to have her child placed in the neighborhood school so the children around him would know him and interact with him more (C25). One mom threw birthday and theme parties to which her daughter could invite friends (C17). Three families discussed arranging for visits with classmates outside of school. For one child this included only other children with disabilities (C8). In the other two families, both parents worked full-time outside the home, they talked about the difficulties in making time to get together with other children outside of school or day care. However, both sets of parents felt it was important and attempted to arrange opportunities for their child to play with other children. The parents of one child who lived in the country said,

We're hoping to do more. . . She wants to have kids over. She always wants to invite people over. Yeah. She's been invited to other children's houses, and she wants to invite them, but there is usually something else that has to happen or other people's schedules (C15).

Another mother discussed how her child likes to interact with neighborhood children but only when mom is present. This mother believed "sometimes she's just scared that she can't handle it the right way, she is aware that she is not able to say what she wants" (C28). She shared that she would like her daughter to be more independent and interact with others:

A lot of times I'll go out [outdoors where neighborhood kids are playing] and get her started and then try to kind of sneak away, and she will be okay for a little while, and then all of a sudden she will come running in 'mama, mama.' You know, she has to be sure that I'm there.

One parent discouraged other children from playing in her home; she said "I have a hard time with my kids in here [the house]. I don't want a bunch more" (C11). Another parent has never

encouraged her child (C26) to interact with neighborhood children because they do not go to the same school and do not understand him. This child has never had other children over to visit nor visited other children's homes. Parents of at least four children (C8,C13,C20,C25) believed their children's lack of or limited peer relationships was inevitable because of their disabilities.

Other parents. A number of families commented on the role other parents played in their child(ren)'s access to peers in the home environment. Parents reported on both the attitudes they believed other parents held that impacted the development of social interactions between children with and without disabilities as well as the behaviors of other parents that impacted the child with a disability's social interactions.

The mothers of three children (C3,C4,C17) believed other parents were reluctant to have their child(ren) over because of the child(ren)'s disability. Several parents commented that their children have not been invited to other's homes. One mother reported, "she has never been asked to go over to anybody's house. I would certainly let her if someone ever called and asked . . . I think the only reason why mothers don't ask her over because they are assuming she's going to require more upper body strength" (C17). Another mother commented, "other people are more reluctant to have them come over because they don't know how to handle it" (C3,C4).

Slightly more families who discussed other parents' attitudes believed other parents were very accepting of their children and even quite helpful in assisting their children during visits with other children (C2,C19,C23,C25). One mother had this to say about the mother of a child her child plays with, "Her mom is really good with him. In fact, she says he is real easy, and he goes through her house as any one else would. He crawls through her house just like he does at home" (C23).

Parents who knew the parents of neighborhood children reported that their child had neighborhood children over or visited in neighbors homes more often than parents who did not know the parents of other children. Several mothers (C1,C2,C5,C19,C23) discussed how other parents in

the neighborhood were helpful in supervising and/or assisting in caretaking, making it possible for their child to visit their homes. For example, one child's younger brother would sometimes drive the child in a battery operated jeep to a friend's home down the street where the friend's mother would take the child out of the jeep and to the play area and assist the child when needed, such as when she needed to use the bathroom. One mother who is new to an area with lots of children hopes to meet more parents in the summer when people spend more time outdoors (C20).

Other children. Six families believed other children (C8,C11,C13,C20,C21,C26) did not understand their child's disability or were fearful of the child due to his or her disability which resulted in other children avoiding the child with a disability. "I think some of the kids are scared of Phillip, or just scared with the chair and everything, what would you call, threatening: they are not sure" (C20). Another mom reported that there are "tons" of children around; however,

They just don't know how to play with her, so I kind of gave that up. I invite her friends over from school, and she has some friends with CP that come over to play. She does go out, but they just don't know what to do with her; they have not been around handicapped kids. At first they would come on the deck and then run away. We just never really pursued it. . . . it is sad though (C8).

One mother commented that her son interacted more with girls in the neighborhood, "The girls are a lot better with him than the boys because he can't keep up with them and they seem less tolerant" (C23). Another mom said that other children play in their yard because there are lots of other children around and the backyards are all open, but her child does not get involved much because there are more boys than girls in the neighborhood and they tend to play rougher than she is able.

Several families reported other children were very accepting of their child (C2,C13,C18,C19,C25). Much of this they attributed to the other children having a great deal of

exposure to or “being used to” the child (C2,C13,C18). One parent talked about her son riding the school bus with a neighbor: “when the school year started, the girl that rode the bus with Scott actually took him under her, it was a mutual thing, she was unsure, it was her first year of all day [of school] and she was nervous. . . I think for the first few weeks she was appreciating Scott as much as we appreciated her being with him” (C25). Another mother believed having an older and younger brother had helped her daughter be accepted. “Their friends have always accepted her. The boys that my son brings in have no qualms about giving her a good going over when she does something they don’t like. It’s just really neat how kids have been so accepting” (C19).

Finally, one mom discussed how other children accepted her daughter but did not socially interact with her. She said, “no one around here minds her. They all know who she is, and they don’t bother her or make fun of her or anything like that. She rides the school bus with them, and it is no big deal” (C24). At another point in the interview, this mother reported, “the neighbor kids are pretty friendly and if she gets out, someone always comes and tells me” (C24).

Characteristics of the Neighborhood

Many families participating in this study lived in middle class subdivisions or city blocks with limited traffic. The terrain in these areas tended to be relatively flat. Many of these areas had good sidewalks providing safe access from one home to another, although a few of these areas had sidewalks in need of repair posing a challenge for some children with disabilities to negotiate. These homes tended to have safe play spaces both inside and out. These neighborhoods tended to have many children residing in them. In fact, two families (C23,C25) stated a major factor in selecting the location of their home was to be surrounded with other children. One mom stated, “we also drove around and looked for the houses that had the most swing sets in the backyards. . . we would find a neighborhood with tons and tons of children and things to do. And we have them here” (C23).

A few families lived in more isolated areas with few neighbors. Two families (C3,C4,C15) attributed their children's lack of social relationships in the home environment in part to living in the country without neighbors close by. One parent reported one reason they would like to move is to have more children available for their children to interact with, but they could not financially afford to move at the time (C3, C4). Parents in the other family reported that their child would like to have friends over, but they find it difficult to schedule with their own and other families' busy schedules and with them living far away from other children (C15).

A couple other families lived on moderate to busy roads. One mom discussed the impact of the busy road in front of her home on her children's peer relationships:

I don't know any of my neighbors, and I have been here a year and a half . . . I think it has a lot to do with where we live. I think there would be a lot more kids to play with if we didn't live on Eastland Avenue. This is an elderly neighborhood. A lot of the kids that do live here aren't allowed to cross Eastland Avenue. We have seen too many accidents here since we have lived here. (C9, C10).

Two mothers commented on the impact of their child attending a different school than the neighborhood children. One of these moms reports, "I just never encouraged it [children from the neighborhood over to play]. Most of the children here don't go to the same school, so they don't understand" (C26). The other had this to say:

The neighborhood kids, they don't know him, and he doesn't know them. A couple of them come to play with my 7-year-old, but they ignore him. They kind of walk wide around him . . . I wanted him in the neighborhood school so that he would know the kids and they would know him. Now he is going to this school clear over on the South side. Those aren't the kids that he would be playing with in the neighborhood (C22).

Characteristics of the Home

Indoor spaces to play. Through parent interviews and home observation the researchers found many children in this sample had several spaces available to entertain peers in their home. Although not all children who had space available had other children over to play. For seven children the space was very limited due to the size of the home and/or adult items filling most of the available space. Of these seven children only two had friends over occasionally with one of these spending time mainly outdoors. For two other children, cousins often came over to play (C9,C10). The remaining three did not have friends or relatives over to play (C20,C22,C26).

Common places for children to play include playrooms, living/family rooms, and children's bedrooms. Ten homes contained playrooms with numerous toys and space available for several children to play (C1,C2,C11,C12,C13,C15,C16,C19,C21,C23,C24). Other children had play space available in their bedrooms and/or family rooms. Several children had multiple spaces to choose from when friends visited. One mom commented on the importance of their playroom:

We have this huge playroom downstairs that is decadent. You open it up and you think well here is a mother who is fulfilling her childhood dream . . .We've always tried to make it pleasant for our own children as well as other kids because I think that's very important for her to have as much exposure to them and for them to also be around her and see how she gets up and down the stairs and things like that (C19).

Even though spaces were available, some children had difficulty accessing these play areas without assistance. A fairly common difficulty children faced were stairs. Children with physical limitations (C1,C2,C6,C8,C9,C10,C11,C12,C13,C19,C22) often struggled with stairways that were necessary to negotiate to get to a play space located upstairs or downstairs. As a result, these children did not have the opportunity to move from play space to play space without struggling or receiving adult assistance.

Access to toys indoors. Most children in this sample had at least some access to toys; that is, toys were located in such a way that even with the child's limitations he or she could select and play with toys without assistance. Parents often made their child's toys accessible by keeping toys low and assuring any containers toys were stored in were ones the child was able to get into on his or her own. In many circumstances, toys were kept on the floor or on low open shelves. Seven children had more limited access to toys. Parents of two children with extremely limited mobility and other motor difficulties (C13,C22) placed toys around their child for their child to grab, these children generally did not have a choice as to what toys were available at any point in time. For three others, there were some toys accessible without assistance, but others were located on high shelves requiring adult assistance (C8,C13,C24). The remaining two children had limited toys available (C16,C26).

The parents of two children discussed specialized or modified indoor toys their child used. One mother (C18) tied bells to the bottom of a basketball net so her visually impaired son could hear when he made a basket. This same family installed an adaptive switch so their son could use the computer, and built a special art table to meet the child's needs. Another child had several descriptive videos such as Walt Disney's "Aladdin" which describe what the characters look and what they are doing for children who are blind (C22) and a homemade "little room" box that the child could lie in and feel objects hanging down.

Outdoor spaces to play. Many children had private yards to play in. Several families had fenced in backyards. Fifteen children had play structures (C1,C2,C3,C4,C6,C11,C12,C16,C17,C28,C22,C23,C24,C25,C26) in their backyards, although many children could not use the equipment without assistance. Several other families modified their play structures to ease their child's use of it. Three families adapted swings for their children (C1,C12,C13), and another family had just ordered an adaptive swing (C24). Another family built stairs with rails on both sides up to the slide (C25). Another family included only equipment their child with a disability could use (C17).

Sandboxes also were a popular outdoor play item (C1,C16,C23,C26). A couple of children had playhouses they used outdoors (C3,C4,C17). Three children with physical limitations had motorized children's vehicles to get around (C2,C3,C4,C23). Another two children had tricycles modified for their use (C2,C17).

One child lived in a double-wide mobile home in a mobile home court (C18) with a small grassy area to play in outside. Two families lived in family housing complexes at a university (C5, C20). Outside play spaces were shared and consisted of grassy areas between buildings, some sidewalks and the occasional cement slab. One of these complexes had playground equipment within the complex. Sidewalks provide access from building to building; however, some of the sidewalks were old and bumpy, which could pose difficulties for wheelchairs, walkers, and children with difficulties walking. Another family rented an apartment in a large older home. Outdoor play space consisted of a small front and back shared lawn with no play equipment (C27).

Terrain. Rough ground around homes makes it difficult to maneuver wheelchairs or walkers and can be difficult for children who do not walk well. Four families discussed how the uneven, bumpy terrain of their yards made it difficult for their child to play outdoors. Two of these children still played outdoors. One child "belly crawled" in the backyard (C2) and the other struggled to maintain his balance (C3). The two other children do not spend much time, if any, playing in their yards (C10, C22).

Characteristics of the Disability

Physical issues. The amount and type of access children with physical challenges had to other children varied greatly within this sample. The severity of the physical disability did not seem to highly be related to peer relationships in the home environment for these children except when other limitations were present (i.e., behavioral, cognitive, and/or sensory motor). For example, of the five children with the most severe physical limitations three had other children over to play or

played in the homes of other children at least occasionally. The three children who had daily peer interactions in the home and neighborhood had moderate physical limitation. Two of these children experience only physical limitations and the third had physical limitations and mild cognitive impairment. Of the remaining children with moderate physical limitations five children (C1,C13,C14,C23,C25) played with neighborhood children at least occasionally and seven (C3,C4,C9,C10,C11,C15,C16,C17,C18) rarely or never play with neighborhood children; however, four of these children (C9,C10,C11,C17, C18) had occasional contact with children outside the neighborhood including family friends, school friends, and/or extended family.

Several families of children with physical disabilities found ways for their children to visit the homes of neighbor children. For several families this involved a parent carrying the child into a playmate's home. For example, one mother reported, "I might carry her in and find out where they are playing. If they are playing downstairs, I take her there. If she has to go potty, their moms take her" (C2). Two parents believed other families were reluctant to have their children over because of extra physical assistance they thought would be needed to care for these children when they visited.

