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MAKING AND MAINTAINING FRIENDSHIPS ON THE AUTISM SPECTRUM

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ABSTRACT

Qualitative interview methodology was used to investigate how children with autism spectrum disorders (ASD) make and maintain friendships. Children with ASD (n=16) between ages 8 and 13 years were interviewed as well as parents of children with ASD (n=13). Children were asked how to make and maintain friendships and also how many friends they have. Parents were asked to report how many friends their child with ASD has in addition to their satisfaction with the quantity and quality of their child's friendships. Results of parent interviews indicate that parents of children with ASD are dissatisfied with the quality of friendships their children have. Results of child with ASD interviews indicate that children with ASD know the steps to make and maintain friendships. This suggests that children with ASD have difficulty generalizing the skills to make and maintain high-quality friendships in social settings.

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Chapter 1

Introduction

Autism spectrum disorders (ASD) are characterized by deficits in communication and difficulty fostering relationships. In the *Diagnostic and Statistical Manual of Mental Disorders V* (DSM-V), the American Psychiatric Association outlines many characteristics that demonstrate the challenges individuals on the spectrum face in their attempts to make friends. These challenges include, but are not limited to, difficulty with: appropriate turn taking, choosing conversational topics, displaying an interest in others, understanding nuances in language, expressing interest in peers, displaying appropriate body language, exchanging greetings, altering communication to match the context of the conversation, and social-emotional reciprocity. Because no two people with ASD are the same, many of these characteristics fall along a continuum, some having more severe deficits than others.

The prevalence of ASD is currently increasing, and with that, so has the research dedicated to understanding how children with ASD are impacted by their differences. The current study will provide insight into how children on the autism spectrum perceive friendship, focusing on their attitudes towards friendship. The current project examined what children on the autism spectrum are doing to make and maintain relationships as perceived by the children and their parents.

The review of the friendship literature to date related to individuals with ASD by Petrina and colleagues (2014) outlines the agreed upon definitions of friendship. Conceptually,

friendship was defined as the “stable, frequent, and interconnected affective interactions that are manifested by certain classes of behavioral markers (e.g., sharing, play, and conversational skills that facilitate the functions of companionships, intimacy, and closeness” (N. Petrina et al., 2014; p. 119). Friendship was operationally defined as “a mutual relationship that has lasted for a defined period of time (e.g., at least six months) and friendship activities that also occurred out of school or structured settings based on maternal report and verified by the friend” (Petrina et al., 2014; p. 119).

Friendship in school-aged children promotes social, cognitive, and emotional development (Petrina et al. 2014). Petrina argued that high quality friendships are linked to a sense of belonging at school (Hamm & Faircloth, 2005) , increased perceptions of school (Ladd, 1990), decreased likelihood of being victimized by peers (Hodges, Boivin, Vitaro, & Bukowski, 1999), and higher academic performance (Wentzel & Caldwell, 1997). The results obtained from the current project will guide clinicians in improving the quality of life for those on the spectrum. The long-term goal is to understand what interventions can be provided to individuals on the spectrum to help them overcome the deficits in social behavior that prevent them from the social closeness they seek.

Literature Review

Prior to initiating the current project, a literature review was conducted to better understand the extant data to support the assertion that children on the autism spectrum struggle to make and maintain peer relationships when compared to children without disabilities of the same IQ, age, and demographics. The literature reviewed herein will address three categories

related to the ability to make and maintain friends: feelings of loneliness, quality of present friendships, and the child's perception of friendship and perception of self.

Loneliness

Loneliness is defined as an “undesirable feeling associated with negative affect and may result from an unfulfilled desire to have friends, an understanding of the gap between an actual and desired social status, and a lack of affective bonding” (Locke et al., 2010; p. 74). This is believed to motivate neurotypical children to interact with peers, however the social deficits associated with ASD make it more difficult to engage with others. These social deficits include difficulty understanding figurative language and nuances in language, such as sarcasm and reading social cues. Locke and colleagues (2010) found these differences in behavior make children with ASD more likely to be subjects of bullying. Locke et al. (2010) concluded that children with ASD experience a greater deal of loneliness than their peers without disabilities. Differences in behavior also make them subjects of bullying. Children with ASD experience greater amounts of loneliness than their peers without disabilities.

Bauminger and Kasari (2000) addressed the question that many friends and families of those with autism ask: “Do Children with ASD feel lonely or are they simply loners?” About 20-30 years ago, before ASDs achieved the attention they do now, it was unknown whether or not children with ASD were isolated or if they simply preferred playing alone.

Bauminger and Kasari first addressed this by asking 22 “high-functioning” participants with ASD to provide their definitions of loneliness. The definitions from children with ASD were less inclusive definitions than their peers without disabilities. Only 30% of children with

ASD acknowledged both the affective and social-cognitive dimensions of friendship, compared to 73.7% of their peers without disabilities. These findings are supported by Calder et al., (2012) who observed that children without disabilities defined “friend” in terms of companionship, affection, and intimacy, but children with ASD did not include this three dimensions as often. This lends the notion that they do not perceive friends the same way.

The instances of loneliness that children with ASD addressed in the Bauminger and Kasari (2000) study were assessed based on internal and external loci of control. An internal locus of control would be exemplified by a child saying that he does not know how to make friends, while an external locus would be a child saying that he does not have friends because other children are mean.

