

## **Nurse Day Care and Autism**

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## **ABSTRACT**

Nurse-led daycare programs play a vital role in providing comprehensive care and support for children with autism spectrum disorder (ASD). This review explores the role of nurse-led daycare in the care of children with ASD, focusing on the challenges faced, interventions implemented, and outcomes achieved. Evidence-based strategies and best practices in nurse-led daycare for children with ASD are discussed.

## **Introduction**

Autism spectrum disorders (ASD) are a group of rapidly growing disabilities. They are characterized by repetitive patterns of behavior, interests, or activities, problems in social interactions. ASD is a complicated neurological disorder that is characterized by behavioral and psychological problems in children. These children become distressed when their surrounding environment is changed because their adaptive capabilities are minimal. The symptoms are present from early childhood and affect daily functioning. Children with ASD have co-occurring language problems, intellectual disabilities, and epilepsy at higher rates than the general population. The nursing of the disease including Impaired verbal communication related to reduced ability to read body language, at risk for injury, impaired social interaction, family and caregiver lack of knowledge regarding autism, ineffective therapeutic regimen related to economic difficulties(1).

Children with autism spectrum disorder (ASD) require specialized care and support to address their unique needs. Nurse-led daycare programs offer a structured and supportive

environment for children with ASD, providing them with essential services and interventions to improve their quality of life.

## **Challenges in ASD Care for Children**

### **1. Behavioral Challenges**

Challenging behaviors commonly associated with autism spectrum disorder (ASD) include aggression toward others, self-injurious (or self-harming) behaviors, and severe tantruming(2)(3). Many individuals with ASD exhibit multiple challenging behaviors; for example, a survey of 2327 individuals on the autism spectrum found that more than 40% engaged in both aggression and self-injurious behavior (SIB) (4). Aggression may include scratching, biting, hitting, or kicking(5)(6). SIB may include excessive scratching or rubbing, hair-pulling, hand-biting, headbanging, or face-slapping. Severe tantruming may sometimes include one or more of these behaviors. All of these behaviors vary in frequency, duration, and severity across the autism spectrum. Treatment of these behaviors has been only moderately successful (7). Lavery and her colleagues conducted a follow-up survey of 67 ASD individuals who engaged in SIB on a regular basis and found that 44% still engaged in these behaviors 10 years later(8).

### **2. Sensory Sensitivities**

Many children with ASD have sensory sensitivities, making it challenging for them to tolerate certain sounds, textures, or environments. Over 96% of children with ASD report hyper and hypo-sensitivities in multiple

domains. Similar to the wide-range of spectrum severity found for communication and social deficits, sensory behavioral differences also range from mild to severe, and these behavioral differences can endure through adulthood(9),(10).

Sensory processing concerns have been a key feature of ASD clinical descriptions from the original independent seminal reports by Asperger and Kanner to first person accounts(11) . The distress caused by particular sensory stimuli can cause self-injurious and aggressive behavior in those unable to communicate their duress. While sensory hyper- and hypo-responsiveness are not unique to ASD, they appear to be more prevalent in this population than in other developmental disabilities(12), (13), (14).

## **Role of Nurse Day care**

### **1. Structured Environment**

Nurse-led daycare programs provide a structured and predictable environment, which is beneficial for children with ASD who thrive on routine and predictability

### **2. Behavioral Interventions**

Nurses in daycare settings implement evidence-based behavioral interventions, such as Applied Behavior Analysis (ABA) and Positive Behavior Support (PBS), to address challenging behaviors and promote skill development . Particular intervention strategy for children who have ASD that can be readily utilized in hospital settings is movement therapy. Movement therapy provide a sense of calmness to a stressful situation. It also

integrates the body and mind in a non-verbal way, which can be very helpful for children who do not have language(15). In a similar frame, play therapy can also be beneficial to a child who has ASD. As play is a natural mode of communication, it becomes an effective way for children to grapple with their anxieties and questions, instead of having to use language. Play therapy is also a great aid to sensory challenges that are common in children who have ASD(16). For example, professionals in health care settings can initiate a connection with a patient through simple play materials that light up, spin, and/or are squishy, which can help facilitate the down regulation of the patient’s sensory systems. There are also informal strategies that the health care team can initiate during the child’s hospital stay. For example, using different modes of communication is one way the health care team can better assist the child and family as they are integrated into the hospital setting(17).

### **3. Sensory Integration Therapy**

Sensory integration therapy is a clinic-based approach that focuses on the therapist–child relationship and uses play-based sensory motor activities to address sensory–motor factors specific to the child to improve their ability to process and integrate sensation(18)

Nurse-led daycare programs may offer sensory integration therapy to help children with ASD regulate their sensory experiences and improve their tolerance to various stimuli.