Behavioral. Four children in this sample had significant behavioral limitations. In addition, two of these children had severe cognitive limitations, one experienced moderate cognitive limitations and one experienced mild cognitive limitations. Of these four children, only the child with mild cognitive limitations spent time with peers of her own, and her mother reported that other children sometime were "overwhelmed" with the child. Parents of three of these children commented on the high level of supervision their children required, particularly outdoors (C9, C10, C25, C26). One parent discussed how her daughter got into everything and had broken many items throughout the home; as a result, the family had locks put on most of the inside doors and was considering an alarm system to prevent the child from taking off outdoors on her own (C25).

Another parent talked about how her son cannot be outdoors without her being with him because he would take off running. She discussed one such incident:

He just scared me to death. He got almost all the way to Quaker Avenue before I caught him. I mean he was just running and he'd stop and turn around and just laugh. He just doesn't understand. They work with him at school a lot at school crossing and walking in the street and stuff, so it isn't that he isn't exposed to it; it is just that he doesn't understand (C26).

Medical. The guardian of one child reported the child needed to be with specially trained persons at all times due to her tracheotomy. No other families reported medical conditions requiring constant specialized care that might make it difficult to visit the homes of other children.

Discussion

This study provides a beginning look at the social experiences of children with disabilities in the home environment. Fifteen themes grouped into 5 major categories emerged from the data. These findings are summarized into seven important issues for discussion. These issues and findings relating to these issues are summarized in Table 3 and are discussed in greater detail below. In addition, limitations of this research, suggestions for future research, and implications for professionals working with children with disabilities and their families are explored.

Contact with Peers

As expected there was great variability in the amount and type of peer relationships children with disabilities experienced in the home environment. A few children had daily contact with friends in their own home or in a friend's home while a few other children had no real contact with peers in the home environment at all. Most of the children fell somewhere in between ranging from very occasional to somewhat regular contact with neighbors, classmates, family friends, and/or extended family, although more fell towards the occasional end of the continuum. With the exception of three children who had daily contact with peers, children in this sample spent significantly less time with

their peers, particularly neighborhood children, in the home environment than older or younger siblings. In addition, consistent with the previous findings (Stoneman et al., 1988; Stoneman et al., 1991), several parents specifically mentioned that their child spent significantly less time playing with other children in the home environment than did other children of the same age.

Exposure

Peers. Many parents believed the amount of exposure other children had to their child with a disability affected the amount and type of social interactions their child experienced with other children. Some parents discussed how other children had spent a great deal of time with their child and, as a result, treated their child as they would any other peer. Other parents believed their child did not spend time with peers because other children did not understand or were even fearful of their child because he or she was different. These findings also provide additional support for the existing research which suggests children are more accepting of children with disabilities when they have exposure to and experience interacting with them (Biklen et al., 1989).

Several parents seemed to accept peer rejection as inevitable. One mom exemplifies such feelings when she says, "at first they [neighborhood children] would come on the deck [when the child with a disability was on the deck] and then run away . . . it is sad though, but kids will be kids." These results are consistent with those of Turnbull and Ruef (1997) who examined the inclusion of people with problem behaviors. They state, "the clear consensus among parents appeared to be that they accepted the lack of friendships as almost an inevitability" (p. 218).

Other parents. A few parents reported parents of neighborhood children were very encouraging of peer relationships between their children without disabilities and children with disabilities. In these cases, other parents were quite helpful in assisting children with disabilities to visit their homes. Several other parents of children with disabilities believed other parents were reluctant to have their child with a disability visit because these parents believed their children with

disabilities would require a lot of assistance. In general, children with disabilities had more interaction with peers when their parents knew the parents of neighborhood children.

One limitation of this study is that children without disabilities and their parents were not interviewed. Information about how and why other children and their parents behaved the way they did towards the children in this study was obtained from the parents of the children with disabilities. There is no way of knowing how accurately these data reflect the attitudes and/or reasons for the behaviors of other children and their parents. Future research should include interviews with potential playmates of children with disabilities and their parents, including neighborhood children and their parents who do and do not interact with children with disabilities in the home environment.

Parent Roles

Initiating peer contact. Several parents discussed some general ways they were attempting to increase their child's exposure to other children in hopes of assisting their child in developing friendships. These included selecting homes in neighborhoods with lots of children, getting to know the neighbors, involving the child in organized clubs (i.e., girl scouts), inviting other children to parties, arranging play dates for the child with classmates, and advocating to have the child placed in neighborhood schools. A number of other parents expressed concern over their child's lack of peer relationships but did not report doing anything to assist their child in developing these relationships.

The strategies parents discussed for helping their child with a disability develop relationships with peers were more global strategies used to increase their child's exposure to neighborhood peers (i.e., involving the child in neighborhood girl scout troop, advocating to get the child in the neighborhood school) or occurred only occasionally (i.e., throwing a birthday or Christmas party). Parents did not discuss their role in initiating (or not initiating) peer relationships in the home environment between their child and other children in the neighborhood and/or from school on a more day to day basis. As a result, we do not have much information about who initiated the day to

day peer interactions children in this sample were involved in (e.g., parents, children with disabilities, or peers). Future research should examine these issues.

Overall, children in this sample experienced relatively few peer interactions (i.e., less than siblings without disabilities) with several children experiencing no peer interactions in the home environment. Previous research indicates children with disabilities often lack the social skills necessary to effectively interact with peers (Guralnick & Weinhouse, 1984; Guralnick & Groom, 1987; Odom, McConnell, & McCoy, 1992; Odom & Brown, 1993). It is reasonable to assume that children with disabilities who experience difficulty interacting with peers in the classroom will experience similar difficulties in the home environment. As a result, children with disabilities might not be as effective at initiating peer contacts (e.g., extending play invitations) as other children of the same age; therefore, they may benefit from greater involvement by parents in initiating opportunities to interact with peers in the home environment. This may include parents actually arranging opportunities for their children with disabilities to interact with others in the home environment, or it may include parents assisting their children with disabilities in making play arrangements. Again more research is needed in this area.

Supervising peer relationships. Researchers also should explore the area of parental supervision of peer relationships more thoroughly. Parents who did comment on supervising their children during their play with other children generally focused on making sure their child was safe (e.g., making sure he or she doesn't fall out of her wheelchair). Parents did not discuss directly supervising their child's interactions; rather, their supervision of peer interactions appeared to be more indirect. Although this type of indirect supervision has been found to be correlated with positive social outcomes for older preschoolers and school age children (Bhavnagri & Parke, 1991; Ladd & Golter, 1988), given the social skills deficits of many children with disabilities, we can not assume that indirect supervision would yield the most positive results for these children. In fact,

many of the social skills interventions currently being implemented in the classroom to encourage peer relationships between children with disabilities and their peers with and without disabilities rely on the direct intervention of teachers to guide the interactions between children with disabilities and their peers (Odom & Brown, 1993). Such programs may be useful for parents in the home environment in encouraging the development of effective social skills in their children with disabilities. This is an area that deserves further attention.

Characteristics of the Disability

There is some evidence that the type of disability a child has impacts his or her peer relationships in the home environment. In this study, the children most actively involved with other children were those whose disabilities were predominantly physical in nature, while children with behavioral problems and significant cognitive limitation were among the children with the most limited peer contact in the home environment. These results are consistent with research in the schools (Green & Stoneman, 1980). It is reasonable to assume that parent attitudes are similar for their child's interactions with children with disabilities in the home environment. That is, parents of children without disabilities are likely to be more accepting and even encouraging of their child's friendship with a child with a physical disability than they would be of a child with a behavioral and/or severe cognitive disability. It is possible that due to characteristics (i.e., aggressive behavior, tendency to run) children with behavioral disabilities often exhibit, parents of these children may be leery of inviting other children over or leaving their child with another parent. Another explanation may be that other children may find it easier to interact with a child with a physical disability than to interact with a child with a behavioral and/or severe cognitive disability. Future research should explore these issues further.

Physical Environment

Home. Whether they used it or not, the majority of children had at least some play space available to entertain other children inside their homes. However, a number of children had to struggle to access some of the available play space. In particular, stairs to play areas were difficult for several children to negotiate, with some children requiring an adult to carry them to the play spaces. As a result, some children with disabilities did not have as much freedom to move from play space to place space as their peers without disabilities.

For most children, toys were accessible and were age appropriate; however, a few children relied on others to access toys for them. In addition, for a few children, toys were not age appropriate, generally geared towards younger children, possibly an attempt by parents to match the child's developmental age. Age-appropriate peer interactions are likely to be more difficult when toys are inaccessible and age inappropriate.

Outdoors, children had a wide variety of outdoor equipment to play on or with. A few parents modified play equipment, such as swings, or other outdoor toys, such as tricycles, to assist their child in normal outdoor play. Some yards contained bumps and ruts making it difficult for a few children to negotiate. Many children were only allowed to play outside with direct parental supervision. Several children spent limited time playing outdoors.

Neighborhood. Many children lived in middle-class subdivisions with lots of other children living nearby. A couple of parents discussed selecting these neighborhoods largely to provide their child(ren) with informal social opportunities. While several children living in these areas did indeed interact with other children to at least some extent others living in these neighborhoods did not interact with others very often, if at all. Consistent with previous research, contact with other children in the home environment was even more limited for children who lived in more isolated areas and those living off busy roads (Berg & Medrich, 1980; Ladd & Le Sieur, 1995).

Additional Limitations

In addition to the limitations previously mentioned, it is important to remember this study relied on purposive sampling to include children with varying disabilities living in varying home environments. Generalizability is limited due to purposive sampling and a small sample size. Future research, both qualitative and quantitative, should be done to support, refute, and/or expand on these findings.

Conclusions and Implications

While at least some children with disabilities have peers over to play and do visit the homes of peers, for many this contact is limited. Moreover, at least when compared with their siblings, children with disabilities spent less time playing with peers in the home environment than children without disabilities. This study found in the home environment what many researchers have found in the school environment, which is that even when children with disabilities are in close proximity (i.e., classroom, neighborhood) to children without disabilities, they are not as socially involved with children without disabilities as would be expected by availability (Guralnick et al., 1995).

Since social development is an important developmental task of childhood and since parents of children with disabilities of all ages report a desire for their child to experience positive social relationships and friendships with peers, these results raise some concerns for children with disabilities. Many educators are attempting to address these concerns within the school context through social skills programs. However, little, if anything, is being done to address the social development of children with disabilities in the home environment. Parents need to be made aware of the importance of peer relationships in the home environment for their child as well as ways they can assist their child in developing friendships in the home and neighborhood.

While this study provides only a first glimpse into the peer relationships of children with disabilities in the home environment and much research remains to be done in this area, this research

identifies several ways parents may help their child with a disability develop peer relationships. There is some evidence to suggest that the more contact children without disabilities and their parents have with children with disabilities, the more accepting they generally are of these children. Parents play a critical role in determining the amount and type of contact their children with disabilities have with others. In this study, children with disabilities visited the homes of neighborhood children and had neighborhood children over to visit more often when their parents knew these neighbors. This suggests parents of children with disabilities may increase their child's opportunities for peer interaction in children in the home and neighborhood environments by getting to know the parents of neighbors with children and/or the parents of classmates of their child. Parents may want to invite or help their child with a disability invite other children over to play. This may serve as another way to get to know other families as well as let other families know their child is interested in playing with peers. Providing other parents and children with information as to the nature of their child's disability and his or her abilities and limitations may help other parents and children understand and accept a child with a disability rather than be cautious or fearful around a child who may look and/or act different from the norm (Biklen et al., 1989). Parents of other children may be more willing to extend invitations or encourage their children to extend invitations to a child with a disability if they understand what would be required to have that child visit. Parents of children without disabilities may expect a lot more work is required to have a child with a disability visit their home than is actually needed. As we see in this sample, many children with disabilities require limited (e.g., help negotiating stairs, assistance using the bathroom) or no extra assistance.

Another possible way to increase and enhance peer relationships of children with disabilities in the home environment is by using social skills programs used in the classroom in the home. For example, parents might be trained to directly interact with their children with disabilities and their

children's peers during social interactions in the home environment in ways that might increase and enhance their child's social skills and peer relationships.

Finally, parents of children with disabilities should consider the physical environment they provide their child to play in. Both indoor and outdoor play areas that provide appropriate and accessible space and materials for children with and without disabilities are likely to encourage positive peer interactions in the home. The layout of the home is important. For example, single story homes may increase accessibility of play areas for some children. In addition, parents may want to consider characteristics of the area in which they live, such as whether other children are close by and easily accessible as playmates for their children. Neighborhoods with sidewalks available may make it easier for some children to visit neighbors. Parents may also want to consider the terrain of the area—can their child negotiate the outdoors with the least possible difficulty?

