

RELATION BETWEEN AWARENESS OF PHYSIOTHERAPY AND DISTRESS LEVEL AMONG FAMILY MEMBERS OF CHILDREN WITH AUTISM SPECTRUM DISORDER.

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ABSTRACT

Background: - Autism spectrum disorder (ASD) is a neurological and developmental disorder characterized by hypotonicity, poor balance and delayed gross motor milestones. Every 1 child amongst 100 has autism in India. **Objectives:** -This study was done to assess the relation between awareness of physiotherapy and distress level in ASD amongst family members of autistic child using self-administrated questionnaire and Brief family distress scale respectively. **Methods:** - Out of 85 family members of children's with ASD, 60 family members were selected based on inclusion and exclusion criteria. A written consent was taken and study was explained to them. All the parents were evaluated for awareness of physiotherapy in ASD treatment using self-administrated questionnaire. Distress level were evaluated using Brief family distress scale. Data was collected and analyzed using percentage values to make interpretations. **Result:** - 46.66% children diagnosed with autism spectrum disorder were functionally affected and family members of these autistic children were also not aware of the role of physiotherapy in autism spectrum disorder. Brief family distress scale scoring said that 53.33% family members have to work extremely hard every moment of every day to avoid having crisis. **Conclusion:** - Study concludes that there is lack of awareness of physiotherapy that is directly related to the high-level family distress amongst family members of children with autism spectrum disorder.

Keywords: Autism Spectrum Disorder, Awareness of Physiotherapy, Brief Family Distress Scale scoring, Self-administered questionnaire

INTRODUCTION

Autism spectrum disorder is said to be a neurodevelopment disorder that has been predictable at the initial stage during infancy or childhood, affecting communication and behaviour.¹ It can be identified at any age; indications commonly appear in the first 2 years of life. Autism is the symptom of struggle to the development of brain streaming which is usually understood by 3 months after a child's birth.² Awareness of autism is still petty in contrast to other neurodevelopment disorders.² It is a condition in which social interaction, communication and constrained repetitive behavior is observed. Several prenatal factors such as advanced paternal age, diabetes to mother during pregnancy are the risk factor for ASD. Nowadays more children than ever before are being diagnosed with ASD.³ 1 in 100 children in India under age of 10 has autism.⁴ The prevalence of autism spectrum disorder is more common in males than in females. Male to female ratio for ASD is 4.3:1.⁵

Children with autism generally establish poor motor skills.⁶ Discrepancy in social communication and interface, restricted and repetitive pattern of behavior and attentiveness in activities that can carry on throughout the life is the diagnostic standards for ASD. These children suffer from childhood obesity⁸ respiratory problems, postural weakness and joint complaints⁷. Several studies have also recognized gait disturbances in children with autism⁸

