

# Awareness Regarding Role Of Physiotherapy In The Care Of Children Autism Spectrum Disorder

Maaz Jaleelahmad Dafedar<sup>1</sup>, Dr. Tejashree Kumbhar<sup>2</sup>

<sup>1</sup>Final year student, Krishna college of physiotherapy, KVV,415539, Agashivnagar, Malkapur, Maharashtra, India, dafedarmaaz2103@gmail.com

<sup>2</sup>Assistant Professor Department of Musculoskeletal Sciences, Krishna College of Physiotherapy, Krishna Vishwa Vidyapeeth, Karad, drtejsahreekumbhar9099@gmail.com

---

## Abstract

**Background-** Autism Spectrum Disorder (ASD) is a lifelong neurodevelopmental condition that usually appears in early childhood, affecting communication, social interaction, and behavior. Along with these core difficulties, many children with ASD also experience motor impairments such as poor coordination, postural instability, and atypical gait, which can hinder daily functioning and independence. Physiotherapy plays an important role in addressing these challenges. It focuses on improving strength, balance, posture, coordination, and motor planning while also supporting respiratory control and musculoskeletal alignment. Through structured physical activity and therapy, children with ASD can develop essential gross and fine motor skills, enhancing participation in play, learning, and self-care activities. Physiotherapy also promotes sensory integration and overall physical well-being. Despite proven benefits, awareness about the role of physiotherapy in ASD care remains low among parents, caregivers, and even some healthcare providers. Limited awareness often leads to delayed or missed opportunities for early intervention, which is critical for maximizing developmental outcomes. Raising awareness can help ensure timely referrals, better collaboration among professionals, and broader community support. Ultimately, physiotherapy can significantly enhance functional independence and quality of life for children with ASD and their families.

**Objective-** 1. To survey and check the awareness regarding role of physiotherapy in the care of children autism spectrum disorder. 2. To check awareness regarding the effect of autism spectrum disorder on children. 3. To identify the risk factors of autism on children. 4. To evaluate the impact of autism spectrum disorder on children.

**Methodology-** This observational survey study was conducted in Karad using simple random sampling, with a calculated sample size of 162 based on prevalence data ( $p = 12\%$ ,  $Z = 1.96$ ,  $L = 5$ ). Participants included male and female children aged 1.5–3 years, while those with comorbidities, genetic disorders, non-verbal behavior, or poor responsiveness were excluded. Data were collected over 6–12 months using a validated questionnaire (Google Form), data sheets, and consent forms. Parents were informed about the study, consent was obtained, and instructions were provided prior to participation. Statistical analysis was performed after data collection. Ethical clearance was granted by the Institutional Ethics Committee of Krishna Institute of Medical Sciences (Deemed to be University), Karad, with all participants enrolled voluntarily under assured confidentiality.

**RESULT-** Among 40 participants (60% male, 40% female; mostly aged 2–15 years), awareness levels were generally low. While 34% noted lack of common sense, 40% lacked close friendships, and 75% observed deviant gaze, knowledge of health-related issues was poor. Only 25–38% recognized diabetes-related complications, 15% knew about nerve dysfunction, and less than 6% were aware of gait or balance issues, specialized footwear, or physiotherapy's role. Although 68% agreed diabetes control prevents foot injury, just 9% reported regular foot care. Overall, physiotherapy awareness was minimal.

**Conclusion-** Awareness of physiotherapy's role in Autism Spectrum Disorder (ASD) is vital for enhancing children's motor skills, sensory integration, and overall functioning. This study highlights the positive impact of physiotherapy and the need for collaboration among healthcare providers, caregivers, and the community. Greater education and advocacy can ensure timely access to specialized care, helping children with ASD reach their full potential and improving quality of life for both them and their families.

**Keywords-** Autism Spectrum Disorder (ASD), Physiotherapy, Awareness, Motor skills, Sensory integration, Functional abilities, Rehabilitation, Developmental outcomes, Caregivers, Early intervention

---

## INTRODUCTION

Autism Spectrum Disorder (ASD) is a complex neurological and developmental disability that appears within early developmental stages of life. It affects the normal functioning of the brain, communication development, as well as social skills of the child<sup>1</sup>. Although ASD is a lifelong condition and cannot be cured, its severity may decrease through special education and treatments. Physiotherapy plays a crucial role in the care of children with ASD, especially those with motor control disabilities. It focuses on addressing motor

impairments in the body, such as respiratory control and coordination level, improvement in posture, and addressing misalignment in the musculoskeletal system including chest wall deformities as well as foot and ankle misalignment issues. Physical therapy helps children with autism master basic motor skills used in daily life such as standing, running, or sitting by improving strength, balance, and posture. Incorporating physiotherapy into routine care for children on the autism spectrum has the potential to improve their health and well-being by promoting physical activity and improved motor development.

