Persons with autism spectrum disorder (ASD) are a growing population that public libraries serve. This study sets out to discover what children with ASD use their public library for and what they would like the library to change or improve in order to best serve them. Eight children with ASD and their families were interviewed for this purpose. Results showed areas where public libraries are serving children with ASD effectively and ineffectively and pointed to a greater need for universal design.

Headings:

Libraries & children with disabilities
Libraries & children
Library activity programs
Library public services--Evaluation
Public libraries -- Use studies
PUBLIC LIBRARIES: SERVING CHILDREN WITH AUTISM SPECTRUM DISORDER AND THEIR FAMILIES

by
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Introduction

Public libraries have long made it their mission to serve their communities by providing services and resources to satisfy information needs (Farmer, 2013). They have also been a force for social justice, and are increasingly seeing themselves as community centers and providers of community services (Jaeger, Shilton, Koepfler, 2016). One of the highest needs groups in many local communities are children with special needs and their families. Libraries have a responsibility, based on the tenets of the Library Bill of Rights and the Americans with Disabilities Act, to welcome children with special needs and their families, and to provide them with the highest level of service. In order to do this, we need to know more about what library programs would truly benefit these patrons and what they want out of their experience at the library. While overall percentages of enrollment in school special education programs have dropped over the years between 2004 and 2012, percentages of student enrollment with autism spectrum disorder (ASD) have increased from 0.4% in 2004 to 1.0% in 2012 (NCES, 2014). ASD affects 1 in 68 children according to a 2012 study funded by the CDC (Christensen, Baio, Van Naarden Braun et al, 2016). Serving these children is a growing concern in this day and age. The Americans with Disabilities Act (ADA) has been in place since 1990, and IDEA-I since 2004, with the earliest amalgamations of these protections enacted in the 1970s. IDEA-I can be broadly understood to guarantee students with disabilities a free and appropriate education in the least restrictive environment and early intervention supports, while ADA bequeaths equal protection and access to people with disabilities
Along with ADA and IDEA, libraries have their own values to uphold. The American Library Association (1996) “Library Bill of Rights” states. “Books and other library resources should be provided for the interest, information, and enlightenment of all people of the community the library serves. Materials should not be excluded because of the origin, background, or views of those contributing to their creation”. One library resource is the library programming that gathers people together for a library relevant activity whether inside or outside of the library. The American Library Association (2009) further related the “Library Bill of Rights” to serving patrons with disabilities.

“Libraries should use strategies based upon the principles of universal design to ensure that library facilities, policies, services, and resources meet the needs of all users. Libraries should provide a clear path for persons with disabilities to request accommodations that will enable them to participate fully in library programs and services. Further, libraries and schools should work with persons with disabilities, agencies, organizations, and vendors to integrate assistive technology into their facilities and services to meet the needs of persons with a broad range of disabilities, including learning, mobility, sensory, and developmental disabilities.”

This paper will focus on programs specifically targeted to children with ASD, specifically children from age four to eleven, as ASD is increasing in prevalence and is a complex topic in and of itself.

**About Autism Spectrum Disorders**

Autism spectrum disorders (ASD) comprise a group of developmental disorders (meaning that they occur before or close to birth and disrupts typical development). The characteristics of an ASD diagnosis include a range of “impairments in social interaction, communication—both verbal and non-verbal—and stereotypical or repeated behavior, interests, and activities” (Hayes, Hirano, Marcu, Monibi, Nguyen, & Yeganyan, 2010, p. 663). This medical definition is not as straight forward as it might seem.
There are many approaches to understanding how ASD affects people’s lives and identities. One such approach is the social model. As Lawrence (2013) points out “in contrast with the medical model of disability, the social model depicts disability as a socially constructed phenomenon, the product of systematic discrimination. One of the greatest frustrations Autistic self-advocates report is the consistent emphasis on the viewpoint of the ‘autism spectrum disorder specialist,’ without any regard for the wealth of knowledge Autistics have about their own lives” (p. 100). Thus it is important to remember to consult with the real experts, the children themselves.

Literature has many recommendations for working with children with ASD, though most recommendations come from “specialists.” Early intervention therapies, such as Applied Behavior Analysis are common. It is maintained that children with ASD can benefit from training in socialization and communication (Walling & Irwin, 1995). There are many possible programming structures that could meet these needs. Peer mediated intervention often have "day one" effects. These entail typically developing peers (similar in age) giving social, verbal, or other cues on appropriate behavior which would be a small part of any inclusive program that includes children with and without ASD (Strain & Danko, 1995). Also, according to Walling and Irwin (1995) this group needs predictable timing and structure in its programming. A change in or lack of routine can be a trigger for tantrums or anxiety. Parents of these children also have needs that libraries can meet. Parents have been shown to use other parents as information sources most frequently, regarding professional, school and social activity referrals (Gibson, 2013). So while providing physical resources in print or online with information about
special needs and applicable services is valuable, providing opportunities for parents to connect and exchange information may be even more so.

Many public libraries have begun developing programs to serve children with ASD and their families. Library programs are sponsored by the library (or by community organizations in collaboration with the library), within the library space and elsewhere in the community. Some libraries focus more on specialized programs while others focus more on making meaningful accommodations within general programming. Special story times for children with ASD like the “sensory story times” popular among librarians, are said by some to be a way to serve children with special needs and their families without diverging from the strict enforcement of age requirements in general programming (Akin & MacKinney, 2004). Others assert that special programming acts as a “gateway” to general library services. According to White (2016) special story times serve the purpose of “familiarizing children with the pacing, structure, and activities in a library story time…[and] be a safe place for families to grow comfortable with the library” (p. 10). Whelan furthers this argument of the end goal being inclusive programming by suggesting that “slight modifications” to regular programs can encourage children with ASD and their families to attend. Specifically, Whelan (2009) suggests, carpet square for clear boundaries, giving individuals copies of their own book or other object to hold when needed, and making allowances about social norms, such as eye contact and noise level. It remains to be seen whether specialized programs are truly accomplishing this goal of making children with ASD and their families feel comfortable and going on to participate in general programs. Even if this is the case does this benefit of comfort truly
outweigh the benefits that could be gained from inclusive programming? Should a measure of program success be future attendance of general programming?

Most studies on this topic have detailed the librarian’s perspective and library offerings without getting the perspective of the library clients themselves. The child’s and the family’s perceptions of the level of inclusion, learning, and comfort are all paramount concerns. Such studies have provided valuable insights within the education field to which libraries are a close cousin. The purpose of this exploratory study is to examine how participants use public library programs and perceive library environments, and what potential improvements can be made from the perspective of children with ASD and their families.
Literature Review

Library services to children with ASD are informed by professional standards, ADA and IDEA, research on best practices and inclusion, and understandings of the individual with ASD’s behaviors and needs. Among the professional standards are librarians’ commitment to provide services that fit community needs by using needs assessments and continually evaluating service effectiveness. The Association of Specialized and Cooperative Library Agencies (2001) a division of the American Library Association asserts that libraries must not discriminate against individuals with disabilities and that they must be provided with equal access to all library resources. Research across the educational and social services realms informs best practices and inclusion in libraries, therefore literature from these realms will be explored. In order to understand an individual with ASD it is important to remember that the children and their families are the real experts on their own lives, and that each individual with ASD is different (Lawrence, 2013). Thus studies on family perceptions, and how they are affected by culture are also covered. In order to provide youth services that best meet the needs of children with ASD and their families all of these areas must be understood, which requires librarians to receive education and training in these matters.

