Siblings of children with intellectual disability: Social validity of a skills group experience

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Siblings of Children with Intellectual Disability:

Social Validity of a Skills Group Experience

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Abstract

A review of literature has shown that siblings of students with intellectual disability benefit from various types of interventions and value supports (Prusty, 2016). Few studies investigate intervention acceptability and effectiveness of such interventions in the educational environment despite the major role that school plays in children’s lives. Professionals such as exceptional education teachers, school counselors, school psychologists, and school social workers often serve these populations of students and their families, are involved in behavioral support teams, and play a key role in intervention development and implementation. In the present study, the Behavior Intervention Rating Scale (BIRS; Elliot & Treuting, 1991) was utilized to measure this group of professionals’ views of acceptability, effectiveness, and time of effectiveness of a school-based group for siblings of students with intellectual disability. Participants reviewed a vignette of a student struggling with deficits in skills such as peer interactions, problem solving, and coping and intervention materials and completed the BIRS. No significant correlations were found between demographic information and BIRS ratings. Results indicated support of the intervention across BIRS subscales with the acceptability scale obtaining the highest ratings. No significant differences were found among ratings of different professional membership groups. Future directions include expanding the sample size, surveying students, and utilizing treatment acceptability scales as pre- and post-measures surrounding intervention implementation in the educational setting. The present study contributes to the existing literature base of social validity and treatment acceptability, sibling interventions, and supporting service delivery and fidelity while gaining input from important stakeholders.
Introduction

Typically developing siblings of children with intellectual disability have unique perspectives and experiences. Some studies have shown that siblings experience positive effects of having a brother or sister with intellectual disability (Moyson & Roeyers, 2011; Neely-Barnes & Graff, 2011; Stoneman, 2005) while others addressed difficulties specific to siblings’ unique families and sibling relationships (Carter, Cook, Sutton-Boulton, Ward, & Clarke, 2015; Shivers & Dykens, 2017). Incontestably, siblings experience different family dynamics and roles, and this affects many aspects of their lives (Carter, Cook, Sutton-Boulton, Ward, & Clarke, 2015).

According to the Diagnostic and Statistical Manual of Mental Disorders, Fifth Edition (DSM-5; American Psychiatric Association, 2017), intellectual disability involves deficits in cognitive functioning and adaptive skills that present before the age of 18. Children with intellectual disability have difficulties with reasoning, problem solving, abstract thinking, communication, and personal independence in addition to a cognitive functioning score that is two standard deviations below average (APA, 2017).

A review of literature has shown that siblings benefit from various types of interventions and value supports (Prusty, 2016). Particularly, siblings find benefits to social supports in group settings. Few studies have been conducted in the educational environment despite the major role that school plays in children’s lives. Professionals such as exceptional education teachers, school counselors, school psychologists, and school social workers often serve these populations of students and their families, are involved in behavioral support teams, and play a key role in intervention development and implementation. Measuring these professionals’ views of acceptability, effectiveness,
and time of effectiveness of an intervention to serve the aforementioned population of students provides value to service delivery and fidelity while gaining input from important stakeholders.

**Literature Review**

The literature will begin by discussing family dynamics and disabilities. Continued discussion will include intellectual disability, sibling experiences, and interventions. The literature review will conclude with information regarding social validity and treatment acceptability instruments. In this paper, the term *sibling* refers to the child without intellectual disability and the term *brother or sister* refers to the child with intellectual disability.

**Family Systems and Children with Disabilities**

Families of children with any type of disability demonstrate variations in parenting and parental attention. Children with disabilities likely require more time, attention, and effort, and siblings may have negative perceptions of this. It is possible that siblings observe this treatment as fair or just, but children who are unhappy with differential treatment from their parents may experience increased anxiety and depression (McHale and Gamble, 1989). Additionally, siblings who perceived that their parents or caregivers treated their brother or sister more favorably may also experience delays in adjustment related to internalizing and externalizing behaviors (McHale & Gamble, 1989). For example, Neely-Barnes and Graff (2011) found that siblings experienced more mental health and behavioral problems compared to children with typically developing siblings. These difficulties were amplified by factors such as poverty, divorce, and single parent households. A meta-analysis by Sharpe and Rossiter (2002) revealed that siblings
of children with chronic illness had lower cognitive and psychological functioning compared to control groups where neither sibling had a disability. They also found that siblings of children with chronic illnesses had negative experiences with peers and peer activities, but their relationships with their own siblings were viewed as more positive. There is also some evidence that some siblings adjust over time. Gath (1972) found that children who have a brother or sister with a disability had behaviors that decreased over time indicating a possible difference due to age or developmental stage.

Much of the research focuses on siblings of children with disabilities as one large group (Mandleco, Olsen, Dyches, & Marshall, 2003; Neely-Barnes & Graff, 2011; Sharpe & Rossiter, 2002; Stoneman, 2005; Thompson, Curtner, & O’Rear, 1994; and Weisner, 1993), and recent studies have focused on specific groups such as autism spectrum disorders, chronic illness, and physical disabilities (Carter, Cook, Sutton-Boulton, Ward, & Clarke, 2015; Luijkx, Van Der Putten, & Vlaskamp, 2016; Moyson & Roeyers, 2011; Schuntermann, 2007; Shivers & Dykens, 2017; Shivers & Kozimor, 2017). However, few studies focus on siblings of children with intellectual disability as one specific group with unique experiences. While there is value in understanding siblings of children with disabilities overall, there is also great value in understanding the specific needs of unique sibling groups such as siblings who have a brother or sister with intellectual disability.

Specific needs that affect siblings of children with intellectual disability are family structure and processes that influence development and relate to psychological factors. Shivers and Dykens (2017) found that siblings’ feelings of anxiety, depression, and hostility were related to parental feelings of stress. The family system can decline
when changes in parental stress, family relationships, and family maintenance occur. When these changes occur, the siblings often experience declines in overall self-concept (Dyson, 1999). Siblings have also been found to have increased internalizing and/or externalizing problems compared to a control group (Coleby, 1995). Researchers continue to hypothesize about these differences and contributing factors such as receiving less parental attention, family resources, and autonomy in decision making.

Family systems theory emphasizes how family interactions and roles greatly impact the functioning of the family unit as a whole and its individual members (Carter, Cook, Sutton-Boulton, Ward, & Clarke, 2015). Based on this theory, characteristics of the child’s disability have the potential to greatly impact individuals, the family system’s general functioning, and environmental factors involving the family unit. Conversely, the presence of a child with intellectual disability does not necessarily cause difficulties within the family system; rather, Carter et al. (2015) suggest that the presence of a child with intellectual disability uncovers and activates existing difficulties within a family with challenges. This idea that difficulties within the family may simply uncover a coping mechanism that is specific to that family unit is shared among other researchers (Schuntermann, 2007).

Researchers agree that the family dynamic is changed when a child with a disability is present, and the unique characteristics that accompany a child with intellectual disability may elicit altered lifestyles, family roles, and family functioning as a whole (Prusty, 2016). For families that have a child with intellectual disability, conflict and disorganization at the family level may impact siblings of children with intellectual disability more negatively than siblings in comparison groups who have typically
developing siblings (Lynch, Fay, Funk, & Nagal, 1993). Previous research indicates that siblings of children with intellectual disability experience different sibling relationships characterized by atypical socialization and more rigid home environments (Prusty, 2016).

**Siblings of Children with Intellectual Disability**

Within the family system, it is possible that siblings’ perceptions of their family dynamics differ from others in the family unit and produce varied experiences and outlooks (Prusty, 2016). For example, Prusty discussed how parents and siblings often have different ideas about how siblings perceive their experiences and family dynamics. Studies investigating perceptions of siblings of children with Down syndrome found that parents and children reported similar ratings on some constructs like the sibling relationship, but not others such as nurturance. Additionally, parents often reported more negative results than the children reported (Sharpe & Rossiter, 2002).

Luijkx et al. (2016) investigated the family system to better understand quality of life of all family members, especially siblings of children with profound intellectual and multiple disabilities. Siblings participated in photo elicitation interviews where they were asked to take at least 20 photos over the span of one week that captured times when they enjoyed having a sibling with a disability and times when it was difficult. After the week concluded, siblings met with interviewers where the photos were discussed. Their responses were then coded and categorized into nine domains: joint activities, mutual understanding, private time, acceptance, forbearance, trust in wellbeing, exchanging experiences with other siblings of children with disabilities, social support, and dealing with the outside world. Luijkx et al. (2016) found that siblings desired to be understood
by their sibling with intellectual disability and have peers or other siblings they can relate to and share in experiences.

Shivers and Dykens (2017) conducted the first study using self-report to directly compare siblings’ general empathy to empathy toward their brother or sister. They used multiple measures to evaluate empathy, feelings towards the brother or sister, and family factors such as parental optimism. They found that siblings reported higher levels of anxiety and hostility than the control group toward their brother or sister. The anxiety and hostility were significantly related to the brother’s or sister’s internalizing behavior problems. Additionally, if the brother or sister exhibited higher levels of internalizing, externalizing, or total behavior problems, siblings were more likely to receive higher ratings of depression, anxiety, and hostility. Siblings were also more likely to endorse feelings of fear, worry, and tension in reference to their brother or sister when compared to the control group. These findings were similar to Shivers and Kozimor’s (2017) findings that found that siblings had similar levels of anxiety, depression, and hostility, and these levels were amplified if the brother or sister had a co-occurring mental illness.

Self-concept is another area of interest in literature involving siblings. Self-concept is how someone perceives themselves including their strengths, weaknesses, cognition, and accomplishments (Prusty, 2016). Siblings of children with intellectual disability have been found to possess lower self-confidence and self-worth compared to children who have typically developing siblings (Prusty, 2016). Dyson (1999) found that decreases in self-concept co-occurred with increases in parental stress. Decreases in self-concept were also related to decreases in family cohesiveness and nurturing. These differences were attributed to having a family member with intellectual disability since
the comparison group did not show similar results (Dyson, 1999). The group with siblings of children with intellectual disability experienced changes more related to support and harmony involving members of the family system while the group with typically developing siblings experienced changes related to the system itself and outside sources. Overall, self-concept was positively related to positive family functioning and negatively related to parental stress (Dyson, 1999).

Mascha and Boucher (2006) found that 72% of siblings reported experiencing embarrassment in public settings due to their brother’s or sister’s behaviors. The siblings also often avoided social situations, public outings, or inviting peers to their homes to prevent this type of embarrassment. This may be related to the sibling’s beliefs that onlookers hold prejudice and judgment towards their brother or sister with intellectual disability. Though the siblings reported acting as a protective figure for their brother or sister, they also reported annoyance when attention is drawn to their brother or sister due to outbursts or other atypical behaviors.

Regardless of birth order or number of children still living in the home, siblings often occupy roles that they normally would not. These roles impact developmental milestones and transition periods. Siblings of children with intellectual disability may endure particular demands and experiences that are specific to the sibling’s disability (Shivers & Dykens, 2017). The demands placed on these siblings may be different than what is normally expected and involve specific stresses, coping mechanisms, and distressing experiences. For example, siblings often assume the role of the caregiver for brothers or sisters with intellectual disability regardless of age or gender (Ormond & Seltzer, 2000). Siblings are also expected to model behaviors and often experience more
rigid home environments where they contribute to the maintenance of the family system and strive to meet parental expectations (Prusty, 2016). It is roles like these and other daily occurrences and stresses that scholars postulate affect siblings more than significant life events (Prusty, 2016).