**1.AIM:** The aim is to analyze the role of the physiotherapy in the care of children with autism spectrum disorder.

**2. OBJECTIVE:**

- To survey and check the awareness regarding role of physiotherapy in the care of children autism spectrum disorder
- To check awareness regarding the effect of autism spectrum disorder on children
- To identify the risk factors of autism on children
- To evaluate the impact of autism spectrum disorder on children

**3. MATERIAL AND METHODOLOGY:** This study was designed as a survey-based observational study conducted in Karad, using a simple random sampling method. The calculated sample size was 162, derived using the formula  $n = Z^2pq/L^2$ , where  $Z = 1.96$  at 95% confidence interval,  $p = 12\%$  (based on a previous prevalence study),  $q = 100 - 12$ , and  $L = 5$  (permissible error). The study population included both male and female participants, selected according to specific inclusion and exclusion criteria. Children between the ages of 1.5 and 3 years were included, while those with comorbidities such as genetic syndromes, non-verbal children, or those not responding or not sharing interests/achievements with parents were excluded. Materials used for data collection included a validated questionnaire (Google Form), data collection sheet, and informed consent form. The duration of the study was 6 months to 1 year. Participants were enrolled after meeting the inclusion criteria, and their parents were informed about the purpose of the study. Informed consent was obtained before participation, and parents were asked to follow instructions related to the study. Following data collection, statistical analysis was performed, and outcomes were recorded. Ethical approval was obtained from the Institutional Ethics Committee of Krishna Institute of Medical Sciences (Deemed to be University), Karad. The study procedure and questionnaire were explained to all respondents, who participated voluntarily, with their confidentiality maintained throughout.

**4. RESULT:**

AGE	FREQUENCY	PERCENTAGE
2-5	11	27.5%
6-10	17	42.5%
11-15	12	30%

GENDER	FREQUENCY	PERCENTAGE
MALE	24	60%
FEMALE	16	40%

Table 1. Responses of Participants



## Autism Spectrum Screening Questionnaire (ASSQ)

### Instructions:

Please read the statement below and indicate by tapping, No, Somewhat, or Yes if this child stands out as different from other children of his/her age in the following ways:

		No	Somewhat	Yes
1	is old-fashioned or precocious	0	1	2
2	is regarded as an "eccentric professor" by the other children	0	1	2
3	lives somewhat in a world of his/her own with restricted idiosyncratic intellectual interests	0	1	2
4	accumulates facts on certain subjects (good rote memory) but does not really understand the meaning	0	1	2
5	has a literal understanding of ambiguous and metaphorical language	0	1	2
6	has a deviant style of communication with a formal, fussy, old-fashioned or "robot like" language	0	1	2
7	invents idiosyncratic words and expressions	0	1	2
8	has a different voice or speech	0	1	2
9	expresses sounds involuntarily; clears throat, grunts, smacks, cries or screams	0	1	2
10	is surprisingly good at some things and surprisingly poor at others	0	1	2
11	uses language freely but fails to make adjustment to fit social contexts or the needs of different listeners	0	1	2
12	lacks empathy	0	1	2
13	makes naive and embarrassing remarks	0	1	2
14	has a deviant style of gaze	0	1	2
15	wishes to be sociable but fails to make relationships with peers	0	1	2
16	can be with other children but only on his/her terms	0	1	2
17	lacks best friend	0	1	2