According to Jenkins (2000) the ultimate purpose of youth or children’s services library programming in both school and public libraries is the promotion of reading and
literacy. This goal underlies a wide range of activities, all designed to facilitate connections between young people and texts. Fannette Thomas’s (1982) definition of youth services librarianship comes in the form of a framework. According to Thomas, youth services librarianship is evidenced by the fulfillment of five conditions: (1) specialized collections, (2) specialized space, (3) specialized personnel, (4) specialized programs/services designed for youth, and (5) work within a network of other youth services organizations and agencies. Library programming covers many different types of activities and serves many different purposes. There are story time programs, enrichment programs, digital literacy programs, and book groups to name a few. The reasons that motivate library programming include: promoting reading and love of books, bringing people into the library, improved circulation, creating future library supporters, teaching family literacy skills, and preparing children for school, socialization, and community building (Sullivan, 2005). Many of these programs are aimed at children and their families. This is for good reason as 60% of library patrons are under the age of 18 making children a significant portion of the population that currently uses public libraries (Sullivan, 2005). With the introduction of Common Core, public libraries are being relied on to provide support in the goal of having children with special needs do well in general curriculum and prepare for success (Harper, 2014). This has given youth and child focused programming in the library a push toward serving the population of children with special needs. Our population of interest in this study is specifically children with ASD and their families. We will focus on this specific population as well as best practices and the current trends in the libraries when creating programs for this population.
Understandings of Autism Spectrum Disorder

1 in 68 children in the United States are diagnosed with ASD (Christensen, Baio, Van Naarden Braun et al, 2016). In North Carolina are these numbers are even higher with an average of 1 in 59 children diagnosed with ASD. The median age of diagnosis is 50 months (Christensen, Baio, Van Naarden Braun et al, 2016). The exact cause is not certain, but it is widely accepted to be a neurobiological condition affected by genetics. Treatments also vary with occupational and speech therapy among the most common (Klipper, 2014). ASD can “include impairments in social interaction, communication—both verbal and non-verbal—and stereotypical or repeated behavior, interests, and activities” (Hayes, Hirano, Marcu, Monibi, Nguyen, & Yeganyan, 2010, p. 663).

Historically there have been varying definitions of ASD, including three subtypes that fall under the umbrella term of ASD (Christensen, Baio, Van Naarden Braun et al, 2016). The current definition of ASD is as a single disorder while previously the definition split it into subtypes. It is still important to know a little about the subtypes as patrons may still identify themselves or their loved ones as having Asperger disorder, pervasive developmental disorder, or autistic disorder (Christensen, Baio, Van Naarden Braun et al, 2016). It is also important to be aware of the range of intellectual abilities that children with ASD may have. In a 2012 study of children in the U.S. funded by the CDC, 4.0 per 1,000 children had ASD with an intellectual disability and 8.7 per 1,000 children had ASD without intellectual disability (Christensen, Baio, Van Naarden Braun et al, 2016). This variation along a spectrum also applies to the impaired social interaction, impaired communication, sensory processing, and restricted or repetitive behaviors that characterize ASD. For individuals with ASD there are a range of abilities and manifestations for these characteristics (Farmer, 2013). Socially there are tendencies to
misinterpret emotions or body language and difficulties engaging with peers (Feinberg & Jordan, 2014). Communication issues may include echolalia (repeating what has been heard), literal understandings of words and phrases, using vocalizations (not words), difficulty generalizing or being spontaneous in responses, and delayed development of speech. Use of Picture Exchange Communication System (PECS) or sign language are some ways that some children with ASD may be skilled at communicating (Farmer, 2013). It is sometimes harder for children with ASD to follow complex instructions or copy behaviors. Frustration or sensory overload can sometimes lead to aggression and self-injurious behaviors (Farmer, 2013). Though there are many possible observable characteristics of ASD, some individuals with ASD may not show any of these characteristics and have what is called an invisible disability, completely unobservable by the average onlooker.

Although not part of the definition of ASD, sensory processing disorder (SPD) is often diagnosed with ASD, since many children with ASD experience a degree of SPD. SPD is when the body’s senses are prevented by a neurological impairment from being organized and interpreted typically (Klipper, 2014). Having SPD might mean that a child wants engage in high or low levels of sensory stimulation, this includes things like touching, listening, tasting, and smelling. It can also mean sensitivity to loud noises or bright lights and difficulty identifying the source of physical discomfort (Klipper, 2016). The way that ASD affects a child’s life “reflects the world in which he or she has to navigate” (Farmer, 2013). Children with ASD need age appropriate and developmentally appropriate activities and resources to aid in their development, just as typically developing children do. Each child is different and it is important that a librarian get to
know each child and their family to learn about their typical behavior and expectations in order to provide the most effective library services (Farmer, 2013).

**Studies on Autism Spectrum Disorder and Families: Culture, Needs and Perception**

Differing cultures and beliefs should be taken into account when designing programs in libraries and when interacting with library patrons. Bailey, et al.’s (1999) study of the needs and supports of Latino families of children with developmental disabilities was conducted by doing interviews using the Family Needs Survey and Family Support Scale. Family respondents in this study reported high need, with 52% needing help with every one of the need areas addressed in the survey. This was double that of the general needs reported in previous studies of non-Latino families. Bailey (1999) conjectures this may be due to cultural influences on willingness to report needs, difficulties that Latino families face in getting support, or problems finding useful services and information. A number of studies demonstrate differing perspectives between cultures about a child’s development. Coonrod and Stone (2004) reported that American parents did not describe the social abilities of their child with ASD disorder unless pressed. In contrast 45% of Indian parents stated in interviews that they noticed social delays in their children with ASD (Daley, 2004). Language acquisition seems to be of much greater concern than social abilities to American families (Coonrod & Stone, 2004). These differing perspectives may influence what type of programming a family would like to receive from the public library.

Also to be considered are the varying beliefs about the causation and trajectory of ASD. Some parents may believe that ASD is curable, others may believe it is a chronic and/or lifelong way of being of which treatments can alleviate harder aspects, while still
others may believe that treatment cannot help in any way (Mandell & Novak, 2005). This will affect the time of diagnosis, types of treatments, and the services these families will seek out for their child. Fountain et al. (2011) conducted a study in California of the birth and administrative records of 185 children who had been diagnosed with ASD born between 1992 and 2001. Many individual and community factors were all measured as independent variables while the dependent variable measured was age of diagnosis. They found that socioeconomic status was the strongest predictor of age of diagnosis and that children who were African American, Latino, Asian, or other minorities were diagnosed with ASD at older ages when compared to white children. This suggests that there may be children in our community who are going undiagnosed and without specialized services. These children would benefit from similar library programming to those children who are diagnosed with ASD, but would only be able to attend programs that are purposefully inclusive.

**Library Programs for Children with Autism Spectrum Disorder or Special Needs**

While services to child patrons with ASD are not widely researched or discussed in the field of library science, there have been some publications on the topic. Feinberg & Jordan (2014) book is an influential work on libraries, children with special needs and their families that provides librarians with guidance on inclusion in the library. Notably their recommendation for assessing the needs of children is to identify the population, then locate them, and then find out what they want by developing appropriate questions available in accessible formats. Some people being questioned may be unfamiliar with the library and so it is important when asking questions to also tell them what is currently
available in libraries (Feinberg & Jordan, 2014). This should include both at their local library and libraries across the country or world that are modeling best practices.

Training of librarians and other staff on issues related to serving clients with ASD comes up again and again in literature related to libraries and children with ASD. Read (2009) details background and recommendations for librarians working with children with ASD that were garnered from the 2009 Oregon Library Association Annual Conference. Conference speakers Judith Belk Ph.D., Sharron Donelly, and Stacy Cayce all spoke on the topic of ASD in relation to libraries showing that understanding this issue was a priority to librarians at this conference. Halverson (2006) asserts that when working with children with Asperger Syndrome specifically, librarians should learn to say exactly what is meant, to state the rules of the library, to recognize strategies for self-regulation and signs of distress, to not insist on eye contact, to use visual aids when possible, and to be cognizant of touch as this may be threatening to the child.