Peer relationships and friendships resulting from peer interactions, impact people throughout their lives. Peers can serve as companions and as sources of support throughout one's lifetime. Rewarding social interactions can positively impact a person's quality of life. If children with disabilities are provided with opportunities to interact with peers, they are more likely to develop rewarding relationships with others in childhood and beyond. The home environment provides an excellent place to begin encouraging such relationships to develop.

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Table 1. Family Demographics

Total number of families	26
Mean income range	\$35,000-\$39,999
Parent education level	
Less than high school diploma	2
High school graduate	4
Some college	2
College graduate	16
Graduate school/professional degree	2
Marital status	
Married	23
Other	3
Caregiver(s) present at interview	
Mother only	20
Mother and Father	5
Grandmother (guardian)	1
Number of children living in the home	Mean 2 (range 1-5)
Home Ownership	
Own home	22
Rent	4
Type of Home	
Single family house	22
Mobile home	1
Apartment	3
Number of rooms in home	Mean 7 (range 4-11)

Table 2. Child Demographics and Disability Information

Child	Sex	Age	Type of Disability ^a	Physical Limitations ^b	Cognitive Impairment ^c	Behavioral Limitations ^d
1	F	5 ½	Spina Bifida	Moderate	Mild	None
2	F	7	Cerebral Palsy	Moderate	None	None
3	M	9	Cerebral Palsy	Moderate	None	None
4	M	7	Dwarfism	Mild	None	None
5	F	6 ½	Neurological Damage	Severe	None	None
6	F	6	Mental disabilities, Oxygen dependent tracheotomy	Mild	Mild	None
7	F	8	Physical and mental disabilities	Moderate	Mild	None
8	F	10 ½	Cerebral Palsy	Severe	Moderate	None
9	M	5	Cerebral Palsy	Mild	Mild	None
10	M	5	Cerebral Palsy, minimal vision	Moderate	Severe/ Profound	Yes
11	M	5	Cerebral Palsy	Moderate	Mild	None
12	F	5	Cerebral Palsy	Severe	Mild	None
13	F	9	Physical and Mental Disabilities, minimal vision, unknown hearing	Moderate	Severe/ Profound	None
14	F	5	Spina Bifida	Moderate	None	None
15	F	6	Physical Disability	Moderate	None	None
16	M	3	Hydrocephalus, minimal vision	Moderate	Moderate	None
17	F	4 ½	Holt-Oran Syndrome, hypotonic, scoliosis	Moderate	None	None
18	M	8	Cerebral Palsy	Moderate	Moderate	None
19	F	5 ½	Spina Bifida	Moderate	None	None
20	M	4	Cerebral Palsy	Severe	Mild	None

Table 2. (continued)

Child	Sex	Age	Type of Disability	Physical Limitations ^a	Cognitive Impairment ^b	Behavioral Limitations ^c
21	F	7	Down Syndrome	Mild	Moderate	None
22	M	5	Cerebral Palsy--low muscle tone, blind	Severe	Unknown	None
23	M	3	Cerebral Palsy	Moderate	Unknown	None
24	F	4 ½	Autistic, mentally retarded	None	Moderate	Yes
25	M	5 ½	Hydrocephalus/ Mild Cerebral Palsy	Moderate	Mild	None
26	M	9	Mental Retardation	None	Severe	Yes
27	F	4	Mental Disabilities, Hyperactivity	None	Mild	Yes
28	F	5 ½	Moderate brain disability, seizure disorder, Attention Deficit Disorder	Mild	Moderate	None

^a Type of disability as reported by parents.

^b Physical Impairment: The degree of physical impairment was determined by written questionnaire information completed by parents concerning a child's ability to use his or her limbs in combination with information obtained during parent interviews about the child's physical abilities and observation of the child by research team members. Three researchers independently evaluated degree of physical impairment.

Mild: Child was able to use arms or legs with slight difficulty. For example, the child could walk fairly well but may require a brace.

Moderate: Child had significant difficulty using arms or legs, or child had some difficulty with both arms and legs. For example, the child could not walk without the aid of a walker and may have used a wheelchair; however, the child may have been able to drag him or her self around on the floor; or the child was not able to perform some basic self-care functions such as using the bathroom or brushing hair due to difficulty with arms.

Severe: Child had significant difficulty with arms and legs, very limited mobility. For example, the child was unable to sit up on his or her own and unable to crawl or drag him or herself.

^c Information about cognitive impairments was obtained from parents.

^d A child was considered to have behavioral limitations if parents discussed significant behavior issues for their child including aggression, hyperactivity, self-injurious behaviors, damage to property, tendency to run.

Table 3: Summary of Findings by Issues

Issue	Findings
Contact with peers	<ul style="list-style-type: none"> • The amount of time children with disabilities spent with other children varied from no time to time spent on a regular basis with most children falling somewhere in between but generally near the limited time. • Children with disabilities spent less time with peers than did their younger or older siblings. • Parents reported their children with disabilities spent less time with peers than did other children their age.
Exposure	<ul style="list-style-type: none"> • Parents believed other children were more accepting of and interacted more with their children with disabilities when they had greater exposure to their children with disabilities. • Parents of children with disabilities believed other parents were hesitant to invite their child over to play because these parents thought children with disabilities would require a lot of extra assistance. • Children with disabilities played with neighborhood children more when parents of children with disabilities knew the parents of neighborhood children.
Parents as initiators of peer relationships	<ul style="list-style-type: none"> • Parents reported selecting homes in neighborhoods with lots of children, getting to know the neighbors, involving the child in organized clubs (i.e., girl scouts), inviting other children to parties, arranging play dates for the child with classmates, and advocating to have the child placed in neighborhood schools as ways they assisted their child in developing relationships with peers in the home environment. • Even though some parents identified ways they initiated peer interactions for their child, many parents did not report doing anything to increase their child's opportunities to interact with peers. In fact, several parents seemed to accept their child's lack of friends as inevitable.

Table 3 (continued)

Issue	Findings
Supervision of peer interactions	<ul style="list-style-type: none"> • Direct parental supervision of children with disabilities while playing with peers was generally to assure the safety of the child (i.e., make sure the child did not fall out of his or her wheelchair). Otherwise parents relied on indirect supervision of peer interactions (i.e., only intervened when deemed necessary such as during a disagreement).
Characteristics of the Disability	<ul style="list-style-type: none"> • Children who spent the greatest amount of time with peers in the home environment were children whose limitations were primarily physical in nature. • Children with behavioral problems and significant cognitive limitations were among the children who spent the least amount of time with other children in the home environment.
Home Environment	<ul style="list-style-type: none"> • Play spaces in the home were difficult to access for a number of children with disabilities, primarily due to difficulty negotiating stairs. • Many children had age-appropriate toys that were easily accessible, though a few children lacked age appropriate toys and/or could not get any of their toys on their own.
Neighborhood Environment	<ul style="list-style-type: none"> • Many children lived in middle-class subdivisions with many other children around. However, living in close proximity to other children did not guarantee peer interactions. • Children living in more isolated areas (e.g., in the country) or off busy roads had more limited peer contact.

CHAPTER 4. THE IMPACT OF THE HOME ENVIRONMENT ON THE DEVELOPMENT OF SELF-DETERMINATION IN CHILDREN WITH DISABILITIES

A paper to be submitted to Environment and Behavior

Cheryl L. Geisthardt, Christine C. Cook, Mary Jane Brotherson

Abstract

This research examines the opportunities to make choices, act independently, and interact with peers that children with disabilities experience in the home environment. These skills have been identified as important in the development of self-determination or the ability of a person to make decisions about how to live his or her life. Findings from the In-Home Checklist (INHC), a series of questions accessing the amount of access and control children with disabilities experience in the home, are presented. In addition, parent attitudes towards self-determination are explored using the Parent Attitude Survey (PAS). Case studies from in-depth family interviews and home observations add depth to the information reported from the INHC and PAS. Results indicate parents of children with disabilities value the development of self-determination in their children with disabilities. However, many children in this sample had limited opportunities to develop skills contributing to self-determination in the home environment. As expected, parent attitudes towards self-determination were highly correlated with children's opportunities to develop self-determination skills in the home. Children with more severe disabilities were found to have fewer opportunities to make choices, act independently, and interact with peers, and parents of these children held attitudes less supportive of the development of these skills. Ways that professionals working with families of children with disabilities can help parents structure the home environment to support the development of self-determination in their children are explored.

Introduction

It is during childhood that we develop a sense that we can influence the world around us (Abery & Zajac, 1996; Wehmeyer, 1996b). Opportunities abound to express preferences, make choices, act independently, and interact with others. Children with disabilities, however, have fewer chances to make decisions for themselves (Abery & Zajac, 1996; Guess & Siegel-Causey, 1985; Guess, Benson, & Siegel-Causey, 1985; Houghton, Bronicki, & Guess, 1987). Decisions are often made by family members, caregivers, and professionals.

The lack of influence over their own lives that many people with disabilities experience (Kishi, Teelucksingh, Zollers, Park-Lee, Meyer, 1988) has raised interest in the concept of self-determination (Wehmeyer & Metzler, 1995). Wehmeyer (1996b) defines self-determination as “acting as the primary causal agent in one’s life and making choices and decisions regarding one’s quality of life, free from undue external influence or interference” (p. 116). Self-determination is an ongoing process beginning at birth (Abery, 1994; Wehmeyer, 1996b). Individuals with disabilities have identified self-determination as important to them and their quality of life (Kennedy, 1993, 1996; Ward, 1996; Wehmeyer & Berkobien, 1991; Williams, 1989). One individual with disabilities had this to say about self-determination, “self-determination is what life is about. Without it, you might be alive, but you wouldn’t be living—you would be just existing” (Kennedy, 1996, p. 48). Parents, advocates, and professionals working with people with disabilities also consider self-determination a significant contributor to a person with a disability’s self-esteem, sense of self-efficacy, and quality of life; as a result they view the development of self-determination as an important goal for people with disabilities (Abery, 1994; Doss & Hatcher, 1996; Wehmeyer, 1996b). Wehmeyer (1996a) does an excellent job of summing up the importance of focusing on self-determination for individuals with disabilities:

The movement to support and promote self-determination is about treating people with dignity and respect. It is about enabling people with disabilities to achieve independence, integration, and inclusion to the greatest extent possible by providing them the opportunities to learn the skills they need and the chance to put those skills into action. It is about empowerment, choice, and control. (p. 33)

In the language of this literature, for children to become more “self-determined” requires that they develop the skills that allow them to make decisions about their own lives. The ability to express preferences, make choices, make decisions, act independently, and interact with others are all skills commonly cited as contributing to the development of self-determination (Abery, 1994; Wehmeyer, 1996b). Abery and Zajac (1996) report that “many, if not most, of the fundamental roots of personal control lie with the developmental processes initiated during early childhood and the elementary school years” (p. 176). In order for children to gain control over their lives, they need opportunities to experience control, including opportunities to make choices and act independently. In addition, children learn the skills needed to become self-determined by observing and interacting with peers (Abery, 1994; Doll, Sands, Wehmeyer, & Palmer, 1996).

Abery and Zajac (1996) report that the skills needed for self-determination “are best taught in the natural environment through procedures that draw upon the daily needs and desires of children” (p. 183). The home environment, in particular, can provide excellent opportunities for children to experience control, make choices, act independently, and interact with others (Abery & Zajac, 1996; Cook, Brotherson, Weigel-Garrey, & Mize, 1996). It is in the home that children first experience opportunities to make choices, experience control, and exhibit competence (Cook et al., 1996). The physical environment sets parameters for available choices and, consequently, the ability of individuals to make choices (Altman & Wohlwill, 1978; Lang & Sullivan, 1986; Lewis, 1986, Miller, 1986). Children learn by acting on their environment and observing consequences of those

actions, and experiencing mastery over the environment can help children feel their life is under their own control (Hendershott, 1989). Research has found restricted access to explore the home environment has negative consequences for children's cognitive development (Wachs, 1986).

The role the home environment can play in the development of self-determination in children with disabilities has received limited attention (Brotherson, Cook, Cunconan-Lahr, & Wehemeyer, 1995; Cook et al., 1996). The purpose of this study was to begin looking at the home environment as a context for the development of self-determination. In particular, this research explored the roles of the home environment, parent attitudes towards self-determination, and the severity of a disability play in children's opportunities to make choices, act independently, and interact with peers. The following sections examine these issues and how they relate to the development of self-determination.

Physical Environment

The types of choices, the amount of independence, and the opportunities for socialization a child experiences in the home environment are likely to be impacted by the structure and arrangement of the physical environment. Children with disabilities are likely to experience more limited opportunities to act on the environment if characteristics of the child's disability and the structure of the environment inhibit freedom to explore and manipulate the home environment (Brotherson, Cook, & Parette, 1996; Cook et al., 1996). For example, narrow hallways or steep stairs limit the spaces a child requiring the use of a wheelchair for mobility can access on his or her own. Modifications to the home environment and/or assistive devices can provide greater access to the home environment thereby providing greater opportunities for children to make choices, act independently, and interact with peers (Cook et al., 1996).