Age may also play a role in the siblings’ experiences and perceptions. Harry, Day, and Quist (1998) found that younger siblings experience unique difficulties because they eventually progress beyond the developmental level of their older brother or sister. As a result, the sibling assumes a new role as caregiver. If an older, typically developing sibling leaves the home, the younger sibling may even inherit the other sibling’s roles, and the younger sibling’s responsibilities significantly increase (Harry, Day, & Quist, 1998). Additionally, Stoneman, Brody, Davis, and Crapps (1989) found that as these children age together, their relationship moves farther away from its typical trajectory and the sibling takes on more responsibilities for their brother or sister. Coleby (1995) found that siblings who occupy more intensive and strenuous caregiver roles often experience more internalizing behaviors like anxiety and depression, increased conflict, and decreased positive sibling interactions. Coleby (1995) also found that siblings who occupy these more intensive caregiver roles may have less time to spend with their friends or participate in social activities. Over time, siblings express anxiety and worry about caregiving roles in the future and how these roles will impact the trajectory of their aspirations and lives in general (Damiani, 1999).

Sibling Interventions

Research pertaining to sibling groups expanded after Public Law 94-142, the Education for All Handicapped Children Act, was passed in 1975. This impacted siblings
by providing more resources and opportunities to children with disabilities and their families. Studies published before Public Law 94-142 often yielded results showing negative sibling adjustment while studies published afterward yielded more mixed results of adjustment overall. This observation indicates that resources and services offered to families of children with disabilities may have positively affected the family as a whole giving credibility to the argument that increased early intervention and availability of services can greatly impact development and overall well-being of typically developing siblings. Though studies often disagree on whether having a sibling with intellectual disability helps or hinders a student, research has shown that the provision of early intervention and family resources aids in alleviating negative impacts that may occur in a family caring for a child with intellectual disability (Dyson, 1999). Since the passage of PL 94-142, the literature has grown in relation to sibling interventions and sibling groups.

For siblings of children with disabilities, Prusty (2016) explained that one of the simplest and most important findings was that siblings value supports. For siblings of children with autism spectrum disorders (ASD), social support and opportunities for sharing experiences with peers have shown positive effects by increasing positive feelings towards their brother or sister with ASD and building resiliency and tolerance to encounter negative aspects of the sibling relationship (Mascha & Boucher, 2006). Mascha and Boucher (2006) conducted a study with siblings of children with ASD utilizing a semi-structured interview to gain positive and negative reports about sibling experiences in relation to behavioral adjustment, embarrassment, and other internal factors. They found that most of the participants experienced positive factors, and those experiencing negative factors were greatly impacted by their brother’s or sister’s
Social Validity of a Sibling Skills Group 

Aggression and outbursts. The researchers hypothesized that these results were attributed to the opportunity to analyze their experiences, emotions, and the impacts the brother or sister has on their families. They also concluded that the siblings did not feel equally yoked with their peers in that their peers often did not understand their experiences, were unaware of correct terminology and language surrounding the disability, and intentionally express verbal disapproval of having a sibling with a disability. Mascha and Boucher (2006) concluded that providing social supports may reduce the likelihood of developing depressive symptoms including loneliness and decreased self-worth due to challenging home environments and unmet social needs. This is consistent with other research explaining that social supports in any form have proven to positively affect adjustment, mental health, physical health, and emotional state (Prusty, 2016).

Specifically, for siblings of children with intellectual disability, social support and opportunities for sharing experiences with peers have shown positive effects. Groups have helped siblings increase their positive feelings towards their brother or sister and build resiliency and tolerance to encounter negative aspects of the sibling relationship (Mascha & Boucher, 2006). Shivers and Dykens (2017) explained that due to findings that siblings often experience more anxiety, depression, and hostility in relation to their feelings towards their brother or sister, the siblings themselves can be a crucial part in improving these factors and meeting their own needs. Carter, Cook, Sutton-Boulton, Ward, and Clarke (2015) studied the impact of social supports for siblings, and they found that the value of these supports was evident as participation in groups provided neutral to positive effects. Their study was unique in that it included aspects of a standardized interview with preselected questions, but it also allowed for open-ended
questions where siblings were able to expand their answers and draw from their specific experiences and perceptions of having a brother or sister with intellectual disability. They were able to share with peers who had similar experiences and openly discuss their views such as wanting their brother or sister to “be normal” or desiring decreases in their brother’s or sister’s outbursts and other externalizing behaviors. Carter et al. (2016) concluded that siblings highly value peer support and experience benefits from participating in groups. Their study was unique in that it allowed open, self-report from the siblings, and it showed that siblings greatly valued play-based activities with peers they could relate to. Their findings were similar to previous studies in this area where siblings valued the individualized time and attention given by a support group (Naylor & Prescott, 2004).

**Intervention Settings**

Recently, Zuna, Gràcia, Haring, and Aguilar (2016) found that families of children with disabilities desire more services for the siblings. Their most requested service was for support groups for siblings followed by respite care and support groups for parents. Though the agency through which this study was conducted covered a large metropolitan area, this need for more services was not met. Services can often be difficult to access especially if they require large monetary commitments or specific qualifications.

A majority of groups for siblings are conducted through and in private or clinical settings. Many clinical settings use comparable, research based programs for intervention like Sibstars, Sibshop, SibLink, and Sibworks (Giallo & Gavidia-Payne, 2008; Mccullough & Simon, 2011; Lobato & Kao, 2002; Lobato & Kao, 2005; Roberts, Ejova,
Giallo, Strohm, Lillie, & Fuss, 2015). These groups are created to provide support and skills for siblings of children with various disabilities by providing knowledge of the disability and developing skills in a variety of areas. Most are based in cognitive behavioral therapy and psychoeducation and involve group discussions and activities to address the content areas and main goals of the program. Groups such as these measure self-concept or self-competence, coping and problem-solving skills, behavioral functioning, emotional functioning, connectedness and communication, and knowledge of the disability before and after the group intervention. This data may be collected through parent or self-report rating scales or through free response during the group or upon its completion. Groups typically occur once per week over a six week period and may last 30 minutes to two hours. The children with disabilities have diagnoses including autism spectrum disorder, cerebral palsy, developmental delay, intellectual disability, and physical disabilities.

Other group interventions conducted in clinical settings are based on original content where each lesson and goal are created by the researchers, allowing room for minor modifications as the group progresses and unforeseen needs arise (Granat, Nordgren, Rein, & Sonnander, 2011; Lobato, 1985). These groups also focus on knowledge about the disability, coping and problem solving, and emotional functioning. Similarly, they have a comparable structure where groups occur once per week over a six week period and last around two hours per session. The children with a disability in these studies have diagnoses of autism spectrum disorder, intellectual disability, and developmental disability. Whether the content is taken from an existing program or
created by the researchers, the clinical setting, program structure, goals, and measures remain the same.

A review of recent literature did not provide any group intervention studies conducted in an educational environment, but it did yield one study conducted in a community-based setting. Roberts, Ejova, Giallo, Strohm, and Lillie (2016) implemented a Sibworks intervention for siblings that occurred after school for about two hours over a six week period. The program focused on positively impacting the adjustment and communication skills of the sibling. Skill development involved utilizing social supports, learning about the disability, and coping skills. Sibling behavioral functioning and symptom severity of the child with a disability were measured before and after participation in the intervention. The children with disabilities had diagnoses of autism spectrum disorder, developmental delay, oppositional defiant disorder (ODD), and attention deficit hyperactivity disorder (ADHD). While no descriptive data was collected about the siblings’ overall views of the program and its effectiveness, difference scores between pre- and post-measures indicate that Sibworks benefitted the siblings in the areas of disability knowledge, coping skills, and socialization.

Luijkx et al. (2016) and Shivers and Dykens (2017) found that siblings desire peers they can relate to and with whom they can share experiences. Pioneers who have devoted their work to this area of literature believe that gaining a well-rounded, comprehensive perspective from one age group of siblings who have a brother or sister with one specific disability will help schools and school psychologists better support siblings from a well-informed stance (Stoneman, 2005).

**Intervention Populations**
Most studies look at a broad spectrum of disability categories when studying siblings. Very few seek to address one specific disability, and few have looked solely at intellectual disability confirmed by an educational or medical diagnosis. Other studies look at intellectual disability in combination with ASD or debilitating motor disabilities like cerebral palsy or multiple sclerosis. While this has broadened the literature base for what we know about siblings, each disability encompasses unique characteristics and symptoms that cannot be equivalently compared to understand shared experiences within a group of siblings. Further, individuals across the spectrum of intellectual disability vary considerably from one to another. Combining a group of disabilities leaves a wide range of adaptive skills, cognitive abilities, levels of dependence, mobility issues, parental attention, sibling relationships, and communication skills. It is important to understand the similarities among different disabilities and the experiences of siblings. It is also important to understand the experiences of siblings of children with the same disability in order to better serve each sibling and address their individual needs.

Some studies focus on siblings who are school-aged (Carter et al., 2015; Dyson, 1999), but little research has been conducted in the school setting. Conducting groups and research in schools will serve to inform schools and school psychologists of the individualized needs of siblings of children with intellectual disability. Additionally, facilitating groups in the school setting contributes to the accessibility of services for students and allows them to learn in a familiar and significant environment.

Shivers and Dykens (2017) and Carter et al. (2016) highlighted the value in gaining self-report from the siblings without restricting their experiences through structured interviews. Both studies allowed siblings to contribute their own perspectives
and experiences in a child-centered interview/group structure. The researchers noted the unique value to studies of this kind and importance of asking the population of interest about their needs. While Shivers and Dykens (2017) and Carter et al. (2016) found that siblings value supports, few studies have explored the benefits social supports and skill groups may provide for siblings or if there is a direct connection to this support and increased overall self-concept (Prusty, 2016). Carter et al. (2016) stated that though researchers disagree about the overall effects of having a brother or sister with intellectual disability, it is our ethical responsibility to develop and implement better ways to support siblings.

**Social Validity**

Social validity rating scales and their variations, such as the Treatment Evaluation Inventory (TEI; Kazdin, 1980) and the Intervention Rating Profile (IRP; Witt & Elliott, 1985), allow researchers to evaluate seemingly subjective judgements pertaining to interventions and intervention procedures that further the understanding of social validity (Fairbanks & Stinnett, 1997). Target participants for these scales range from children, parents, teachers, physicians, and school personnel; some measures seek input from intervention providers while others value reviews of potential intervention consumers or their guardians. Treatment acceptability research falls within social validity and it aims to measure if consumers value an intervention and expect it to be beneficial for the behavior they are seeking to change (Fairbanks & Stinnett, 1997).

For example, Fairbanks and Stinnett (1997) surveyed different professionals (teachers, school psychologists, and school social workers) to evaluate their perceptions of different types of interventions. Overall, they found that teachers provided higher
ratings across interventions. They also concluded that when the intervention was positive, the professional groups rated the intervention similarly and higher than other interventions which demonstrated the participants’ awareness of the potential adverse effects of negatively perceived interventions. The design and methodology of this study is an archetype for this body of research. Carter (2007) found that most studies manipulate several variables or components of an intervention and compare acceptability ratings; few studies simply evaluate the treatment acceptability of one single intervention.