When planning and implementing programs for any group of children, it is important to consider the necessary program timing, structure, sensory, and developmental needs that require being met. Klipper (2014) observes that the window of availability for children with ASD is limited due to special services received and many other time commitments. Libraries can increase children with ASD’s attendance by offering weekend programming and partnering with other organizations. Klipper (2014) recommends that age ranges served with a particular program remain narrow, despite varying ability levels. This recommendation is based on the fact that children enjoy the company of others of similar age and that books and other content are designed for particular age groups. Klipper (2014) also recommends limiting enrollment, having
assistants, preparing participants, using visual supports, managing transitions, controlling the environment, accommodating food restrictions and therapies, supplying sensory diets and fidgets, and using the three Rs. “The three Rs” represent the foundations of repetition, routine, and redundancy (Akin & MacKinney, 2004). The sensory diets referred to are a list of activities that help regulate a child’s sensory system. Preparing participants includes priming the children with ASD to take part in the library program by familiarizing them with the library and the program, perhaps by using social stories, in person library tours, or illustrated tours of the library online or in print. Akin and MacKinney (2004) provide a review of ASD research outside the field to help inform the practice of story times and other literacy efforts. Their model program uses activity schedules, environmental scans, themes, scaffolding, social stories, supplemental activities, interactive technology, and an ending ritual. Social stories include visuals, behavior expectations, and the social cues of a situation (Klipper, 2014). Environmental scans refer to filtering out things that are harsh or distracting in the environment such as buzzing fluorescent lights and making sure that the library has a consistent look and organizational set up. Visible or tangible cues should accompany each stage of this program in order to signal transitions (Akin & MacKinney, 2004). Things within the environment and within the program should be predictable for comfort purposes. Repetition and redundancy are also beneficial to comprehension and engagement, meaning that cues to transition are constantly the same and as well as some other aspects both within and between programs (Akin & McKinney, 2004).

Best practices are often detailed in publications on library services to children with ASD. The recommendations from Oregon Library Association’s annual conference
include modifications to the environment, programming, and computer time. Within the library environment there should be small spaces removed from busy, noisy areas and objects such as rocking chairs, bean bag chairs, and koosh balls should be available to help with sensory needs (Read, 2009). Feinberg & Jordan’s (2014)’s best practices for inclusive and accessible programs, include: 1) be aware of invisible disabilities; 2) give time to prepare and make structure clear; 3) encourage but don’t demand participation; 4) communicate clearly; 5) enable focusing; 6) provide quiet areas; 7) use multisensory, multiple intelligences strategies; 8) have assistive and adaptive technology; 9) encourage socialization; 10) offer choices, but don’t overwhelm with too many; 11) be flexible; and 12) normalize disability. Including siblings is a practice employed by some library programs geared toward serving children with special needs in order to help siblings feel accepted and potentially meet other children who, like them, have siblings with special needs (Kaeding, 2014). What is considered best practice for library programming for children with ASD seems to be in relative agreement across sources, especially when it comes to providing supports, structure, and sensory experiences.

Klipper (2014) maintains that there are two types of story time programs targeted at children with ASD: adapted story times and sensory story times. Adapted programs have the same structure as typical story times with books, flannel boards, and movement, but they use the best practices Klipper detailed to make the programs friendly to children with autism spectrum disorder. Sensory story times focus much more on sensory integration activities, like bubble blowing, textured paper crafts, or sensory tables, along with the familiar story time structure. Klipper (2014) also reviews a number of other
programming ideas for school age children with ASD, including book discussion groups, art programs, kitchen skills programs, yoga, and summer reading clubs.

Many public and school libraries have already begun designing programs with children with ASD and/or other special needs in mind. Adkins and Bushman (2015) conducted a survey and interviews with the aim of understanding what services public libraries provide for children with disabilities with a special focus on children’s programming. The survey was sent to 185 medium and large libraries across the United States. Out of 39 respondents 33 served children with ASD in their library. 37 respondents said that they provided mainstreamed (inclusive) children’s programming and 15 respondents offered separate programs for children with disabilities. The Brooklyn Public Library has an adaptable graduating reading program as well as resources and workshops for parents who have children with special needs (Banks, 2004). In Australia the Adelaide Hills Council Library Service took note of their patrons’ needs and began a story time program in 2011 specifically catering to children with special needs (Kaeding, 2014). To accomplish this, they trained library staff in disability awareness. Patrons with children who had special needs had commented that the regular early childhood group sessions were too large and too loud for their children and so the library designed a smaller sensory story time program. This program used a variety of communication methods including Makaton sign language, communication cards, picture cards and props. It also included sensory objects and activities (Kaeding, 2014). In Akron and Portage Lake, Ohio libraries are offering a wide range of resources, programming, and outreach geared toward children with special needs. These include a sensory garden, play and sensory story times, “Tales and Tails” dog therapy, role playing playtime for
speech therapy, and magazine swaps for their visitors with no library cards (Harper, 2014). The examples detailed here are only a few of the many services that libraries are endeavoring to provide to children with ASD. In order to provide the best possible services not only do librarians need to be informed of what is regarded as best practices, they also need to undertake regular evaluation of these services.

**Library Program Evaluation**

Current evaluation methods used for programs for children with ASD further inform the understanding of research and practice on children with ASD and libraries. Akin and McKinney (2004) recommend regular, planned evaluations of library programs and detail options for evaluation pertaining to programs including children with ASD. Observing children for enjoyment or absence of distress, eye contact or attention, singing or reading along with you, or giving answers to questions are all given as possible behavioral outcomes to measure during programs. Asking parents, teachers, or other caregivers for suggestions and behavioral goals is recommended in order to accurately measure program success. Traditional evaluation methods such as noting circulation statistics can be done after programs as well (Akin & McKinney, 2004). Klipper (2014) recommends evaluating programs based on whether the families with children with ASD feel welcome in the library and/or are taking part in networking, whether the children are being helped to transition to general library programs, whether children are learning how to interact with books and librarians, and whether a space is being provided for loud and impulsive behaviors to be acceptable. Farmer (2013) recommends action research that includes identifying objectives, research on the topic, determining what to measure and why, using appropriate assessment tools, gathering and analyzing data, and acting on the findings. Action research can improve current programs, identify community needs,
develop plans of action, measure impact of library efforts, and create publishable and shareable data (Farmer, 2013). These publications lack full coverage of the results, methods, and influences of community assessments and other research done when evaluating library programming for children with ASD.

**Perceptions of Inclusion**

Inclusion is not a placement, but a method. It uses developmentally appropriate practices and effective special education supports to allow children with ASD to learn in the least restrictive environment with typically developing peers (Allen & Cowdery, 2014). Universal Design for Learning is one part of inclusion that is applied in library programming, where an attempt is made to make programs accessible to all by providing multiple kinds of formats and ways to participate so that a program works well for many (Feinberg & Jordan, 2014). Every library and library program should be accessible to all. Universal design entails designing “products and environments that are maximally usable for all and eliminate the need for further adaptation or specialized design” (Remy & Seaman, 2014, p 27). This approach can lead to library environments and programs that are better for the learning and comfort of everyone, not just those with disabilities.

Perceptions on inclusion vary. Klipper (2014) sees many benefits in the practice of inclusion, it encourages socialization and learning while allowing for services to reach more of your community. However, Klipper has noticed that parents of children with ASD often request segregated library programs in order to help themselves to feel comfortable and understood. Most research about inclusion practices has taken place within the field of education. There is still room for improvement in the education field as research has found that some school systems “have progressed from segregation as a
matter of course… to segregation via misinformation and/or withholding of information” (Gibson, 2013, p. 98). In reviewing 28 articles on parents’ of children with ASD perceptions of inclusion in schools Falkmer et al (2015) found that parents identified 22 aspects that influence inclusion. The five most mentioned were about the teacher specifically their personal characteristics, knowledge of the individual child, training on ASD, ability to communicate, and ability to elicit trust. They were able to draw conclusions that it is not student behavior or needs that create barriers to inclusion, but the attitudes held by the teacher and others in the school environment about impairments. Overall, parent satisfaction with their child’s schooling rested on how well they felt their child’s teacher understood the effect of ASD on their child. This was helped most by good communication between parent and teacher (Falkmer et al., 2015). Lindsay, et al. (2013) ‘s qualitative study of educators of children with ASD within inclusive “mainstream” classrooms contributes to the discussion of inclusion. The semi-structured interviews of 13 educators revealed common challenges of understanding and managing behavior, socio-cultural barriers, and creating an inclusive environment were encountered when carrying out inclusion. They also found that the teachers studied lacked the training, funding, and support to apply best practices. Librarians face similar challenges in carrying out inclusion. Adkins and Bushman’s (2015) survey found that out of their 39 respondents 23 reported lack of library staff training, 22 reported lack of money, and 9 reported either resistance from staff or patrons as challenges in providing programs for children with disabilities.

