# Finding Museum Visitors with Autism Spectrum Disorders: Will Art Help in the Search?

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### Abstract

Visiting a museum can be a tremendously stressful event for families that include children with Autism Spectrum Disorders (ASD). The goal of this research study was to find what concerns families have when visiting a museum, if there are any intervention materials caregivers prefer, to examine behaviors of children with ASD while in the museum, and to see if an art-making activity after the museum visit could be directly tied to the museum experience. Results indicated that museums continue to be stressful for families, and parents would like materials to help reduce anxiety in their children before and during the visit. While in the museum, parents tried to focus their children's attention on interesting things, but many children became overly excited and desired spaces within the museum to be more active. Art-making after the museum visit allowed children to reflect back on what they saw and did during their experience.

**Keywords:** Autism Spectrum Disorder; museum; art-making; family visits.

# The Often Forgotten Visitor

Autism Spectrum Disorder (ASD) is a complex neurodevelopmental disability that currently has seven decades worth of research, which has led to vast improvements in both diagnosis and intervention options. With the increase in diagnoses, ASD has become the fastest growing developmental disability in the world. The Center for Disease Control (CDC) (2015) estimated that about 1 in 68 children have been identified with ASD, a figure that has remained unchanged today. Being aware of ASD and its multiple severity levels will be an important step in helping children with ASD across different educational settings. One of these educational environments includes the museum, which can offer families that include visitors with ASD specialized programs and materials to benefit their overall museum experience.

However, visiting a museum can be a tremendously stressful event for many families, even families without a child with ASD. This event can be magnified for families that include a child with ASD as they may lack the ability to read calming social cues from others, have developed inappropriate coping strategies, or have had negative museum experiences in the past. Children with ASD, like many children, may experience feelings of confusion, being lost, and sensory overload within a new environment. Ultimately these will increase stress and anxiety in the child as well as the family at large. Mulligan, Rais, Steele-Driscoll, and Townsend (2013) noted that families may be reluctant to pursue outings to places such as museums, citing worries that their child may become upset with the novel experience or overwhelmed by the behavioral demands of the new and unfamiliar environment.

Langa et al. (2013) found that families that include a child with ASD are often anxious around crowds and waiting in long lines can create potential sources of discomfort if a child becomes stressed. Parents often feel forced to obstruct the museum experience with quick interventions or exit to a quieter space until the stressed behaviors recede, thus negatively impacting the overall museum experience. Families that include children with ASD are often faced with challenges to accessing museums comfortably and benefit from museum programs and exhibitions (Au-Yeung, Ho, Lam, Leung, and Wong 2010).

Because of the uniqueness in family outings with a child with ASD, it is important for

families to properly plan when visiting a museum in order to minimize the stress, anxiety, and feelings of tension. The museum plays a vital role in reaching out to these visitors and has the potential to make the museum experience more meaningful, accessible, and inclusive for them. While larger well-known museums across the United States have extended their programming efforts to include visitors with ASD, the vast majority of museums throughout the country have forgotten these unique visitors.

The purpose of this article is to shed light on these forgotten visitors and determine just how children with ASD and their families have experienced museums in the past and what concerns they may have when visiting museums in the future. Beyond documenting the museum experiences of family participants, this article also explores art-making activities and their connection back to the museum experience. Using a qualitative research approach, the answers to these questions were found by interviewing parents and their children with ASD, and by examining the art products made by children with ASD. Based on these findings, suggestions are made for museums looking to implement inclusive programming to fill the gap between creating positive experiences and working with forgotten populations like visitors with ASD.

# **Finding Visitors**

Museums undoubtedly need to find their forgotten visitors, like families that include children with ASD, in order remain important places of interest within their community. Tazi, Vidal, and Stein (2015) indicated the need for museums to become more accessible to these types of diverse audiences in order to promote learning, personal empowerment, and social inclusion. By looking at the rise in visitor-centered museum programming, the need for special education practices, and art making within the museum, staff members can establish a set of tools that will help them during the search for their forgotten visitors.