Modifications to the physical environment. Modifications to the home environment that provide children with greater access to and control over the environment are likely to provide a child

with a disability greater opportunities to make choices, act independently, and socialize in a developmentally appropriate manner within the home (Brotherson et al., 1995; Brotherson et al., 1996; Cook et al., 1996). For example, a child with limited mobility due to a physical disability may have increased opportunities to make choices about where to spend time in the home if the home is arranged so the child can maneuver a wheelchair or walker throughout the home (Cook et al., 1996). This same child is going to be able to act more independently if items such as toys, snacks, and clothing are accessible to the child. This may mean storing these items low enough for the child to reach and/or in easy-to-open containers, cabinets, or drawers. Finally, accessible play spaces and adaptive play equipment (e.g., adaptive swing, or tricycle) may make it easier for children with disabilities to play with other children in the home environment (Cook et al., 1996).

Many simple modifications can be made to increase a child with a disability's choice and independence in the home environment (Brotherson et al., 1996; Cook et al., 1996; Parette & Brotherson, 1996). For example, a child who is unable to reach and/or pull out a dresser drawer may benefit from clothes being placed in baskets on the floor. Similarly, toys on open shelves or in low open containers may provide a child with a disability greater access to these items. In order for children with disabilities to benefit from home modifications, parents need to be aware of what type of modifications might benefit their child.

Assistive devices. Technological advances have helped make homes more accessible for children with disabilities and increase the opportunities these children have to exert control, make choices, act independently, and interact with peers (Brotherson et al., 1996; Cook et al., 1996; Parette & Brotherson, 1996). Assistive devices (e.g., wheelchairs, walkers, ramps, communication devices, switches) can provide children with greater access to both physical spaces and items within the home environment (Parette & Brotherson, 1996; Cook et al., 1996). Greater access can lead to increased opportunities for a child to make choices, act independently and interact with others in an age-

appropriate manner. For example, a communication device can enable a child with communication difficulties to express his or her preferences or an electronic switch can provide a child with the opportunity to exercise some control over the physical environment such as turning on and off lights or operating an audio cassette player. In order for children to benefit from assistive devices, parents need to be aware of these technologies and be willing to use them (Brotherson et al., 1996; Parette & Brotherson, 1996).

Parent Attitudes Towards Self-Determination

Parents greatly influence their young children's opportunities to make choices, act independently, and socialize with peers in the home environment. For example, parents determine whether or not their child is provided with the opportunity to select the clothes he or she would like to wear each day, the snack he or she would like to have, or even how the family should spend their leisure time together; furthermore, parents may encourage independence by allowing their child to get a cup and pour a glass of milk or allowing the child to play in the backyard unaccompanied by a parent. Parents can also impact the opportunities their child has to interact with peers by encouraging and/or assisting him or her in extending play invitations to other children (Ladd & Le Sieur, 1995). The value parents of children with disabilities place on their child acquiring these skills is likely to have at least some impact on what these parents do or are willing to do to structure the physical environment to facilitate choice-making, independence, and peer relationships for their children with disabilities (Abery & Zajac, 1996).

Parents of all children must balance, allowing their children to take risks in order to develop into independent, self-competent human beings while at the same time protecting them from harm. Due to limitations imposed by a child's disability, parents of children with disabilities may view their children as more vulnerable and in need of extra protection (Doss & Hatcher, 1996; Schloss, Alper, & Jayne, 1993; Wehmeyer, 1996b). As a result, parents of children with disabilities may find it

particularly difficult to find a balance between keeping their child safe and allowing their child to take the risks needed to develop skills leading to self-determination (Doss & Hatcher, 1996; Schloss et al., 1993). Wehmeyer (1996b) claims “family needs for protection and safety eventually win out over the risk-taking and exploration needed to develop independence and autonomy” (p. 126). Considering the increased concerns over child safety parents of children with disabilities often experience, it may be that parents of children with disabilities place less emphasis on children with disabilities developing choice-making, independence, and socialization skills than they place children without disabilities developing these same skills.

The value parents place on the development of self-determination in their children with disabilities is influenced by their cultural background (Turnbull & Turnbull, 1996). For example, some cultures value independence of their members, whereas other cultures value interdependence in their members (McCollum & McBride, 1997; Turnbull & Turnbull, 1996). A culture that values interdependence in its members may be less likely to value self-determination. In fact, Turnbull and Turnbull (1996) suggest that “self-determination itself is largely rooted in the cultural values of middle- and upper-middle class Anglo American professionals and families” (p. 199).

Severity of the Disability

Advocates of self-determination emphasize the importance of self-determination for *all* people with disabilities regardless of the type or severity of the disability (Schloss et al., 1993; Wehmeyer, 1996b) Furthermore, it is believed that nearly all individuals can achieve some level of self-determination, and research indicates individuals with severe disabilities can learn to make choices (Dattilo & Rusch, 1985; Peck, 1985; Realon, Favell, & Lowerre, 1990). Wehmeyer (1996b) supports this belief as he discusses that even individuals with severe cognitive impairments are able to make choices in their lives:

Given adequate supports, opportunities to experience control by having one's preferences honored, chances to learn to make choices, reasonable accommodations, and the opportunity to learn skills related to self-determination, *it is possible that a person with a significant cognitive disability can become not only self-determined, but fully self-determined.* (p. 123)

Wehmeyer (1996b) also provides an excellent example of an individual named Bill with multiple and severe limitations who with determination and the right assistance was able to become self-determined. Bill spent 20 years in an institutional setting. Bill was born with cerebral palsy, labeled as severely mentally retarded, and was deaf. He lacked a systematic means for communication and exhibited problem behaviors deemed too disruptive for the community or even a shelter workshop. Bill developed a relationship with Christine, the executive director of the local Association for Retarded Citizens (ARC). Christine took the time to figure out what Bill was trying to communicate. She became an advocate for Bill. Christine and Bill worked closely together to improve Bill's control over his life. Bill never gave up trying to express his preferences or explaining what he wanted (pp. 124-125). Bill's life today serves an example of the impact self-determination can have on a person with severe disability's quality of life:

Bill works 30 hours per week as a clerk in a Minneapolis nonprofit agency with the support he needs. He has received commendations from his employer as a valued employee. He lives independently in a supported living home in a suburban neighborhood. He has two roommates whom he selected. He interviewed the support service personnel who were then scheduled to come into their home on a daily basis. He enjoys mountain camping, whitewater river rafting, hockey and visiting friends and relatives. He was reunited with his mother after 15 years and travels to visit her when he can make room in his schedule. Bill cooks with a microwave, shops, and is responsible for his own self-care needs. (p. 125)

The point is that people with severe disabilities can develop the skills needed to become self-determined. It appears Bill had to wait until adulthood to achieve a high level of self-determination. Again, professionals working in the field of disabilities emphasize the importance of developing the skills needed for self-determination from early childhood (Abery & Zajac, 1996; Doll et al., 1996). However, children with more severe disabilities may experience even greater challenges acting upon the environment around them. Children who experience multiple limitations and/or more severe limitations generally require greater modifications to the environment, more assistive technology, and/or greater involvement by parents to provide them with access to their environment, and provide opportunities to make choices, act independently, and socialize within the home environment. Although certainly not what advocates of self-determination would like to be the case, due to the increased demands that multiple limitations or more severe limitations impose, it is likely that children with severe disabilities have fewer opportunities to make choices, act independently, or interact with peers in the home environment than do children with fewer limitations and/or less severe disabilities.

The research reported here provides a beginning look at the types of choices, the amount of independence, and the opportunities for socialization that children with disabilities experience in the home environment as well as the attitudes parents hold towards these same issues. Since children rely largely on their parents to structure their home environments and provide opportunities to make choices, act independently, and interact with peers, it is likely that parent attitudes towards self-determination are related to the opportunities children with disabilities have to develop these skills. More specifically, it may be reasonable to expect that the more supportive parental attitudes are towards self-determination, the more the opportunities children with disabilities have to develop skills contributing to self-determination. In addition, due to the increased demands more severe limitations impose, it is likely that children with more severe limitations have fewer opportunities to

make choices, act independently, and interact with peers in the home than children whose disabilities are less severe. The research reported here explores these issues.

This study serves as a preliminary look at two scales. The first scale, the Parent Attitude Survey (PAS), measures parents' attitudes towards self-determination of children with disabilities. The second scale, the In-Home Checklist (INHC), focuses on the opportunities children with disabilities have to develop skills contributing to self-determination in the home environment. In addition, four case studies, summarizing data from in-depth family interviews and home observations, were developed to provide the reader with a deeper understanding of the issues measured in the In-Home Checklist and the Parent Attitude Survey. Interviews for case studies were selected to represent families who scored at both the high and low ends of the continuum on the In-Home Checklist and the Parent Attitudes Survey.

Method

The research reported here is part of a larger study examining the home environments of children with disabilities. This study was reviewed and accepted by the Human Subjects Committee at Iowa State University and family consent forms were obtained. Measures were taken to assure confidentiality of the families in data collection and reporting.

Participants

The sample was selected to include children with a wide range of physical, cognitive, and/or behavioral limitations living in a variety of neighborhoods and housing types. Families were recruited with the assistance of early childhood educators and related service therapists in public schools in surrounding areas. The research team presented the study to public school educators and therapists, and they, in turn, shared the information with families with whom they worked. Characteristics that distinguish families who chose to participate from those who did not choose to participate are unknown and result in sampling bias. The final sample included 32 families with 34

children. The children ranged in age from 3 to 10 years ($M = 6.7$) and included 21 females and 13 males with a wide range of physical, cognitive, and/or behavioral disabilities. All families were paid \$50 dollars for their participation. Family demographics appear in Table 1. Characteristics of the child's disability appear in Tables 2 and 3.

For the purposes of this study, the severity of disability was calculated by examining all information pertaining to characteristics of the disability including physical limitations, cognitive limitations, behavioral limitations, sensory impairments (visual and hearing), and significant medical issues (i.e., requires oxygen, significant seizures). First, the degree of physical limitations was assessed, and physical limitations were categorized as mild, moderate, or severe. The degree of physical impairment was determined by written questionnaire information completed by parents concerning a child's ability to use his or her limbs in combination with information obtained during parent interviews about the child's physical abilities and observation of the child by research team members. Two researchers independently evaluated the degree of physical impairment. Each child was then given a score from 0 to 3 on degree of physical limitations with 0 for no limitations, 1 for mild, 2 for moderate, and 3 for severe. Cognitive impairments came from parental reports again scoring from 0 to 3. Behavioral issues were scored 0 or 1 with 1 indicating parent's discussed significant behavior issues for their child including aggression, hyperactivity, self-injurious behaviors, damage to property, or a tendency to run. Sensory impairments were given a 1 for each significant limitation including very limited to non-existent vision or hearing. If a child experienced significant medical difficulties requiring near daily specialized treatment, he or she was given another point. The potential scores for severity of disability ranged from 1 to 10.

Procedure

Multiple methods of data collection were used in this study including family interviews, home observations, and written questionnaires completed by the parent(s). After a family agreed to

participate an interview date was set. Prior to the interview, a packet containing several questionnaires was sent to the family. The family was asked to complete questionnaires which included *demographic information, information about the characteristics of the child's disability, modifications made to the home, the Parent Attitude Survey, and the In-Home Checklist*. When the researchers arrived for the interview, they discussed the written materials the family had completed. Parents were invited to comment on the questionnaires and ask any questions they had on the clarity or content of the questionnaires. Parents and/or the researchers made note of the parents' questions and concerns on the original written materials.

The home visit consisted of an in-depth family interview and a home observation lasting from about 90 minutes to 2 hours. A team of at least two researchers visited the home of each of the participants. One researcher primarily focused on the interview while another focused on observing the home environment. Families were asked in advance if photos could be taken, and they were asked again at the time of the interview where photographs could be taken. Parents sometimes joined in touring the home, pointing out how the environment was used. All researchers were present for the beginning of the interview, which involved getting to know the family as well as the characteristics of the target child. The researcher responsible for the home observation toured the home room by room systematically, examining the features of each room and noting how accessible the room and items within the room were to the child with a disability as well as what, if any, modifications that had been made for the child with a disability. Pictures were taken in the home for a visual record of home characteristics. The same procedure was used outdoors to record characteristics of the home and neighborhood.

Instruments

The first instrument, the Parent Attitude Survey, was designed to explore the attitudes parents hold towards choice, independence, and self-determination for children with disabilities.