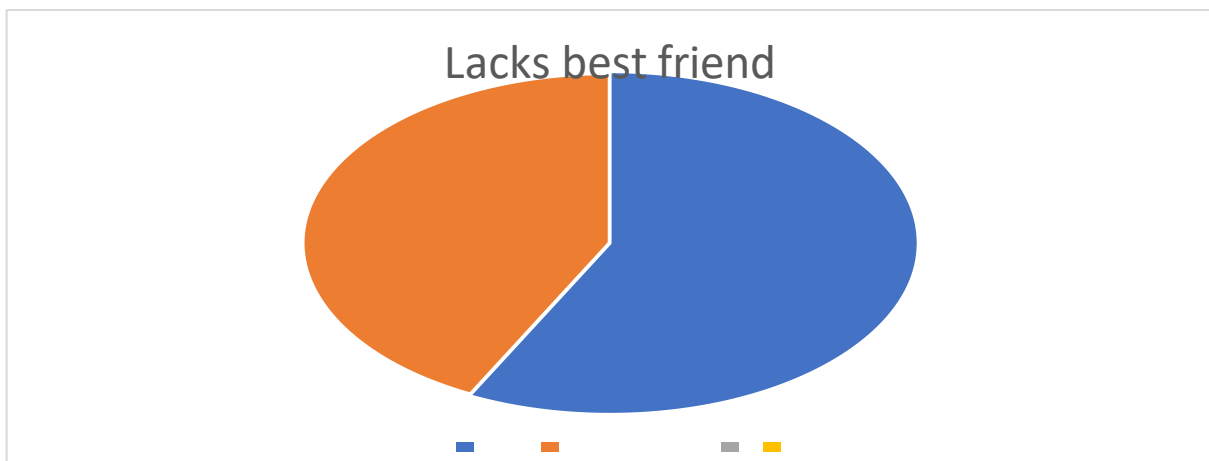
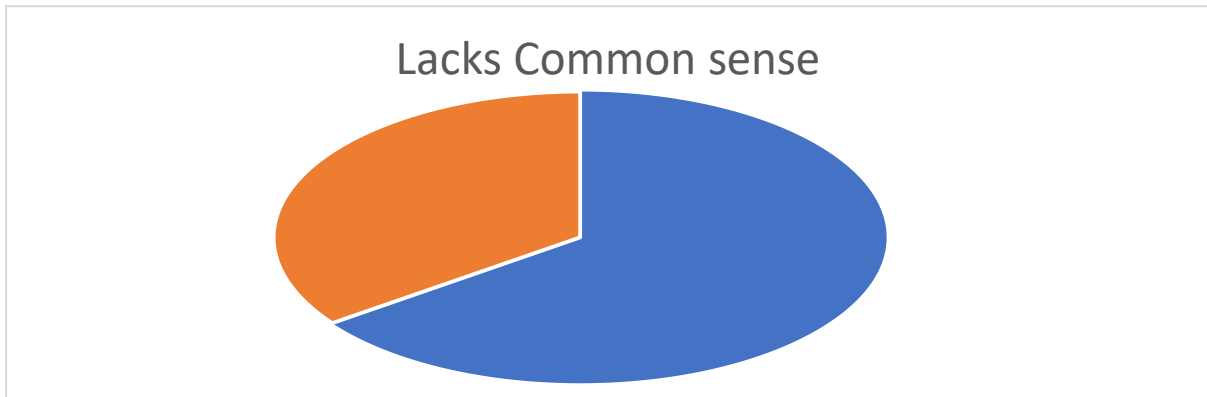


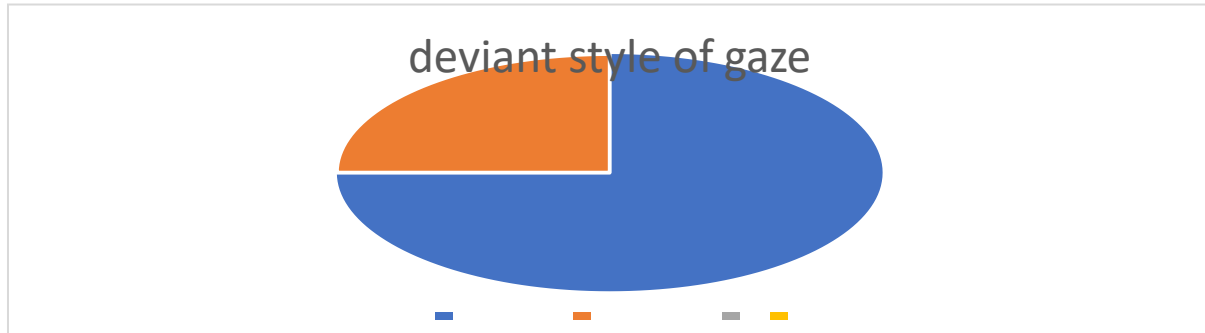
NovoPsych

	No	Somewhat	Yes
18 lacks common sense	0	1	2
19 is poor at games: no idea of cooperating in a team, scores "own goals"	0	1	2
20 has clumsy, ill coordinated, ungainly, awkward movements or gestures	0	1	2
21 has involuntary face or body movements	0	1	2
22 has difficulties in completing simple daily activities because of compulsory repetition of certain actions or thoughts	0	1	2
23 has special routines; insists on no change	0	1	2
24 shows idiosyncratic attachment to objects	0	1	2
25 is bullied by other children	0	1	2
26 has markedly unusual facial expression	0	1	2
27 has markedly unusual posture	0	1	2

**Developer Reference:**

Ehlers, S., Gillberg, C., & Wing, L. (1999). A screening questionnaire for Asperger syndrome and other high-functioning autism spectrum disorders in school age children. *Journal of autism and developmental disorders*, 29(2), 129-141.





