

Sesame Street and Autism: See Amazing in All Children Evaluation Report Executive Summary



GEORGETOWN UNIVERSITY
Georgetown University Medical Center

Center for Child and Human Development



Children's National™

Center for Autism Spectrum Disorders

Background

Autism Spectrum Disorders (ASD) affect approximately one in every 68 children in the US, but while the ASD diagnosis is common, the public's understanding of ASD is varied. Advocacy and policy efforts have made strides in increasing awareness, but meaningful community integration and acceptance have been more difficult to achieve. For example, a recent study revealed that ASD children are five times more likely to be bullied than their peers. ASD individuals can experience health disparities, discrimination, and even physical violence. Research is limited in this area, but what exists suggests that increasing knowledge about ASD is associated with more positive attitudes and reduced stigma.

ASD children are not the only targets of stigmatization; their caregivers may also be subjected to biases from others. Research suggests that these experiences can contribute to negative attitudes, increased levels of stress, and cause parents to feel more social isolation. Some parents of young ASD children experience high levels of strain, but it is important to emphasize that not all caregivers experience having an ASD child negatively. Parents whose perception of their child and their child's ASD is more positive tend to experience less distress, suggesting a powerful target for intervention.

When anyone wants to know anything these days, most people first do an Internet search. This has been a particularly risky prospect for those who want to know about ASD, because that first search returns a deluge of misinformation, frightening statistics, and terrible predictions for the future of ASD individuals. It can be difficult to find information on the web about the gifts of ASD, appropriate services and supports, and positive stories about some of the incredible people on the autism spectrum. How could a parent, teacher, or community member possibly work to reduce biases and stigma, increase acceptance and inclusion, and empower ASD children with knowledge and positive information about themselves amidst these negative messages?

Purpose

To promote knowledge and acceptance of ASD children age two to five, Sesame Workshop created an online initiative, *Sesame Street and Autism: See Amazing in All Children*. The website includes general information about autism and links to resources for families and the public. The website features narrated videos that reflect a diverse group of ASD children, an electronic storybook that features Julia, a new Muppet character who is Autistic, and eight daily routine card sets. The routine cards are designed to be used by parents with their child to build new independent living and community skills, such as brushing teeth or crossing the street. The website and the resource materials were developed to reduce stigma and build positive perceptions about ASD with input from autistic self-advocates, people who serve the autism community, and parents, filling a crucial need in our community.

Goals of the Evaluation

An evaluation of the *See Amazing in All Children* initiative was conducted by researchers at Georgetown University and Children's National Medical Center. The goals of the evaluation were to:

1. Gather **reactions to the website content** to assess the acceptability of the *See Amazing in All Children* online materials.

2. Assess whether exposure to the *See Amazing in All Children* materials **promotes increased knowledge and acceptance of ASD**.
3. Determine whether exposure to the *See Amazing in All Children* materials **promotes increased positive attitudes about ASD, specifically feelings about the effect of having an ASD child on community inclusion, parenting strain, and parenting competence**.

Sample & Method

The study was designed to provide an innovative and comprehensive evaluation of the impact of *See Amazing in All Children* on the parents of young children. First, we collected information from large groups of parents of ASD children and, importantly, parents of non-ASD children to determine how they responded to the materials. Second, by using a nationwide recruitment strategy, approaching parents by email, websites, flyers in clinics and service programs, and social media, we were able to enroll large number of individuals, most of whom had not visited the *See Amazing* website. Third, the survey instruments covered areas conceptually-relevant to the goals of the initiative and were based on well-established measures.

The majority of the 331 parents of ASD children were recruited through an autism advocacy or service organization. Approximately half of these parents had either heard of the *See Amazing* initiative or had some familiarity with the website but only 25% had actually visited the site before the study. The majority of the 698 parents of non-ASD children (75%) had never heard of the initiative and only 3% had been to the website.

All data collection took place online. Participants were sent a link and asked to complete an initial set of measures. They were then instructed to review the *See Amazing in All Children* website. One week later, both groups of parents were asked to complete the measures again (post-viewing) and rated how they felt about the website and resources. Parents of ASD children completed a third survey one month later to explore whether further changes in their attitudes or behaviors emerged over time. Knowledge and acceptance of ASD was assessed in both parent groups. Parents of ASD children were also asked about their perceptions of their inclusion in the community and the degree to which they experienced stress or felt empowered.