Researchers have studied library programming, parent perceptions, and inclusion separately, but these three focuses have never been combined into a full study. Child
perceptions have been neglected almost entirely. This is a gap in the literature that needs to be filled. It is important in order to inform best practices in library programming for children with ASD.

The following research questions will guide this study:

General:

1. Is there a relationship between specialized programs for children with ASD in public libraries and satisfaction with library services by children with ASD disorder and their families?
   a. What services and programs do children with ASD and their families want to receive from the public library?
   b. What public library services and programs do children with ASD and their families currently use?

2. Is there a relationship between accommodations for children with ASD in general programs in public libraries and satisfaction with library services by children with ASD and their families?
   a. How do children with ASD and their families feel about public libraries?
   b. What are obstacles to public library use for children with ASD and their families?
Methods

The intention of this study is to gain insight into how public library programs are currently used, how library environments are perceived, and the potential improvements for children with autism spectrum disorder (ASD) and their families. This is an exploratory study, using qualitative methods and a purposive snowball sample.

Recruitment and Sampling

This study focused on a sensitive, protected population. A purposive, snowball sample was created to recruit children with ASD using flyers and word of mouth from organizations and study participants. Study participants were recruited by sharing flyers through public libraries, the Autism Society of North Carolina, and the Arc of the Triangle. Participants were also recruited from the Carolina Institute for Developmental Disabilities Research Participant Registry which is funded by NICHD U54HD079124. These methods allowed access to a sensitive population through partnering with the gatekeepers of this community.

Recruiting from the Carolina Institute for Developmental Disabilities Research Participant Registry required special vetting and procedures. They are sensitive to the participants in their registry being over sampled and so require that the name and e-mail of individuals from their registry contacting the researcher and/or participating in the research be shared with them. The researcher shared this information with them after the IRB approved the registry as a recruitment method and interview participants confirmed
they were part of the North Carolina Autism Registry. There were two study participants recruited through this registry and five others who contacted the researcher.

Flyers included information on the purpose of the study, what the qualifying characteristics were for participants, the incentives, and contact information of the researcher. After interested parties contacted the researcher they were sent a standard study introduction e-mail to further inform them and ask them to confirm that they fit into the selection parameters of the study (see Appendix B). Participants were included in the study if the children are between the ages of 5 and 11 years of age with ASD and are willing and able to be interviewed (see Table 1). Parent or family characteristics will have no bearing on selection. The only other selection factor was familiarity with the library.

*Table 1: Ages of Child Participants*

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There were eight children between the ages of five and eleven interviewed in this study, see Table 1 for the composition of sample. They had a variety of interests and library experiences. The aim was for at least 70% of families recruited for interviews to have some recent experience with the library and that goal was met with 75% of
participating families regularly visiting the public library. Part of the intention of this study is to get information about what is and isn’t working in library programming for children with ASD, as well as perceptions held about the library. Of the families recruited, 50% had been to a library program within the last year. While families who did not recently attend library programs cannot tell us about their experiences of library programs in detail they can tell us about their perceptions and/or the feelings past experiences left them with. Eight children and their parent or guardian participated in the interview.

**Interview Procedures**

The researcher conducted semi-structured interviews with eight pairs of children with ASD and a parent or guardian. The researcher developed an interview guide that allowed for adaption based on participant abilities and expertise. This guide was generally followed with additions and omissions when the researcher deemed appropriate, see Appendix A for questions and prompts. Interviewees were regarded as the experts and allowed to take interviews in unexpected directions. The researcher asked follow up questions and other questions that were found to be of interest in the context of a particular interview. Interviews took place in person. Interview locations were arranged individually based on the preferences of the participants due to the fact that availability of children with ASD and their families is extremely limited and their comfort is of the utmost importance in this interview. Dyadic interviewing technique was used, since this interview technique is based around interdependence and an interdependent relationship exists between parent and child. Caldwell (2014) points out that expecting unsupported participation from individuals with intellectual disabilities, or in this case ASD, can create a disabling environment based on the social model of disability. Thus dyadic
interviewing involving joint interviews acts as both triangulation and accommodation. It typically involves three separate interviews, one each with individual subjects and one conducted jointly. This specific structure was altered to only include a joint meeting in order to better fit a short term study involving children and their families. One meeting was set up, that included time for informal play and chatting so that rapport and the plan for the interview can be established. After about fifteen to thirty minutes this transitioned to the interview itself. It is at this time that permissions forms were and the recording device was switched on. The interview lasted up to an hour and a half. Determining which parent or guardian to be present in the interview was based on self-identification as primary child advocate and/or library attendee. Dyadic interviewing usually leaves identification of primary support to the individual with a disability, but as these cases typically involve adults an adjustment has been made due to the greater presence of the family as a unit in a child’s life as well as the impulsivity and limited understanding associated with childhood. Joint interviews were the chosen method due to concern for participant comfort and ability to communicate, as well as the short amount of time for conducting this study. To avoid suppression of child voices preference and weight will be given to the child as the primary source of information in the semi-structured interview and coding.

Questions in the interview (see Appendix A) focused on child interests, experiences in libraries, attendance of library programs, thoughts and feelings about the library itself and the programs it puts on, and thoughts on and experiences of inclusion. All interviews were audio recorded with the verbal consent of children (Appendix C) and written consent of parents (Appendix D) and partially transcribed by the researcher,
leaving out interruptions and personal details. The only demographic data on children or family members recorded for this study was the age of the children. Participation in this study was completely voluntary and participants were given many choices in how they want to participate. Confidentiality of participants will be maintained by keeping participant contact information obtained in order to conduct the interview on a hard copy in a locked drawer in a locked home, separate from participant interviews. All contact to set up the interview will be conducted over UNC e-mail after being initiated by the participant, with any e-mail containing contact information deleted immediately upon conversion to hard copy. All personal and contact information will be stored separately and destroyed upon study completion.

**Data Analysis**

Data analysis of interviews took place after partial transcription. The portion of the interview that is transcribed was that which gives insight into child interests, feelings on inclusion, and anything about the library including experiences and feelings about the library. Data was coded for relevance to pre-determined categories and then axial coding was done within categories to identify specific conceptual codes. Themes were the unit of analysis used in coding. Child data was coded for relevance in the categories of library experience, interests, program structure, and inclusion. Parent opinions were not separated into categories in this way and had axial coding done separately from the child data. Axial coding is defined as “a type of coding that treats a category as an axis around which the analyst delineates relationships and specifies dimensions of this category” (Charmaz, 2014, p 341). It is a type of applied coding, rather than emergent. Horizontalization was used for cross analysis leading to the development of themes. Horizontalization includes highlighting portions of statements that provide understanding
of participant experiences, creating clusters of similar statements, and then developing themes through a cycle of analysis (Eisikovits & Koren, 2010). According to the SAGE Encyclopedia of Qualitative Research Methods “Horizonalization is a method for understanding data through a phenomenological reduction by reducing the number of words and replacing the vocabulary with similar terms in which the researcher places equal value on each statement or piece of data” (Given, 2008, Horizontalization). Once themes were identified through this process of coding and grouping then comparisons were made between family member and child, as well as between 5-7 year olds and 8-11 year olds further informing themes found within the study.