#### The Rise of Visitor-Centered Museums

The first officially established 'museum', as we know the term today, was the Ashmolean Museum opened on the Oxford University campus in 1683 (MacGregor 2001). Other museums that followed were the British Museum in London, the Louvre in Paris, and the Smithsonian in Washington D.C. Visitors came to these museums out of curiosity to see fascinating objects that were donated by aristocratic collectors. With these unique collections, museums developed into places of highly intellectual research and places of cultured education (MacGregor 2001); thus creating an elitist museum that offered little to the general public (Hill 2016).

Museums have evolved greatly over time, and visitor-centered exhibitions have become more relevant (Simon 2010), a push that started in the 1980s (Hooper-Greenhill 1992). The 1980s brought about the reshaping of best practices in museums, which can be accredited to audience activism and cultural critiques. This initial transformation could not have happened without input from visitors themselves, as well as a critical examination of art histories and the development of museum studies programs (Kreps 2003). The 1990s revisited objects within collections and exhibitions as they were seen through the visitor's interpretation and perspective (Duncan 1995; Karp and Kratz 2014). Museum education programs in universities were also on the rise as the way knowledge was shaped within museums was rethought in a way that focused the mission of museums around the visitor, not the object (Hooper-Greenhill 1992; Weil 1999).

Museum studies and education programs brought up the idea of participation as a way to connect museum collections and their programming activities to misrepresented communities. Instead of engaging in the design of exhibitions based solely on information delivery, museums starting looking toward participation and programming where the individual actively constructs knowledge through accessible and personally relevant learning experiences (Falk and Dierking 2000a; 2012b). Simon (2010; 2016) proposed that providing visitors with opportunities to voice their opinions and participate in the development of museum experiences, would lead to museums that are more appreciated by and captivating for everyone. Museums also had to reevaluate their audiences' needs yet again: as Ballantyne and Uzzell (2011) asserted, museums had become more visitor-centered due to the large decline of public funding for such traditional institutions and the rise in other recreational options available to families.

All of these milestones have led to the reshaping of the functions of today's museums, which include the creation of positive experiences for visitors, providing educational opportunities, and preserving/growing collections. In order to retain a relevance to society, museums must continue to improve by becoming active and receptive to new ideas within their communities, as they have done in the past. Throughout the ongoing transition to a visitor-focused environment, museum education departments have been working more with disenfranchised communities, such as families that include children with ASD.

# Need For Special Education in an Inclusive Museum Setting

Educational laws, practices, special education support systems, and art have had major positive impacts on young people with special needs (Berger 2013, Fox and Macpherson 2015). These practices have increased the awareness of individuals with special needs and expanded educational practices, all while diminishing negative stereotypes in order to accept the strengths of individuals (Berger 2013). Nonetheless, museums have yet to take on the responsibility to devote programming to incorporate the needs of visitors with special needs. As Weisen (2010) pointed out:

Billions have been spent in recent years on new museums, major extensions and refurbishments across the globe, with little or no regard paid to providing a shared experience of the collections for disabled peoples. The cumulative effect is discrimination on a grand scale against disabled people (2010: 54)

Museums can undoubtedly offer a meaningful experience to their visitors and can be extremely beneficial to visitors with special needs like ASD. However, people with special needs are among the most isolated, vulnerable, and least mobile group, requiring more support to access both the exhibition space and the collections within them (Fox 2014). Even though visitors with special needs are vulnerable, museums can contribute to social inclusion through specialized programs (Sandell 2003).

According to Fox, the inclusion of people with disabilities within a museum experience can provide a number of benefits: 1) high quality learning experiences that begin with the interest of the group, 2) vibrant resources for inspiration and creative experiments, 3) enhanced opportunities for reflection, practical experiences, and active involvement, 4) opportunities to make art in new ways with the gallery space, 5) opportunities to challenge perceptions of marginalized people and the values placed on them and their creativity, 6) opportunities to develop new ways of working with collections that are beneficial and transferable, and 7) educational benefits (2014). To accomplish these benefits within a museum, there is a need for a trained educational staff willing to find and reach out to visitors with special needs.