Carter (2007) reviewed a wide range of acceptability instruments and described the evolution of various measures, their target populations, and the impact of intervention settings. It was determined that information provided by these rating scales is beneficial because the provider can modify the intervention as needed or work to increase understanding of the intervention to facilitate treatment acceptability. Additionally, treatment acceptability has been shown to benefit the educator-student relationship, intervention planning process, intervention fidelity, and intervention outcomes (Elliott, 2017).

Though a large variety of treatment acceptability scales and variations exist, a comparison study by Finn and Sladeczek (2001) indicated that no scale is more comprehensive than another. This finding supports the continued use of the diverse assortment of treatment acceptability measures available in the literature. Additionally, scale developers confirm the consistent utilization of these scales demonstrated by requests for and research citations of these measures (Elliott, 2017).

Although treatment acceptability research in the fields of education and psychology has been around for three decades, it is not readily incorporated in the field of
Determining treatment acceptability from stakeholders and/or service providers must be established prior to treatment implementation as acceptability is crucial to intervention efficacy and fidelity (Carter, 2007). Intervention factors such as implementation time, severity of the behavior, the type of treatment, and if the intervention is perceived to be effective are likely to influence teacher acceptability ratings of an intervention (Elliott & Treuting, 1991). Additionally, professional affiliation of raters is a common variable in treatment acceptability research to examine potential differences among groups (Fairbanks & Stinnett, 1997; Heffer & Kelley, 1987; Spreat & Walsh, 1994). Despite the prevalence of sibling intervention research, to date, no social validity studies have been conducted of sibling intervention groups, specifically.

**Purpose of the Study**

The current study aims to expand on the existing social validity literature while addressing several areas of need for siblings of students with intellectual disability. Thus, the primary purpose of this study was twofold: to adapt a sibling group intervention for implementation in a school setting and evaluate the social validity of this intervention. This study aims to build on previous research and expand on Carter’s (2007) findings that intervention providers’ or stakeholders’ views of treatment acceptability are crucial for intervention success. Thus, the attitudes and perceptions of exceptional educators, school counselors, school psychologists, and school social workers were solicited about a school-based intervention (SibSTAR) for siblings of children with ID using the BIRS. Specifically, the study sought to answer three research questions:
1. What is the acceptability of the adapted SibSTAR curriculum among school-based professionals?

2. What is the perceived effectiveness of the adapted SibSTAR curriculum among school-based professionals?

3. What is the perceived time of effectiveness of the adapted SibSTAR curriculum among school-based professionals?

To address each of the three research questions, the researcher asserts the following hypotheses:

1. The researcher hypothesizes that school-based professionals will rate the adapted SibSTAR curriculum as highly acceptable as an intervention for siblings of students with intellectual disability.

2. The researcher hypothesizes that school-based professionals will indicate, via ratings, that the adapted SibSTAR curriculum provides an effective intervention for siblings of students with intellectual disability.

3. The researcher hypothesizes that school-based professionals will indicate, via ratings, that the adapted SibSTAR curriculum provides sufficient time of effectiveness of the intervention of displayed sibling behaviors.
Method

Participants

Twelve school-based professionals serving in a large school district in central Virginia participated in this study. The target population for this study was exceptional educators, school counselors, school psychologists, and school social workers. These professionals were recruited because they likely have experience serving students with intellectual disability and their families. Specifically, these professionals often provide direct services, serve on eligibility, individualized education program (IEP), and behavior support teams, and provide general collaboration and consultation with students and their families.

Demographic data were collected regarding participants’ professional affiliation, race/ethnicity, and gender. Table 1 in Appendix A contains demographic information, and the demographic data collection questions are included in Appendix B. Participants consisted of two exceptional education teachers, two school counselors, five school psychologists, and three school social workers. Respondents indicated that 75% identified as White, 16.7% as Black or African American, and 8.3% as Native Hawaiian or Pacific Islander. Approximately 91.7% of the participants identified as female, while 8.3% of the participants identified as male.

Data related to each participants’ professional experience in their field, experience in their current position, and the school populations they have served were also collected. Regarding years of experience in their professional role (e.g., exceptional education teacher, school counselor, school psychologist, or school social worker), most of the participants (33.3%) indicated that their amount of experience fell in the 1-5 year(s)
range. A majority of participants’ experience fell in the 6-10 years range (25%), 8.3% fell in the 11-15 years range, 16.7% fell in the 16-20 years range, and 16.7% of participants had 20 or more years of experience in their professional membership role. Similar results were found for the amount of time each participant had been serving in the school district in which this study was conducted. Most participants (66.7%) indicated that they had served in this school district for 1-5 years, 8.3% had served there for 6-10 years, 16.7% had served there for 11-15 years, and 8.3% had served in this school district for 16-20 years. Lastly, data were collected to conceptualize the populations of students that these professionals currently serve or have served in the school setting. In this school district, pre-kindergarten (four years old by the upcoming academic year through five years old), elementary, middle, and high school are the different levels of school buildings. Elementary schools consist of grades kindergarten through fifth, middle schools consist of sixth through eighth grade, and high schools consist of ninth through twelfth grade. Participants reported experience across age/grade levels. The following percentages represent populations of students that the participants currently serve or have served in the past: 50% in pre-kindergarten, 91.9% in elementary school, 66.7% in middle school, and 50% in high school. The school psychologists who participated in the study served all four levels while the exceptional education teachers both had experience with three levels (elementary, middle, and high). One school counselor had experience in only the high school level while the other had experience at three levels (prekindergarten, elementary, and middle). For social workers, one had experience at all four levels, one had experience at three levels (prekindergarten, elementary, and middle), and one had experience at the elementary level.
Recruitment

Participants were recruited through a mass email that was sent by the assessment, research, and evaluation department in a large school district in central Virginia during a two-week period. The email included the consent form and Qualtrics link to the vignette, intervention materials (i.e., session plans and handouts), and the Behavior Intervention Rating Scale. The email script is included in Appendix C, and the consent form is included in Appendix D. Sixty-five exceptional education teachers, 144 school counselors, 33 school psychologists, and 32 school social workers were contacted through the email distributions. A second email was sent one week after the initial email was distributed. Participants were required to have internet access to view the survey and survey materials in addition to a device (laptop, tablet, cell phone, etc.) with internet access. Fifteen professionals began the study (response rate = 5.5%); however, three individuals completed the demographic questions but did not view the intervention or complete the BIRS, resulting in a completion rate of 80%. Data from these three participants are not included in the study results.

Measures

Vignette

Vignettes have been heavily utilized to conceptualize the intended population for an intervention throughout social validity literature from its conception to present day (Clark & Elliott, 1988; Elliott & Fuqua, 2002; Fairbanks & Stinnett, 1997; Gage & Wilson, 2000; Kalfus & Burk, 1989; Kazdin, 1980; Miller, Manne, & Palevsky, 1998; Reimers, Wacker, Cooper, DeRaad, 1992; Spreat & Walsh, 1994; Stinnett, Crawford, Gillespie, Cruce, Langford, 2001). Elliott and Treuting (1991) also utilized vignettes
during the development and advancement of the BIRS; therefore, the use of a vignette in this study was deemed appropriate when considering the nature of the supporting literature and the current study methodology. The vignette was developed and written by the researcher. It describes a seventh-grade girl who has a brother with intellectual disability. She is experiencing difficulties with skills such as relationship building, problem solving, and coping. The vignette is included in Appendix E.

**Intervention**

The sibling intervention was adapted from existing curricula that was modified by Hansford (2013) called SibSTAR. The session lesson plans and activities were modified to serve older school-age siblings of students with intellectual disability. The intervention is designed for siblings to participate in one thirty-minute session per week over the span of six weeks, during which siblings have a chance to share in experiences, learn, and practice skills related to problem solving and coping.

The first session includes activities that allow the siblings to collectively and individually learn more about each other, establish group norms, and learn about the group sessions they will participate in over the six week period. The students also work together to establish their own group norms about confidentiality that would be maintained throughout the six weeks of weekly sessions and beyond. Each of the sessions consist of three main components: an activity, review of previous content, and new content. The beginning group activity takes approximately five minutes and allow siblings to prepare for the group. For example, siblings may be asked to individually draw a picture of themselves playing with their brother or sister. If times allows, the siblings may come together and share these drawings with the group and describe the
play activity. The second component of the group is a whole-group review of the previous session’s content. Siblings reflect on and discuss the strategies they learned previously and share if they used the technique in the past week. This allows siblings to discuss successes and challenges of practicing the skills they learned in the group while hearing the experiences of other group members. The last component is the introduction of new content to be taught during that session. For example, siblings may discuss ways to cope using examples from “Aunt Blabby” letters. In this activity, the siblings listen to a letter from another sibling who wrote to Aunt Blabby about a problem, such as how to handle a situation when a peer makes a hurtful comment about the sibling’s brother or sister in public. The letter asks for advice about what to do, and this allows the siblings to practice content from the group with feedback and reinforcement, share suggestions, and discuss solutions while introducing new content and strategies. This discussion concludes the session until the next meeting. All group sessions consist of individual and group activities.

The *SibSTAR Coping and Problem Solving Questionnaire* (Hansford, 2013) is a pre- and post-group measure that assesses the knowledge siblings have retained about coping and problem-solving training. This 10-item measure consists of true/false statements related to content taught and discussed during group sessions. It assesses siblings’ knowledge about the COPE acronym (clarify the problem, option list, pick the best idea, and evaluate), strategies, and resources. The Cronbach’s alpha coefficient for this measure was .44 indicating poor internal consistency that may be due to the short nature (10 items) of this measure (Hansford, 2013).
An Exit Interview Questionnaire is administered to siblings upon the conclusion of the group to gather qualitative data and assess their perspectives of what they liked, disliked, and wished to change about the sibling group. This questionnaire would integrate components from the *SibSTAR Sibling Satisfaction Survey* (Hansford, 2013) which is a post-group questionnaire consisting of 11 items on a 5-point Likert scale (1=strongly disagree; 5=strongly agree). Siblings are asked to rate aspects of the intervention like structure, content, and enjoyment. This measure also consists of a checklist evaluating changes in sibling interactions since the sibling’s participation in the sibling group. Additionally, the Exit Interview Questionnaire asks siblings about their perceptions of themselves and if they would participate in a group like this intervention again. Finally, the questionnaire measures the siblings’ knowledge of content learned during the group sessions. The intervention protocol can be found in Appendix F.

**Behavior Intervention Rating Scale**

The *Behavior Intervention Rating Scale* (BIRS; Elliott & Treuting, 1991) was derived from the Intervention Rating Profile-15 (IRP-15; Martens, Witt, Elliot, & Darveaux, 1985), a measure of acceptability for school-based interventions. The BIRS extended the IRP-15 by measuring perceived intervention effectiveness and time of effectiveness. The acceptability scale is comprised of the original 15 items that make up the IRP-15. Seven of the additional items, which make up the effectiveness scale, measure the perceived generalization to other behaviors and settings and measure perceived peer comparisons. The remaining two items which make up the time of effectiveness scale measure how effective an intervention is perceived to be regarding the rate of change of the target behavior. Items are measured using a 6-point Likert Scale.
ranging from strongly disagree (1) to strongly agree (6). Sum scores are calculated for the Total BIRS score and each scale score. Higher scores suggest more positive attitudes towards the intervention.