Lincoln and Guba’s (1985) four criteria can be used in evaluating the trustworthiness of this study. These criteria include credibility, transferability, dependability, and confirmability. Confirmability means that others besides the researcher can confirm the results of the study through access to data, the research process, and possibly through audits (Wildemuth, 2009). Credibility refers to adequate representations in collection and transparent processes for coding and interpreting results (Wildemuth, 2009). This study improved its credibility through peer debriefing and checking conclusions against raw data. Though all coding was done by the primary researcher the faculty advisor assisted in credibility and confirmability, areas of import to the trustworthiness of this study. Debriefings with faculty advisor were done throughout the process of data analysis. Faculty advisor also served as a second reader of raw data, coded data, and data analysis. Dependability includes the reliability of the internal process and its adaptations to conditions (Bradley, 1993). To this aim coding consistency was assessed when all data had been coded by going back through all of the assigned
codes and checking for inconsistency of codes and overlap. Transferability is when a hypothesis can be applied by another researcher in another context (Wildemuth, 2009). Transferability of the research question is also an aim of this study and so discussion of the study including sampling, data analysis, and results all endeavor to be clear enough for others to further pursue this line of research.
Results

The results of the coding of interviews will be reviewed in this section. Major and minor themes revealed through coding are included in the results due to the sample being so small that any uncovered theme may have relevance. First we will discuss the results from the children, which were broken into the five to seven age range and the eight to eleven age range in order to compare the older and younger groups. Within each of these results categories there will be further break down of results into the categories of library experience, interests, program structure, and inclusion. Within each of these sections major themes will be discussed first and then minor themes. After the children’s results the parent results will be covered, broken down into major and then minor themes.

Children 5 to 7

There were four children between the ages of five and seven interviewed in this study, two five-year-olds, one six-year-old, and one seven-year-old. They had a variety of interests and library experiences. Most seemed to have a limited understanding of abstract concepts such as size and time. Two out of the four did not regularly spend time in public libraries, one because of parent discomfort and the other due to the child’s own dislike of the library.

Library experience.

A major theme that emerged in these young children’s descriptions of library use was that they enjoyed checking out books. This applied to children relating that when
they were at the library they got books. For instance, one child said “I got some books and went to this library to get books”. Lesser themes were that a number of children and enjoyed story times, did crafts, played on the computer, and wanted a space to play in the library. Some of their favorite things about the library were learning, computers, and puppet shows. There was one major outlier within this group, a seven-year-old whose thoughts were that nothing about the library can ever be good. The main complaint about the library from this child was that it was messy and the books had messy plastic wrapping on them. Any changes to the library would be unsuccessful in this child’s opinion because “the library is the stupidest place in the world.”

**Interests.**

Young children’s interests were varied with a select few shared by all four children. Technology use was one major theme among child interests, all enjoyed using some form of technology whether it be computers, ipads, video game consoles, or smartboards. The other major theme was enjoyment of reading. All children had different kinds of books that they enjoyed, some enjoyed nonfiction while others had their favorite fictional characters they wanted to read about. Lesser themes included art, music, pretend play, toys, puzzles, peers, and playing outside.

**Program structure.**

The children all had some thoughts on program structure, these were considering the activities, group size, and other things that they need in order to fully enjoy library programs. A major theme that emerged was that all children expressed that they liked having visual schedules. One child said about schedules, “then maybe the kids can know
what they’re going to do today” and “I just love watching it every day.” A lesser theme was having music at story time, with two of the children expressly wanting music and two others expressing dislike of all the noise. Other lesser themes that came up included wanting story times with puppets, large groups, flexible/open door programming, repetition, opportunities to be active at programs, and themed story times with toys. One child in particular really wanted activity in the form of bowling and playing with toys during story time. The repetition related to both reading favorite stories again and again and having aspects of the program the same every time. For one child the aspect that needed to stay the same no matter what was getting a stamp at story time, for another it was that you read a book and then write about it.

**Inclusion.**

These children did not directly express whether they would prefer inclusive programming or specialized programming. However, they did have thoughts on how they would like to be included in programming and how their sensory needs would be met, which have already been discussed in relation to their library experience and program structure. These include fidget friendly seating, opportunities for sensory and other play, flexible open door policies during programs, and visual schedules. Also, all of them do attend classes that are inclusive. Those who had thoughts about who would attend their program thought a large group of only other children would be best.

**Children 8 to 11**

There were four children between the ages of eight and eleven in this study, two nine-year-olds, one ten-year-old, and one eleven-year-old. They had commonalities and differences within their interests and thoughts on libraries. Most had an understanding of
abstract concepts. All four of these children regularly spent time at the public library and so contributed to the library user perspective.

**Library experience.**

The major themes of their library experiences included enjoying checking out books and talking to the librarian to help find books. A couple of the children specifically said that they used the online library catalog and had trouble finding the book they were looking for before talking to the librarian. All felt like the librarian was helpful. One child in particular talked to their librarian more than others, since they regularly attended programs that she ran and the child likes to tell her she’s “the best teacher ever”. All were happy with their library experiences and two did not want anything to change, partially because of an aversion to change and partially due to satisfaction with library services. The main thing the other two wanted to change was that the library had more books and that they didn’t have to wait for the books they wanted. Lesser themes included attending themed one off programs, but these older children had a wide range of experiences at the library and some had not gone to a library program in years. Two of them specifically stated that story times were for younger children or “babies” - not them.

**Interests.**

The major theme within the older children’s interests was a love of reading. The lesser themes were learning, movies and TV, art, and technology. Technology included computer games and CAD modeling for 3-D printing. The children particularly liked to learn in fun ways and learn about writing. The art theme in particular was contentious,
two children really loved art, one did not mention it at all except in relation to origami, and one specifically said that they did not like art.

**Program structure.**

The 8 to 11 year old children’s thoughts on library programs were wide-ranging. A major theme was that the ideal length of programs is longer than half an hour. Another major theme was having structured programs with multiple activities scheduled out within them. An example of an over a half hour long structured program can be found in one of the children’s plan for a book club,

> “I would like it structured so if we had like we would especially if it’s like a reading group we would have one type of for like an hour for the first 15 minutes we should have a group. One group should talk about like one the library members/library people that run it should talk about fiction books. And then that group moves on to non-fiction books”.

This structure lends a predictability and this carries over into this same child saying “I didn’t want it to start thirty minutes early/late”. Lesser themes were liking visual schedules, funny books for story time, puppets for story time, interest in book clubs, discovering new books, and wanting crafts at programs. The children gave their opinions based on what they used to like at story times when they were younger and what they currently want out of library programs. Notably none of them particularly wanted music at programs. However, one did say that having a predictable, repeating beginning or ending song was nice because “it’s like ‘oh I remember this song’… in your brain you can still like dance along with the music and you can use your own dancing power with the songs power”.

**Inclusion.**
The older children’s thoughts on library services and programs did contain some themes related to inclusion. A major theme was that there would be some people attending a program who would be familiar to the child, conversely there was another theme that the programs should be open to all. Another major theme was wanting small to medium groups to attend a program with them. One child said they would want ten children at a program explaining, “It’s good for me feeling comfortable. So there’s like there isn’t like fifteen which is like which is sort of like my class I think is like 24. Very overwhelming sometimes”. Only one child indicated a large group would be ideal. Most of these children were in an inclusive classroom at school. This is where a lesser theme about fidget friendly seating came in. The child stated, “Yea I think the fact that (teacher) last year she had exercise balls. That was like easier because like it was sometimes like a lot of my friends like we’re super hyper”.

**Parents and Guardians**

Parent answers within interviews had their own emerging themes. They were not coded separately within the four categories of program structure, library experience, interests, and inclusion the way that children’s answers were, but instead all together. This was done in order to give greater weight to the child’s answers. Parents that were interviewed had both positive and negative experiences at the library and variable opinions on what their child needed from the library and its programs.