With the rise in ASD prevalence and its awareness, many research studies have been successful in shedding light on the family experience when visiting a museum and museums have responded with inclusive ASD programming, most notably large, well-known museums. Deng (2015) described the need for further research that opens the door to more opportunities for collaboration between the special needs community and museums because an all-inclusive museum experience plays a vital role in cognitive and social development of young visitors with ASD. Perhaps the inclusion of art-making can lead to more positive museum experiences and a desire to return to the museum at a later date.

# **Art-making Can Benefit Museum Visitors with ASD**

Due to possible limitations and deficits often associated with ASD, people with ASD may have a hard time engaging in art activities appropriately without specialized attention or proper interventions. But even with those difficulties, people with ASD have benefited from exposure to making art and continue to create art at differing skill levels. Art-making activities have been successful with these populations because art has the ability to help meet the following goals: developing imagination, sensory regulation, emotional self-expression, developmental growth, visual-spatial skills, and the promotion of recreation skills (Martin 2009a, 2009b; Gerber and

Kellman 2010). The misconception that people with ASD lack the required skills to participate in art making activities have been dispelled as people with ASD continue to create great art and have successful art-making experiences (Burdick, 2011).

Art-making also benefits this population as they may think better and express themselves in a more meaningful way through visual representations (Grandin and Sacks 2006). Research has suggested that the autistic brain consists of three kinds of mind; those that think in facts, those that think in patterns, and those that think in pictures (Grandin and Panek 2013). Within the autistic population, these visual thinkers whose thoughts rely on pictures may be more strongly connected to art making activities. While visual thinkers may be more strongly connected to art making, they all do not see the world in the same way, showing the complexity of the disorder. Temple Grandin, a researcher with ASD, herself said, 'I see like an artist... but I don't feel like an artist' (Grandin and Panek 2013: 168).

Museums have the ability to facilitate the benefits of art making by including art activities into more meaningful experiences through specialized programs. Positive and meaningful museum experiences can ultimately lead to the creation of art based on the learning that took place within the exhibition. Csikszentmihalyi and Hermanson (1995) suggested that the experiences within a museum could inspire visitors to see the relationships between the exhibits and their own concerns, and perhaps be stimulated to create art. Bhatia and Makela (2000) also recommended another important aspect of making meaningful museum visits would be to ask children to share their experiences using writing, drawing, and discussion after the museum visit. Museum educators need to follow up on learning after the museum visit in order to continue the museum learning and experience, and art making shows great potential as it offers visitors a way to reflect on their museum visit.

Creating art within a museum also opens an opportunity for Inclusive Arts to take place. Fox and Macpherson (2015) described Inclusive Arts as a creative collaboration between disabled and non-disabled individuals in order to support increases in knowledge, skills, and competence within the arts. Inclusive Arts can help reveal the creative and artistic potential of people with developmental disabilities, facilitates different modes of communication, and promotes individual self-advocacy (Fox and Macpherson 2015). Inclusive Arts is about more than art making, as it can be applied directly to the museum experience and the community.

#### Time to Move Forward

Some major museums, like the Museum of Modern Art and Metropolitan Museum of Art in New York City or the Field Museum in Chicago, have provided ASD friendly programming for their visitors. However, the majority of museums across the US have yet to take on the responsibility of finding visitors who need these types of specialized programming in order to have a positive museum experience, possibly due to funding or the lack of knowledge in the needs of individuals with disabilities. Visitors with special needs are among the most isolated and unique group of people, requiring more support to access both the museum's many spaces and the objects within them. Furthermore, there has also been an increase in the prevalence of ASD, as it has become the fastest growing developmental disability in the world (CDC 2015). But even as the understanding and audience diagnosed with ASD has increased, the museum has yet to become truly inclusive for this group. However, it has become clear that museums are in a great position to develop a more inclusive mission by providing visitor-centered programs designed to find visitor groups that are often forgotten.

#### Visitor Research

The purpose of this study was to find what concerns families have when visiting a museum, to see if there are any intervention materials parents prefer, to examine behaviors of children with ASD while in the museum, and to see if an art-making activity after the museum visit is directly tied to the museum experience. To guide this research, pragmatism was accepted as the methodological paradigm because of its strong emphasis on research questions, solving everyday problems, and multiple modes of meaning making (Biesta and Burbules, 2003). While pragmatism tends to point toward mixed methods research, there is a practical and creative side

to qualitative research involving skillfully open-ended interviewing questions and observations (Biesta and Burbules 2003, Dewey 2005), which was better suited for this research project.