Bauminger, Shulman, and Agam (2004) also confirmed that children with ASD experienced greater feelings of loneliness using an analysis of variance assessment. Similarly to Locke et al., (2010), Bauminger and Kasari (2000) , and Calder et al., (2012) Bauminger, Shulman, and Agam (2004) concluded that children with ASD experience more loneliness than their peers without disabilities.

Quality of Friendships

High quality friendship is reported to benefit children psychologically and improve both development and adjustment. This indicates that simply having friends is not enough; children need high quality friendships to feel protected, better adjust to change, and prevent feelings of isolation. Instances where children with ASD report having friendship defies the outdated myth that they lack the skills and/or desire to make friends. Research by Locke et al. (2010) indicates

that friendships of children with ASD are reported to be of lower quality in the categories of companionship, security/trust, and helpfulness when compared to children without disabilities of a similar demographic. This information was self-reported, indicating that children on the spectrum seek meaningful relationships and are aware of their shortcomings. See Petrina et al. (2014) for a table that summarizes the data in the current research literature related to the variables of companionship, security-intimacy, closeness, help, and conflict from ten studies. This data compares children with ASD to children who are typically developing and indicates whether or not there is a significant difference. Overall, children and adolescents with ASD reported significantly lower levels of companionship, security-intimacy, closeness, and help than their peers.

There is a need for further research on what children with ASD are doing to make and maintain relationships and to identify the pitfalls they are experiencing so that helpful interventions may be designed and implemented. Locke et al. (2010) found that the best friends of children on the autism spectrum were typically other individuals with ASD. A relationship between two individuals with social deficits is perceived to be of a lesser quality when compared to the normative model of friendship between two children without disabilities of the same age. This can be inferred based on the reports of children with ASD, stating that their friendships are poor in terms of companionship and helpfulness. The studies conducted in inclusion settings, Locke et al. (2010) and Calder et al. (2012), indicated that opportunities to make friends are inadequate at providing friends to children with ASD. However, Locke et al, (2010) was conducted with a greater number of children with ASD in the classroom, suggesting that this increases the opportunity for children with ASD to make friends.

Bauminger and Kasari (2000) assessed security/intimacy/trust in the friendships of children with ASD by asking about time spent together with friends and willingness to share secrets. In addition, level closeness in the friendship was assessed by asking participants if they thought about their friend(s) when they were not around. Asking the participants if their friend would help them if they needed it assessed level of help in the friendship. Similarly, conflict was assessed to see if children felt they could disagree with their friend. If the children with ASD reported they felt lonely, then that could mean they want to be in relationships. If they want friendships, it could mean they place value on social relationships, and would contradict older research from the 1940s that stated children with ASD have a “basic desire for loneliness.”

Similarly, Calder et al., (2012) used companionship, conflict, help, security, and closeness to identify the qualities of friendship in children with ASD. Children with ASD reported substantially lower qualities of friendships on Bukowski et al.’s (1994) Friendship Quality Scale with respect to closeness and help, as compared with students without disabilities. However, the quality of friendship reported by children with ASD with respect to companionship, conflict and security were similar to that reported by children without disabilities.

Locke et al. (2010) noted that in adolescence, peers become more aware of and less tolerant of social differences. This often ostracizes children with ASD. For the observed age group, school-aged children, social differences are less accepted than for pre-school aged children. Locke et al. (2010) also observed that children with ASD reported lesser quality of friendship with their best friend than children without disabilities, specifically with regard to companionship, security/trust, and helpfulness. Not only are feelings of loneliness attributed to not having friends, but can also be attributed to friendships of lesser quality.

Petrina et al. (2014) concluded that children and adolescents with ASD perceived their friendships to be of lower quality than their peers without disabilities. Petrina et al. (2014) explained this is likely due to the nature of ASD, which makes it challenging for individuals on the spectrum to “engage in intimate and meaningful social interactions” (p. 123). Petrina et al. (2014) also stated the reports of lower quality friendships may also be due to the way children with ASD perceive friendship.

Perception of Friendship and Perception of Self

In Locke et al. (2010), peers without disabilities reported their classmates with ASD were on the periphery of the social network of their classroom. The students with ASD within the class formed clusters among themselves and had a lower quantity of friends than their peers without disabilities. Within the classroom network, the most of the children with ASD observed by Calder et al. (2012) were classified as either secondary or nuclear members of the social network, however, six of the students were classified as their peers as peripheral. In this study, no child was isolated. Self-reported perceptions of social network centrality contained inaccuracies, as not all friendship nominations were reciprocated. It is crucial to note that different classrooms present different dynamics. A trend that appeared throughout this research is that children with ASD had more central roles in the classroom network when there were more ASD peers in the classroom.

Petrina et al. (2014) summarized current research indicating children and adolescents with ASD have a more difficult time identifying and defining friendships, often only describing companionship and/or similar interests and excluding aspects of affect and emotion. Overall,

children and adolescents with ASD appeared to have a lesser understanding of the concept of friendship than children of similar age and demographic without disabilities. Additionally, Locke et al. (2010) observed that despite participants of the study having some knowledge of friendships that correspond to being a good friend, the children with ASD were not able to apply this knowledge to their relationships.