Goal 1: Reactions to the Website Content

Opinions of the website by both parents with an ASD child and parents with a non-ASD child were consistently and remarkably positive (see Figure 1 below). More than 87% participants in the evaluation agreed or strongly agreed that they enjoyed visiting the website, would recommend it to others, would use it themselves, and felt that the website makes information about ASD more accessible (see Figure below). More than 70% agreed or strongly agreed that they had a better understanding of autism after using the website.

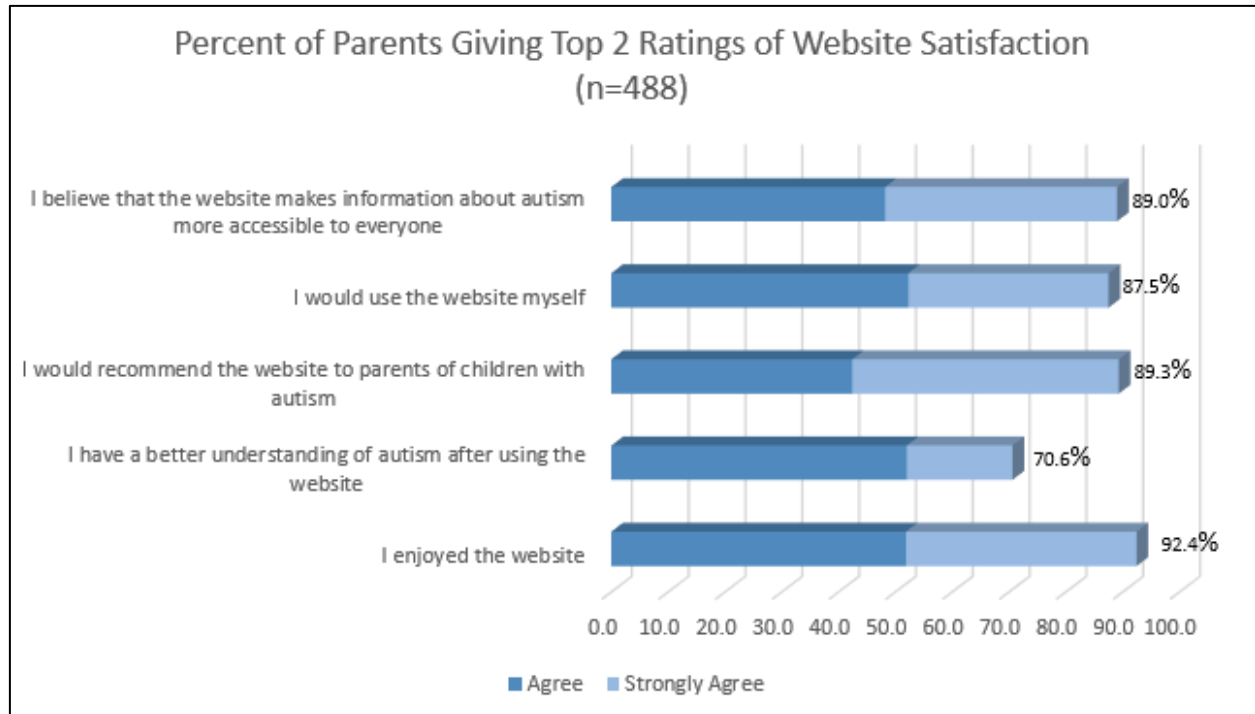
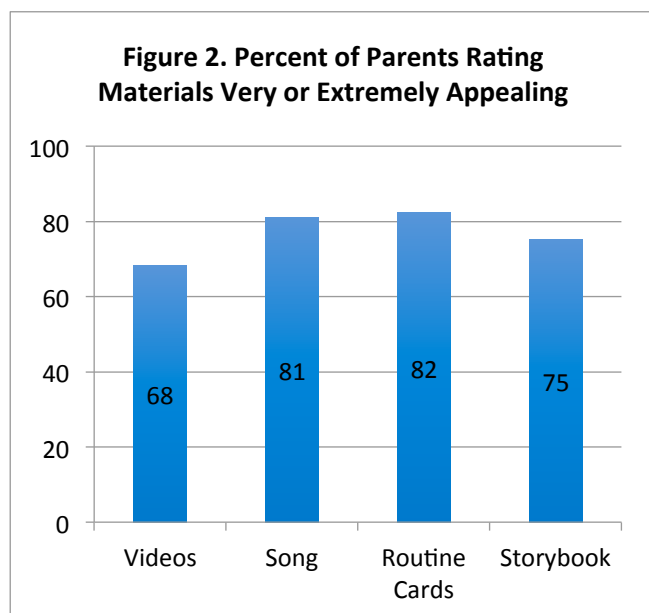


Figure 1. Parent Ratings of Website Satisfaction

Only a few parents found the organization a little confusing. One said that she “had a difficult time trying to navigate the website, which usually isn’t a problem for me. I think it is just because it is organized a bit differently.”