The research study included four families, each consisting of children diagnosed with ASD. There were 15 total participants: seven children diagnosed with ASD, three neurotypical siblings, and five parents. Participants with ASD ranged in age from 3-14. Child participants and their families were primarily chosen for their diagnosis of ASD, but also by their email or text message response in desiring to participate in the study after reaching out to local ASD support groups in both Tallahassee Florida and Paducah Kentucky.

As stated previously, many large, well-known museums have already found their visitors with ASD, but the majority of museums across the United States are still looking. Museums without established programming tend to be small to midsize museums, which focus their collections around local, state, or regional artifacts (Sandell and Nightingale, 2013).



Figure A: Non-participant at the River Discovery Center's boat simulator. Photo courtesy of River Discovery Center.



Figure B: Riverboat models at the River Discovery Center. Photo courtesy of River Discovery Center.

But even larger museums that lack a robust educational staff or funding can also. Because of this, the research locations chosen for this study included two museums that fit the description, The River Discovery Center in Paducah Kentucky (see Figure A and B) and The Museum of Florida History in Tallahassee Florida (see Figure C and D). Both locations were easily accessible, are similar in exhibition interactives, and have open weekend hours. The River Discovery Center's goal is to encourage it visitors to engage and learn more about the environmental, cultural, and economic benefits of America's rivers, and in particular upon the Four Rivers Region. The Museum of Florida History focuses its efforts on the past and present cultures of Florida, and promotes appreciation of the state's diverse heritage.



Figure C: Non-participant in 'Florida's First People' exhibits at The Museum of Florida History. Photo courtesy of The Museum of Florida History.



Figure D: Hiwatha riverboat recreation at The Museum of Florida History

## Step by Step

In order to explore the concerns parents of children of with ASD had when visiting a museum, pre-visit interviews were conducted with parents as well as their children in a semi-open format at a location of their choosing. Parents were asked the following questions:

- 1) Have you ever taken your child to a museum, and if so, where?
- 2) What concerns do you have when taking your child to a museum?
- 3) Are there any behavior or communication concerns that are specific to your child in public environments?
- 4) How can museums, in general, become more accessible to your child and other children on the spectrum?
- 5) Does your child like to create art, and if so, what do they create and how often?
- 6) What are the general likes and dislikes of your child?

Child participants with ASD were asked the following questions:

- 1) What are some of your favorite things?
- 2) What are some things that you dislike?
- 3) What is a museum?
- 4) Have you ever been to a museum?
- 5) Do you like making art?

During the museum visit, the primary researcher observed the family from a distance while taking field notes, and routed the families' movement through the museum using a mapped exhibition diagram. While observing the families, the primary researcher noted where families spent the most time, how much time they spent in the museum, as well as their interactions. Museums were visited as soon as they opened during weekend hours, and often the participants were the only visitors in the museum.

After the museum visit, child participants were provided with multiple 2D art media, and simply asked to create art without explicit instructions, which was then evaluated to see if the museum visit impacted their immediate art making through subject matter. While children participated in art making, their parents were asked post-visit questions in a semi-open format. Parents were asked the following questions:

- 1) Can you summarize your family's experience in the museum?
- 2) Did your child seem to like or dislike the museum?
- 3) What was your child's favorite object in the museum?
- 4) In your opinion, did anything go wrong or upset your child?
- 5) What could the museum have done differently to improve you and your child's museum experience and/or accessibility?
- 6) How can museums, in general, become more accessible to your child and other children on the spectrum?

Post-visit interviews and art-making with parents and children took place within the Florida History Museum education office or at picnic tables outside of the River Discovery Center.

## **Research Results**

#### Before The Visit

During the pre-visit interview sessions, many of the children with ASD choose not to participate, but those that did indicated that they had an interest in art-making and described museums as 'places where people display historical objects and models with cool facts,' 'big places with a bunch of factual stuff that sometimes I like or dislike,' and 'dinosaurs, animals, and fossils.' Children were well aware of the idea of a museum and what they might see and do, even though many had never visited the Museum of Florida History or River Discovery Center before. While children displayed excitement, parents addressed their concerns and ways museums could become more accessible.