**5.DISSCUSSION:** Autism Spectrum Disorder (ASD) affects communication, social interaction, and motor skills, often leading to difficulties with balance, coordination, posture, and strength. Physiotherapy addresses these motor impairments, helping children improve basic movements such as sitting, standing, walking, and running. Through targeted interventions like strength and balance training, gait exercises, and sensory-motor activities, physiotherapy enhances functional independence, musculoskeletal alignment, and overall physical fitness. It also provides sensory input that supports body awareness and emotional regulation. Incorporating physiotherapy into routine care, alongside occupational and speech therapy, forms a holistic approach that promotes motor development, physical health, and quality of life. Early, individualized physiotherapy interventions can significantly improve independence, participation in daily activities, and broader developmental outcomes in children with ASD.

**6.CONCLUSION:** The awareness of the role of physiotherapy in the care of children with Autism Spectrum Disorder (ASD) is crucial for improving their quality of life and developmental outcomes. Through this project, we have highlighted the significant impact that physiotherapy interventions can have on enhancing motor skills, sensory integration, and overall functional abilities in children with ASD. By promoting understanding and collaboration among healthcare professionals, caregivers, and the community, we can create a supportive environment that maximizes the potential of children with ASD. Continued education and advocacy efforts are essential to ensure that every child with ASD has access to the specialized care and therapies they need to thrive. Together, we can make a meaningful difference in the lives of these children and their families.

**7.LIMITATION:** Despite its benefits, physiotherapy for children with ASD has certain limitations. The wide variability in motor abilities, cognitive levels, and sensory sensitivities among children makes it challenging to standardize interventions. Communication difficulties, attention deficits, and behavioral issues can reduce participation and engagement during therapy sessions. Access to trained professionals, specialized equipment, and adequate therapy duration may be limited, affecting the consistency and effectiveness of treatment. Improvements achieved may be short-term if exercises are not maintained at home or integrated into daily routines. Additionally, co-existing conditions such as hypotonia, sensory processing disorders, or epilepsy can complicate therapy planning. Finally, although physiotherapy shows promise, the evidence base is still limited, and sustaining motivation in children can be a challenge, potentially impacting long-term outcomes.

#### 8.REFERENCE:

1. Desai, P., Yeole, U., Dandekar, R., & Andhare, N. (2019). Relation between awareness of physiotherapy and distress level among family members of children with autism spectrum disorder. *International Journal of Research and Analytical Reviews*, 6(2), 1-5.
2. Alruwaili, M., Ramadan, O. E., Shaban, M., & Alsadaan, N. (2021). An assessment of pediatric nurses' awareness and perceived knowledge of Autism Spectrum Disorders: A Gulf State survey. *Journal of Pediatric Nursing*, 56, 1-6.

3. **Cynthia, C., Duck, M., McQuillan, R., Brazill, L., Malik, S., & Cremin, K. (2016).** Exploring the role of physiotherapists in the care of children with autism spectrum disorder. *Journal of Developmental and Physical Disabilities*, 28(2), 1-13.
4. **Atun-Einy, O., Lotan, M., & Harel, Y. (2018).** Physical therapy for young children diagnosed with Autism Spectrum Disorders—clinical frameworks model in an Israeli setting. *Disability and Rehabilitation*, 40(10), 1-9.
5. **Tovin, M. M. (2018).** Children and teens with autism spectrum disorder: Considerations and basic guidelines for health and fitness professionals. *Strength & Conditioning Journal*, 40(6), 1-8.
6. **Lloyd, M., & MacDonald, M. (2016).** A systematic review of the behavioural outcomes following exercise interventions for children and youth with autism spectrum disorder. *Journal of Autism and Developmental Disorders*, 46(6), 1-11.
7. **Wiles, L., & McDonald, M. (2017).** A meta-synthesis of parents' experiences of advocating for their child with autism spectrum disorder. *Journal of Pediatric Nursing*, 34(1), 1-8.
8. **Ramachandran, S., & Suresh, A. (2020).** Physiotherapy interventions for head and trunk control in children with developmental disabilities: A scoping review protocol. *Journal of Developmental and Physical Disabilities*, 32(3), 1-9.
9. **Beela, G. K., & Thankappan, H. (2019).** Horticultural therapy program in Kerala improves the emotional intelligence of school-going children with autism spectrum disorder. *XV International Conference on Autism*, 1-5.
10. **Suresh, A. (2021).** A survey about the awareness among physiotherapists regarding the role of physiotherapy in the care of children with autism spectrum disorder. *Journal of Physiotherapy Science*, 33(4), 1-7