According to Elliott and Treuting (1991), the BIRS total score yielded a high coefficient alpha of .97. A coefficient alpha was calculated for each of the three factors and demonstrated high reliability for acceptability (.97), effectiveness (.92), and time of effectiveness (.87). Elliott and Treuting stated that the scale also has high content and construct validity. Further analyses indicated moderate to strong correlational relationships among the three factors. For example, the acceptability and effectiveness scales were found to be highly correlated (.79) in the original BIRS study. Additionally, the use of this scale to measure three distinct factors is supported by both oblique and varimax rotations; the items consistently loaded onto the same factors regardless of the type of rotation indicating the measurement of three different constructs. Lastly, the BIRS acceptability scale has a strong correlation with previously-used measures such as the semantic differential scale \( r=0.78 \); Osgood, Suci, & Tanenbaum, 1957). For reference, the original BIRS is included in Appendix G.

The BIRS authors encouraged minor adaptations of the rating scale wording to best meet each study’s individual needs (Elliott & Treuting, 1991). For the current study, the wording of each item was modified to meet the needs of the school-based SibSTAR intervention. For example, the phrase “problem behavior” was changed to “problem solving and coping skills” and “child” was changed to “sibling.” The adapted BIRS is included in Appendix H.

**Procedure**
An email containing the consent form and a Qualtrics link to the intervention materials (including session plans and handouts), demographic survey, and BIRS was sent to exceptional education teachers, school counselors, school psychologists and school social workers. By clicking a hyperlink to Qualtrics, the participants provided consent and began to review the school-based SibSTAR intervention. Participants reviewed six lesson plans and activities, as well as pre- and post-test measures and the exit questionnaire; this was expected to take about 20-25 minutes. Once participants finished reviewing materials, they continued to six brief questions regarding demographic data and then completed the BIRS. Providing answers to demographic data and survey questions was expected to take approximately 10-15 minutes.

**Data Analyses**

Descriptive statistics were conducted to describe the study sample in addition to determine the mean ratings of acceptability, effectiveness, and time of effectiveness based on the scales from the BIRS. Correlational analyses were conducted to evaluate relationships between demographic variables and BIRS scales. In order to answer research question one, the mean was calculated for the acceptability scale score for all professionals. The same was done for the effectiveness and time of effectiveness scales for questions two and three, respectively.

Additionally, an independent samples Kruskal-Wallis test was conducted to determine if there were significant differences between professional role and ratings of acceptability, effectiveness, time of effectiveness, and overall BIRS ratings. An ANOVA was not deemed appropriate because all of the assumptions were not met. For example, a Likert scale measures the dependent variable on an ordinal level, and an ANOVA
requires measurement on an interval or ratio level. The assumptions for the independent samples Kruskal-Wallis test were met including an independent variable with two or more categorical groups; measurement of the dependent variable at an ordinal, interval, or ratio level; and independence of observations. Additionally, analyses were conducted to determine that all groups included in the demographic data had the same shape distributions; therefore, the independent samples Kruskal-Wallis test was the most appropriate analysis to measures potential differences among professional group ratings on the BIRS.

Results

Descriptive Analyses

Preliminary analyses were conducted to investigate correlational relationships among descriptive data and BIRS total and subscale scores. No significant relationships were indicated in bivariate correlations of demographic data with BIRS total, acceptability, effectiveness, or time of effectiveness scores. See Table 2 in Appendix I.

Acceptability

The acceptability of the school-based SibSTAR intervention was measured using the sum score for the acceptability scale. See Table 3 in Appendix J. The average acceptability score for respondents was 78.67 (SD = 6.17). The participants’ acceptability scores ranged from 72 (mean item rating = 4.8; agree) to 90 (mean item rating = 6; strongly agree). Comparatively, the mean scale score for school psychologists was 82.20 (SD = 7.46) followed by exceptional education teachers (M = 76.00, SD = 4.24), school counselors (M = 74.50, SD = 0.71), and school social workers (M = 77.33, SD = 5.51). An independent-samples Kruskal-Wallis test was conducted to examine the differences in
acceptability scores according to the participants’ professional group membership. The results indicated that there were no significant differences among scores across professional membership groups ($\chi^2 (3) = 2.055, p = 0.56$). No further analyses were conducted. See Table 4 in Appendix K.

**Effectiveness**

Perceived effectiveness of the school-based SibSTAR intervention was measured through the sum score for the effectiveness scale. See Table 3 in Appendix J. The average effectiveness score was 30.58 ($SD = 3.96$). The participants’ effectiveness scores ranged from 22 (mean item rating = 3.14; slightly disagree) to 36 (mean item rating = 5.14; agree). The mean scale score for school psychologists was 32.40 ($SD = 3.36$), followed by exceptional education teachers ($M = 30.50, SD = 2.12$), school counselors ($M = 28.50, SD = 2.12$), and school social workers ($M = 29.00, SD = 6.56$).

An independent-samples Kruskal-Wallis test indicated that there were no significant differences among scores across professional membership groups ($\chi^2 (3) = 2.124, p = 0.55$). This means that the distribution of effectiveness scores is the same across professional membership groups; therefore, no follow-up analyses were conducted. See Table 4 in Appendix K.

**Time of Effectiveness (Time)**

Though this scale consists of only two items, the construct structure is strongly supported by factor loadings (Elliott & Treuting, 1991). Perceived time of effectiveness was measured using the sum score for the time scale. See Table 3 in Appendix J. The average time score was 8.67 ($SD = 1.50$). The participants’ time of effectiveness scores ranged from 6 (mean item rating = 3; slightly disagree) to 11 (mean item rating = 5.5;
strongly agree). Mean time of effectiveness scale score for school psychologists was 9.20 (SD = 1.64), followed by exceptional education teachers (M = 9.00, SD = 1.41), school counselors (M = 7.00, SD = 1.41), and school social workers (M = 8.67, SD = 1.15).

An independent-samples Kruskal-Wallis test was conducted to examine the differences in time scores according to the participants’ professional membership group. The results indicated that there were no significant differences among scores across professional membership groups (χ²(3) = 2.722, p = 0.44). No follow-up analyses were conducted. See Table 4 in Appendix K.

**Behavior Intervention Rating Scale Total**

Finally, a total score on the BIRS was calculated to indicate the social validity of an intervention as a whole; the total scores combines the three subscales to provide a comprehensive and collective measure of acceptability, effectiveness, and time of effectiveness. See Table 3 in Appendix J. The average BIRS total score was 117.92 (SD = 11.12). The participants’ BIRS total scores ranged from 102 (mean item rating = 4.25; slightly agree) to 137 (mean item rating = 5.71; strongly agree). Comparatively, the mean rating for school psychologists was 123.8 (SD = 12.44), followed by exceptional education teachers (M = 115.50, SD = 7.78), school counselors (M = 110.00, SD = 2.83), and school social workers (M = 115.00, SD = 77.34). An independent-samples Kruskal-Wallis test was conducted to determine if there were significant differences in total BIRS scores according to the participants’ professional group membership. The results indicated that there were no significant differences among scores across professional membership groups (χ²(3) = 2.288, p = 0.51). No follow-up analyses were conducted. See Table 4 in Appendix K.
Discussion

The results of the study indicate that the three hypotheses for the present study were supported. School-based professionals rated the adapted SibSTAR curriculum as highly acceptable as an intervention for siblings of students with intellectual disability, school-based professionals indicated that the adapted SibSTAR curriculum provides an effective intervention for siblings of students with intellectual disability, and school-based professionals indicated that the adapted SibSTAR curriculum provides sufficient time of effectiveness of the intervention.

Interpretation

The BIRS total scale and the subscales indicate relatively high ratings of approval. Participant comments also indicated similar sentiments: “The curriculum looks fantastic. It's structured well and allows for plenty of participation from students. It also tackles the specific challenge (i.e. living with a sibling with ID) while offering skills that can apply to other areas of a student's life.” Although no statistically significant differences were found between school-based professionals in this study, previous research noted that school psychologists rated interventions as more acceptable than school social workers (Fairbanks & Stinnett, 1997).

Responses that indicate unfavorable views of the intervention can be further analyzed by comparing the ordinal data of the BIRS Likert scale. For example, participants have the option of choosing “strongly disagree”, “disagree”, or “slightly disagree” to BIRS items. Overall, a majority of responses fell within the favorable or “agree” type answer choices. The acceptability scale consists of fifteen questions that were answered by each of the twelve participants. Only one item received one response
containing a “disagree” answer choice. The effectiveness scale contains seven items, and participant responses demonstrated less favorable views of the intervention. Six out of the seven items received one to two “disagree” type answer choice; one question received responses only on the “agree” portion of the Likert scale. Lastly, the time of effectiveness scale consists of two questions, so this scale is more drastically impacted by “disagree” type Likert responses. Both questions received one to two responses that fell on the “disagree” portion of the Likert scale. Though these estimations are not direct interpretations of the scale scores, they are useful in conceptualizing a relative idea of rater acceptability, perceived effectiveness, and perceived time of effectiveness.

Participants were also able to provide comments to assist in the modifying the intervention for future use. Three comments offered constructive feedback of the intervention, and one of these comments directly related to the effectiveness and time of effectiveness scales. For example, the participant noted that “coping and problem solving skills are an ongoing process for students and their family members.” From this feedback, we can theorize that some participants may have had concerns about if this intervention would meet the needs of all students seeking to strengthen problem solving and coping skills. It is also possible that some participants had concerns about whether or not a six week intervention would be sufficient enough to provide a lasting impact in an appropriate time frame. The effectiveness and amount of time needed to demonstrate a treatment effect is a crucial part of any intervention, so ensuring success in these areas is essential in meeting students’ needs in the school setting.

Another participant discussed limitations to the school setting such as identifying time for students to participate in a 30 minute intervention during the school day. This
participant was concerned if this amount of time for an intervention would be feasible and questioned if an after-school group would be more appropriate. Other comments included positive feedback concerning the intervention and the desired student population. One participant commended the structure of the session lessons because they include activities and skills training. Another participant shared similar sentiments to the drive behind this study: “I think that often times siblings without disabilities often have their own needs overlooked. Often times, people do not consider how a family member’s disability can impact others in the family. I think this intervention would be applicable for the school setting.”

**Limitations**

There were several limitations to the current study. The study included an unevenly distributed sample size and did not control for rater variables such as gender and years of professional experience. However, other studies have found that the variable of years of professional experience does not influence acceptability ratings (Carter, 2007).

The sample size for this study is small; however, several studies have utilized the BIRS in small n treatment studies to evaluate the acceptability of an intervention as a pre-treatment measure (Sheridan, Kratochwill, & Elliott, 1990; Turco & Elliott, 1990). Though not all participants had served or currently served at the middle school level, each of these professionals in the school system are certified and trained to serve middle school students, so it is reasonable to expect that all participants have an understanding of the components needed to comprise a successful intervention for middle school students. Additionally, a majority of participants (66.7%) had served in middle school meaning
that a majority of participants have worked directly with this population and have likely been involved in developing, implementing, and/or consulting about interventions for middle school students. Therefore, the high ratings on the BIRS were provided by highly informed professionals across multiple disciplines who understand and implement successful interventions for students of all ages.

**Future Directions**

**Research Implications**

This study was only conducted on a sample of school-based professional in single school district because it was intended to be implemented in that school district. Expanding the sample size and potentially including other school districts or surveying professionals at a state-wide level may provide more and/or different information and demonstrate differences across geographic areas.