Interestingly, the daily routine cards, originally created for ASD parents, were rated as the most

One parent said, “I think the daily routine cards are the most helpful. I really loved how it went step by step on how things are done. This is an area that I am working on with my son so it went above and beyond. I found that being able to print off the cards [was] a major plus so I can put them on a poster board and do games with him on the correct order and let it serve as a visual reminder to him of how to do things.”



helpful component of the website by both parent groups (Figure 2). This suggests that the daily routine cards would be a welcome addition to Sesame Street’s resources for all children.

Several parents of ASD children stated that they

plan to incorporate the cards into their child’s daily routine. A few parents of ASD children

stated that they would love to see more book options. Many said that their child loved the

“I really like the videos as well – I have a 6-year old nephew that is trying to understand why my 4-year old son doesn’t talk like him and he is starting to have questions. I feel these videos would help him have a better understanding too!”

storybook and they wished that there were more stories for them to read with their child. One parent suggested that the storybook would be a good way to explain to preschoolers how to include children with ASD in play.

Both groups of parents reported that they really enjoyed the videos. One parent wrote, “I most enjoyed the videos where they talked and interacted directly with the children. It is very humanizing and shows that children on the spectrum are charming, socially motivated, and communicative.” One parent suggested that a sentence synopsis of each video would be helpful to make navigating the videos easier.

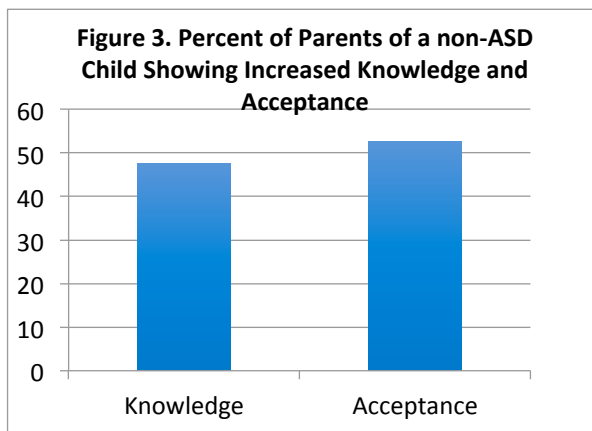
Parents also found the materials in the “Read More” section of the website to be very helpful. These resources provide tips on important skills such as such how to talk with a parent of an ASD child and explaining autism to young children. A few parents suggested that these materials be highlighted so that they are more obvious. One parent of a non-ASD child said, “I found the ‘Read More’ resources to be very helpful, especially all the talking points and tips. I wish they were somehow featured more prominently on the website.”

Goal 2: Promoting Knowledge and Acceptance of ASD

Increasing knowledge about and acceptance of ASD in the general population allows people to better understand feelings, behaviors and needs of autistic individuals, which are the cornerstones of increased compassion, tolerance, and inclusion. Promoting knowledge and acceptance are key goals for the *See Amazing* initiative, and findings suggest that these were achieved. The percent of parents of a non-ASD child whose responses changed after exposure to the *See Amazing* materials are presented in Figure 3. **Approximately half showed an increase in both their Knowledge and Acceptance scores.**

Knowledge

Parents’ knowledge of ASD, assessed through the number of accurate responses to 21 questions, increased after they viewed the website materials. **These changes were statistically significant, and important, for parents of non-ASD children.** It is important to keep in mind that the parents of ASD children were primarily recruited through online advocacy groups, suggesting that they had already accessed available online knowledge of ASD and came to the *See Amazing* materials with a good amount of knowledge, but remaining needs that the materials successfully addressed, as described below.



Acceptance

The level of acceptance of ASD also increased for parents who viewed the *See Amazing materials*. Acceptance was measured from participants’ responses to questions about a short video of an ASD child. Individuals were asked about the level of comfort they might feel if they were interacting with the child in the video by rating items such as “the child in the video makes me uneasy” or “I think I would like the child in the video.” **The average ratings of Acceptance increased after viewing the website. The**

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increase was statistically significant for both groups of parents.