## Outcomes of Nurse Daycare

### 1. Improved Social Skills

Children who participate in nurse-led daycare programs often show improvements in social skills, communication abilities, and peer interactions(19).

### 2. Enhanced Behavior Management

Nurse-led daycare programs are effective in reducing challenging behaviors and promoting adaptive behaviors in children with ASD(20).

3. **Support for Families:** Nurse-led daycare programs provide valuable support and resources for families of children with ASD, helping them navigate the challenges associated with raising a child with special needs (21).

## Conclusion

Nurse daycare programs play a critical role in providing comprehensive care and support for children with autism spectrum disorder. By offering structured environments, evidence-based interventions, and support for families, nurse-led daycare programs help children with ASD thrive and reach their full potential.

## References

1. Mughal S, Faizy RM, Saadabadi A, Doerr C. Autism Spectrum Disorder (Nursing). StatPearls. 2021.
2. Hampton LH, Roberts MY, Anderson E, Hobson AN, Kaat AJ, Bishop SL, et al. Brief Report: What Diagnostic Observation Can Teach Us About Disruptive Behavior in Young Children with Autism. *J Dev Behav Pediatr.* 2021;42(1).
3. Matheis M, Estabillo JA, Matson JL. Managing Challenging Behavior in Adolescents with Autism Spectrum Disorder. In: *Adolescents with Autism Spectrum Disorder.* 2017.
4. Edelson SM. Comparison of autistic individuals who engage in self-injurious behavior, aggression, and both behaviors. *Pediatr Rep.* 2021;13(4).
5. Durand VM. *Severe Behavior Problems: A Functional Communication Training Approach.* Guilford Press. 1990;
6. Fitzpatrick SE, Srivorakiat L, Wink LK, Pedapati E V., Erickson CA. Aggression in autism spectrum disorder: Presentation and treatment options. Vol. 12, *Neuropsychiatric Disease and Treatment.* 2016.
7. Weitzman CC, Baum RA, Fussell J, Korb D, Leslie LK, Spinks-Franklin AIA, et al. Defining Developmental-Behavioral Pediatrics. *Pediatrics.* 2022;149(4).
8. Laverty C, Oliver C, Moss J, Nelson L, Richards C. Persistence and predictors of self-injurious behaviour in autism: A ten-year prospective cohort study. *Mol Autism.* 2020;11(1).
9. Minshew NJ, Sweeney J, Luna B. Autism as a selective disorder of complex information processing and underdevelopment of neocortical systems. *Mol Psychiatry.* 2002;7.
10. Crane L, Goddard L, Pring L. Sensory processing in adults with autism spectrum disorders. *Autism.*

- 2009;13(3).
11. Asperger H. 'Autistic psychopathy' in childhood. In: *Autism and Asperger Syndrome*. 2009.
  12. Leekam SR, Nieto C, Libby SJ, Wing L, Gould J. Describing the sensory abnormalities of children and adults with autism. *J Autism Dev Disord*. 2007;37(5).
  13. Baranek GT, David FJ, Poe MD, Stone WL, Watson LR. Sensory Experiences Questionnaire: Discriminating sensory features in young children with autism, developmental delays, and typical development. *J Child Psychol Psychiatry Allied Discip*. 2006;47(6).
  14. Ben-Sasson A, Hen L, Fluss R, Cermak SA, Engel-Yeger B, Gal E. A meta-analysis of sensory modulation symptoms in individuals with autism spectrum disorders. *J Autism Dev Disord*. 2009;39(1).
  15. See CM. The use of music and movement therapy to modify behaviour of children with autism. *Pertanika J Soc Sci Humanit*. 2012;20(4).
  16. Parker N, O'Brien P. A play therapy-reaching the child with autism. *Int J Spec Educ*. 2011;26(1).
  17. Brown AB, Elder JH. Communication in autism spectrum disorder: A guide for pediatric nurses. *Pediatr Nurs*. 2014;40(5).
  18. Joshi A. Clinician's guide for Implementing Ayres Sensory Integration - promoting participation for children with autism. *Indian J Occup Ther*. 2015;47(3).
  19. Kasari C, Gulsrud AC, Wong C, Kwon S, Locke J. Randomized controlled caregiver mediated joint engagement intervention for toddlers with autism. *J Autism Dev Disord*. 2010;40(9).
  20. Wong C, Odom SL, Hume KA, Cox AW, Fettig A, Kucharczyk S, et al. Evidence-Based Practices for Children, Youth, and Young Adults with Autism Spectrum Disorder: A Comprehensive Review. *J Autism Dev Disord*. 2015;45(7).
  21. McStay RL, Dissanayake C, Scheeren A, Koot HM, Begeer S. Parenting stress and autism: The role of age, autism severity, quality of life and problem behaviour of children and adolescents with autism. *Autism*. 2014;18(5).