Many social validity and treatment acceptability scales have been revised and modified to address a larger variety of needs, survey a different population, or incorporate improvements to the scales. For example, some scales have been adapted to be suitable to children and others have been shortened to reduce the amount of time needed for completion (Carter, 2007). Other variations of the IRP, such as the Children’s Intervention Rating Profile (CIRP; Witt & Elliott, 1985), could be used to survey children and gain information about their view of treatment acceptability related to the school-based SibSTAR intervention. Direct evaluation of the views of the potential consumers of this intervention program could provide valuable information such as interest in the intervention and its perceived helpfulness. The items on the scale were written at a fifth-grade reading level, so the use of this scale for the target population (middle school
students) would be appropriate; participants would likely need little to no help reading and understanding the rating scale items.

Compiling data pertaining to different rater populations and treatment acceptability pertaining to varying intervention characteristics (e.g., treatment length, intervention skills and activities, behavior severity) would only benefit the success of the school-based SibSTAR intervention as Witt, Elliott, and Martens (1984) and Elliott (1988) concluded that treatment acceptability is a complex construct that is influenced by multiple variables. Additionally, Fairbanks and Stinnett (1997) suggested that further evaluation of differences among professionals’ ratings could be valuable information that prepares interventions to meet the needs deemed appropriate by stakeholders who typically compose behavioral support teams in the schools.

Other studies have suggested that the professional recommending or implementing the intervention may influence treatment acceptability (Carter, 2005; Kalfus & Burk, 1989; Tingstrom, 1990); therefore, future research could study the views of parents, students, and general education teachers regarding the school-based SibSTAR intervention. Surveying parents or teachers while manipulating the variable of the professional involved in the intervention may impact treatment acceptability, enhance treatment efficacy, and provide further information for behavioral support and treatment planning.

The BIRS scale creators, Elliott and Treuting (1991), and other treatment acceptability researchers (Miltenberger, 1990; Reimers, Wacker, & Koepple, 1987; Witt, Elliott, & Martens, 1984) noted that treatment acceptability is influenced by factors such as time (i.e., session length and number of sessions). One participant also noted that the
amount of intervention time needed may need to be revised to coincide with the feasibility of educational scheduling. A future direction of this study could be comparing the treatment acceptability of the intervention provided in this study versus a condensed version to better accommodate the educational environment and its needs. According to the study conducted by Reimers et al (1987), treatment acceptability would likely increase if this time concern was shared among raters in this study and impacted their ratings.

The authors of the BIRS also explained that the use of the scale as a pre- and post-treatment measure can help to elaborate on perceptions of a particular intervention (Elliott and Treuting, 1991). Additionally, they proposed that data collected from pre-treatment measures can help inform the intervention and potentially adjust for factors that may hinder treatment acceptability or effectiveness while simultaneously decreasing consumer opposition. This statement was likely influenced by Elliott’s (1988) earlier work that indicated moderate-to-strong relationships between pre-treatment acceptability ratings and perceived treatment effectiveness. Modifying the present study to add intervention implementation followed by a post-treatment BIRS may provide detailed information about consumers’ responses to treatment adjustments based on their own input.

Collecting a foundation of literature in social validity and treatment acceptability will provide a supportive basis for further research into these topics. Additionally, a foundation of literature regarding social validity may contribute to the availability of intervention resources and other information to support treatment decisions. The present
study further contributes to the social validity research by evaluating acceptability and effectiveness of a school-based sibling group.

**Implications of school psychology practice.**

Fairbanks and Stinnett’s (1997) study had a similar focus: allowing teachers and school-based mental health professionals to measure social validity pertaining to interventions for students. Measuring social validity is important for the field of school psychology because it allows highly trained professionals to contribute data-based feedback to interventions within the schools. Utilizing social validity measures in the school setting encourages informed collaboration and decision making with problem-solving teams, intervention fidelity, and student success. Students spend an exceptional amount of time in schools, so school personnel such as psychologists are tasked with the responsibility of providing for their social and emotional needs to aid in their academic growth. Incorporating social validity scales into routine services such as interventions holds professionals accountable for developing and modifying these services to best support unique needs and unique populations of students.

Information provided by this study can assist in informing the school district’s school-based, behavioral support teams of social validity ratings provided by knowledgeable professionals. Feedback from professionals in this school district allows behavioral support teams to better understand various components that each professional group finds important to successful intervention implementation. This type of collaboration is supported by Fairbanks and Stinnett (1997) who suggested that different groups of professionals provide valuable information that facilitates stakeholder support. It is also supported by Witt, Elliott, and Martens (1984) who determined that when an
intervention is thoroughly explained with detailed session plans and conceptualized within educational situations while utilizing a Likert type scale, relatively objective evaluations of participants’ perceptions can be measured.

This study also provides information about professionals’ views on providing supports to specific and unique populations of students whose needs may often be overlooked. One respondent indicated the importance of providing services to students’ whose needs may often go unnoticed either due to severity or the presence of other needs within the family unit. This study helps to bring light to the unique needs of this group of students and the importance of providing social supports and tailored activities for siblings of students with intellectual disability.

Lastly, this study provides, supports, and promotes an existing resource that can serve as an intervention program for siblings of students with intellectual disability: school-based SibSTAR intervention. This intervention program was originally created to meet the needs of siblings of students with autism, and the program is versatile enough to withstand adaptations for intellectual disability as demonstrated in this study; therefore, the SibSTAR program can be modified to meet a variety of other needs for specific or broad groups of students.
References


the Schools, 34(4), 329–335. doi: 10.1002/(sici)1520-6807(199710)34:4<329::aid-pits4>3.0.co;2-g


severity of behavior problem, and type of intervention. *Behavioral Disorders, 9*(2), 95–104. doi: 10.1177/019874298400900211

### Appendix A

**Table 1**  
*Demographics of participants by professional membership group.*

<table>
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<th>Professional Membership</th>
<th>Exceptional Education Teacher</th>
<th>School Counselor</th>
<th>School Psychologist</th>
<th>School Social Worker</th>
<th>Total</th>
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<td>n</td>
<td>%</td>
<td>n</td>
<td>%</td>
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<tr>
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<td>100</td>
<td>5</td>
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<td>0</td>
<td>0</td>
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<tr>
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<td>Populations Served</td>
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</table>

Appendix B
Demographic Data Survey Questions

1. Please indicate your professional membership:
   - Exceptional Education Teacher
   - School Counselor
   - School Psychologist
   - School Social Worker

2. Please indicate your race/ethnicity (Check all that apply):
   - White
   - Black or African American
   - American Indian or Alaska Native
   - Asian
   - Native Hawaiian or Pacific Islander
   - Other

3. Please indicate your gender identity:
   - Male
   - Female
   - Intersex
   - Transgender
   - Non-conforming
   - Prefer not to answer
   - Not listed

4. Indicate the number of years you have served in your professional membership role:
   - _____

5. Indicate the number of years you have served in __________ County Public Schools:
   - _____

6. Indicate the populations you have previously or currently serve (Check all that apply):
   - Pre-Kindergarten
   - Kindergarten – 5th Grade (Elementary)
   - 6th – 8th Grade (Middle)
   - 9th – 12th (High)
Appendix C

Project Distribution Email

Hello,

My name is Michelle Bryant, and I am currently a school psychologist intern in ______ County. As part of my graduate work, I am completing a thesis project to examine the social validity of a sibling skills group for students who have a brother or sister with intellectual disability. You have been selected for this study because you are in a role that allows you contact and experience with this unique population of students and their families.

If you would like to participate in this study, please begin by reading the consent information below. Then, follow the steps to review the intervention and complete the Behavior Intervention Rating Scale (BIRS) where you will provide feedback about the intervention. It will likely take about 20-25 minutes to review the intervention lesson plans and about 10 minutes to complete the BIRS.
Appendix D

“Web / “Email” Consent to Participate in Research (confidential research)

Identification of Investigators & Purpose of Study
You are being asked to participate in a research study conducted by Michelle Bryant from James Madison University. The purpose of this study is to gather information to inform in better serving students who have a sibling with intellectual disability. This study will gather information about the feasibility of a skills group intervention regarding student knowledge and experiences related to intellectual disability, knowledge related to problem solving and coping skills, views of their relationships with their sibling, and ratings of their perceived self-concept. This study will contribute to the researcher’s completion of her educational specialist thesis.

Research Procedures
This study consists of an online survey that will be administered to individual participants through Qualtrics (an online survey tool). After viewing an intervention, you will be asked to provide answers to a series of questions related to the feasibility of the intervention (acceptability, content, time components). Should you decide to participate in this confidential research you may access the intervention materials and anonymous survey by following the web link located under the “Giving of Consent” section.

Time Required
Participation in this study will require 30-45 minutes of your time to complete the necessary consent form, review the intervention, and complete the survey.

Risks
The investigator does not perceive more than minimal risks from your involvement in this study (that is, no risks beyond the risks associated with everyday life).

Benefits
Potential benefits from participation in this study include increased knowledge of a particular intervention and intervention tools targeting knowledge, self-concept, behavior rating scales, problem solving skills, and coping skills. As a whole, the benefits of this study include informing school systems of how to best serve students who are siblings of a child with intellectual disability by gathering and analyzing information provided by exceptional education teachers and school based mental health professionals.

Confidentiality
The results of this research will be available through James Madison University’s libraries. While individual responses are anonymously obtained and recorded online through Qualtrics (a secure online survey tool) data is kept in the strictest confidence. Responding participant’s email addresses will be tracked using Qualtrics for follow-up notices, but names and email addresses are not associated with individual survey responses. The researcher will know if a participant has submitted a survey, but will not be able to identify individual responses, therefore maintaining anonymity for the survey. The results of this project will be coded in such a way that the respondent’s identity will
not be attached to the final form of this study. Aggregate data will be presented representing averages or generalizations about the responses as a whole. All data will be stored in a secure location accessible only to the researcher. Upon completion of the study, all information will be destroyed. Final aggregate results will be made available to participants upon request.

**Participation & Withdrawal**
Your participation is entirely voluntary. You are free to choose not to participate. Should you choose to participate, you can withdraw at any time without consequences of any kind.

**Questions about the Study**
If you have questions or concerns during the time of your participation in this study, or after its completion or you would like to receive a copy of the final aggregate results of this study, please contact:

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Graduate Psychology
James Madison University
hayes3ml@dukes.jmu.edu

Tiffany Hornsby, Ph.D.
Graduate Psychology
James Madison University
hornsbtc@jmu.edu

**Questions about Your Rights as a Research Subject**
Dr. Taimi Castle
Chair, Institutional Review Board
James Madison University
(540) 568-5929
castletl@jmu.edu

**Giving of Consent**
I have read this consent form and I understand what is being requested of me as a participant in this study. I freely consent to participate. The investigator provided me with a copy of this form through email. I certify that I am at least 18 years of age. By clicking on the link below, and completing and submitting this confidential online survey, I am consenting to participate in this research.

http://jmu.co1.qualtrics.com/jfe/form/SV_8e3XqCBQE4BGuAR

Michelle Bryant_________________________ 5/4/2020________
Name of Researcher Date

*This study has been approved by the IRB, protocol # 20-1541.*
Mrs. Smith has a son named John who receives exceptional education services under the label of Intellectual Disability. Last week, Mrs. Smith was attending her son’s annual IEP meeting when the exceptional education teacher and school psychologist noticed a specific area of concern expressed by Mrs. Smith. While discussing some of her son’s goals, Mrs. Smith brought up her children’s interactions in the home setting. She explained that she also had a daughter named Sally who is in the 7th grade. Sally is an exceptional student though she is experiencing difficulties with her peers. Mrs. Smith indicated that Sally sometimes has trouble relating to her brother and gets upset when she is asked to help her brother brush his teeth or make a meal, especially in the evenings. She reported that Sally has a few good friends though it is hard for peers her age to understand what it is like to have a brother with intellectual disability. Her mother also reported that Sally often spends time at home and does not have many opportunities to participate in events and activities with her friends.