Children with ASD reported they perceive themselves to lack the traits necessary for making and maintaining friendships (Locke et al., 2010). Into adolescence, children with ASD gain an increasing awareness of their social deficits and the struggle it imposes on making friends, realizing they lack attributes desirable in a friend. Bauminger, Shulman, and Agam (2004) observed children with ASD lack the affective perspective on friendship that children without disabilities have. In describing a picture of friends, children with ASD were less likely to recognize the characters as “friends,” and if they did, their justification was less effective than children without disabilities. Often, the children with ASD would support the idea that the characters were friends based on their proximity in the picture or that they were talking to each other, whereas the children without disabilities observed more intimate details, such as the characters smiling at each other or sharing secrets.

In Bauminger, Shulman, and Agam (2004), children with ASD obtained lower scores on the companionship, security, and help portions of the multivariate analysis of variance assessment. In addition, children’s scores on self-perception in the subscale of social acceptance were lower than their peers without disabilities. A trend emerged in this data, showing that children with ASD reported higher quality relationships also felt greater feelings of self-worth.

Calder et al. (2012) outlined the way children with ASD perceived friends. When children with ASD were asked to describe friendship, responses primarily included terms of

companionship. For example, children with ASD typically defined friends as individuals they play with and spend a lot of time with. Their definitions lacked emotional closeness, compared to peers without disabilities. Participants with ASD in the Calder et al. (2012) study reported that “Well, my best, best friend is going to be moving soon... and my second best friend, she won’t be moving so I can always play with her,” and “[They’re my friends] because I try to catch them,” and “I helped them once and they were kind so I thought well yeah” (p. 306). Ultimately, the literature reviewed shows children with ASD perceive friends as companions, such as peers to play with or spend time with. Contrarily, children without disabilities perceive friends in a more intimate sense, as someone who can be confided in and can provide emotional support.

Friendship was also perceived as confusing to children with ASD. They expressed uncertainty identifying who is a friend and who is not. Some of the children expressed that they preferred to be alone, feeling other children did not want to be friends with them, or feeling that other children disliked them. There is wide variation along the spectrum, and further research can identify components that affect perception, and how accurate that perception is. Some of the literature reviewed established trends between accuracy of self-reports and/or correlations between perception and cognition, but that will not be addressed in this review. Petrina et al. (2014), Bauminger and Kasari (2000), and Calder et al. (2012) present some information about the accuracy of self-reports and the influence of cognition on perception, but there is still a need for more research in these areas. It is worth mentioning, however, that while children with ASD may perceive friendship differently, this is not to say this is worse. Some children are content with a friendship defined by companionship. However, it is crucial that children who seek more meaningful relationships and the children who lack companionship are not overlooked. Stating

that children with ASD prefer to be alone and do not seek higher quality friendships is a gross overstatement and oversimplification of the issue.

Parental Data from Literature

The current data comparing parent perceptions to child perceptions is contradictory. For example, Petrina et al. (2014) reported children and adolescents with ASD had a greater number of friends than their parents reported. However, Bauminger and Kasari (2000) observed that mothers identified a greater number of friends than their children reported. Alternatively, Calder et al. (2012) reported a match between the number of friends reported by children and their parents.

Summary and Conclusion of Reviewed Literature

The literature reviewed successfully addressed the topics of loneliness, quality of friendship, perception of friendship and self, and parent perception of child with ASD friendships. By addressing these topics, one can gather that children on the autism spectrum have a harder time making and maintaining friendships. The literature reviewed indicated children on the autism spectrum feel greater amounts of loneliness than peers without disabilities. It also showed that the friendships they do have are of lesser quality with respect to affection, such as intimacy, trust, and closeness. Additionally, children on the autism spectrum perceive friendship differently from typically peers. While peers without disabilities perceive friendship affectionately and affectively, for spending time together AND sharing deeper thoughts and emotions, children on the autism spectrum perceive friendship more cognitively, and define

friends as a playing partner. Along the lines of perception, children with ASD play more peripheral roles in the classroom social network than peers without disabilities. Also, children on the autism spectrum also perceive themselves differently than children without disabilities do in that they consider themselves to lack the necessary skills for high-quality friendships or they reported lower self-worth than their peers without disabilities.

Further research would be beneficial to identify other factors contributing to the difficulty that children on the spectrum have making and maintaining friends. Some trends that could be further investigated include cognitive ability or level of inclusion in the classroom. More participants would help to support the data already collected.

Additional research on interventions and their effectiveness would also be beneficial, especially for parents and clinicians. Interestingly, Calder et al. (2012) observed that children were frustrated with their parents' involvement with their friendships, which is why it is important to consider the social and ethical implications of intervention. As helpful as the literature on the topic is, the overarching goal is to help children on the autism spectrum achieve a higher quality of life through social closeness with peers. For this to be done, the research needs to be translated into interventions or other real life applications. From there, those interventions should be further researched to identify, and correct, any shortcomings, so that this goal can be accomplished.

Additionally, research on the level of satisfaction of children on the autism spectrum can be useful in the field to determine if children on the spectrum are content with fewer friendships. So while friendships may differ from children without disabilities, do they still meet the needs of children with ASD?