This instrument was developed from Davis and Wehmeyer's (1991) "10 steps to independence: Promoting Self-Determination in the Home." A team of researchers examined each of the 10 steps Davis and Wehmeyer identified and developed a series of statements they believed captured the points made by Davis and Wehmeyer. The questions asked about children with and without disabilities in an attempt to explore differences in attitudes parents hold towards self-determination for children with and without disabilities. The final scale was set up so parents would respond to the extent to which they agreed or disagreed with each statement on a 4-point-likert scale.

A second series of questions, the In-Home Checklist, was designed to measure the amount and type of access, and the opportunities for choice, independence, and social interaction that children with disabilities have in the home. This scale consisted of two parts. The first series of questions were specific to access and choice in the child's bedroom. This scale was based on the work of Schutte, Malouff, Lawrence, Glazer, & Cabrales (1992) who developed a similar scale for use with nursing home populations. Parents were asked whether they agreed or disagreed with a series of 15 statements about access and choice their child had in his or her bedroom. The second section of the In-Home Checklist included a series of question about choice making, independence, and socialization experiences of the child in the home. A team of researchers with backgrounds in housing, early childhood special education, early childhood education, and child development systematically considered areas of the home and activities children often carry out in these areas that provide opportunities for choice, independence, or socialization. The team came up with 28 statements summarizing these activities (i.e., using the telephone, helping with preparation of snacks); parents were asked to rate on a 4-point likert scale how often their child with a disability was involved in these activities.

Finally, case studies were developed using interview transcripts, observational reports, and team meeting notes and are used here to increase the reader's depth of understanding of the issues

addressed in the In-Home Checklist and the Parent Attitude Survey. Detailed information about the child's disability, the child's daily routine, the layout of the home, and modifications made to the home for the child with a disability were particularly useful in gaining a deeper understanding of the type of access and control children with disabilities have in their homes as well as opportunities to make choices, to act independently, and to socialize in the home environment.

Results

Table 4 summarizes the findings of the Parent Attitude Survey including the frequencies of each response and sample mean for each scale item. Items phrased to express an attitude supportive of self-determination were scored from 4 to 1 (strongly agree to strongly disagree), and items phrased to express an attitude not supportive of self-determination were reverse scored from 1 to 4 (strongly agree to strongly disagree). Total scale scores were calculated by summing the scores of all 28 items. Higher scores reflect attitudes more supportive of self-determination than lower scores. Total scores of this scale ranged from 74 to 102 with a $M = 89.67$, $SD = 7.02$. Cronbach alpha was used to calculate internal consistency of the scale with $\alpha = .75$.

In general, responses to the Parent Attitude Survey indicate that many parents value self-determining behaviors in their children with disabilities. For example, 100% of all parents agreed or strongly agreed that independence is a high priority for children with disabilities and that the development of self-worth and self-confidence are high priorities for children with disabilities, and 97% of parents agreed or strongly agreed that children with disabilities should have a variety of opportunities to interact with non-disabled peers. However, when parents were asked to compare children with and without disabilities or children in general (disability status unspecified), parental attitudes were more supportive of self-determining behaviors in children without disabilities. For example, more than half of all parents in this study agreed that children with disabilities are more vulnerable and need more protection than children without disabilities, and 69% agreed or strongly

agreed that children with disabilities need more overall supervision than children with disabilities. In addition, 35% of respondents agreed or strongly agreed that children with disabilities cannot go outdoors unsupervised; whereas, only 22% of parents agreed or strongly agreed that children in general cannot go outdoors unsupervised.

The frequencies and sample means for each item in Parts 1 and 2 of the In-Home Checklist are presented in Table 5 and Table 6 respectively. In part 1 of the In-Home Checklist, a parental response of “agree” was given a score of 2, and “disagree” was given a score of 1. Part 2 was scored from 1 to 4 (never to routinely). Total scale scores were calculated by summing the items in both parts 1 and 2. Higher scores reflect greater access, control, choice, independence, and socialization in the home environment. Scores of the In-Home Checklist ranged from 54 to 129 with a $M = 100.97$, $SD = 18.09$. Internal consistency was calculated as $\alpha = .92$.

The results of the In-Home Checklist provide preliminary information as to the amount and types of access, choice, independence, and socialization children with disabilities experience in the home environment. Within the child’s bedroom, children were allowed and able to make as much noise as they wanted, decide the activities that go on in the room, and leave the room if desired. Children were least likely to be allowed to eat or drink in their bedroom, decide what time things happened in the bedroom, and arrange the room as desired. Of the activities examined in Part 2 of the In-Home Checklist, children in this sample were least involved with visiting neighbors with disabilities, helping with the preparation of meals, playing outside unattended, using the telephone, and using the toilet unassisted, with 60% or more children not often or never engaging in these activities. In addition, a significant number of children were never or not often able to retrieve a snack or drink from the cupboards (59%) or refrigerator (47%), select friends to play with (48%), visit neighborhood friends without disabilities (41%) or select clothes to wear each day (42%). Most children in this sample routinely ate at least one meal with the family (94%), and selected toys to

play with (88%). Other activities that 75% or more of the children in this sample engaged in at least sometimes include playing outside, eating without assistance, accompanying parents on routine errands and clothes shopping, playing alone unattended, and selecting snacks to eat.

A statistically significant correlation between the Parent Attitude Survey and the In-Home Checklist was found with $r = .53$, $p < .01$. Parents whose attitude scores were higher, suggesting that they were supportive of self-determination skills, reported that their children with disabilities experienced greater opportunities to practice skills contributing to self-determination including greater access in the home and more opportunities to make choices, act independently, and interact with peers than children whose parents who had lower attitude scores. The amount of variance of one scale explained by the other was quite high at 27%.

The degree of severity using the scale previously discussed ranged from 1 to 9. The correlation between the In-Home Checklist and severity of disability was $r = -.64$, $p < .001$, and the correlation between the Parent Attitude Survey and severity of disability was $r = -.59$, $p < .001$. Children with more severe disabilities had parents who reported their child had fewer opportunities to practice skills contributing to self-determination. In addition, children with more severe disabilities had parents whose attitudes were less supportive of self-determination.

Case Studies

Four brief case studies are included to provide the reader with greater depth and contextual information as to the types of children involved in this study and their experiences related to access, choice, independence, and socialization in the home environment. Case studies were selected to represent both the highest and lowest scores on the In-Home Checklist (INHC) and Parent Attitude Scale (PAS).

Family 1 INHC = 54 (lowest score); PAS = 74 (lowest score). Jane is a 7-year-old female with physical and mental disabilities. She is cortically blind and has limited hearing. She has very

limited use of legs and arms. She can roll some but does so rarely. She is severe/profoundly mentally retarded. Currently mom and her two children are living with mom's parents in a two story home in a small town while dad is oversees with the military.

Jane uses a wheelchair when she is at school. When she is home she spends most of her time on a bean bag chair in the living area. She has very limited access to areas and items within the home. She relies on other people to take her from room to room and to hand her or put her within reach of toys. She is given very limited opportunities to make choices in the home environment. She does not select the clothes she would like to wear, the toys she would like to play with, or where she would like to be within the home. She has no peer contact outside of school. She is fed by a bottle and does not participate in snack or meal preparation at home, although mom notes she is doing some of this at school.

Mom believed many of the questions asked on the In-Home Checklist were not applicable to her child, implying her child was not able to have many types of access, control, choice, independence, and socialization due to her disability. Throughout the interview she appeared satisfied with the way things were going for her child. For example, when she was asked if there were any modifications they had made or they would like to make to help her or Jane she had limited suggestions. When asked if Jane could communicate preferences mom, reported they knew when Jane was unhappy because she would hit herself, and they could tell if she particularly liked an activity by Jane's grins and giggles, but when asked if Jane communicated choices or preferences for things mom said, "well she doesn't; if she is trying to communicate with me, I don't know how to read it."

Family 2 INHC = 67 (2nd lowest); PAS = 80 (3rd lowest). Sally is 9 years old. Mom reports Sally has physical and mental disabilities resulting from Group B strep meningitis at 3 weeks of age. She is severe/profoundly mentally retarded. She does not speak. She has very limited vision and

experiences some hearing loss. She has full use of her arms and hands but limited use of her legs and feet. Inside the home Sally gets around mainly by rolling, although she is able to take a few steps with assistance from another person. Outside the home Sally uses a wheelchair. The family resides in a one-story home with a basement in a middle-class subdivision.

Sally has little opportunity to exert control over her environment. When at home she spends most of her time on the living room floor. Her wheelchair is generally not used in the home; therefore Sally relies on rolling to get around. Sally's access to toys is limited. Generally toys are placed around her as she plays on the floor. There are toys kept on low shelves in her bedroom, but she spends limited time in there. The basement is full of toys, but again Sally spends limited time in this area largely because a strong adult is needed to carry her up and down the stairs. As a result, the basement is mainly the play area for Sally's younger brother. Sally's mother believes Sally could open and get into kitchen cabinets and drawers, and she believes Sally would like to spend time on the kitchen floor since she would probably enjoy the feel of different textures the linoleum would provide. However, Sally is not provided with this opportunity. Although Sally does not speak, she is able to express preferences by the tone of her vocalizations and her body language (i.e., pushing unwanted food away); however, Sally is not provided with opportunities to make choices about what she wears, what she eats, or where she plays. Sally does have quite a bit of contact with other children including neighborhood children and cousins; however, the interactions between Sally and her peers tend to be age inappropriate with children playing with Sally as if she was an infant (i.e., pushing her wheelchair or swing, entertaining her with toys on the living room floor, holding her hands and rocking her back and forth). Mom reports Sally requires a fairly high degree of supervision, although mom can leave her alone for a couple minutes on the living room floor, outside in the yard, or in the tub in the bath chair.

Mom's attitudes towards choice, independence, and control come out in the interview. During the interview Sally's mother was asked about Sally's opportunities for making choices to which mom simply replied "they are working on that in school right now." When the interviewer inquired about how they were doing, this mom was not certain what they were doing but thought they were encouraging Sally to reach for her preferred snack or drink. During the discussion of desired home modifications mom discussed few things that would increase Sally's access and/or independence within the home. In fact, when asked whether it would be nice to have a wheelchair accessible bathroom mom reported she did not feel that was necessary at this time as they could take Sally into the bathroom. Mom discussed Sally falling out of bed a couple times in what she believes was Sally's attempt to get out of her bed on her own. The interviewer asked if sometime in the future they might consider putting a mattress on the floor so Sally could get in and out of her own bed. Mom replied she felt Sally slept better if she was confined.

Family 3 INHC = 117 (3rd highest); PAS = 94 (6th highest). Lynn is 5 ½ years old. She has moderate brain disability, seizure disorder, and Attention Deficit Disorder. She is moderately mentally retarded. She has some mild physical difficulties including mildly low muscle tone causing her to stumble a lot. The family resides in a University town in a 2 story home with a basement.

Mom tries to give Lynn choices about what she is going to wear and what she is going to eat. Lynn likes to help make supper and does so most days. She can get into the cupboards and select snacks. Lynn's parents are very familiar with Lynn's preferences and try and allow her to do the things she likes as much as possible. For example, Lynn likes to play outside, and she likes to hear a song on the tape recorder, which they will help rewind and play over and over again. Lynn recently moved into a new bedroom, and she selected the color paint and the blankets. Lynn knows her boundaries outdoors, but mom says she still requires supervision so that she doesn't wander off. Mom says, "we are trying to keep things within her reach like her things that she can get herself, like

in the closet and in the kitchen there is paper and colors. . . . and we moved the cereal down so that in the morning she can pick the boxes.” A stepstool is located in the bathroom so she can get a drink of water, brush teeth etc. Parents leave an old stereo and the VCR accessible to Lynn and her younger sibling. Some of Lynn’s clothes are located in baskets on the floor for easy access by Lynn. Lynn has somewhat limited interactions with peers, which mom believes is because Lynn is fearful of being left alone with them due to her communication difficulties. Mom tries to encourage the development of peer relationships, and when Lynn is involved with neighborhood children outdoors, mom will sometimes “sneak away.”

It is clear opportunities for Lynn to make choices and act independently are important to Lynn’s parents. In fact, Mom says, “she could have a lot more freedom than she has, and I would love her to be more independent. But she is very, by choice, dependent on me at home, she wants me with her all the time.” Lynn’s parents have intentionally arranged the home environment to increase Lynn’s access within the home thereby allowing her greater opportunity to make choices and act independently.

Family 4 INHC = 129 (highest); PAS = 100 (3rd highest). This family has two children both with disabilities. David is a 9-year-old with cerebral palsy mainly affecting his lower extremities. He does walk independently but with braces. He has mild difficulties with his hands and has some perceptual motor limitations. Bill is 7 years old and has a form of dwarfism caused by his growth plates closing prematurely. At the time of the interview, he was in the process of getting a brace for one leg.