Among the top concerns of parents were that they described their children as runners or bouncy, and that they did not follow instructions easily, making all family outings difficult. They admitted that a museum environment made things increasingly problematic, as they did not want to create a stressful environment for other visitors or potentially have their children damage objects. Parents were also worried about their children experiencing sensory overloads associated with lighting, visuals, and sounds, which could also become triggers for negative behaviors. One parent stated, 'I want him to be entertained and get something out of it, but worry about meltdowns.' Other concerns included complicated language or subject matter within museum labeling that made it difficult for parents to describe artifacts to their children.

In order to address these concerns, parents believed the museum could become more accessible by providing materials to reduce anxiety and allow their children different ways to explore the museum. Parents most often desired museum staff members that were welcoming, patient, and understood the needs of children with ASD, museums that provided hands on experiences, social narratives that children could read before coming to the museum, sensory maps of places that may be of concern, and special times to visit with less noise and less people. A parent stated, 'I would love a space that touching is ok and being loud and bouncy aren't discouraged.'

# During The Visit

Families started their museum visit at the admission desk listening to an introduction by the museum staff, or looking at the map (Museum of Florida History). Parents frequently informed their family about appropriate behavior and a plan for the visit. The majority of families started their visit by reading and talking about almost every exhibit on display but soon would transition into a faster pace during the second half of their museum visit, often dictated by the speed and enthusiasm of their children. For one family, the entire visit could be best be described as a social exchange between the entire group, where they participated in every interactive, read most of the labels, and took turns describing objects to family members. Other families moved through the museum with their children running from exhibit to exhibit to family members and then back to exhibits. Due to the lack of other visitors in the museums during the visits (when the museums first opened), parents felt better about allowing their children to roam as they wished and parents followed to explain artifacts that interested the children. Another family struggled to keep one child with ASD calm and used a weighted blanket, a calming device often used with children with ASD, on the child before deciding that it would be best to leave the museum early.

Even though the museum experience differed from family to family, the children with ASD were clearly excited to be there and the majority had a good time. Beyond displaying signs associated with ASD, like the repetition of phrases, the children were often overheard saying, 'pretty freaking cool,' 'This is really awesome,' 'cool,' 'Can we take a picture of that to show dad?' 'It's so cool,' 'Over there, over there!' 'I wanna see more,' and 'Mom, can I show you more stuff? Come on... I want to show you more.'

## After The Visit

Directly after the museum visit, families sat down with the primary researcher for a post-visit interview and an art-making activity. While the children were participating in creating art, parents reflected on their family's experience and were asked again how museums could become more accessible to their children. Parents summarized their families experience as, 'We had a pretty good time going through the museum,' 'It was crazy, a foot race, like he was on a mission,' and 'It was fantastic... they seem to appreciate everything more.' Even parents who seemed overwhelmed and frantic during the museum visit described the day as a pleasurable one and expressed a desire to return at a later date.

When reexamining the question 'how can museums become more accessible?', parents continued to push for social narratives and other pre-visit orientation materials, one saying, 'It really seems simple, but it's usually the most simple little thing that can make or break a new experience for a child on the spectrum.' Other parents mentioned keeping lighting and audio/ visual noise levels down, having a pleasant and patient staff, having interactives and objects that were safe to touch, and even accessibility times for families which have a child with special needs. Another parent addressed a common concern that many parents of children with ASD have in regard to the expenses involved in doing family activities, particularly activities that may become stressful. The parent stated, 'It's important for museums to be free, so families with children with ASD aren't hurt financially when their child may become upset and the family feels the need to leave early.' Museums can easily improve the museum experience by creating programming to address the requests of parents. Art-making also proved to be a beneficial addition to the museum experience as participants were able to reflect back on their experience (see figure E).



Figure E: Participants creating art at the Museum of Florida History



Figure F: Participant artwork featuring a helmet and rifle relating back to the World War 2 gallery within the Museum of Florida History.



Figure G: Participant artwork depicting participant looking through an antique camera display within the Clyde Butcher photography exhibition at the Museum of Florida History.