**Major themes.**

There were several major overlapping themes within parent opinions. These included their child’s need of predictability, their child being overwhelmed by large story times or other programs, their child using visual schedules, their child getting distracted
during story time, parents worrying their child will be disruptive to others, their child needing to be active, programming based on child interests, and needing more readers advisory and resource navigation tools. One parent quote addresses most of these themes,

“to be able to have a visual and to be able to go through that and just be able to take them off and see what it is also too. And I think like you just giving some more movement which is obviously essential just making sure that after there’s a story then it’s time to get up and move and then come back to, you know being able to do that and having that so the kids can anticipate it too. And some days you know I said I think the themes work really well too and having the other stuff out to go with the story time and you know like we said maybe some more sensory busy stuff too so that way we wouldn’t only have to get our books and leave. You know if he has some bouncy chairs or something like that we could sit in here and interact a little while longer. So then that way it wouldn’t feel like ‘okay I don’t want to be disruptive to other people who are in here as well’.”

In this one statement, the parent asks for a visual schedule, predictability, physical activity, sensory activities, and child interest related themes and expresses their concern that their child may be disruptive to those around them. The need for predictability does not only include knowing what is going to happen within a program, but also when the program itself is going to happen. One parent expressed that when a story time did not start on time it really frustrated their child. Parents all said that complete visual schedules were not visible throughout library programs that they attended and that often they have to make their own for their child when attending library programs. It would show understanding of their child’s needs and provide aid in meeting them if librarians were to provide visual schedules that were constantly visible. Many parents also described regular, large story times as being overwhelming to their child, using words like noisy, chaotic, and overstimulating.
Parents worry about disrupting others was founded on their child not behaving age appropriately and up to the standards and norms of the library. One parent explained it particularly well:

“So when we would be in a library and you know and C did not have words and so the librarian might be like you know “be quiet” and he didn’t understand or if he’s being loud and people don’t like that you want to be able to take your child to the library but then you’re not they’re not a typically developing child and so having a space where your child can be themselves in a library and not be disruptive and I think in a library that’s hard because there are these norms about behavior and your child is not always going to be able to behave in that way. So your option is either to take them and like deal with people being unhappy with you that your child is there or not take them and your child doesn’t get to go the library.”

Some parents proposed solutions to this such as, flexible open door policies at programs, spaces in libraries where it is common knowledge that you can be loud, and fidgets or fidget friendly seating.

The readers advisory and resource navigation tools may seem to have nothing to do with the other themes uncovered in these interviews, but this is not the case. Having a strong structure that a child can rely on is something that ties many of these themes together and is also related to readers advisory and resource navigation tools. Understanding the structure of the library, the types of resources in it, and how to find things that they will like is another thing that will make children with ASD feel more comfortable in the library. Parents expressed a need for more subject related signage, more interconnected and easily navigable catalogs, and easy ways to see what other books their child may like based on the books that they have read.

Along with all these major themes another important one was that parents felt that their child had mostly positive experiences at the library, leading them to love the
library. Overall their children love books, enjoy playing with toys or computers at the library, and have had fun and learned at library programs. Many of the children interviewed frequently ask to go to the library, one parent said “(child) always, always wants to go to the library. ‘I want to go to the library, I want to go to the library, I want to go to the library’”. Another parent said, “I don’t think there’s anything he doesn’t like. For him this is a really happy place and he’ll ask to come here so I think for him… I think stuff we’re sensitive to he’s not. He’s unaware of and so for him its books and computer and crafts and like he’s happy. He’s happy here”.

**Minor themes.**

Along with the major themes a few lesser themes emerged. These included not knowing when programs were happening, wanting sensory oriented programs and activities, children needing free play, flexible open door programs, supported socializing, and nooks and private spaces in the library. A parent said about one library that their child particularly likes, “I think there’s just a lot of sensory stuff there for him like the trees that you can nestle into and the glass things you can look in”. A few others echoed this need for sensory activities, like bubbles, fun things to look at, and opportunities to bounce or swing, and other ways to get visual and tactile input. Only one parent specifically referenced sensory friendly and ASD specific programs. Their reasoning for this included limiting stimulation and being surrounded by an understanding and supportive community, which many other parents expressed a need for as well.

As stated previously two of the children did not regularly spend time in the library. It is important to examine parent explanations for this in order to understand the relationship of the library’s service provision and the family’s satisfaction with library
services. These parents shared that they both went to the library and picked out books for their child without the child being involved. At most perhaps the child would make a subject request for a type of book and then the parent would find it at the library for them. While both had bad experiences at the library the causes of these experiences were different. One parent stated that their child has “never been really happy to go to the library” and described the child’s unwillingness to participate in both story times and in picking out books with no definite cause known. This parent thought that more small private spaces in the library would help their child feel more comfortable. The other parent described the situation that led them not to take their child back to the library as comprising an exclusionary story time where they were asked to leave when their child began to run around and subsequently their child continually wanting to go run around in the story time room when on regular library visits. This parent explains the story time experience as “all the kids were sitting and silent and he couldn’t do that. So I felt like it was just inaccessible for us”. This parent expressed that in order to make a story time feel welcoming and accessible activities and playfulness need to be incorporated and also in their own words

“I think things like schedules or different areas of the library where you can you know if you can’t be quiet you can be welcome there. That just feels like a better experience. Anything like that to an Autism parent feels like ‘okay they get it!’”

**Comparisons**

Overall most of the children and parents agree that the library is a good place to be. They all agree that visual schedules are appreciated. A need for fidgets was something that came up for all age groups and with parents as well.
Older children are different from the younger children in the types of programs they are interested in and the size of the groups that they want at programs. It is perfectly understandable that children want age appropriate programming. The reasoning for older children wanting smaller groups when compared to younger children is less clear. It could simply be that with greater maturity they have a better understanding of their sensory needs and their levels of comfort. It could also be that younger children do not understand the reality of the numbers they cited or that they enjoy having a lot of people around more than the older children do. Perhaps it is also the difference in the types of programming these children attend; at a story time you are not expected to interact with others as much as you are at a book club. However, some older children recalled story times as being too loud and unpredictable for them when they were younger.

Parents’ thoughts on the library services for their children differ from the children’s thoughts, in that only the parents express worry or discomfort about the inconveniences to and perceptions of those around them. Parents also tend to cite large groups as overstimulating and chaotic if they say anything about group sizes at all, which not all the children agree with. Parent answers overall are different in that they show a greater depth of understanding of what the library could offer to meet the sensory, language, literacy, and social needs of their child.
Discussion

This study was partially successful in answering the research questions posed. From the results it can be seen that there is a relationship between accommodations for children with ASD at general programs and satisfaction with library services. These accommodations include a flexible open door policy, fidget friendly seating, physical activity during the program, visual schedules, and sometimes maintaining smaller attendance numbers. This relationship can be seen in multiple children and families asking for these accommodations and in children and families saying either that they don’t go to libraries or they don’t go to programs because of a lack of these supports.

There does not seem to be a correlation between specialized programs for children with ASD and satisfaction with library services, as only one parent said that they would like for the library to provide such a program and this parent otherwise indicated that library services were satisfactory.

These results support the use of universal design in libraries. Universal design uses “products and environments that are maximally usable for all and eliminate the need for further adaptation or specialized design” (Remy & Seaman, 2014, p 27). In libraries this includes the design of programs, the library space, interactions, and formats of materials. The Center for Universal Design (1997) recommends considering seven things when evaluating or creating universal design: 1. Equitable use 2. Flexibility in use 3. Simple and intuitive use, irrespective of experience user's knowledge, language skills, or
concentration level 4. Information perceptible regardless of ambient conditions or the user’s sensory abilities 5. Tolerance for error and compensation for unintended action 6. Low physical effort 7. Appropriate size and space for approach and use that allows for materials to be in reach, clear line of sight, and variable postures. Providing a visual schedule with pictures and words at a program along with verbally running through the schedule is one example of universal design, in that it allows for information to be perceived regardless of sensory abilities of the audience or the ambient conditions occurring at a program.