With Mrs. Smith’s permission, the school psychologist asked Sally’s teacher if she had noticed any similar difficulties in the classroom setting. Sally’s teacher reported that Sally does not have many friends in the classroom and sometimes gets into disagreements with her peers. The teacher indicated that Sally has overheard other students making fun of her brother’s class and classmates, and Sally has trouble handling these types of situations. Sally often responds with anger and defensiveness, and a teacher has to help calm the situation and separate the students. Her teacher reported that Sally has trouble recovering after these situations, and she often falls behind on her classwork for that day. The behaviors of most concern to Sally’s teacher are those which interrupt Sally’s participation in class: arguing with peers and shutting down once the conflict has resolved.

After learning this information, the school psychologist consults with the exceptional education teacher, school counselor, and school social worker to brainstorm potential supports to meet the needs expressed by Mrs. Smith and Sally’s teacher. The counselor recalls a few research articles that explained how siblings value supports and spending time with like peers. The social worker points out that Sally may benefit from some skills training related to problem solving and coping. Together, they remembered hearing about a Sibling Skills Group from a school psychologist intern and wondered if this group would be a suitable intervention.
Appendix F

Sibling Skills Group Intervention Protocol

Target Behavior(s): Problem solving, coping skills, social interactions

Hypothesized Function(s): To improve problem solving and coping skills of students who have siblings with intellectual disability in addition to providing social support including mentors and peers with similar experiences.

Brief Description: The Sibling Skills Group is an intervention for siblings of students with intellectual disability who may benefit from learning more about their sibling’s disability, problem solving and coping skills training, social supports, and/or practice interacting/implementing new skills with peers. This group consists of six 30-minute sessions during which the siblings meet as a group, discuss the lesson, and practice implementing the new skills. This intervention is intended to strengthen self-efficacy of interacting with a sibling with ID through sibling support and skills training.

Please view the following lesson plans for each group session with the vignette in mind.
## Sibling Skills Group*

<table>
<thead>
<tr>
<th>Materials</th>
</tr>
</thead>
<tbody>
<tr>
<td>● Name Tags</td>
</tr>
<tr>
<td>● Markers</td>
</tr>
<tr>
<td>● White Board</td>
</tr>
<tr>
<td>● Journals</td>
</tr>
</tbody>
</table>

### Objectives
Siblings will:
1. Meet other group participants.
2. Understand the rules and expectations for group participation.
3. Identify characteristics of intellectual disability.

*Note: Some content adapted from activities described by Meyer and...*

### Session 1: Introduction & Orientation

**Welcome Activity: Name Game Ice-Breaker (8 min)**
1. Upon arrival, siblings make name tags.
2. Leaders and siblings introduce themselves to one another.
3. Leaders discuss the activities planned for the group.
4. To help learn the names of each member of the group, leaders and siblings play a name game.

**Group 1: Group Formation (10 min)**
- Leaders discuss with siblings the purpose of the group and talk in more detail about the activities that the group will be engaged in.
- Leaders talk about 2 important activities in a group: group name and group rules.
- Siblings and leaders decide upon a name as a group, using voting or some other strategy if necessary.
- Group rules should include rules about one person speaking in the group at a time, respect for each other and property of the group, confidentiality/limits of confidentiality, and what should happen when a rule is broken.
- Leaders discuss the importance and unique contributions of each person to the group.
- Leaders introduce the journaling concept to the siblings. Each sibling will keep a journal that will allow them to vent and write about their struggles, triggers, and use of the coping/problem solving/calming skills as they learn them. They could continue to add to this journal after the group concludes.

**Group 2: Discussion of Families & Intellectual Disability (10 min)**
- Each leader and sibling discuss who makes up their family, including their siblings.
- While discussing their family, each member draws a family tree on the board with each person in their family.
- Leaders encourage each sibling to tell about their brother or sister with intellectual disability and to give the name, age, and tell a few interesting things about their brother or sister.
- Then leaders ask siblings to tell what they know about intellectual disability, making a list of the characteristics and how children get intellectual disability.
- If the siblings do not bring up each major characteristic of intellectual disability, leaders will add to the list.

**Wrap-Up (2 min)**
| Vadasy (1994), Lobato (1990), and Celiberti and Harris (1993), Hansford (2013) | - Review the activities of the group and ask about favorite activities of the group.  
- Provide each student with a journal to write about their experiences with their sibling and use of the skills they learn over the next few weeks.  
- Provide a preview of the next group. |
## SIBLING SKILLS GROUP

### Materials
- Name tags
- Pencils
- German Test
- F Test

### Objectives
Siblings will:
1. Review rules and expectations for group participation.
2. Decrease inhibition of talking during group.
3. Discuss key characteristics of intellectual disability.
4. Discuss problem behaviors associated with intellectual disability and their functions.

### Session 2: Learning about Intellectual Disability

**Welcome Activity: Find Name Tags & Review (5 min)**
- As each sibling comes in, they are asked to find their name tag and join the table.
- Leaders ask siblings to recall the events of the last sibling group and assist them with recall.
- Siblings review group rules and give a brief overview of the activities/discussions for session 2.

**Group 2: Information about Intellectual Disability - Didactic (10 min)**
- Leaders ask siblings to review the definition of intellectual disability the group created last week.
- Leaders lead a more formal and detailed discussion of characteristics of intellectual disability.
- Leaders discuss main characteristics of intellectual disability: adaptive difficulties and difficulties with learning/understanding using age/grade appropriate language and strategies.
- Leaders ask siblings for examples of each from observations of their siblings.
- Leaders talk about strengths of children with intellectual disability and what is known about the genetics of intellectual disability, paying attention to the need to debunk myths (e.g. Can I catch ID? Did my parents cause it?).

**Activity: Walking in Another’s Shoes (13 min)**
Siblings are given opportunities to experience what it is like to have certain disabilities (i.e., walk in someone else’s shoes). Leaders can pick one of the following activities if time does not allow completion of both.

**Difficulty with Understanding/Learning: German Test/F Test**
- Hand out a copy of the “German Test” to each student, and tell them that they have 3 minutes to read the paragraph and answer the questions. Tell the students that it is an easy test and all of the answers are right there in the paragraph. If the students complain, tell them “you can do it if you just try harder.”
- As soon as time is up, pick up their German Test Paper. Then, hand out the F Test papers.
- Tell the students to follow the directions on the page and that this activity should be easier since it is in English.
- When they are finished, have them raise their hands to indicate how many of the letter “F” they found: 3, 4, or 5.
The correct answer is 6. Most people miss the Fs in the word “OF” because we pronounce this as “ov,” so our brain skips right over this word when we are looking for “F.”

Lastly, have a discussion about the tests. How did it feel being given the “German Test” and told that “you can do it if you try harder!” when you did not understand? How many people stopped trying when they saw what the test was? Additionally, how did it feel to realize that you didn’t count all of the letter “F”? How did it feel to have your brain “trick” you on this test? How would it feel if this happened to you all the time/every day?

**Difficulty with Daily Skills: Shaping Game**

- Have half of the students in the group volunteer to wait in the hallway with one leader for 2-3 minutes while the students remaining in the room with another leader come up with an activity. The activity is meant to be something that the siblings may see as “simple” or “routine” like washing their hands or brushing their teeth.
- For example, the activity could be rubbing a piece of felt on one’s elbow and then throwing it away. Or, the activity could be tapping a pencil on your head three times and then handing the pencil to the person next to you. The activity can be called “Do The Routine.”
- Have the volunteer students in the hallway return and immediately ask them to “Do The Routine.” As the volunteer students may seem confused, gradually provide them hints such as the materials involved, the actions, or if it is an independent activity or if they need a partner. Ask the siblings to take note of how the teaching of the activity needs to be broken down step by step.
- Encourage the students who know how to “Do The Routine” to begin helping the other students by teaching them or demonstrating the steps to the activity.
- Once the students know how to “Do The Routine,” ask them what was easy and what was difficult? Ask them if it was frustrating that the group assumed that they would know what to do? Was it uncomfortable knowing that the group knew how to do the activity/thought it was easy when the volunteer students did not?
- Help guide a discussion about how daily activities and routines may feel like this for their sibling with intellectual disability. Encourage students to reflect on how it was helpful to get support from their peers and learn step by step.

*Note: Some content adapted from activities described by leaders encourage each sibling to take turns contributing to the discussions and assist children with making the connection between difficulties with understanding/learning or adaptive skills with
Meyer and Vadasy (1994), Lobato (1990), and Celiberti and Harris (1993), Hansford (2013)

Meyer and Vadasy (1994), Lobato (1990), and Celiberti and Harris (1993), Hansford (2013)

frustration due to difficulties associated with having intellectual disability.

Wrap-Up (2 min)

- Review the activities of the group and ask about favorite activities of the group.
- Provide a preview of the next group.
German Test

Der Deutsche hat an und für sich eine starke Neigung zur Unzufriedenheit. Ich weiß nicht, wer von uns einen zufriedenen Landsmann kennt. Ich Kenne sehr viele Franzosen, die vollstädmit ihrem Geschick, mit ihren Erlebnissen zufrieden sind. Wenn sie ein Handwerk ergreifen, so stellen sie sich die Aufgabe, durch dasselbe, wenn’s möglich ist, vielleicht bis zum 45., 50. Jahre eine gewisse Vermögensquote zu erreichen; haben sie die, so ist ihr ganzer Ehrgeiz, sich als Rentier bis zu ihrem Lebensende zurückzuziehen. Vergleichen Sie damit den Deutschen; dessen Ehrgeiz ist von Hause aus nicht auf eine nach dem 50. Jahre zu genieße Rente gerichtet, sein Ehrgeiz ist schrankenlos. Der Bäcker, der sich etabliert, will nicht etwa der wohlhabendste Bäcker in seinem Ort werden, nein, er will Hausbesitzer, Rentier, er will nach seinem größeren Berliner Ideal schließlich Bankier, Millionär werden. Sein Ehrgeiz hat keine Gemzen.

(Im Reichstag, 9.Oktober 1887)

1. Eine starke Neigung zur Unzufriedenheit hat der ________________________.

2. Nit ihrem Geschick und ihren Erlebnissen sind viele ________________________.

3. Sie stellen sich die ________________________ eine gewisse Vermögensquote zu _________________

4. Der Ehrgeiz der Deutschen ist ________________________.

5. Der Bäcker will Hausbesitzer, ________________________ werden.

6. Nach seinem größeren ________________________ Ideal will er Bankier, Millionär ________________________.


The above text is from a speech by Otto von Bismarck before the German Reichstag on 9 October 1887.
F Test

First, read the sentence in the box below.

FINISHED FILES ARE THE RESULT OF YEARS OF SCIENTIFIC STUDY COMBINED WITH THE EXPERIENCE OF MANY YEARS.

Now, count the F’s in the sentence. Count them only once. Do not go back and count them again.
## SOCIAL VALIDITY OF A SIBLING SKILLS GROUP

### SIBLING SKILLS GROUP*

| Materials |  
| --- | --- |
| ● Name tags |  
| ● Pre-Assessment |  
| ● Role play scripts |  

### Objectives

**Siblings will:**

1. Review rules and expectations for group participation.
2. Complete the Problem Solving Skills Pre-Assessment.
3. Identify emotions and their triggers.
4. Understand when and how to use problem solving skills.
5. Practice using problem solving skills.