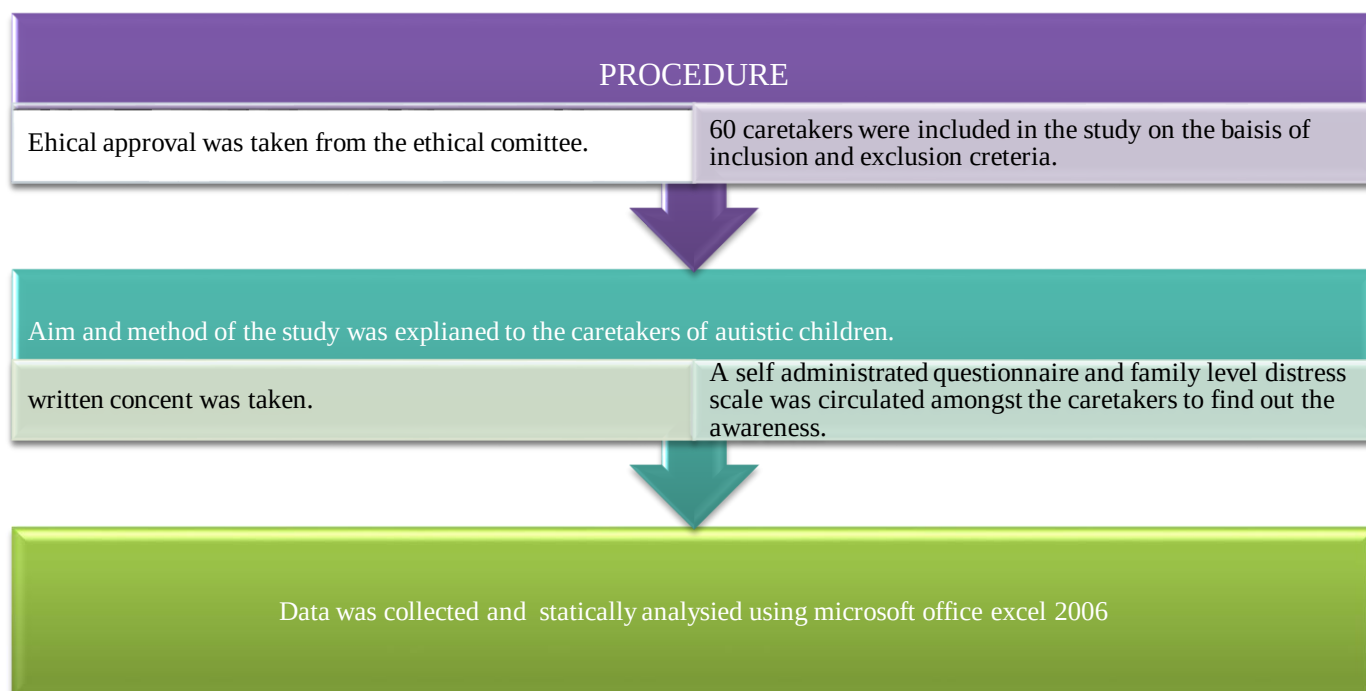
Physiotherapy plays a major role in providing a physical and emotional safeguard of a child. It uses physical strategies to promote, maintain, and redevelop physical, psychological and social comfort. Physiotherapy work on basic motor skills such as sitting rolling standing and the various techniques of physiotherapy are helpful to improve the muscle strength and coordination and gross motor skills. Physiotherapy is considered with classifying and manipulating quality of life with in the events of anticipation, treatment, intervention, habilitation and rehabilitation. Physiotherapy involves the communication between families of children with autism spectrum disorder. Some children with this type of disability are at a superior risk of health problems and behavioral problems⁹.

The process of collaboration between family members and therapists is the belief that shared decision making in program planning, and evaluating results in the therapy.¹⁰ Early involvement programs are available to recognize and treat these infants at a very early stage so as to restrained the effects of the diseases on them and to ensure a long-term encouragement of the treatment.¹¹

RESEARCH METHODOLOGY

85 family members of children with autism spectrum disorder in and around pune were approached, 70 were willing to participate amongst them 60 family members were included on the basis of inclusion and exclusion criteria to participate in the study. 1) Inclusion criteria included children above and below 3 years and Caretakers of children diagnosed with autism spectrum disorder willing to participate. 1) Exclusion criteria were children excluding with some other disability, 2) And family members not willing to participate.

To assess the Brief family distress scale was explained and circulated among the family members of children with autism spectrum disorder and they were instructed to score on scale, where minimum score was 1 and maximum score was 10. A self-administrated questionnaire was prepared which included total no. of 15 questions based on functional activity performed by the children and awareness of physiotherapy amongst parents. The questionnaire was circulated and explained to the parents and they were asked to mark an appropriate response for each question of the questionnaire in terms of yes or no. The interpretation for self-administrated questionnaire was done as functionally affected and not aware of physiotherapy, functionally not affected but aware of physiotherapy, functionally affected and aware of physiotherapy.



RESULTS AND DISCUSSION

Table 1.1: - Self Administrated Questionnaire.

SELF-ADMINISTRATED QUESTIONNAIRE.	TOTAL NO. OF SAMPLES	PERCENTAGE
Functionally not affected and aware of physiotherapy.	14	23.33%
Functionally affected, and aware of physiotherapy.	18	30%
Functionally affected, and not aware of physiotherapy.	28	46.66%

Self-administrated questionnaire interprets that 23.3% are functionally not affected and aware of physiotherapy, 30% are functionally affected, and aware of physiotherapy, 46.66% are functionally affected and not aware of physiotherapy.

