

PLAYGROUND DESIGN FOR CHILDREN WITH AUTISM

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ABSTRACT

Autism Spectrum Disorder (ASD) is more common in England than ever before, with one in 57 children diagnosed in 2020 compared to one in 110 in 2006 (Andres Roman-Urrestarazu, 2020). The reasons for this increase are uncertain; some researchers attribute it to improved diagnostic practices, while the media portrays it as an epidemic. Regardless, it is evident that children with ASD experience the environment differently and this is often overlooked in urban design, resulting in playgrounds that do not cater for their needs.

OBJECTIVES

1. Understanding neurodiversity and the traits/sensitivities of neurodivergent children
2. Understanding the needs of autistic children in relation to playground design
3. Providing customised design of playgrounds for autistic children and draw guiding principles for designing these spaces
4. Testing the design principles by interviewing a specialised professional in designing for autism

METHODOLOGY

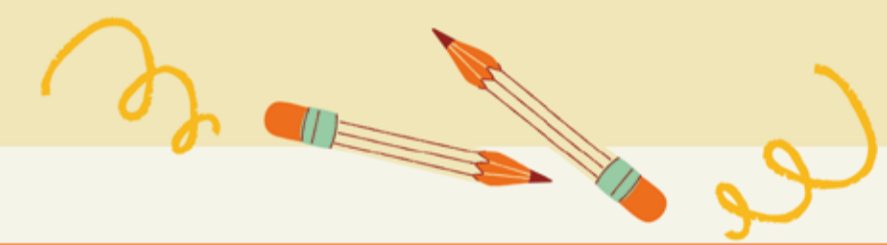
This study employs a mixed-method approach including a literature review and interviews. The literature review is meant to give an insight at what do we already know from previous research about ASD. Then, the interviews with those who know the child best (families, specialists, school and nursery staff) add another layer of knowledge and better understanding of what are the needs of ASD children in relation to the playground. Based on these findings, a design guide has been created and tested by interviewing a specialised professional in designing for autism.

AIM

This research aims to identify individual sensory needs and provide customised opportunities in the form of a design guide to allow autistic children to thrive and occupy the space as other children do.

RESULTS

The aim of the study has been fulfilled through the identification of specific needs for children with ASD and the creation of a tailored design guide to accommodate those needs. This will enable these children to flourish, feel secure, comfortable, and engage with their surroundings just like other children.



ANALYSIS

Building on the information from the literature review the primary data collected from the interviews is fundamental to understand what are the needs of children with ASD within a playground setting. This data highlighted that the most important aspects to consider are safety (all respondents thought safety is top 3 aspects to consider), controlling sound levels (100% of respondents believe sounds level can 'make you stay or leave'), water play opportunities (all respondents emphasised that children are drawn to water), encourage repetitive behaviors (all respondents agreed there is need to cater for autistic children repetitive behaviors and not try to limit these), escape spaces (80% mentioned situations when children want to hide, get a break from noise or social interaction). Here's a breakdown of the primary data collected:



Escape Spaces

that allow quieter spaces for children to hide, rest, play. 'Cocoons', tunnel, quiet nooks, nature labyrinths, shaded retreats.



Water play

Introduce water in different ways (fountain, waterfall, streams, sprays, water walls, splash pad)



Safety

As children with ASD do not recognise danger, playground design need to address this through limiting the number of entrances, regular maintenance, avoid tall structures and opting for non-toxic plants.



Control noise levels

Balance noise levels by naturally enclosing playgrounds (trees, bushes, hedgerows). Plan for 'quiet spaces'.

ASD-FRIENDLY PLAYGROUND



Appropriate signage

using maps for improving wayfinding and signs that help children understand what the main function of a space is.



Simplified environment

that focuses on separating elements based on their main function.



Encouraging repetitive behaviours

by offering opportunities to swing, spin, jump, slide, climb and providing appropriate equipment for doing this.



Sensory Play

introducing a variety of textures & materials such as wood, sand, rubber mulch, stones, sensory panels, sensory garden, grass.

CONCLUSION

Playgrounds have the potential for improved design to accommodate the needs of autistic children. These design enhancements don't detract from the experience of other children but can make a significant difference for an autistic child and their family.

This research proposes a design guide and specific solutions on how to create safe, comfortable spaces for children with ASD that will allow them to thrive, engage with the surroundings just like other children. As our understanding of developmental disorders and disabilities advances, we are moving closer to the creation of inclusive playground designs. This progress enables us to uphold the dignity of all children and develop spaces that cater to everyone's needs.



Related literature

Mostafa, Magda (2008) *An architecture for autism: Concepts of design interventions for the autistic user*

Mostafa, Magda (2015) *The Autism Design Index: ASPECTSS*

Kristi Gaines, Angela Bourne, Michelle Pearson, Mesha Kleibrink (2016) *Designing for Autism Spectrum Disorders*

Gardin Temple (2006) *Thinking in pictures: My life with autism*

Royal College of Art (2018) *Green Spaces*

Appleton (1975) *Prospect and Refuge Theory*

Kurt Lewin (1951) *Theory of environment and behaviour*

Blanca Calvo Boixet, Raquel Colacios, Loreto Nacar García, Benedetta Rodeghiero (2023) *ASD (Publics) Friendly Design Handbook*