The fact that the levels of acceptance of ASD improved so much for both groups of parents has powerful implications for the potential benefit the *See Amazing in All Children* materials may have for promoting empathy both within and toward families with an ASD child, as well as for promoting acceptance towards ASD children in the community.

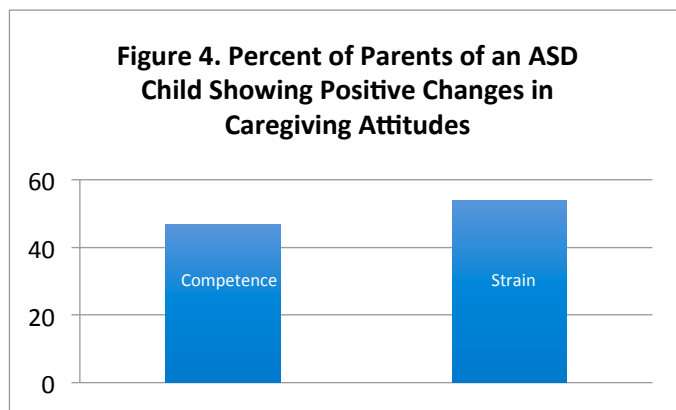
Goal 3: Promoting Positive Beliefs and Attitudes about ASD

Community Inclusion

Another goal of the initiative was to help families with an ASD child feel less stigmatized and more comfortable engaging in activities within their community. The results showed that these attitudes improved after parents engaged with the *See Amazing* materials. The Community Inclusion score reflected parents' comfort with engaging with their child in community activities (e.g., "I feel comfortable in taking my child to restaurants and stores), their positive perceptions of their child (e.g., "I am proud of my child"), and feelings of stigmatization caused by their child's diagnosis (e.g., "I am sad because my child has autism"). **The ratings of Community Inclusion improved significantly over time for parents of ASD children with 53.3% of parents showing increases after viewing the *See Amazing* materials.**

Competence and Strain

The information, resources, and tools contained in the *See Amazing* materials, particularly the routine



cards designed to be used by parents to build new independent living and community skills, might also impact their feelings about raising an ASD child. **Figure 4 shows this proved to be the case.** Parents of ASD children completed questions that assessed feelings of strain related to caregiving (e.g., worries about child's future, feeling tired) and beliefs about their parenting competence (e.g., "I believe I can solve problems with my child when they

happen," "I have a good understanding of my child's needs"). **From baseline to the one-month follow-up, almost 60% of parents showed reductions in caregiver strain and increases in feelings of competence. These findings are very important because ASD children are more likely to thrive when their family members feel more positive and less stressed.**

Importantly, the level of strain reported by parents of ASD children at baseline influenced the impact of the *See Amazing* materials. Compared to parents with moderate or low levels of reported parenting strain, those with high levels of strain showed significantly greater positive changes in parenting competence and confidence. Differential impacts on community inclusion were even more striking as

evident in Figure 5. **Percent reduction in feelings of stigma and percent increase in the likelihood of community engagement were much greater in parents with the highest level of strain at baseline.**

Conclusions

Sesame Workshop created the *See Amazing in All Children* initiative to promote understanding and acceptance of ASD and to provide resources to families with an ASD child to support their child in learning how to manage common situations that can be challenging for all children.

This evaluation demonstrated that those who viewed the website felt the *See Amazing in All Children* materials were engaging and useful, particularly the routine cards, and that after exposure to the resources:

- Parents of non-ASD children showed significant increases in the level of knowledge about ASD and, like parents of ASD children, their feelings of acceptance of ASD children.
- Parents reported feeling less strain related to raising their ASD child and increased feelings of parenting competence.
- Parents felt more likely to feel hopeful about involving their ASD child in the community, particularly those with the highest levels of reported strain.

In keeping with other large scale, public health initiatives targeting stigma and negative beliefs about disability, the significant, positive effects tended to be in the small to moderate range. However, although interventions of this scope are usually able to produce short-term to medium-term improvements in knowledge, they tend less often to show the attitudinal improvements demonstrated in this evaluation. **Importantly, no website about ASD has been shown to have such powerful and wide-reaching effects. That the *See Amazing* materials can invoke such remarkably positive changes in both the general community and in parents of ASD children makes Julia, the ASD Muppet, and this particular set of groundbreaking resources the easiest and most effective website to increase acceptance and community inclusion, and should become the new standard for ASD resources.**

Figure 5. Percent Change from Pre to Post for Parents of an ASD Child with the Highest Level of Strain