### Session 3: Introduction to Coping and Problem Solving

#### Group 1: Review of Previous Week & Introduction of Theme (5 min)

- Leaders and siblings review group rules.
- Leaders ask siblings to recall the events of the last sibling group and assist them with recall (especially about characteristics of intellectual disability).
- Leaders encourage each sibling to contribute to the discussion.
- Introduce the session’s theme: emotions and how to deal with them.

#### Coping and Problem-Solving Skills Pre-Assessment (5 min)

#### Group 2: Problem Solving Strategy - Didactic (10 min)

- Leaders discuss that positive and negative feelings are experienced by all siblings.
- Talk about feelings as a normal part of growing up with a brother or sister with intellectual disability and discuss that all siblings will have some positive emotions (e.g., pride, love) and some negative emotions (e.g., anger, jealousy).
- Discuss with siblings that emotions are not right or wrong, good or bad; they are what they are.
- Although negative feelings are a normal part of having a sibling with intellectual disability, they are a cue that there is a problem.
- Problem solving strategies can help siblings cope with negative emotions in a positive way.
- Discuss that problem-solving strategies do not solve problems for siblings or tell them what to do, but they help them solve the problem.
- Problem Solving involves identifying that you have a problem and finding a solution.
- Feelings are your cue to Problem Solve: COPE
  - ★ Clarify the Problem
  - ★ Option List
  - ★ Pick the Best Idea
  - ★ Evaluate
- Work through a couple of examples with siblings, asking for sibling input while modeling problem solving for the siblings.

#### Activity: Problem-Solving Role Play (8 min)

- Leaders describe the procedures of a role-play.
- Each script describes a problem that siblings may encounter.
*Note: Some content adapted from activities described by Meyer and Vadasy (1994), Lobato (1990), and Celiberti and Harris (1993), Hansford (2013)

| o Brother with intellectual disability colors on homework or breaks a toy/model/electronic |
| o Sibling starting at a new school and friends make fun of her sister who is walked to the bathroom by a classroom aid and needs help eating her food at lunch |

- The siblings use COPE to come up with a solution to the problem, and then the role play script is acted out with one leader (who plays the child with intellectual disability or the parent) and one student (who plays the sibling).

**Wrap-Up (2 min)**
- Review the activities of the group and ask about favorite activities of the group.
- Ask siblings to try using problem solving strategies over the next week and journal about it.

Provide a preview of the next group.
Project SibSTAR Coping and Problem-Solving Questionnaire

Try to remember what you learned in group to help you answer these questions!

Name: ____________________________

Please circle True or False for the following statements.

<table>
<thead>
<tr>
<th></th>
<th></th>
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</tr>
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</table>
Problem Solving Role Play Script

The sibling started at a new school, and her friends/classmates make fun of her sister who is walked to the bathroom by a classroom aid and needs help eating her food at lunch.

Narrator: Jane and her classmates are eating lunch in the cafeteria when her sister’s class comes in and sits at their usual table which is a few tables away. Jane’s classmates begin staring and giggling.

Peer: Wow, do you see that? None of them can cut up their food. That boy also has ketchup on his face.

Jane: HEY, stop it! You don’t know what you’re talking about!

Peer: Oh, now someone is walking that girl to the restroom. Not even the normal bathroom, they’re going to that weird bathroom that only lets one person in at a time.

Jane: Quit! You don’t know them.

Peer: Oh, and you think you do?

Narrator: Jane realized that she had gotten very upset. Her peers didn’t know that they were talking about her sister. Either way, it wasn’t ok. Then, Jane realized that she could use COPE to help her with this situation. Maybe then, the conversation wouldn’t turn into an argument where everyone gets in trouble. She began with taking a deep breath and thinning about C. She realized that the problem was already CLARIFIED. Her classmates were making fun of her sister and the exceptional education class, and Jane did not like it.

Jane: *thinking to herself* Hmm, what does O stand for? Right! OPTION LIST. One, I could keep arguing and telling her to stop. Two, I could get up and stomp off. Three, I could simply tell her that she is bullying my sister’s class.

Peer: Why did that lady wait outside of the bathroom for her? Can’t she walk by herself?

Jane: *thinking to herself* Next is P for PICK THE BEST IDEA. I think my first two ideas would only make the situation worse. I guess I will try to talk to her.

Jane: It’s not cool to bully other people because they are different from you. That’s my sister’s class. Just because she may need help to do some things doesn’t mean you can make fun of them.

Peer: Oh, umm. I was just being honest. I didn’t know you were going to make a big deal about it.

Jane: I’m not sure it was honest. I don’t think it’s right for you to talk about when you don’t know them.

Peer: Ok, fine. I’ll stop. Calm down.

Jane: I’m calm. I just think you would change your mind if you knew them like I do. We all need help sometimes.

Peer: Ok, got it.

Jane: *thinking to herself* Well, she didn’t completely change her mind or decide to be nice right now. At least she knows that I don’t like when she says stuff like that. She probably won’t say that, at least not when I’m around anymore. Maybe she will think more about what I said later.

Narrator: Jane did a great job using E for EVALUATE. She broke down the whole situation, reasoned through it, and thought about the outcome.
## SIBLING SKILLS GROUP*

### Materials
- Name tags
- Aunt Blabby Letters

### Objectives
Siblings will:
1. Review rules and expectations for group participation.
2. Discuss applying problem solving skills to real-life situations.
3. Practice using problem solving skills. Identify and use calming strategies.

### Session 4: Coping and Problem Solving Part 2

**Group 1: Review of Previous Week & Discussion of Problem Solving (8 min)**
- Leaders ask siblings to recall the events of the last sibling group and assist them with recall (especially about problem solving strategies).
- Siblings review group rules.
- Ask siblings if they had any difficult problems with their siblings during the week.
  - If they used the problem solving techniques, how did they work?
- Leaders encourage each sibling to contribute to the discussion and reinforce attempts at using strategies.

**Group 2: Aunt Blabby (10 min)**
- Introduce Aunt Blabby to siblings, an advice columnist who answers letters from siblings who have problems that they do not know how to solve.
- Tell the siblings that they will take a try at answering some of Aunt Blabby’s letters.
- Choose letters from Aunt Blabby’s bag: Work through a couple of letters with the group to (1) identify the negative emotion involved and (2) use the problem-solving formula (e.g. sibling writes that he/she is unable to join the soccer team/choir group. Mom is unable to drive him to events because she has to drive brother to speech – anger, jealousy; classmate makes a mean comment about a brother’s or sister’s class and that they walk down the hallways with teacher aids – anger, embarrassment, defensive; friends give the sibling a hard time because they cannot hang out when their parent has asked them to care for their brother or sister – embarrassment, lonely/missing out).

**Group 3: Keep Calm (10 min)**
- Leaders talk to siblings about the importance of keeping calm after an emotional trigger occurs.
- Ask siblings to think about how much more difficult problem solving is when you are not calm.
- Have siblings come up with some ways to stay calm after a trigger situation (walk out of room and take a break, counting down from 20, deep breathing, perspective taking).

### Wrap-Up (2 min)

*Note: Some content adapted from activities described by Meyer and Vadasy (1994),"
<table>
<thead>
<tr>
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<tr>
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<tr>
<td>● Ask siblings to try using problem solving and calming strategies over the next week and journal about it.</td>
</tr>
<tr>
<td>Provide a preview of the next group.</td>
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</tbody>
</table>
Dear Aunt Blabby,

I have been so upset lately and I don’t know what to do! All of my friends are playing on our local soccer team. I really like soccer and I am so good at it when we play in gym class! But my mom told me that I can’t play because nobody is around to drive me there. My dad is at work and my mom has to take my brother to speech at the same time. I realized that my friend who lives a few neighborhoods over is on the soccer team. Maybe they could drive me? I don’t want to make my mom mad, but this seems so unfair! What I want to do always comes second. What do I do?

Sincerely,
Sibling

Hi Aunt Blabby,

I need some help. My friends won’t get off my back. I am running out of excuses to tell them of why I can’t hang out on the weekends. My dad never lets me. He says that I need to help around the house and can’t be out late because they take my sister to her Special Olympics practice early on Saturday mornings. They said that if I went to hang out with my friends on Friday nights, they would have to stay up too late to pick me up and they’d be too tired Saturday morning. My friends are always asking where I am, and I’m scared they’ll stop wanting to hang out with me since I never go. I don’t understand why I always have to compromise, but my sister never does. Help, how can I fix this?

Sincerely,
Sibling
### SIBLING SKILLS GROUP*

<table>
<thead>
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<th>Materials</th>
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</thead>
<tbody>
<tr>
<td>● Name tags</td>
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<tr>
<td>● Post-Assessment</td>
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</table>

<table>
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<tr>
<td>Siblings will:</td>
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</tr>
<tr>
<td>1. Review rules and expectations for group participation.</td>
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<tr>
<td>2. Complete the Problem Solving Skills Post-Assessment</td>
<td></td>
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<tr>
<td>3. Discuss keeping calm and problem solving.</td>
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<tr>
<td>4. Discuss using problem solving skills to talk to parents.</td>
<td></td>
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*Note: Some content adapted from activities described by Meyer and Vadasy (1994), Lobato (1990), and Celiberti and Harris (1993), Hansford (2013)*

### Session 5: Talking to Parents

#### Coping and Problem-Solving Skills Post-Assessment (5 min)

#### Group 1: Review of Previous Week & Discussion of Keeping Calm using Problem Solving (10 min)

- Leaders ask siblings to recall the events of the last sibling group and assist them with recall (especially about keeping calm and problem-solving).
- Ask siblings if they tried any of the strategies during the week.
  - If they used the problem solving and calming strategies, how did they work?
- Leaders encourage each sibling to contribute to the discussion and reinforce attempts at using strategies.

#### Group 2: Talking to Parents (13 min)

- Leaders read a scene about a sibling who is having a problem talking to her parents:
  - A sibling is upset that her parents continue to ask her to help care for her brother on Friday evenings when his case manager comes to check in. The sibling does not mind helping out, but she wants to be able to spend time with her friends and miss out on fewer events/social outings.
- As a group, siblings and leaders discuss what the sibling can do to figure her way out of the problem.
- Siblings make a list of things that they wish their parents knew about being a sibling and discuss ways they can talk to their parents about them.

#### Wrap-Up (2 min)

- Review the activities of the group and ask about favorite topics of the group.
- Provide a preview of the next group.

Instruct siblings to bring in something special to them to show off to the group (e.g., sports trophies; art).
Project SibSTAR Coping and Problem-Solving Questionnaire

*Try to remember what you learned in group to help you answer these questions!*

Name: __________________________

Please circle True or False for the following statements.

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# SIBLING SKILLS GROUP*

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<tr>
<th>Materials</th>
<th><strong>Session 6: Group Conclusion &amp; Presentation</strong></th>
</tr>
</thead>
<tbody>
<tr>
<td>● Name tags</td>
<td><strong>Group 1: Review of Previous Week &amp; Discussion of Talking to Parents (7 min)</strong></td>
</tr>
<tr>
<td>● Snacks</td>
<td>● Leaders ask siblings to recall the events of the last sibling group and assist them with recall (especially about talking to parents).</td>
</tr>
<tr>
<td>● Exit Questionnaire</td>
<td>● Ask siblings if they tried any of the strategies during the week.</td>
</tr>
<tr>
<td></td>
<td>o If they used the talking to parents techniques or problem solving strategies, how did they work?</td>
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<tr>
<td></td>
<td>● Leaders encourage each sibling to contribute to the discussion and reinforce attempts at using strategies.</td>
</tr>
</tbody>
</table>

**Objectives**

Siblings will:

1. Review rules and expectations for group participation.
2. State their unique and special features.
3. Review what they learned in the group.
4. Celebrate their success and conclude the group.