This study addressed the question of what children with ASD are doing to make and maintain friendships. It evaluated whether or not these approaches were working based on how many friends the children with ASD reported having. Additionally, the success of their ability to make and maintain friendships was evaluated based on parental satisfaction with quantity and quality of friendships.

Chapter 2

Method

Design

Data for the ASD Friendship Study were obtained through qualitative interview methodology. Interview questions were designed to identify how children ages 8-12 on the autism spectrum viewed different aspects of friendship. The questions were geared to discuss the roles and responsibilities of the child in making and maintaining peer relationships, how he/she would define a friend, the stability of relationships they had created, and their current attitudes towards friendship. This paper will focus on how the children interviewed felt about friendship and how they conceptualized and went about making friends. Overall, this paper will reflect how satisfied children on the autism spectrum were with their friendships. Alongside their level of satisfaction, this paper will explore how children on the spectrum behaved as friends and how they went about making friends. These data were acquired as part of a larger study that also interviewed the caregivers of the child subjects. Both children and caregivers were interviewed using a set of semi-structured, pre-planned questions.

Participants

Sixteen child participants were interviewed (mean age: 8.93 years age range 8-13 years, and gender 11 male, 5 female). All participants were diagnosed between 2004 and 2005 and were diagnosed with Autistic Disorder, Asperger's Syndrome, or Pervasive Developmental Disorder- Not Otherwise Specified. Thirteen parents of children with ASD were interviewed (mean age: 42.6 years with an age range from 36-60 years, with 1 male, 12 female). Recruitment was conducted using Institutional Review Board (IRB) approved methods.

Participants were recruited in three ways. The first method was through a school professional contacting the parent of a student who was appeared to be a good fit for the study based on criteria presented by the research team. This professional would inform the parents about the study and request their permission to forward their contact information with the research team who would then contact the family with further information. The second approach also involved school professionals contacting parents of children with ASD who appeared to meet the criteria for the study. The professional would provide the family with a brief description of the project and provided the parents with the contact information for the lead investigator so the parents could contact the research team if they were interested in participating in the study. The third approach utilized online discussion forums for parents of children with school-aged children with ASD. An IRB approved post describing the study requested any interested parents contact the principal investigator about participation in the study. These methods were used to ensure that all participation was voluntary and done with parental consent.

Materials

The screening questions utilized to assess metalinguistic and metacognitive skills of the participants can be found in Appendix A. These questions were designed to assess metacognitive, high order thinking, and metalinguistic, language comprehension, ability while maximizing the child's comfort and willingness to participate. The questions in the screening process asked the child with ASD to describe an abstract concept by describing a book, movie, game, or other activity they thought the interviewer may like. The ability to describe an abstract concept is important in this study because friendship is an abstract concept being discussed in a removed setting.

The questions asked during the interview process were formulated after reviewing the available literature. These questions were validated by three parents of children with ASD to ensure they were appropriate prior to being asked in a data collection context. The interviews lasted approximately 45-60 minutes, due to varying degrees of attention, motivation, willingness, and ability to respond to the questions. All interviews were recorded with video and/or audio recording devices. The interviews were then fully transcribed using a word-processing software program for further analysis.

Procedures

Prior to screening the potential participants, the research team acquired parental informed written consent and informed verbal assent from the children with ASD. The research team informed the potential participants that the screening was a diagnostic assessment, and would determine whether or not the participant would be able to participate in the interview part of the

study. Parental written consent and participant verbal assent were considered appropriate because the screening process evaluated the metalinguistic and metacognitive skills of the child participants.

The research team provided the participants with phone numbers, email addresses, and local addresses in the event that the participants had any questions. These points of contact were provided during the consenting and assenting processes. Additionally, the research team provided opportunities for participants and parents to ask question prior to giving consent and assent and provided the parents with copies of their signed informed consent forms.

The interviews were conducted either on a one on one basis at the Pennsylvania State University or via a video-conferencing software. Parents of the child participants were permitted to stay with child, based on the child's discretion. If the child did not want the parent there, the parents were asked to leave. The decision was left completely up to the child with ASD.

If the screening process was successful, the participant was further interviewed with approximately twelve semi-structured questions. These questions can be found in Appendix B. This structure allowed for research-guided conversation on pre-determined topics while providing flexibility in participant responses and allowing the researcher to prompt for further elaboration when necessary. The recorded and transcribed interviews were checked for accuracy prior to beginning the data analysis process.

Data Analysis

The transcribed interviews were analyzed using an adaptation of McNaughton, Light, and Groszyk's (2001) five steps for analyzing data. This involved separating the coded text into the smaller portions containing only one thought, known as a "thought unit." As themes emerged in the content, the thought units were sorted accordingly, and then broken down yet again into "subthemes" within each theme.

Reliability

Two participants with no prior involvement with the interviews checked the data analyzed for reliability. Twenty percent of the sample was coded and the two individuals who assigned the codes met to discuss any discrepancies and revised the code appropriately.

Chapter 3

Results

The child and parent interviews were analyzed independently. The child responses regarding making friendships, maintaining friendships, and number of friendships were further analyzed. The parent responses regarding the presence or lack of friendships in the lives of their child with ASD and their levels of satisfaction with those friendships were also analyzed. The goal of these subthemes was to identify what children on the autism spectrum were doing to make and maintain friendships, with follow up questions to determine if it was working based on perceived number of child's friendships and parent satisfaction. Sixteen children and thirteen parents were interviewed. In this study there was a set of twins, accounting for a parent speaking about her two children with ASD. To protect the identity of the participants, pseudonyms have been used to replace their names.