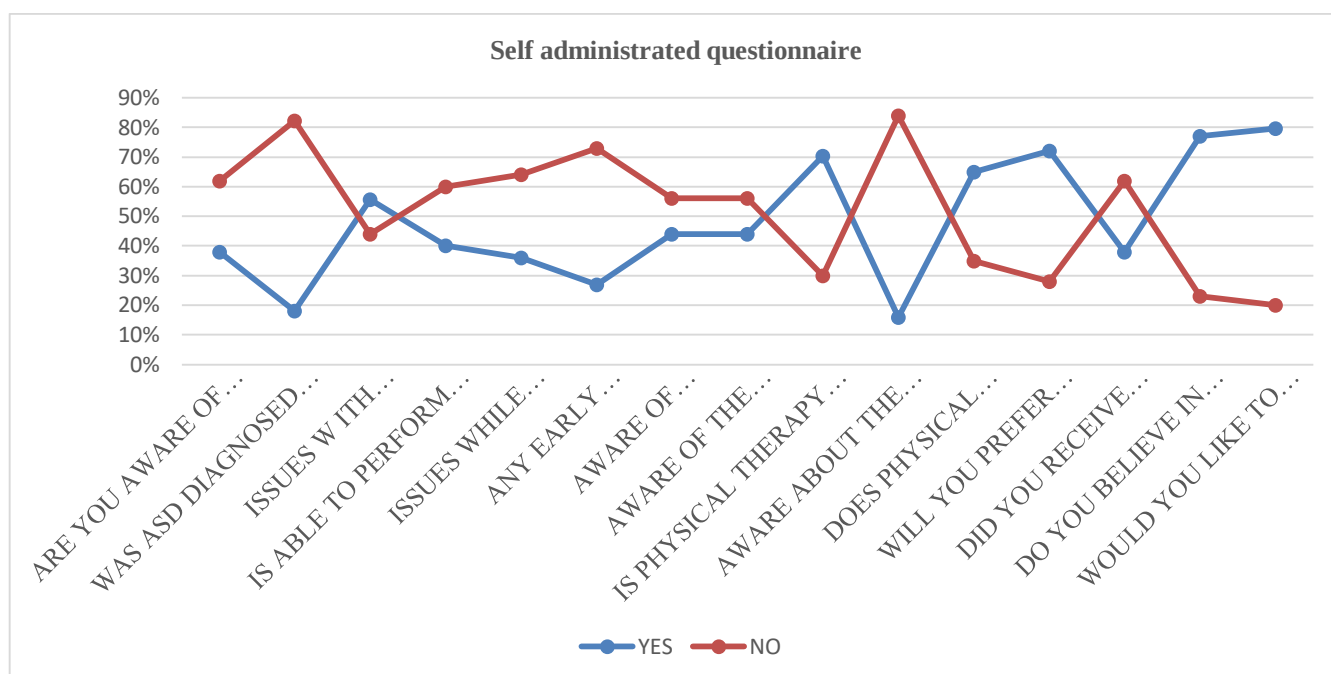


Fig. 1.1: Interpretation of self-administrated questionnaire

Table2.1: - Brief distress family scale.

SCORE ON FAMILY DISRESS LEVEL SCALE OUT OF 10	TOTAL NUMBER OF PARENTS.	PERCENTAGE
2	6	10%
3	8	13.33%
4	14	23.33%
6	32	53.33%

Table 1 shows that Among 60 family members of children's with ASD, 6 parents scored 2, 8 parents scored 3, 14 parents scored 4 and 32 parents scored 6 on Brief Family Distress Scale. 53.33 % parents said that they have to work extremely hard every moment of every day to avoid having crisis.