The family lives in a single story home located in a country setting with no other houses near by. The children have free access to most spaces in the home, although they do not spend much time in the basement because it is unfinished and the steps are hard to negotiate. Some modifications have been made for the children including lower door knobs for Bill, carpeted steps to the basement to

make them safer, an extra wide step built from the deck to the ground so that David could get his balance more easily, and throw rugs were eliminated because David would trip over them a lot. The rough terrain surrounding the home is difficult for David to negotiate. Mom would like a cement slab or asphalt so that David could play outdoors more easily, but the family can not afford this at the present time. Mom also reports they would like to move to an area with other children nearby, but again finances prevent such a move.

Both boys are provided with opportunities to make choices, express preferences, and act independently in the home. They have access and are given the opportunities to get food from the kitchen. The oldest child will cook meals independently occasionally cooking breakfast (scrambled eggs and coffee) for his mother. The younger child serves himself cereal and prepares simpler foods for himself like toast or sandwiches. Both children are able to use the microwave independently. They can access their own clothes and can pick out what clothes to wear when they desire. Mom describes Bill as particularly independent. He climbs or uses chairs to reach things on his own. Toys are easily accessible by both children. The boys can get in and out of their own beds. Both the parent interview and the in-home observation suggest David and Bill have a large amount of control over their environment and many opportunities to make choices and act independently.

The boys' mother is very encouraging of the development of self-determination in her children. She reports she and her husband make modifications to allow their children greater access and control within the home when they notice something making it particularly difficult for a child (i.e., lowering the door knobs for Bill). There are other modifications mom would like to make that are too expensive for the family at this time. Further evidence of this mother's positive attitude towards self-determination comes from discussion of her desire for accessible play equipment at David's school so that he could participate in recess activities. In addition, she discusses a desire for David to be involved with peers outside of school more often.

Discussion

This study provides a preliminary look at parent attitudes towards self-determination for children with disabilities as well as the opportunities children with disabilities have to develop skills contributing to self-determination in the home environment. Many parents in this sample report that they value the development of skills that contribute to self-determination. In particular, most parents reported that independence, interacting with peers, and developing self-confidence are high priorities for children with disabilities. However, when asked to compare the importance of self-determination skills for children with and without disabilities, parental attitudes were more supportive of self-determining skills in children without disabilities. In general, parents saw children with disabilities as more vulnerable and in need of more supervision than children without disabilities. One possible explanation for why parents value the development of skills contributing to self-determination more in children without disabilities than for children with disabilities may stem from the increased struggle between keeping their child safe and allowing their child to take risks that many parents of children with disabilities experience (Doss & Hatcher, 1996; Schloss et al., 1993; Wehmeyer, 1996b).

While some children in this sample experienced opportunities to make choices, act independently, and interact with peers in the home environment, a significant number of children had limited opportunities to do so. For example, almost half the children in this sample not often or never selected the clothes they wore each day or decided how to arrange their bedroom (opportunity to make choices), retrieved food or drink from cupboards or the refrigerator (opportunity to act independently), visited with neighborhood friends (opportunity to interact with peers). An even greater number of children rarely used the telephone, helped prepare meals, used the toilet unassisted, or played outside alone. It appears there are a number of opportunities to make choices, act independently, or interact with peers children with disabilities are not routinely provided.

It is important to remember that the physical and cognitive limitations of many of these children made it very difficult for them to act on their environment. For example, some of the children in this study were not physically able to retrieve snacks from the refrigerator on their own or use the toilet unassisted. However, it is also important to remember that with modifications to the home, assistive devices, and/or skills training many children with disabilities, even children with severe limitations, can experience some control over their environment (Wehmeyer, 1996b). In fact, although there was a strong correlation between the severity of the disability and opportunities to make choices, act independently, and interact with peers children in this sample experienced, a great deal of the variability in these opportunities was not explained by severity of the disability; this suggests that at least some children with more severe disabilities experienced opportunities to make choices, act independently, and interact with peers in the home.

Since children rely largely on their parents to structure their home environment and provide opportunities to make choices, act independently, and to interact with peers, it was expected that parent attitudes towards these issues were related to children's opportunities in these areas. Indeed, a significant correlation was found between opportunities to develop skills contributing to self-determination as measured by the In-Home Checklist and parent attitudes as measured by the Parent Attitude Survey. From this study we cannot determine causality, that is, whether positive parental attitudes towards self-determination led to increased opportunities within the home or whether the reverse was true. However, it makes sense that parents who value choice-making, independence, and socialization for their children with disabilities provide their children more opportunities to develop these skills.

As expected, and as mentioned above, children's opportunities to develop skills contributing to self-determination were greatly affected by the severity of the disability. To the disappointment (but probably not to the surprise) of advocates of self-determination, children whose disabilities were

more severe experienced less access to and control over their home environments. They made fewer choices, acted less independently, and socialized with peers less often. In addition, parents of children with more severe disabilities held attitudes that were less supportive of self-determination. There are at least two plausible explanations for these findings. First, children with more severe disabilities are likely to require greater modification to the home environment, more specialized equipment, and greater training of and patience by parents in order to have the opportunity to express preferences, make choices, act independently, and socialize in the home environment. Since parents may be very concerned with meeting the daily care needs of these children and keeping them safe (Doss & Hatcher, 1996; Wehmeyer, 1996b), they may have less energy to work towards self-determination; as a result, they may put less emphasis on the development of self-determination. In this case, characteristics of the child's disability and the parent's experiences with that child, help to shape the parent's attitudes towards the importance of self-determination, which then influences the opportunities to make choices, act independently, and socialize in the home environment the parent provides a child. It is also plausible that parents of children with severe disabilities have made attempts in the past to provide their child with opportunities to make choices, act independently, and socialize with peers; however, these attempts have been unsuccessful. Rather than see these attempts as failures, parents may put less emphasis on the development of self-determination. In this case, previous experiences impact parental attitudes. Future research should consider these issues further.

Limitations and Suggestions for Future Research

This study provides a beginning look at the opportunities children with disabilities have to develop skills contributing to self-determination in the home environment and parental attitudes towards self-determination of children with disabilities. The scales were based on existing literature and were found to be internally consistent. In addition, there is at least some evidence from interview and observational data that the measures did indeed measure what they were intended to

measure. However, the sample size in this study was quite small limiting generalizability. Future research using the instruments with larger samples is necessary.

Unlike the Parent Attitude Survey, the In-Home Checklist, does not provide an opportunity for a direct comparison between children with and without disabilities. Given the limitations of children with disabilities, it might be reasonable to expect to find children without disabilities have greater access, choice, independence and more peer interactions in the home environment than children with disabilities. Or we may find for example, that all parents limit their child's opportunities to arrange his or her bedroom or help with meal preparation. Future research using the In-Home Checklist with children with and without disabilities would be useful in addressing this issue.

The type of disability (i.e., physical, cognitive, behavioral) is likely to impact access and control children experience in the home environment and certainly impacts the types of modifications needed to provide opportunities for children with disabilities to make choices, act independently, and interact with others. For example, children with physical disabilities may benefit from single level dwellings, low shelves, easy to access drawers and cabinets, and/or room to negotiate a walker or wheelchair in order to increase their opportunities to make choices, act independently, and interact with peers (Brotherson et al., 1996; Cook et al., 1996). On the other hand, children whose disabilities are more cognitive in nature and who experience difficulties with verbal communication may benefit from alternative ways to communicate (i.e., communication boards, sign language) (Parette & Brotherson, 1996). Such difficulties may require others to pay closer attention to non-verbal forms of communication and to work closely with these children to discover the best way to express their choices and have their desires honored. Due to the small sample size and the number of children with multiple limitations, it is beyond the scope of the current study to explore these issues in greater depth. Future research with larger sample sizes should examine the relationship between

type of disability and both parent attitudes towards self-determination and children's opportunities to develop self-determination skills in the home environment.

Much of the discussion and research on self-determination of individuals with disabilities has focused on adults with disabilities. However, professionals now recognize the importance of developing these skills from an early age (Abery & Zajac, 1996; Doll et al., 1996). Longitudinal studies are needed to examine whether the self-determination skills identified here indeed predict self-determination in adulthood.

Implications and Conclusions

This research indicates that, in general, parents of children with disabilities value the development of skills contributing to self-determination. However, a significant number of children in this study experienced limited opportunities to make choices, act independently, and socialize with peers. It may be that parents just do not know how to provide these opportunities to their children with special needs. Professionals working with children with disabilities and their families may be able to provide families with suggestions on how to increase opportunities for developing self-determination skills. Because each child with a disability is unique and every home is structured and organized differently, a home visit and observation could be extremely useful for professionals to best assist parents in structuring the environment to maximize opportunities for developing self-determination skills. Specifically, professionals can be helpful in providing information about assistive devices, home modifications, and skills programs that could be useful in providing children with disabilities greater access in the home and increased opportunities to make choices, act independently, and interact with peers.

Professionals can inform parents about assistive devices, both high and low tech, that might increase a child's opportunities to develop self-determination skills. Some examples might include teaching families how an electronic switch can be used to allow a child with a severe disability to

experience some control over the environment such as turning on or off lights or operating an audio cassette player; how a communication board can help a child who does not speak express his or preferences; or how a motorized car might be used to help a child with a physical disability get to a neighbor's house on his or her own (Cook et al., 1996).

Parents might benefit from information on home modifications or ways that they can structure the home to increase opportunities for a child with a disability to develop skills contributing to self-determination. Some examples might include putting a child's bed on the floor so he or she can roll out of it on his or her own; storing clothing and/or toys on low open shelves or in baskets on the floor; storing snacks in low accessible cupboards so a child can access them easily; providing accessible play spaces with age-appropriate toys for children with disabilities interactions with peers; and modifying play equipment (i.e., swings, tricycles) so children with disabilities can play along side other children (Brotherson et al., 1996; Cook et al., 1996).

Finally, professionals can provide families with information about skills development programs used in the schools that might be adapted for use in the home environment. For example, as case study 2 reported in the results section, one parent is aware that her child is learning to make some choices at school but is not clear about how this is being done. Teachers and other professionals could provide specific information to parents about how they are working on skills such as choice making at school and suggest ways parents might provide similar experiences in the home. The area of social skills development provides another example of programs currently being used in the schools (Odom & Brown, 1993) that might be adapted for use in the home environment in an effort to increase successful peer interactions between children with disabilities and their peers with and without disabilities.

The significant negative correlation between the severity of the disability and both parent attitudes towards self-determination and children's opportunities to make choices, act independently,

and interact with others in the home environment suggests parents, advocates, and professionals may need to be particularly concerned with how to best provide children severe disabilities opportunities to develop skills contributing to self-determination. Professionals need to let parents of children with severe disabilities know that it is possible for their children to make decisions in their lives (Dattilo & Rusch, 1985; Peck, 1985; Realon et al., 1990) and be prepared to offer suggestions for making this happen in the form of information about home modifications, assistive devices and/or skills development programs geared towards meeting the needs of children with severe disabilities. If parents believe it is possible for their child with a severe disability to achieve some degree of self-determination, both how they think about self-determination for children with disabilities and what they do to help their child develop these skills may change in favor of self-determination.

In recent years there has been push away from institutionalization of individuals with disabilities towards integration into least restrictive environments (Braddock, Hemp, & Howes, 1986; Taylor, Biklen, & Knoll, 1987). A next step is to ensure individuals with disabilities have the opportunity to make decisions about their own lives, from what they eat and wear to where they live and work. The abilities needed to act as primary causal agent in one's life develop throughout one's lifetime (Abery & Zajac, 1996; Doll et al., 1996). The current research illustrates the need for advocates, professionals, and parents to structure early home environments to support the development of self-determination.