Child Responses

Children with ASD Making Friendships

The responses to questions asking how to make a friend included the following subthemes: help, kindness, talking to/asking the other person to be a friend, time/proximity together, and inappropriate responses. The child's response may have included more than one of

these subthemes and the following results will represent that. One child, Kevin, responded he could make friends by “help[ing]” with the door. When the interviewer clarified if he could make friends by helping people, he responded “mhm. ” Another child, James, responded to the question by answering “Be kind to their friends at the start. Don’t try to do anything fierce with them.”

Eight of the children responded they would make friends with somebody by either talking to them or asking them to be their friend. Both Mary and Jeremy responded by saying, “Talk to them.” Monica, Kyle, and Mark responded that you ask, “do you want to my friend?”

Six children responded that you make friends based on time spent together, typically playing in close proximity such as school or the neighborhood. For example, Jacob said “sometimes you just have to see each other out in public sometimes and just start playing sometimes,” and that they “meet each other at school,” and “work together at school.” Nick responded similarly saying that friends “sometimes go to school and they meet me.”

Children with ASD Maintaining Friendships

The responses addressed in the section are answers to the question “What do you do to keep friends/ keep a friendship going?” The responses included subthemes pertaining to playing together/spending time together, talking, being nice, helping, and inappropriate responses.

Seven of the children included a component of spending time together and/or playing together as a way to maintain friendships. Some examples are Caleb’s and Kyle’s responses to “hang out with them,” and Anthony’s response, that he maintains his friendships by “play[ing] with them a lot.” Jeremy stated he “play[s] with them at school.” Four of the children responded

that they maintain friendships by talking with their friends. Anthony stated he “can call on the phone” to keep in touch with friends that moved away. Tyler responded that he tries to “keep friends by just, you know, keeping up with him... knowing what he’s knowing and keeping touch... by phone, email,” and “talk[ing] about what they want to talk, if its not very, my subject.”

Three children responded they maintain friendships by being nice. James responded, “technically, be kind,” and Mary added “be nice to them and play with them and sometimes talk to them.” Two children responded with a general theme of help. For example, Mandy stated she “would give them gifts... and stick up for them. And not agree with the bully.”

Number of Friends as Perceived by Children with ASD

The responses to the question “How many friends do you have” were categorized into, no friends, two friends, four to six friends, ten to twelve friends, greater than twenty friends, and a vague response of a lot of friends. Caleb stated “I don’t really have any friends,” and was very emotional throughout the interview, seemingly distraught over the realization that he does not have friends. James had changed schools recently and reported he does not have any friends in his new school. Timothy and Monica stated they each had two friends. Monica went so far as to mention each of her friends by name. Six children reported they had between four and six friends, one of them being James identifying six friends from his old school. Carl, Monica and Mary listed the names of their friends, while Anthony and Kyle responded with the number six. Monica originally stated she had two friends, but responded with four when prompted by her mother. Lily, Jeremy, and Nick fell into the ten to twelve range; Lily and Nick listed their

friends, while Jeremy responded with “twelve.” Jacob responded that this is a “hard question” and “would say [he has] more than twenty [friends].” Kevin, Mandy, and Tyler all responded with nondescript answers, “Um, a lot. A thousand. A million,” “Um, like a zillion,” and “A lot,” respectively.

Adult Responses

Presence of Friendships Perceived by Parents of Children with ASD

Thirteen parents of children with ASD were interviewed. The parents of children with ASD were asked if their child with ASD had friends. The responses were categorized into yes, no. Other comments about the appropriateness of their friends were also considered in this analysis. Eleven parents reported that “yes,” their child with ASD had friends, while two reported that “no,” their child with ASD did not have friends. However, two of the parents that reported their child with ASD had friends, Kim and Mona, provided comments indicating the friendships were not age appropriate because the child’s friends were much younger, respectively stating that “[my daughter] has a lot of kids she plays with that are younger than her” and “[her son] has a few kids from the neighborhood... but they tend to be younger.” One parent, Maggie, reported that the one close friend her son had was “quite destructive.”

Parent Satisfaction of Child with ASD's Friendships

In addition to being asked about the presence of friends, parents of children with ASD were asked if they were satisfied with the number and quality of their child's friendships. All thirteen parents described dissatisfaction with quality of their child's friendships. A recurring theme was that their children have playmates, not friends. Nine of the thirteen parents responded they were not satisfied with the quantity of friends their children with ASD had.

Following up with the question regarding satisfaction of quality and quantity of friendships, the parents were asked what aspect about the quality/quantity of friendships they would change if they could. The following subthemes emerged in response to this question: distinction between friends/acquaintances/bullies, age appropriateness, and desire for child to be more social. Four parents responded they wished their child could better identify the difference between a friend and an acquaintance. For example, Mona wishes that her son would "understand the difference between just racing around with kids and an actual friend." Kelsey reported that her daughter's interactions were on "the surface... she will say hi and goodbye, but she doesn't understand that back and forth communication."