*Note: Some content adapted from activities described by Meyer and Vadasy (1994), Lobato (1990), and Celiberti and Harris (1993), Hansford (2013)
Exit Questionnaire

Please use the scale below to rate the statements about your participation in the sibling support group.

<table>
<thead>
<tr>
<th></th>
<th>1</th>
<th>2</th>
<th>3</th>
<th>4</th>
<th>5</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Strongly Disagree</td>
<td>Disagree</td>
<td>Neither Agree nor Disagree</td>
<td>Agree</td>
<td>Strongly Agree</td>
</tr>
</tbody>
</table>

1. I looked forward to the group sessions. _____
2. I felt that the group was a good idea for me. _____
3. I gained new skills from the group. _____
4. This Sibling Skills Group addressed goals that were important to me. _____
5. I was frustrated by the group. _____
6. The Sibling Skills Group gave me skills I can use in everyday life. _____
7. I have a more positive view of myself after participating in the Sibling Skills Group. _____
8. I feel like spending time with my brother or sister is better because of the group. _____
9. It felt good to know other kids who have a sibling with intellectual disability. _____
10. The group was too long. _____
11. The group was too short. _____
12. I would want to be a part of a sibling group again. _____
Please answer the remaining free response questions.

1. What did you like most about the Sibling Skills Group?

2. What did you dislike about the Sibling Skills Groups?

3. If you could change anything about the Sibling Skills Group, what would it be?

* Modified from *Project SibSTAR Sibling Satisfaction Survey* (Hansford, 2013)
Now that you have reviewed all intervention materials, please return to Qualtrics and continue to the Behavior Intervention Rating Scale.
You have just read about a child with a classroom problem and a description of an intervention for improving the problem. Please evaluate the intervention by circling the number which best describes your agreement or disagreement with each statement. You must answer each question.

<table>
<thead>
<tr>
<th></th>
<th>1</th>
<th>2</th>
<th>3</th>
<th>4</th>
<th>5</th>
<th>6</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Strongly Disagree</td>
<td>Disagree</td>
<td>Slightly Disagree</td>
<td>Slightly Agree</td>
<td>Agree</td>
<td>Strongly Agree</td>
</tr>
</tbody>
</table>

1. This would be an acceptable intervention for the child's problem behavior.
2. Most teachers would find this intervention appropriate for behavior problems in addition to the one described.
3. The intervention should prove effective in changing the child’s problem behavior.
4. I would suggest the use of this intervention to other teachers.
5. The child’s behavior problem is severe enough to warrant use of this intervention.
6. Most teachers would find this intervention suitable for the behavior problem described.
7. I would be willing to use this in the classroom setting.
8. The intervention would not result in negative side-effects for the child.
9. The intervention would be an appropriate intervention for a variety of children.
10. The intervention is consistent with those I have used in classroom settings.
11. The intervention was a fair way to handle the child’s problem behavior.
12. The intervention is reasonable for the behavior problem described.
13. I like the procedures used in the intervention.
14. This intervention was a good way to handle the child’s problem behavior.
15. Overall, the intervention would be beneficial for the child.
16. The intervention would quickly improve the child’s behavior.
17. The intervention would produce a lasting improvement in the child’s behavior.
<p>| | | | | | |</p>
<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>18.</strong> The intervention would improve the child’s behavior to the point that it would not noticeably deviate from other classmates’ behavior.</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
</tr>
<tr>
<td><strong>19.</strong> Soon after using the intervention, the teacher would notice a positive change in the problem behavior.</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
</tr>
<tr>
<td><strong>20.</strong> The child’s behavior will remain at an improved level even after the intervention is discontinued.</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
</tr>
<tr>
<td><strong>21.</strong> Using the intervention should not only improve the child’s behavior in the classroom, but also in other settings (e.g., other classrooms, home).</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
</tr>
<tr>
<td><strong>22.</strong> When comparing this child with a well-behaved peer before and after use of the intervention, the child’s and the peer’s behavior would be more alike after using the intervention.</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
</tr>
<tr>
<td><strong>23.</strong> The intervention should produce enough improvement in the child’s behavior so the behavior no longer is a problem in the classroom.</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
</tr>
<tr>
<td><strong>24.</strong> Other behaviors related to the problem behavior also are likely to be improved by the intervention.</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
</tr>
</tbody>
</table>
Appendix H

Adapted Behavior Intervention Rating Scale

You have just read about a description of an intervention for siblings of students with intellectual disability. Please evaluate the intervention by circling the number which best describes your agreement or disagreement with each statement. You must answer each question.

<p>| | | | | | | |</p>
<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
<td>6</td>
<td></td>
</tr>
<tr>
<td>Strongly Disagree</td>
<td>Disagree</td>
<td>Slightly Disagree</td>
<td>Slightly Agree</td>
<td>Agree</td>
<td>Strongly Agree</td>
<td></td>
</tr>
</tbody>
</table>

1. This would be an acceptable intervention for the sibling. 1 2 3 4 5 6

2. Most *participant’s profession* would find this intervention appropriate for other behaviors and skills in addition to coping and problem-solving. 1 2 3 4 5 6

3. The intervention should prove effective in changing the sibling’s coping and problem-solving skills. 1 2 3 4 5 6

4. I would suggest the use of this intervention to other *participant’s profession*. 1 2 3 4 5 6

5. The child’s difficulties with sibling interactions are severe enough to warrant use of this intervention. 1 2 3 4 5 6

6. Most *participant’s profession* would find this intervention suitable for increasing siblings’ coping and problem-solving skills. 1 2 3 4 5 6

7. I would be willing to use this in the classroom setting. 1 2 3 4 5 6

8. The intervention would not result in negative side-effects for the sibling. 1 2 3 4 5 6

9. The intervention would be appropriate intervention for a variety of children. 1 2 3 4 5 6

10. The intervention is consistent with those I have used in classroom settings. 1 2 3 4 5 6

11. The intervention was a fair way to handle the sibling’s coping and problem-solving skills. 1 2 3 4 5 6

12. The intervention is reasonable for the sibling’s coping and problem-solving skills. 1 2 3 4 5 6

13. I like the procedures used in the intervention. 1 2 3 4 5 6

14. This intervention was a good way to handle the sibling’s coping and problem-solving skills. 1 2 3 4 5 6

15. Overall, the intervention would be beneficial for the sibling. 1 2 3 4 5 6

16. The intervention would quickly improve the sibling’s coping and problem-solving skills. 1 2 3 4 5 6
17. The intervention would produce a lasting improvement in the sibling’s coping and problem-solving skills. 1 2 3 4 5 6

18. The intervention would improve the child’s coping and problem-solving skills to the point that it would not noticeably deviate from other classmates’ coping and problem-solving skills. 1 2 3 4 5 6

19. Soon after using the intervention, the teacher would notice a positive change in the sibling’s coping and problem-solving skills. 1 2 3 4 5 6

20. The sibling’s coping and problem-solving skills will remain at an improved level even after the intervention is discontinued. 1 2 3 4 5 6

21. Using the intervention should not only improve the sibling’s coping and problem-solving skills in the home, but also in other settings (e.g., classroom, community). 1 2 3 4 5 6

22. When comparing this child with another peer before and after use of the intervention, the child’s and the peer’s coping and problem-solving skills would be more alike after using the intervention. 1 2 3 4 5 6

23. The intervention should produce enough improvement in the sibling’s coping and problem-solving skills so the behavior no longer is a problem in the home. 1 2 3 4 5 6

24. Other behaviors related to the coping and problem-solving skills also are likely to be improved by the intervention. 1 2 3 4 5 6
Table 2

**Bivariate correlations of demographic data by BIRS scores**

<table>
<thead>
<tr>
<th>BIRS Scale</th>
<th>Acceptability</th>
<th>Effectiveness</th>
<th>Time of Effectiveness</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>r</td>
<td>p</td>
<td>r</td>
<td>p</td>
</tr>
<tr>
<td>Race/Ethnicity</td>
<td>-.164</td>
<td>.610</td>
<td>-.187</td>
<td>.562</td>
</tr>
<tr>
<td>Gender</td>
<td>.085</td>
<td>.793</td>
<td>.046</td>
<td>.886</td>
</tr>
<tr>
<td>Experience in Years</td>
<td>-.181</td>
<td>.574</td>
<td>.011</td>
<td>.974</td>
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<tr>
<td>Country Experience in Years</td>
<td>-.145</td>
<td>.653</td>
<td>.093</td>
<td>.773</td>
</tr>
<tr>
<td>Populations Served</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Prekindergarten</td>
<td>-.339</td>
<td>.282</td>
<td>-.329</td>
<td>.296</td>
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<tr>
<td>Elementary</td>
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<td>.456</td>
<td>-.046</td>
<td>.886</td>
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<tr>
<td>Middle</td>
<td>-.289</td>
<td>.362</td>
<td>-.342</td>
<td>.277</td>
</tr>
<tr>
<td>High</td>
<td>.028</td>
<td>.931</td>
<td>-.241</td>
<td>.450</td>
</tr>
</tbody>
</table>
Table 3

*BIRS scores by professional membership group.*

<table>
<thead>
<tr>
<th>Professional Membership</th>
<th>Exceptional Education Teacher</th>
<th>School Counselor</th>
<th>School Psychologist</th>
<th>School Social Worker</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>M</td>
<td>SD</td>
<td>M</td>
<td>SD</td>
<td>M</td>
</tr>
<tr>
<td>Acceptability</td>
<td>76.00</td>
<td>4.24</td>
<td>74.50</td>
<td>0.71</td>
<td>82.20</td>
</tr>
<tr>
<td>Effectiveness</td>
<td>30.50</td>
<td>2.12</td>
<td>28.50</td>
<td>2.12</td>
<td>32.40</td>
</tr>
<tr>
<td>Time of Effectiveness</td>
<td>9.00</td>
<td>1.41</td>
<td>7.00</td>
<td>1.41</td>
<td>9.20</td>
</tr>
<tr>
<td>BIRS Total</td>
<td>115.50</td>
<td>7.78</td>
<td>110.00</td>
<td>2.83</td>
<td>123.80</td>
</tr>
</tbody>
</table>
Appendix K

Table 4

*Independent-samples Kruskal-Wallis Test of significance by professional membership group.*

<table>
<thead>
<tr>
<th>BIRS Scale</th>
<th>$\chi^2$</th>
<th>df</th>
<th>p</th>
</tr>
</thead>
<tbody>
<tr>
<td>Acceptability</td>
<td>2.055</td>
<td>3</td>
<td>.561</td>
</tr>
<tr>
<td>Effectiveness</td>
<td>2.124</td>
<td>3</td>
<td>.547</td>
</tr>
<tr>
<td>Time of Effectiveness</td>
<td>2.722</td>
<td>3</td>
<td>.436</td>
</tr>
<tr>
<td>Total</td>
<td>2.288</td>
<td>3</td>
<td>.515</td>
</tr>
</tbody>
</table>