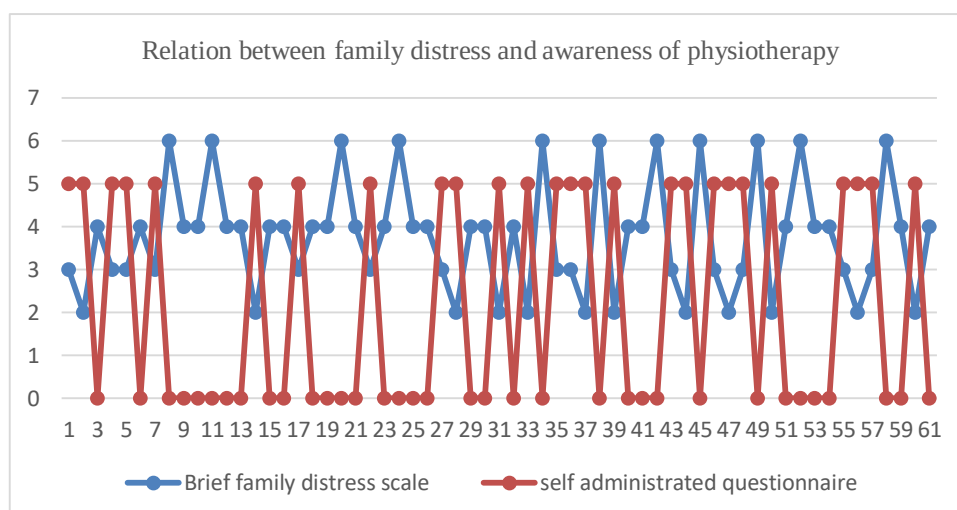


Fig 3.1: Relation between awareness of physiotherapy and distress level.

DISCUSSION

Study was conducted to assess awareness of physiotherapy and family distress level amongst family members of children with autism spectrum disorder. To assess the awareness of physiotherapy Content validated self-administrated questionnaire was prepared. Brief Family distress level scale was used to assess the distress level. Data was collected and analyzed.

In present study there were total no. of 48 males and 12 females were included. On the basis of results, males are more prone to have been diagnosed with autism spectrum disorder than females. Hawlader MDH, Preity S, Abdullah ASM, Akhter S, and Biswas (January 2018) in their study stated that Autism is more prevalent amongst boys than girls, data showed 70% boys had autism as compared to 30% girls.² Also according to the data analysis the study concludes that, commonly autism spectrum disorder is diagnosed in the age group of between 5 to 15.

Present study showed that 46.66% children with ASD are functionally affected and their families are not aware of physiotherapy, 30% children were functionally affected and their family members were aware about physiotherapy and 23.33% children were functionally not affected and their family members were aware of physiotherapy. (Table 1.1.)

On the basis of brief family distress level scale, 53.33% of parents rated a score of 6 which interpreted that they have to work extremely hard every moment of everyday to avoid having crisis. 23.33% score 4 which interprets things are often stressful but they are managing to deal with problems when they rise, 13.33% parents score 3 which interprets things are sometimes stressful but they can deal with the problem if they arise and 10% parents scored 2 which interprets everything is fine but sometimes they have their difficulties. So, the data showed that there is more distress level in families with autism spectrum disorder child. (Table 2.1) Jonathan A. Weiss, Yona Lunskey studied the brief family distress scale: a measure of crisis in caregivers of individuals with autism spectrum disorders stated that parents or caretakers of individuals of autism spectrum disorders often experience stressors associated with caring for their child. These stressors can cause considerable distress for families, which at times can develop into crisis and it is important that professionals be able to quickly identify when families are approaching or are in crisis to respond appropriately.

Present study found that there is lack of awareness of physiotherapy that is directly related to the high-level family distress amongst family members of children with autism spectrum disorder. (Figure 3.1) Study conducted by Jonathan A. Weiss and Yona Lunskey found that most of the family members of autistic children do not know about physical therapy and how can it make a difference in their child's daily living.¹⁷ Although many people knew about occupational therapists but rarely new about physical therapist and were unable to reach the benefits of difference between the both. In recent years several studies also showed that there is an increase in the prevalence of obesity amongst typically developing children which has become a significant public health concern in different societies.¹⁶

Autistic children have their individual personality and different in nature than normal children. They can't interact like others do in the society. Physiotherapy uses physical strategies to promote, maintain, and redevelop physical, psychological and social comfort. Dr. Shweta Kulkarni et.al (2017) in their study stated that social interaction in children's with ASD can be improved using group therapy which will help to improve the social interaction in autism spectrum disorder children.¹⁸