Four parents expressed they wished the quality of friends would be age appropriate or wider to include neurotypical peers as well. Kim reported that her daughter "doesn't seem to make friends very easily at all. At least her own age. Younger kids, yes [she can make friends with them]." Christina observed that in addition to her son having a friend who was four years younger than him that "autistic kids don't get along with other autistic kids." Donna would have liked to see her son "make more friendships with typical peers as well as ASD peers."

Three parents expressed they wished their children would try to make new friends and be more social. Meghan stated “I wish that [my son] would want to go out more, like go outside and ride his bike and maybe see if there are other kids to play with and stuff like that,” and when she suggested to her son to invite a friend over, he’d say “No, I don't really play with him on the playground,” or “No thank you,” or “Today is a day to relax.” She wished her son would “show more initiative” in wanting to see friends outside of school. Paulette stated she wanted her son to “have more friends” and “people perceived others the way [her son] perceives people. He has no judgments whatsoever on anyone.” Patricia stated she “would like [her daughter] to be able to get along with a greater number of kids.”

Chapter 4

Discussion

The goal of this study was to fill a void in the current literature. While research on children with ASD and friendship has been on the rise, no study has interviewed the greatest stakeholders, the children with ASD and their parents. N. Petrina et. al, a review article from 2014 established a need for subjective data gathered from the children. No study has conducted a qualitative study asking children with ASD and their parents about friendship, until now.

This study set out to determine what children with ASD are doing to make and maintain friendships, and whether or not it is successful. Their success in making and maintaining friendships was evaluated by observing the quantity of friendships reported by the children on the spectrum. Additionally, parental satisfaction was investigated to evaluate successful friendships, outlined by quantity and quality.

What are children with ASD doing to make and maintain friends?

From the results, it appears children on the autism spectrum are attempting to make friends primarily by playing with others at school or in their neighborhood, by talking to peers, or asking peers to be their friends. The results indicated that children with ASD primarily maintain their friendships by playing and spending time together, and talking to each other. These approaches are age appropriate for developing peer relationships in the school age.

Is it working? The Child Perspective

The children with ASD perceive varying amounts of friends, from zero to a million. This highlights one of the greatest challenges of studying autism: its nature as a spectral disorder, and responses can vary across that spectrum. While the children in this study can describe abstract concepts appropriately, their abilities to understand social cues, such as reciprocal friendships, vary. For this reason, the presence and quality of friendships reported by the parents were also investigated.

Is it working? The Parent Perspective

The most consistent theme to emerge from this data is that parents perceive their children with ASD to have poor quality friendships. In fact, it was unanimous among all of the parents interviewed that they wish for their children with ASD to have higher quality friendships. Emphasis was placed on quality over quantity.

The discrepancy between child perception and adult perception of friendship highlights two contributing factors to low quality friendships: difficulty to discern a friend from an acquaintance, difficulty generalizing social skills, and a different perception of friendship from children without disabilities. These findings are consistent with the literature previously reviewed.

Conceptualization vs. Generalization

The literature reviewed, particularly Bauminger and Kasari (2000), indicate that children with ASD are not simply “loners”, and that they seek friendships. The data attained from the study conducted suggests that children with ASD understand the concept of friendship. The participants know how to make friends, primarily by talking and playing with new children. The participants also know how to maintain friendships, primarily by staying in contact and spending time together. However, the low quality of friendships reported by the parents of the children with ASD suggests that the children have memorized the steps of the algorithm without being to follow them.

It appears that the children with ASD in this study are able to recite what skills are necessary to make and maintain friendships, but these skills do not transcend from knowledge to action. This is supported by N. Petrina et. al (2014), which identified that individuals with ASD had greater difficulty comprehending friendship. Also supporting this observation, participants of the Locke et al (2010) had knowledge of the factors that define a good friend, but were not able to apply this knowledge to their own relationships.

Quality of Friendship: Cognition vs. Affection

Another noteworthy trend observed throughout the children’s responses was an emphasis on proximity and cognition dictating friendship. As mentioned earlier in the literature review, most friendships of children with ASD have lower levels of affection, intimacy, security/ trust, and closeness when compared with typically developing peers. When asked how to make and maintain a friendship, the responses were limited to concepts of companionship. The children

with ASD most commonly suggested playing and or talking as the main ways to make and maintain friends. The children with ASD did not mention intimate activities, such as sharing secrets, providing emotional support, or talking about feelings. The parents of children with ASD that participated in this study often compared their children to themselves at their child's age or are comparing their child to other children of the same age without disabilities, often times a sibling.

Parents of children with ASD indicated a preference for quality of friendships over quantity of friendships. A parent, when asked what she would change about her son's number or type of friendships responded that she "would really like him to have a best friend." When asked the same question, another parent responded, "If it was one friend... I'd be really happy if I had one really good friend too... quantity is not a big deal." This supports the finding in Locke et al. that children with ASD have lower qualities of friendship with their best friend than their peers without disabilities. This study, in tandem with Locke et al., establishes that when quantity is not a factor, such as in the observation of a best friend, quality is still lesser than that of typically developing peers.

The literature previously reviewed suggests that presence of friends is inadequate. High quality friendships are necessary to feel protected, be well adjusted, and prevent feelings of loneliness. Bauminger, Shulman, and Agam (2004) suggest that children with ASD that reported high quality relationships felt greater feelings of self-worth.