The interviews revealed some services and programs that children with ASD and their families currently use at their public library as well as ones that they would want to receive. The children and families in this study currently use the library to check out books, learn, play, socialize, and attend themed programs. Regularly scheduled public library story times are not widely used amongst this group, though one does attend a weekly program geared to older children that has Maker Space elements to it. The things that they want to receive that they are currently not receiving are no wait book delivery, visual schedules at programs, programs that consider children’s sensory needs and need for predictability, places to be louder at the library, and sometimes opportunities for sensory play at the library. The children wanted programs that aligned with their interests offered at their library. The older children wanted programs such as specialized book clubs or talks, author events with their favorite authors, computer programming, and higher level crafting activities. The younger children wanted their favorite games, shows, and toys to be included in programs.
Most of the children and families in this study had positive regard for public libraries. They felt that they could trust the librarians, that they are welcome, that they enjoyed their time there, and that they could find materials that would interest them. Two out of the eight families did not have these same positive experiences. In one of these families the child felt that the public library was “stupid” and “messy”, while the parent liked the library and was at a loss as to why her child did not. This child also seems to have a complicated relationship with reading at the moment. They seem to feel that having to learn how to read longer books by themselves is too hard and no fun. In the second family that had some negative feelings about the library the child did not really remember being at the public library very well and based most of their opinions on libraries on their school library, because the parent had ceased to take the child to the library after an experience that convinced the parent that the public library was not a welcoming place for a child with ASD. They felt that the library was unwelcoming, exclusionary, and uncomfortable.

A number of obstacles to library use for children with ASD and their families have been uncovered through these interviews. The unpredictability of library programming was a major one. Between not receiving regular e-mails updating families on library events and programs, librarians all having different approaches to programs, lack of visual schedules, and programs starting late there are many cited instances of library programming being unpredictable and therefore harder to choose to attend. A second major obstacle is parents feeling that the norms of the library are ones that their child are unable to reliably meet, such as staying quiet, not running, and knowing social boundaries. Another obstacle is the sometimes difficult to navigate catalog and shelves.
Clear subject signage on shelves, smaller sectioned off areas, interlinking records, and easy reader’s advisory tools were all asked for.

The only truly unexpected theme that emerged was that young children requested large groups at their library programs. The literature in this field indicates that this would not be the case for children with ASD. Small groups with less auditory and visual stimulation are the maintained approach in story times that are specialized for children with ASD. Perhaps this result points to young children wishing to take part in inclusive settings and activities. However, as pointed out earlier it could simply be due to young children lacking an understanding of abstract concepts and the causation of their feelings and needs.

The findings from this study cannot be widely generalized as a small portion of the population has taken part in this study, the sample is a convenience sample, and they were all recruited within the Triangle area in North Carolina. However, the themes found will be helpful for future research on library services to children with ASD, providing a basis for the improvement of library programming for children with ASD and their parents. A study that includes more families, greater demographic data, and further triangulated data with librarian perceptions would serve to further this line of research.

Limitations
There are several inherent limitations of this study. One such limitation is that some of the abstract concepts and questions that were posed, such as what the children would want to do for a library program, were not fully understood by the younger children in this study. Reliance on self-report is also a limitation of this study. Children’s self-reports are often skewed by their limited cognitive abilities, inconsistent levels of
engagement with the interview, and preference for positive characterizations (Byrne, 1996). Self-report is generally seen as a limitation when used as the singular data collection method with adults as well, mainly because perceptions do not always equal reality. Another limitation is that children included in this study were limited to children who had communication skills that would allow them to participate in the interview. This leaves out a significant amount of children between the ages of 5 and 11 who have ASD and have limited language or are nonverbal. The needs and library experiences of children with these characteristics may be completely different than the children with ASD who were interviewed for this study. Some possible differences could include a greater demonstrated need for parent support groups, a greater interest in sensory story times, or differences in comfort levels at the library.
Conclusion

This study shows that children with ASD are using the public library. This may be completely invisible to the librarian and so this serves as an important reminder. Whether or not a librarian is aware of children with ASD or special needs attending their library universal design of programs and library space is absolutely necessary in order to make the library fully accessible to its current and future patrons. While other studies on library services to children with ASD were drawn from to inform this study, this study is filling a gap in the literature by attaining the primary input from children and their families rather than the supposed experts, specialists, or librarians. Many of the answers concerning what children with ASD and their families use the library for and what they want library services and programs to look like support the current themes of the literature on this topic, but some new themes were also uncovered. Such as the possibility of younger children with ASD garnering greater enjoyment from larger programs and a general love of puppets. This study also suggests the need for further development of programs that engage older elementary school children with ASD; they are not going to be interested in the much lauded “sensory story time”. Overall this study reveals that children with ASD want to come to the library and want to attend programs, but could use additional supports and accommodations in order to do so. This studies implication to practice is mainly found in the desire for flexible programs with visual schedules. This points to current library programming requiring improvement in the use of universal design, so that library programs are designed to meet the needs of all children. It is important to note
that parents and children in this study seem on the whole much more interested in what Klipper (2014) calls adapted story times. Instead of what White (2016) said about specialized story times “familiarizing children with the pacing, structure, and activities in a library story time…[and] be a safe place for families to grow comfortable with the library” children with ASD and their parents would like all library programs and spaces to be safe and comfortable (p. 10). To further uncover what children with ASD want out of their public library future research should include more families, greater demographic data, and further triangulated data with librarian perceptions. Further research should also consider the limitations found in this study to do with children’s difficulty in understanding abstract questions and lack of inclusion of nonverbal children. Future research should endeavor to create increasingly simple interview questions and design adaptive interview techniques or observations that will allow for nonverbal children to participate
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Appendix A

Semi-structured Interview Guide for Children with ASD and family member:

1. **What kinds of activities do you enjoy?** If prompting needed suggest “such as games, books, music, toys, gardening, playing with bubbles etc”

2. **Are there any crafts that you like to do?** If prompting needed suggest “such as drawing, painting, knitting, etc”

3. **Have you been to the library in the last year?**
   - If yes
     - What did you do there?
     - Did you talk to the librarian?
     - What did you like there?
     - Was there anything that bothered you while you were there?
   - If no
     - Why do you think you haven’t gone to the library?

4. **What do you like best about the library?**

5. **What would you like to change about the library?**

6. **Have you been to a library program in the last year?**
   - a. What was it? (if yes)
   - b. How do you think the library could have made the program better?
   - c. What would make you want to go to a library program?
   - d. Who would you want to be there? If needed follow up with: Animals? Children your age? New people? People you know? A lot of people or just a few? Your sibling?

7. **Do you like story times?**
   - a. What did the librarian do at the last story time you attended?
   - b. What would you want the librarian to do during a story time? If needed follow up with: Be loud or quiet? Play music? Show pictures in a book or on a picture board? Follow a schedule that you can see and follow along with or give you a timer for each activity?
   - c. Do you like hearing the same stories or songs again and again?

8. **Can you tell me about your classroom at school?**
   - a. What do you like about your class?
   - b. What bothers you about your class?
Appendix B

To:

Subject: Library Programming for Children with Autism Spectrum Disorder

Dear Org. name/contact name,

I am Holly Broman, a Masters in Library Science student at UNC. I am conducting a research study on library use by children with autism spectrum disorder (ASD) and their families under the supervision of Dr. Amelia Gibson. I am writing in order to ask for your help in promoting this study.

The purpose of this research is to find out how children with autism and their families use and perceive public library programs, as well as potential improvements libraries can make from the perspective of children with autism spectrum disorder and their families. I am interested in speaking to children between 5 and 11 years old who have an autism/ASD diagnosis of any kind and their families for this study. Confidentiality of all study participants will be maintained.

Participants will take part in one in person meeting that will include a joint interview. This will take between an hour and 90 minutes. They will receive a $20 gift card for their time.

If you are able to display the attached flyer or share it via listserv or Facebook group to aid in the recruitment of study participants it would help in the publicizing of this study. If you have any questions, please contact me at hbroman@live.unc.edu. If this isn’t your area, please pass it on.

This study has been approved by the human subjects review committee of UNC. IRB #16-2830.

You may contact the Institutional Review Board at 919-966-3113 or by email to IRB_subjects@unc.edu.