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Table 1. Family Demographics

Number of families	32
Mean income range	\$25,000-\$34,999
Parent education level	
Less than high school diploma	3
High school graduate	6
Some college	4
College graduate	18
Graduate school/professional degree	3
Marital status	
Married	27
Other	6
Number of children	Mean 2.4 (range 1-7)
Home Ownership	
Own home	26
Rent	6
Type of Home	
Single family house	26
Mobile home	2
Apartment	4
Number of rooms in home	Mean 6.7 (range 3-11)

Table 2: Nature of Disability

Cerebral Palsy	12
Physical & Mental Disabilities	9
Spina Bifida	4
Down Syndrome	3
Hydrocephalus	2
Dwarfism	1
ADHD	1
Visually Impaired	1
Autism	1

Table 3: Child's Ability to Use Arms and Legs (as reported by parents)

	use of feet/legs	use of hands/arms
No limitations	11	15
Able to move purposefully but with difficulty	14	18
Able to move with assistance of prosthesis or other person	6	0
Unable to move without assistance-has no purposeful movements	3	1

Table 4: Parent Attitude Scale

	Strongly Agree	Agree	Disagree	Strongly Disagree	<u>M</u> (<u>SD</u>)
	<u>n</u> (%)	<u>n</u> (%)	<u>n</u> (%)	<u>n</u> (%)	
Children with disabilities require almost constant supervision.	4 (13)	13 (41)	12 (38)	1 (3)	2.33 (.76)
Children should have lots of opportunities to play with peers.*	26 (82)	5 (16)	1 (3)	0	3.78 (.49)
Independence is a high priority for children with disabilities.*	26 (81)	6 (18)	0	0	3.81 (.40)
Independence and risk-taking are higher priorities for children with disabilities than children without disabilities.*	8 (25)	14 (44)	9 (26)	1 (3)	2.91 (.82)
Independence is a higher priority for children with disabilities than protection from challenges.*	9 (28)	16 (50)	7 (22)	0	3.06 (.72)
Children with disabilities are unable to participate in most family decisions.	1 (3)	1 (3)	13 (41)	17 (53)	3.44 (.72)
It is impractical for children with disabilities to have their own bedrooms.	1 (3)	1 (3)	5 (16)	25 (78)	3.69 (.69)
Children cannot go outdoors unsupervised.	3 (9)	4 (13)	18 (56)	6 (19)	2.87 (.85)
Children with disabilities cannot go outdoors unsupervised.	4 (13)	7 (22)	18 (56)	2 (6)	2.58 (.81)
Children with disabilities are more vulnerable and need protection compared to children without disabilities.	5 (16)	13 (41)	9 (28)	3 (9)	2.33 (.88)
Children with disabilities have unique abilities.	18 (56)	14 (44)	0	0	3.56 (.50)

Note: Items marked with an * indicate parent attitudes that support self-determination; whereas items without an asterick are attitudes that do not promote self-determination. Items that promote self-determination were scored from 4 to 1 with strongly agree receiving a score of 4. Items that do not promote self-determination were reversed scored from 1 to 4 with strongly agree receiving a score of 1. Therefore, higher scores reflect parent attitudes more supportive of self-determination than lower scores.

Table 4. (continued)

	Strongly Agree	Agree	Disagree	Strongly Disagree	<u>M</u> (<u>SD</u>)
	<u>n</u> (%)	<u>n</u> (%)	<u>n</u> (%)	<u>n</u> (%)	
Development of self-worth and self-confidence are high priorities for children with disabilities.*	25 (78)	7 (22)	0	0	3.78 (.42)
Private time in the bathroom is important to children.*	17 (53)	14 (44)	1 (3)	0	3.50 (.57)
Children with disabilities cannot have private time in the toilet or bathtub because they are at risk.	2 (6)	6 (19)	16 (50)	7 (22)	2.90 (.83)
Children need almost constant supervision.	1 (3)	13 (41)	14 (44)	3 (9)	2.61 (.72)
Children with disabilities need more overall supervision than children without disabilities.	7 (22)	15 (47)	8 (25)	2 (6)	2.16 (.85)
Children with disabilities should have a variety of opportunities to interact with non-disabled peers.*	25 (78)	6 (19)	0	1 (3)	3.72 (.63)
Children with disabilities need to work on goals at home as well as school.*	23 (72)	9 (28)	0	0	3.72 (.46)
Children with disabilities should be allowed to explore, unsupervised, most places in the home.*	12 (38)	12 (38)	5 (16)	1 (3)	3.17 (.83)
Young children with disabilities need some private time to be alone.*	18 (56)	14 (44)	0	0	3.56 (.50)
Children with disabilities are able to make most decisions and choices for themselves.*	6 (19)	12 (38)	9 (28)	1 (3)	2.82 (.82)
Children are most likely to learn about decision-making, assertiveness, and self-advocacy in school.	4 (12)	6 (18)	16 (50)	5 (16)	2.71 (.90)
Children with disabilities are unable to participate in most family, recreation, and outdoor activities.	1 (3)	1 (3)	12 (38)	17 (53)	3.45 (.72)

Table 4. (continued)

	Strongly Agree	Agree	Disagree	Strongly Disagree	<u>M</u> (<u>SD</u>)
	<u>n</u> (%)	<u>n</u> (%)	<u>n</u> (%)	<u>n</u> (%)	
Most children of 5 years can dress themselves unassisted.*	6 (19)	22 (70)	4 (12)	0	3.06 (.56)
It is important for children with disabilities to learn about and accept differences related to their disability.*	10 (31)	17 (53)	4 (13)	1 (3)	3.19 (.65)
It is impractical to make physical adaptations to the home for children with disabilities.	0	0	10 (31)	22 (70)	3.69 (.47)
Toys and activities for children should be confined to their bedroom or a playroom.	2 (6)	1 (3)	16 (50)	13 (41)	3.25 (.80)
Without supervision, most rooms in the home are "off limits" to children with disabilities.	1 (3)	4 (13)	13 (41)	13 (41)	3.23 (.80)

Table 5: In-Home Checklist Part 1: Bedroom Access and Control

	Agree <u>n</u> (%)	Disagree <u>n</u> (%)	<u>M</u> (SD)
can arrange it as desired	18 (53)	16 (47)	1.53 (.51)
can reach most things in it	22 (65)	12 (35)	1.65 (.49)
can decide how many other people are in it	20 (59)	14 (41)	1.59 (.50)
can ask others to leave and they will	21 (62)	13 (38)	1.62 (.49)
can control the noise level	23 (68)	11 (33)	1.68 (.47)
can have as much privacy as desired	25 (73)	9 (26)	1.74 (.45)
can put up any decorations he/she likes	21 (62)	13 (38)	1.62 (.49)
can make as much noise as he/she wants	26 (76)	8 (24)	1.76 (.43)
can eat or drink if he/she wants to	14 (41)	20 (59)	1.41 (.50)
can control the lighting	25 (74)	9 (27)	1.74 (.45)
can decide the things that happen	24 (71)	7 (21)	1.77 (.43)
can leave it if he/she wants to	27 (79)	7 (21)	1.79 (.41)
can decide at what time to do things	15 (44)	19 (56)	1.44 (.50)
can decide on the activities going on	27 (79)	6 (18)	1.82 (.39)
can see out a window	22 (65)	12 (35)	1.65 (.49)

Table 6: In-Home Checklist Part 2: Access, Choice, and Independence in the Home

	Routinely	Sometimes	Not Often	Never	<u>M</u>
	<u>n</u> (%)	<u>n</u> (%)	<u>n</u> (%)	<u>n</u> (%)	<u>(SD)</u>
using the telephone	3 (9)	8 (24)	12 (35)	11 (32)	2.09 (.97)
helping with preparation of snacks	5 (15)	12 (35)	8 (24)	9 (26)	2.38 (1.04)
helping with preparation of meals	1 (3)	11 (32)	11 (32)	11 (32)	2.06 (.89)
retrieving food or drink from refrigerator	5 (15)	13 (38)	5 (15)	11 (32)	2.35 (1.10)
retrieving food or drink from food cupboards	4 (12)	10 (29)	7 (21)	13 (38)	2.21 (1.04)
helping with meal cleanup	6 (18)	13 (38)	6 (18)	9 (26)	2.47 (1.08)
accompanying parent food shopping	13 (38)	13 (38)	6 (18)	0	3.22 (.75)
accompanying parent clothes shopping	17 (50)	11 (32)	3 (9)	2 (6)	3.30 (.88)
accompanying parent on routine errands	20 (59)	9 (26)	4 (12)	0	3.48 (.71)
assisting parent with light cleaning/pickup	12 (35)	10 (29)	5 (15)	6 (18)	2.85 (1.12)
selecting clothes to wear daily	5 (15)	15 (44)	8 (24)	6 (18)	2.56 (.96)
dressing him/herself	6 (18)	11 (32)	7 (21)	10 (29)	2.38 (1.10)
selecting snacks to eat	17 (50)	10 (29)	3 (9)	4 (12)	3.18 (1.03)
selecting food for herself/himself at mealtime	10 (29)	13 (38)	4 (12)	7 (21)	2.76 (1.10)
eating without assistance	22 (65)	7 (21)	2 (6)	3 (9)	3.41 (.96)

Table 6 (continued)

	Routinely <u>n</u> (%)	Sometimes <u>n</u> (%)	Not Often <u>n</u> (%)	Never <u>n</u> (%)	<u>M</u> (<u>SD</u>)
eating with the family at least 1 meal a day	29 (85)	3 (9)	1 (3)	0	3.85 (.44)
using the toilet without assistance	10 (29)	1 (3)	3 (9)	19 (56)	2.09 (1.35)
has privacy (is alone) when using the toilet	11 (32)	7 (21)	3 (9)	13 (38)	2.47 (1.31)
playing at a computer or electronic games	13 (38)	7 (21)	3 (9)	11 (32)	2.65 (1.30)
playing alone unattended	16 (47)	12 (35)	3 (9)	3 (9)	3.21 (.95)
selecting toys or games to use	28 (82)	3 (9)	1 (3)	2 (6)	3.68 (.81)
selecting a video to watch	17 (50)	9 (26)	2 (6)	6 (18)	3.09 (1.14)
selecting friends to play with	7 (21)	12 (35)	8 (24)	8 (24)	2.50 (1.08)
visiting neighborhood friends with disabilities	1 (3)	4 (12)	5 (15)	24 (71)	1.47 (.83)
visiting neighborhood friends w/out disabilities	7 (21)	13 (38)	4 (12)	10 (29)	2.50 (1.13)
plays outside	19 (56)	12 (35)	2 (6)	1 (3)	3.44 (.75)
playing outside unattended	6 (18)	5 (15)	9 (26)	14 (41)	2.09 (1.14)
playing in a neighborhood park	7 (21)	13 (38)	11 (32)	3 (9)	2.71 (.91)

CHAPTER 5. CONCLUSIONS

The research presented in Chapters 3 and 4 indicate that although there is great variability in the frequency of peer interactions and opportunities to exhibit control, make choices, and act independently children with disabilities experience in the home environment, many children with disabilities experience limited peer relationships and opportunities to develop skills contributing to self-determination. Since both peer relationships (Hartup, 1983; Rubin & Sloman, 1984; Strully & Strully 1985) and self-determination (Abery, 1994; Kennedy, 1996; Schloss et al., Wehmeyer, 1992, 1996b) have been identified as significant contributors to one's quality of life, these findings raise concerns for the well-being of individuals with disabilities. Several variables can be identified from the research reported in this dissertation that may help distinguish between home environments that provide opportunities to develop peer relationships and self-determination from those that limit development in these areas. In particular, parent attitudes and behaviors, characteristics of the physical environment, and characteristics of the disability appear to impact the development of peer relationships and self-determination of children with disabilities. This chapter provides a brief summary of the findings in each of these areas followed by suggestions, based on the research findings, for parents and professionals to increase opportunities for peer interactions and the development of self-determination skills in the home environment. This chapter will end with a discussion of the limitations of the current research and suggestions for future research.

Parents

Parents are largely responsible for the opportunities children with disabilities have to interact with peers, express preferences, make choices, and act independently in the home environment. Parents provide their children with disabilities these opportunities directly by encouraging them to make choices, act independently, or invite other children to play. They also affect their children's opportunities in these areas by the way they structure the physical environment (Brotherson et al.,

1995; Cook et al., 1996). It is reasonable to believe that the value parents place on their children developing these skills impacts the opportunities to develop these skills that they provide for their children with disabilities and how they structure the environment to support the development of these skills. The research reported in chapter 4 provides support for this idea. In this study, the more parent attitudes were supportive of self-determination for children with disabilities, the more opportunities these children had to make choices, act independently, and interact with peers in the home environment. An examination of the case studies presented in chapter 4 provides a more detailed look at how parents who valued self-determination skills provide their children with numerous opportunities to make choices, act independently, and socialize with others. These parents structured the environment to support the development of these skills by making modifications to the home and organizing items in the home to maximize their children's access and opportunities to exert control over the environment.

The research reported in Chapter 3 provides additional support for the role parents play in their child's opportunities to interact with others. Parents in this study identified diverse ways they assisted their child in developing relationships with peers including intentionally selecting a home in a neighborhood with lots of other children, getting to know the parents of neighbors and classmates, involving their child in community activities such as girl scouts or adaptive sports programs, and arranging parties or play dates for the child. While some parents reported taking active steps to increase their child's interactions with peers, other parents did not report doing anything to increase their child's opportunities in this area. In fact, several parents accepted their child's lack of peer relationships as inevitable due to characteristics of his or her disability. It may be useful for professionals to provide parents with strategies for assisting their children in developing peer relationships in the home environment. The current research identifies several possible strategies for parents to assist their child in developing peer relationships: (1) get to know parents of their child's

peers from the neighborhood and school, (2) assist children with disabilities in extending play invitations to other children, (3) provide appropriate space and toys that children with and without disabilities can play with together, (4) consider modifications to the home and/or play equipment that might allow a child with a disability to interact more easily with peers in an age-appropriate manner. In addition, professionals might consider working with parents on implementing social skills development programs in the home environment in order to assist children with disabilities in effectively interacting with peers. Future research needs to continue exploring ways parents and professionals can increase the opportunities of children with disabilities to interact with peers in the home environment.