Perceptions of Friendship: Friend vs. Acquaintance

A top concern of the parents with ASD that participated in this study was the difficulty their children have in distinguishing a friend from an acquaintance. Many of the parents of the children with ASD were concerned that children were viewing playmates as friends. The danger of this lies in lack of reciprocity; a child may consider a classmate a friend, while that classmate may view that child as an acquaintance. This is supported by the literature that suggests it is more commonplace for the children with ASD to be found on the periphery of the classroom social network.

The concern that parents of children with ASD have regarding their child's ability to discern between a friend and an acquaintance is justified by the literature previously reviewed. In that literature, friendship was perceived as confusing to children with ASD, and they reported that they have difficulty identifying who is a friend and who is not.

Clinical Implications

The implications of this research are pertinent to parents, teachers, speech-language pathologists, and other professionals that interact with children with ASD. This study established that children with ASD have difficulty applying their knowledge of friendship to their relationships. With this information, speech-language pathologists and other professionals should consider devising interventions that build on the foundation of the knowledge that children with ASD have pertaining to maintaining friends. Speech-language pathologists should maximize the generalization of friendship-building behaviors from therapy sessions to the classroom, playground, birthday parties, and other environments that promote socialization.

This study shows that scripted dialogue would not benefit the children with ASD participants. The children with ASD would benefit most from increasing their social competence and overcoming the characteristic deficits of ASD through cognitive-behavioral strategies, theory of mind training, and pragmatic language training (Cotugno et al., 2009). Possible strategies may include group therapy and practice sharing information about ones self in addition to asking about the interests of others. Other tasks that would benefit the children with ASD from this study include recognizing intimacy, social boundaries, and the expression of emotion. Additionally, practice in unpredictable responses, as is typical in emotional interactions, could help prepare children with ASD on appropriate responses and behaviors.

The clinical implications should be considered with flexibility. Each child has his/her own specific needs and abilities. Due to the spectral nature of ASD, it is probably that there are children with ASD that contradict what research suggests. Each child should receive the supports that are most suited for his/her needs.

Parental support is also a factor in the ability for children with ASD to make and maintain friends. Additional opportunities to create and foster friendships will provide more practice for the child and will likely benefit him or her. Parents have a responsibility in promoting friendships by creating opportunities, such as through activities outside of school and in the home.

Teachers should be informed of the specific needs of his/her students, especially those with ASD. They should be informed of the best ways to promote social and educational environments in the classroom. The teacher should educate students without disabilities about ASD and other developmental disorders so that other students understand, support, and include the child with ASD.

Limitations

This study was limited to sixteen children with ASD and thirteen parents of children with ASD. A questionnaire approach to this topic could reach a larger audience and provide a greater representation of the population of children with ASD. This study is limited to include only children diagnosed using the *DSM IV* criteria; school-aged children diagnosed using the *DSM V* will not be available for a few more years. The accuracy of the data is limited to the perspective of the child and his/her parent. Additional studies that confirm/deny the friendship stated by the child with ASD would provide insight into reciprocity in their friendships. On a similar note, parents were interviewed in addition to the children to limit bias in responses. This study also does not span the complete spectrum of children with ASD. Not all children with ASD are capable of describing abstract concepts, such as friendships, would make it difficult to attain information from their perspective through qualitative interview methodology.

Directions for Future Research

Future research should consider older age groups. While companionship and time spent playing together are large parts of school-aged relationships, this diminishes into adolescence and the teenage years. A longitudinal study that observes how a group of children with ASD make, maintain, and/or lose friends could provide insight as to how the nature of friendship for a particular age group is affected by ASD. This would allow a comparison of school-aged friendships, adolescent friendships, and teenage friendships in individuals with ASD.

Another area for potential research is to investigate individuals with varying degrees of ASD, not just those with metacognitive and metalinguistic abilities. This poses a challenge,

however would be valuable, novel data to clinicians and families. Other areas of potential research include the affect of inclusion on friendships of children with ASD, observing how the number of children with ASD in a classroom affects friendships. This would be beneficial for devising educational programs and finding an environment that supports education as well as social skills. Similarly, comparing friendships between two individuals with ASD and one individual with ASD and one individual with ASD could resolve conflicting ideas about the strength of relationships between two individuals with ASD.

Summary

The expanse of research on ASD is continually growing. The current studying conducted indicated that children with ASD are aware of the proper behaviors to make and maintain friendships, yet experience friendships that are defined by companionship and lack intimacy. This suggests that children with ASD struggle to translate their knowledge of friendship into appropriate action. This paper provides possible clinical implications and suggests research that could benefit the field. This study revealed the significance of understanding the strengths and deficits of children with ASD and their ability to make and maintain quality friendships..

Appendix A

Screening Questions

The purpose of the screening is to determine if the child participants, both the children with ASD as well as the children who are typically developing have the cognitive and linguistic skills that are needed to discuss an abstract topic, such as friendship.

During the screening, the child will choose one of the following four topics to talk about:

1. Favorite game
2. Favorite movie
3. Favorite TV show
4. Favorite book

After choosing the topic, the child and investigator will talk about this topic. The investigator will ask the following questions and use the child's responses to determine if he or she has the skills needed to participate in the interview portion of the study. Children will be deemed ineligible for participation in the interview if they cannot answer the following questions, or if they respond with an answer such as "because" or "because I like it" with no further explanation or information being provided.