Thank you,

Holly Broman

hbroman@live.unc.edu

MSLS student

School of Information and Library Science

University of North Carolina

Supervisor: Amelia Gibson, Faculty Advisor
Appendix C

University of North Carolina at Chapel Hill
Assent to Participate in a Research Study
Minor Subjects (7-14 yrs)

Consent Form Version Date: 11/12/16
IRB Study # 16-2830
Title of Study: Autism in Libraries
Person in charge of study: Holly Broman
Where they work at UNC-Chapel Hill: School of Information and Library Science
Other people working on this study:

I’m Holly Broman and I’m doing a research study with the School of Information and Library Science at UNC.

These are some things we want you to know about research studies:
Your parent needs to give permission for you to be in this study. You do not have to be in this study if you don’t want to, even if your parent has already given permission.

You may stop being in the study at any time. If you decide to stop, no one will be angry or upset with you.

Sometimes good things happen to people who take part in studies, and sometimes things happen that they may not like. We will tell you more about these things below.

We would like to know what you do at the library and what you like and don’t like about it.

The reason for doing this research is to help us learn what you want or need from the library.

You are being asked to be in this research study, because your opinion matters.

If you decide to be in this study, you will be one of about 10 pairs of children and their parents in this research study. During this study you will:

- Take part in an interview with your parent or guardian
- Interview recordings will be on tapes that will be kept safe in a locked box, then transferred to a locked computer on the University of North Carolina server. All recordings will be deleted by June 2017

Is it OK to record you during the study?
This study will take place at a **location of you and parent/guardian’s choosing** and will last 60 minutes to 90 minutes.

We will not tell anyone what you tell us without your permission unless there is something that could be dangerous to you or someone else.

Research is designed to benefit society by gaining new knowledge. You will not benefit personally from being in this research study.

Sometimes things happen to people in research studies that may make them feel bad. These are called “risks.” This study has no known risks.

Things may happen that the researchers don’t know about. You should report any problems to the researcher.

If you or your parents don’t want you to be in this study, please tell the researcher, and you don’t have to participate.

If you have questions you should ask me (Holly Broman). If you have other questions, complaints or concerns about your rights while you are in this research study you may contact the Institutional Review Board at 919-966-3113 or by email to IRB_subjects@unc.edu.

If you tell me “yes” to the following question, it means that you agree to take part in this research study. Do you want to be in the study?
Appendix D

University of North Carolina at Chapel Hill
Consent to Participate in a Research Study Adult Participants
Parental Permission for a Minor Child to Participate in a Research Study

Consent Form Version Date: 11/12/16
IRB Study # 16-2830
Title of Study: Autism in Libraries
Principal Investigator: Holly Broman
Principal Investigator Department: School of Information and Library Science
Principal Investigator Phone number: (919) 962-5106
Principal Investigator Email Address: hbroman@live.unc.edu
Faculty Advisor: Amelia Gibson
Faculty Advisor Contact Information: (919)962-0033

What are some general things you should know about research studies?
You and your child are being asked to take part in a research study. To join the study is voluntary.
You may choose not to participate, or you may withdraw your consent to be in the study, for any reason, without penalty.

Research studies are designed to obtain new knowledge. This new information may help people in the future. You and your child may not receive any direct benefit from being in the research study. There also may be risks to being in research studies.

Details about this study are discussed below. It is important that you understand this information so that you can make an informed choice about being in this research study.

You will be given a copy of this consent form. You should ask the researchers named above, or staff members who may assist them, any questions you have about this study at any time.

What is the purpose of this study?
The purpose of this research study is to learn how public library programs are being used, how library environments are being perceived, and the potential improvements they can make from the perspective of children with autism spectrum disorder and their parents/guardians.

You are being asked to be in the study because you are a parent or guardian of a child with autism spectrum disorder. Your child is being asked to be in the study because he/she is a child with autism spectrum disorder between 5 and 11 years of age.
Are there any reasons you or your child should not be in this study?
You should not be in this study if you are not a parent or guardian of a child with autism spectrum disorder. Your child should not be in this study if your child does not have a form of autism spectrum disorder or is not in the range of 5 to 11 years old.

How many people will take part in this study?
A total of approximately 20 people (including children) will take part in this study, all of them from around your local area.

How long will your part in this study last?
There will be one meeting lasting between an hour and 90 minutes that will include time to develop a comfort level between the researcher and you and your child and an interview. These will take place at locations of your choosing.

What will happen if you and your child take part in the study?
If you take part in this study, you will be asked to do the following:

- Contact the researcher to arrange a time and place for meeting.
- Meeting:
  - Meet with researcher along with your child and the researcher. Participate in comfort building activity (of you and child’s choice) and in a joint interview.

Your child will only take part in the meeting part of the study.

What are the possible benefits from being in this study?
Research is designed to benefit society by gaining new knowledge. You and your child will not benefit personally from being in this research study.

What are the possible risks or discomforts involved from being in this study?
There are no known risks in participating in this study. There may be uncommon or previously unknown risks. You should report any problems to the researcher.

What if we learn about new findings or information during the study?
You will be given any new information gained during the course of the study that might affect your willingness to continue your participation.

How will information about you and your child be protected?
Participation in this study is confidential. As such, names and contact information will not be included in interview transcripts, and all audio recordings will be kept on a secure server at The University of North Carolina at Chapel Hill. Any identifying information
obtained in order to set up interviews will be kept as hard copies in a locked box only for the duration of the study. These copies will be shredded June 2017.

Participants will not be identified in any report or publication about this study. Although every effort will be made to keep research records private, there may be times when federal or state law requires the disclosure of such records, including personal information. This is very unlikely, but if disclosure is ever required, UNC-Chapel Hill will take steps allowable by law to protect the privacy of personal information. In some cases, your information in this research study could be reviewed by representatives of the University, research sponsors, or government agencies (for example, the FDA) for purposes such as quality control or safety.

While audio recordings are still on the recording device they will be kept in a locked box. Audio recordings will be transferred as soon as possible to a secure server at The University of North Carolina Chapel Hill. All audio recordings will be destroyed June 2017.

Check the line that best matches your choice:

_____ OK to record me and my child during the study

_____ Not OK to record me and my child during the study

**What if you or your child want to stop before your part in the study is complete?**
You can withdraw yourself or your child from this study at any time, without penalty. The investigators also have the right to stop your or your child’s participation at any time. This could be because you have had an unexpected reaction, or have failed to follow instructions, or because the entire study has been stopped.

**Will you or your child receive anything for being in this study?**
You will receive a $20 amazon gift card for being in this study.
Your child will receive no direct benefit from participating in this study.

**Will it cost you anything to be in this study?**
The only potential cost associated with this study is possible travel costs.

**What if you or your child have questions about this study?**
You and your child have the right to ask, and have answered, any questions you may have about this research. If you have questions about the study (including payments), complaints, concerns, or if a research-related injury occurs, you should contact the researchers listed on the first page of this form.

**What if you have questions about your rights or your child’s rights as a research participant?**
All research on human volunteers is reviewed by a committee that works to protect your rights
and welfare. If you have questions or concerns about your rights or your child’s rights as a research subject, or if you would like to obtain information or offer input, you may contact the Institutional Review Board at 919-966-3113 or by email to IRB_subjects@unc.edu. Are you a member of the NC Autism Registry? (check line below)

_____ Yes    _____ No

If you are a member of the NC Autism Registry referred by them to this study then the researcher will need to report your name to the Research Participant Registry (RPR) Core and share that you participated. Do you agree to this? (check line below)

_____ Yes    _____ No

**Participant’s Agreement:**

I have read the information provided above. I have asked all the questions I have at this time. I voluntarily agree to participate in this research study. I also voluntarily give permission to allow my child to participate in this research study.

________________________________________________________________________

Printed Name of Research Participant (child)

________________________________________________________________________

Signature of Research Participant (parent)    Date

________________________________________________________________________

Printed Name of Research Participant (parent)

________________________________________________________________________

Signature of Research Team Member Obtaining Consent and Permission    Date

________________________________________________________________________

Printed Name of Research Team Member Obtaining Consent and Permission