Figure I: Instead of drawing, participant wrote the words 'boat' and 'river', after visiting the River Discovery Center.



Figure J: Participant artwork, which was described as a map of the museum with all the 'stuff and things'. In the upper right corner is the Mastodon exhibit at the Museum of Florida History

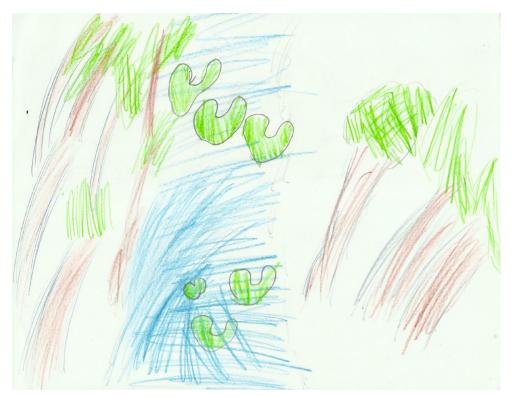


Figure H: Participant created artwork featuring a river with trees and lily pads connecting back to the River Discovery Center.

While parents were reflecting on their museum experience, children with ASD were busy making art to reflect back on their own. Older child participants tied art-making directly back to the museum experience, drawing their favorite museum objects (see figure F, G, and H). Younger visitors either wrote words (see figure I) or used markers to scribble on their papers (see figure J). These children were asked to explain what they created and the majority of these art works could still be tied directly back to the museum visit.

#### Conclusion

Visiting a museum continues to be a tremendously stressful event for all families and presents unique challenges for families that include children with ASD. Parents of children with ASD often worry that their child may become upset, overwhelmed, and anxious around crowds or the new behavior demands. Parents often decide to exclude their families from museum visits to order to avoid the stress or sensory overloads associated with a visit. However, Museums can unquestionably find and reach these forgotten visitors by providing specialized and inclusive visitor-centered programming, looking into special education practices, and creating art making opportunities within the museum.

Visitor-centered exhibitions are becoming increasingly important to museums as they look toward active participation as a way to connect museum collections and their programming activities to communities. The inclusion of special education practices can bring a number of benefits to the museum, like high quality learning experiences, enhanced opportunities for reflection, and chances to make art in new ways, to name but a few. Art-making activities can enhance the museum experience by providing visitors additional time to reflect upon their

visit. Art-making also benefits visitors with ASD as it allows them the opportunity to express themselves in meaningful ways (Grandin and Sacks 2006; Gerber and Kellman 2010; Fox and Macpherson 2015).

During this research study, families remained concerned when visiting a museum and parents expressed a desire for intervention materials like social narratives, pre-visit orientation materials, and accessibility hours for children on the spectrum in order to create more positive experiences. Art-making activities also proved to be a beneficial activity for families as the majority of the art created directly tied into the museum experience and exhibitions seen. Overall this research study uncovered the answers to several questions that will assist museums in the search for forgotten visitors, like visitors with ASD, and ways to create positive and inclusive museum experiences for all. The study also outlined the wants and needs of families with children with ASD when visiting a museum. This research also allows museums to move into the future by becoming more visitor-centered and becoming about someone (the visitor) instead of something (the object) (Weil 1999). It's time for museums to start looking for their forgotten visitors.

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#### **Notes**

- <sup>1</sup> Center for Disease Control. (2015) 'Who is affected. Retrieved from <a href="http://www.cdc.gov/ncbddd/autism/facts.html">http://www.cdc.gov/ncbddd/autism/facts.html</a>. Reviewed on 2015, October 2.
- Child participants, interviewed by author, digital recording, 21 April 8 July 2017, Tallahassee Florida and Paducah Kentucky.
- Parent participant recorded by author, digital recording 21 April 8 July 2017, Tallahassee Florida and Paducah Kentucky.
- <sup>4</sup> Parent participant, interview, 21 April -8 July 2017.
- Child participants, recorded by author, digital recording, 21 April 8 July 2017, Tallahassee Florida and Paducah Kentucky.
- Parent participant, interview, 21 April 8 July 2017.
- <sup>7</sup> Parent participant, interview, 21 April 8 July 2017.
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