Physical Characteristics of the Home and Neighborhood

The research presented in chapter 3 found many children with disabilities had spaces available for them to interact with peers; however, many of these spaces were difficult for children to access particularly due to stairs that were difficult to negotiate for children with physical limitations. Many children had toys readily available for play, and a few had adaptive play equipment including swings, tricycles, a sturdy wood step system with rails up to a slide for a child with stability problems, a basketball hoop with bells so a visual impaired child could hear himself make a basket, descriptive videos for another child with visual limitations, and motorized vehicles to help children with physical disabilities move around outdoors. All of these items contributed to the ability of children with disabilities to interact with peers.

The findings of the research presented in chapter 4 suggest many children with disabilities have limited opportunities to make choices, act independently, or interact with peers in the home environment. For example, almost half the children in this sample “not often” or “never” selected the clothes they each day or how to arrange their bedroom (opportunity to make choices), retrieved food or drink from cupboards or the refrigerator (opportunity to act independently), or visited with

neighborhood friends (opportunity to interact with peers). An even greater number of children rarely used the telephone, helped prepare meals, used the toilet unassisted, or played outside alone. The lack of opportunities to develop skills contributing to self-determination can only be partially attributed to the severity of the disability.

Professionals working with families of children with disabilities can draw from other families' experiences and their own knowledge of home modifications and assistive devices in order to help families structure the environment to provide children with disabilities greater opportunities to interact with peers, make choices, and act independently. For example, chapter 3 provides ideas for structuring the environment and modifying play equipment to increase the opportunities for interacting with others. Several of these are mentioned above. The case studies presented in chapter 4 provide examples of ways parents can modify or organize the environment to promote choice-making and independence; for example, storing snacks in low, easy-to-open cabinets, storing toys on low shelves, keeping clothing in baskets on the child's bedroom floor, providing step stools to reach a bathroom sink independently, lowering door handles, widening steps and lowering railings for a child with balance difficulties, and cement slabs for children whose physical limitations make it difficult to play on bumpy terrain are all suggestions from just two families. Certainly many other assistive devices and modifications to the home can be useful for children with special needs. Some others mentioned in the literature include a mattress placed directly on the ground so a child with a disability can get in and out of bed him or herself; clothing hung on low closet rods, stored on low shelves, or in low, easy to open dresser drawers so children with disabilities have greater access to clothing; wide hallways and doorways providing room for wheelchairs and walkers; scooter boards that allow children with mobility difficulties to travel about the home even to corners and closets they might otherwise be unable to access; and ramps to the outdoors that can allow a child using a wheelchair or walker independent access to the outdoors (Brotherson et al., 1995; Cook et al., 1996).

More high-tech assistive devices can include things such as motorized wheelchairs, electronic switches that allow children with more severe disabilities to control the environment around them (i.e., turn on and off lights, work an audio cassette player), or communications boards that allow children with communication difficulties to express preferences and make choices. Families, researchers, and professionals need to continue identifying ways to structure the environment to increase the opportunities children with disabilities have to exhibit control, make choices, act independently, and interact with others.

Characteristics of the Disability

Type of Disability

The research reported in chapter 3 found children who spent the most time with peers had disabilities that were mainly physical in nature. Children with behavioral problems and cognitive limitations were among the children who spent the least amount of time with peers. It is important to note that not all children with primarily physical limitations experienced high levels of involvement with other children; in fact, many children with physical disabilities did not spend much time with peers. As a result, parents and professionals need to consider how to assist children with a wide range of disabilities in developing peer relationships in the home environment; however, particular attention may need to be paid to the socialization needs of children with behavioral and cognitive limitations.

The findings reported in chapter 3 emphasize the importance of considering how the nature of a disability impacts children's opportunities for interacting with peers, making choices, and acting independently in the home environment. Since the research presented in chapter 4 did not allow for comparisons by type of disability, future research should consider the impact of the type of disability on the opportunities for developing skills contributing to self-determination in the home environment.

Severity of Disability

The research presented in chapter 4 finds children with severe disabilities have significantly less access within the home and fewer opportunities to exhibit control, make choices, act independently, and interact with others in the home environment. Parents of children with severe disabilities held less supportive views of self-determination than parents of children whose limitations were less severe. Although these findings may not surprise parents, advocates, and professionals, it does suggest these people may want to be particularly concerned with how to best provide children with severe disabilities opportunities to develop self-determination skills. Professionals need to let parents of children with severe disabilities know that it is possible for their children to make decisions in their lives (Dattilo & Rusch, 1985; Peck, 1985; Realon, Favell, & Lowerre, 1990) and be prepared to offer ways to make this happen in the form of information about home modifications, assistive devices and/or skills development programs. If parents believe it is possible for their child with a severe disability to achieve some degree of self-determination, both how they think about self-determination for children with disabilities and what they do to help their child develop these skills may change in favor of self-determination.

General Recommendations

The research presented in this dissertation illustrates the need to structure early home environments to support the development of peer relationships and self-determination in children with disabilities. As discussed throughout this and preceding chapters, professionals working with families of children with disabilities can help parents structure the home environment to provide opportunities to develop peer relationships and self-determination skills by making appropriate recommendations for home modifications, assistive devices, and skills development programs. In order to make appropriate recommendations, professionals need to be aware of characteristics of the home environment, characteristics of the child's disability, parent attitudes towards peer

relationships and self-determination for their child with a disability, and family values regarding self-determination and lifestyle issues (i.e., how a particular assistive device or home modification is going to fit into a family's routine and lifestyle) (Parette & Brotherson, 1996). A home visit would be extremely useful in obtaining this information. A home visit would allow a professional to observe the physical environment as well as the child and the family within that environment. Parent interviews would provide information about parent attitudes, family values and lifestyle issues, and parents' explanations as to what has been done so far to increase the opportunities for developing peer relationships and self-determinations skills of their child with a disability and what has and has not worked for the family. Instruments like the *In-Home Checklist* and *Parent Attitude Survey* may provide a starting point for exploring and discussing these issues with families. After reviewing all the information, professionals can make recommendations based on a specific child's needs within a specific physical environment, consistent with the family's lifestyle and parents' goals for their child. This would seem to be more appropriate and effective than a teacher sending home from school a list of possible modifications, assistive devices, and skills programs without having seen the home environment or understanding a family's lifestyle and parents' goals for their child.

Limitations and Future Research

Data for both papers presented in this dissertation came from a larger study examining the home environment of children with disabilities. This data set contains a wealth of information from in-depth family interviews, home observations, and parent questionnaires. However, the sample size is small, limiting generalizability of findings. Future research needs to explore these issues further with larger sample sizes.

Despite small sample sizes, the research presented in this dissertation provides beginning insights into the impact of the home environment on the development of peer relationships and opportunities for developing self-determination of children with disabilities, a previously neglected

area (Brotherson et al., 1995; Cook et al., 1996). The findings of these studies provide suggestions for how to increase opportunities for peer relationships and self-determination for children with disabilities in the home environment. This research also identifies particular subgroups of children with disabilities (e.g., children with behavioral and significant cognitive limitations, and children with multiple and/or more severe disabilities) who may require even greater assistance in developing these skills. Future research needs to continue identifying ways the home environment can be structured to support the development of peer interactions and skills contributing to self-determination. Researchers and professionals can then compile these ideas and use them for assisting other families of children with disabilities.

Since both relationships with peers and self-determination contribute significantly to the quality of life individuals with disabilities experience throughout their lifetimes, it is important to explore the long-term effects of the structure of early home environments on the development of peer relationships and self-determination. Longitudinal studies would be extremely useful in this endeavor.

The research presented in this dissertation illustrates the importance of the home environment in children's opportunities to interact with peers, exhibit control, make choices, and act independently. This information has the potential to enrich the lives of individuals with disabilities. Parents, advocates, researchers, and professionals need to use this information to improve the quality of life for individuals with disabilities. In addition, parents, advocates, researchers, and professionals need to continue exploring how the home environment can be structured to increase children with disabilities' opportunities for interacting with peers and developing skills contributing to self-determination.

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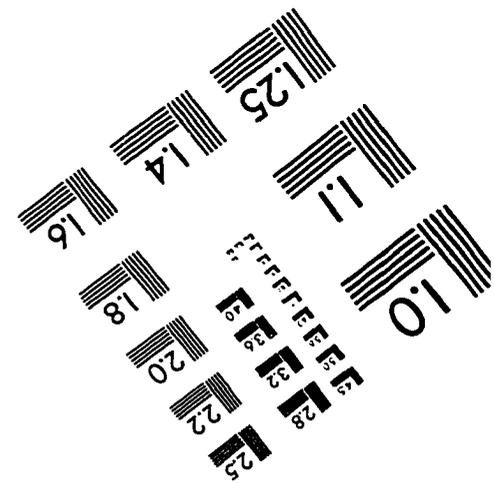
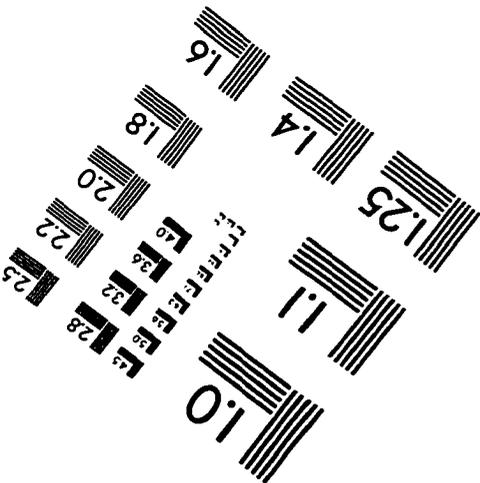
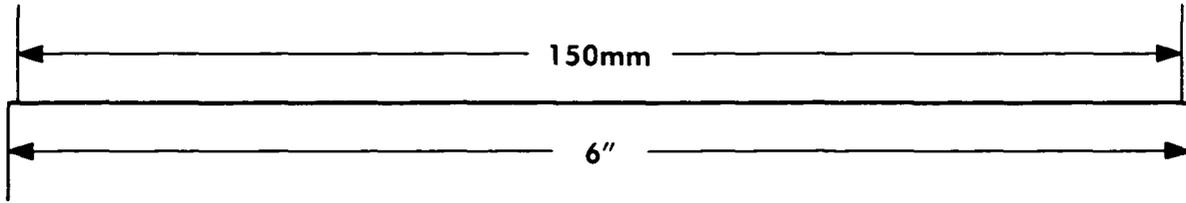
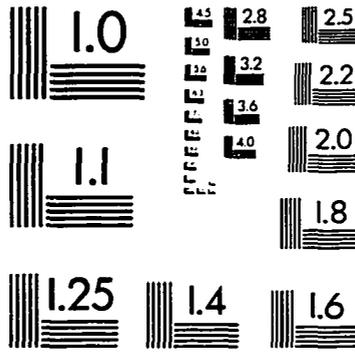
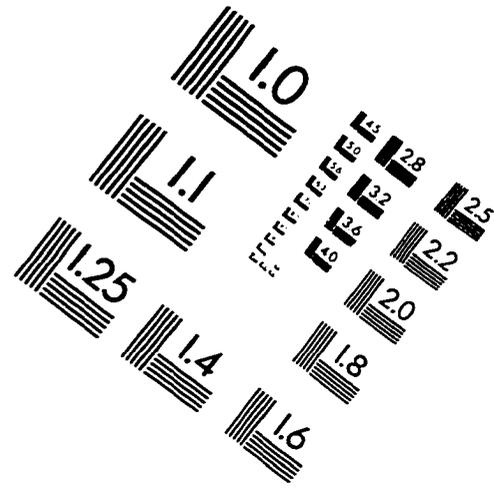
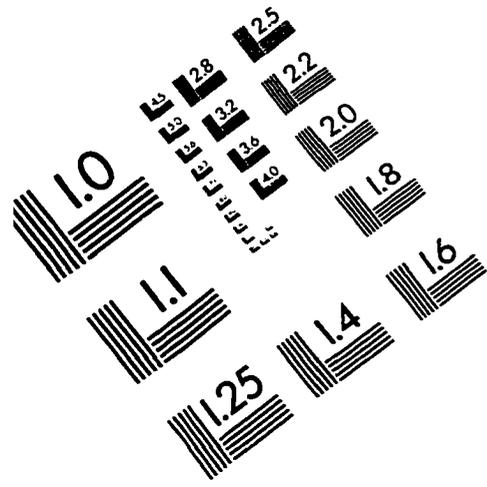
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IMAGE EVALUATION TEST TARGET (QA-3)



APPLIED IMAGE, Inc
1653 East Main Street
Rochester, NY 14609 USA
Phone: 716/482-0300
Fax: 716/288-5989

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