1. Describe this [chosen topic] briefly.
2. Explain to me why you like [chosen topic].
3. What would you tell someone who hasn't seen/played/read this [chosen activity] to convince him or her that they should?
4. Would this [chosen activity] be something that you would recommend to a friend? Explain to me why or why not.

Appendix B

Parent and Child Questions

Initial Questions: Tell me what it means to be a friend. Describe what it is like for a child with an autism spectrum disorder to make a friend.

Parent Questions:

1. Does your child with ASD have friends?
2. Who are their friends?
3. How do you define “friendship”? How do you draw the line between an acquaintance and a friend?
4. Are you satisfied with the number and quality of your child’s friendships?
5. If you could change something about the number or type of friendships your child has, what would it be?
6. What makes you feel the most satisfied about your child’s friendships?
7. What level of control do you feel over who your child is friends with?
 - a. How do you feel about this level of control?
8. What do you feel is your role in helping your child make and maintain friends?
9. What do you feel is your child’s role in helping make and maintain friends?
10. What do you feel is the role of the school and the school team in helping your child make and maintain friends?
11. What are the skills you think your child with ASD has/needs to make and/or maintain friendships?

Child with ASD Questions:

1. What is a friend?
2. How do you know when someone is your friend?
3. How many friends do you have?
4. What do you do to let someone know you are interested in their becoming your friend?
5. How do you know when someone is interested in your becoming your friend?
6. What kinds of activities do friends do together?
 - a. Which of these do you do with your friends?
 - b. Which of these do you wish you would or could do?
7. How do people meet friends?
8. What does someone need to be able to do to talk to a new person or make a new friend?
9. Where do you meet/make your friends?
10. How does having a friend (or friends) make you feel?
11. What do you do to keep your friends, keep a friendship going?
12. Describe the “perfect” friend for you.

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THE PENNSYLVANIA STATE UNIVERSITY - SCHREYER HONORS COLLEGE UNIVERSITY PARK, P.A.
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RESEARCH EXPERIENCE

AUTISM SPECTRUM DISORDER PROJECT FRIENDSHIP UNIVERSITY PARK, P.A.
Research Assistant JAN. 2013- PRESENT

- Recruited children and young adults on the autism spectrum and parent participants
- Prepared questions for qualitative interviews and quantitative questionnaires using Qualtrics
- Analyzed data using SPSS, transcription, coding, and reliability techniques in compliance with IRB regulations
- Independently reviewed literature and presented information in a thesis for the Schreyer Honors College

ROBERT WOOD JOHNSON UNIVERSITY HOSPITAL – LEVEL 1 TRAUMA CENTER NEW BRUNSWICK, N.J.
Clinical Intern SUMMER 2013

- Shadowed physicians in the Emergency Department and attended grand rounds and guest lectures
- Delivered a pedagogic presentation to RWJUH faculty and interns on the use of passive ventilation

WORK EXPERIENCE

THE PENNSYLVANIA STATE UNIVERSITY AMBULANCE SERVICE UNIVERSITY PARK, P.A.
Emergency Medical Technician and Mentor AUG. 2011- PRESENT

- Provide medical care at the basic life support level to the Penn State community and surrounding areas, respond to 911 calls, and provide care at events such as collegiate athletics and concerts

Training Officer APR. 2013- PRESENT

- Provide employees of all levels opportunities to improve the quality of their patient care through emergency simulation drills, tours of facilities, and continuing education courses
- Ensure all staff are up to date on relevant state certifications and implement training exercises to ensure that staff are performing at the highest possible level

THE PENNSYLVANIA STATE UNIVERSITY UNIVERSITY PARK, P.A.
Emergency Medical Technician Teaching Assistant SEPT. 2012- PRESENT

- Instruct EMT students on the foundations Basic Life Support skills, patient assessments, lifting and moving, equipment usage and ambulance operations

CENTRE LIFELINK STATE COLLEGE, P.A.
Emergency Medical Technician and Van Attendant AUG. 2014-present

- Serve the medical needs of Centre County by providing emergency medical care and medical transportation

MONMOUTH GYMNASTICS ACADEMY MORGANVILLE, N.J.
Coach and Gym Manager MAR. 2006-AUG. 2013

- Instructed gymnasts ranging from ages 2-18 in large groups as well as one-on-one at various levels
- Coordinated the summer program and birthday party staff, ensured safety of equipment, and ensured quality instruction and customer service

VOLUNTEER WORK

EMERGENCY MEDICAL SERVICES ASSOCIATION UNIVERSITY PARK, P.A.
THON Chair APR. 2012- APR. 2013

- Motivated club members to participate in fundraising efforts as well as providing financial and emotional support to a family that has overcome pediatric cancer, but still faces the fear of remission, as well as economical set-backs

SKILLS/ACTIVITIES

Awards: Dean's List: Spring/Fall 2012, Spring 2013, Fall 2014; EMS Alumni Scholarship, 2013; Shera Nevera Memorial Award, 2011
Certifications: Emergency Medical Technician in NJ and PA, CPR for BLS Providers, National Incident Management System 100, 200, 700a, International Trauma and Life Support