The number of autistic children is rapidly increasing.² Research have also advised that working collaboratively with parents within a family arranged agenda and can be challenging for Pediatric physiotherapy.¹⁰ Autistic school's authorities and teachers can play important role and aware the parents about autism. Necessary steps need to take to initiate and improve the communication skills mind skills for social interaction of autistic children. It will also raise awareness among the greater community to facilitate every possibility to create an environment which will render support and encourage to the autistic children for their better health and better quality of life. Karen Hanna and Sylvia Rodger (2002) stated that working collaboratively with parents within a family centered framework can be challenging for pediatric occupational therapists. Occupational therapists develop skills in building collaborative partnerships with parents particularly as pediatric services in Australia move towards a more family centered approach. Karen Hanna and Sylvia Rodger (1983) stated that therapists have always recognized the value of involving families in their intervention with children. This process of collaboration between parents and therapists is the belief that shared decision making in the program planning.¹⁰

CONCLUSION

Study concludes that there is lack of awareness of physiotherapy that is directly related to the high-level family distress amongst family members of children with autism spectrum disorder.

REFERENCES

1. Jia Wang, Xue Zhou, Wei Xia, CaiHong Sun, LiJie Wu, Jian Wang Autism awareness and attitude towards treatment in caregivers of children aged 3-6 years in harbin, china. Soc Psychiatry Epidemiol (2012) 47:1301-1308
2. Hawlader MDH, Preity S, Abdullah ASM, Akhter S, Biswas A Perceptions, Practices, and Challenges in schools for Autistic Children: A Qualitative Exploration of Techers and school an authority's views in Bangladesh. Austin J Public Health Epideminol (2018) 5(1): 1065
3. Autism and developmental disabilities monitoring neturile, 14 sites, united states 2008, MMWR surveill sum 2012: 61: 1-19.
4. Priti Arun et, al Chandigarh autism spectrum disorder study: prevalence in India, neurology April 2018.
5. New Schaffer (J et, al the epidemiology of autism spectrum disorders, annu rev public health 2007; 28: 235-258.
6. Ilker Yilmaz, Mehmet Yanardag, BunyAmin Birkan, Gonca Bumin (2004) Effects of Swimming Training on Physical Fitness and Water Orientation in Autism. Hindawi Publishing Corporation Autism Research and Treatment Volume 2012, Article ID 576478, 5 pages doi: 10.1155/2012/576478
7. Tara L. Benninger, B.S. Evaluation Level of Crisis in Caregivers of Children with Intellectual and Developmental Disabilities. Copyrighted by Tara Lindsey Benninger 2015
8. TazbinTajdinManasia, Shweta Satish Devare Phadke 2016 Early Intervention Program Awareness Amongst Novice Physiotherapists. Scholars Journal of Applied Medical Sciences (SJAMS) Sch.J.App.Med.Sci.,2016; 4 (10A): 3564- 3568
9. Jon Baio.et.al. prevalence of autism spectrum disorder among children aged 8 years, Autism and Developmental disabilities monitoring network, 11 sites, united states, 2014. MMWR surveill sum 2018:67 (no.55-6): 1-23.
10. U. Korsten-Reck, T. Kaspar, K. Korsten, K. Kromeyer- Hauschild, K. Bos, A. Berg, H-H Dickhuth 2006 Motor Abilities and Aerobic Fitness of Obese Children. Int J Sports Med (2006) ISSN0172-4622.
11. Devanshi Joshi, Mariyaiandani, Rucha Gadgil, Neha Shetty 2017 Physiotherapy Awareness in Medical and Non-Medical Population: A Social Media Survey. International journal of physiotherapy and research, Int J Physiotherapy Res (2017), Vol 5(2): 1971-75 ISSN 2321-1822.
12. Gardener H. et, al, Prenatal risk factors for autism comprehensive meta-analysis. Br J Psychiatry. 2009: 195(1): 7-14
13. Karen Hanna and Sylvia Rodger 2002 Towards Family- Centered Practice in Pediatric Occupational Therapy: A Review of the Literature on Parent- Therapist Collaboration. Australian Occupational Therapy Journal (2002) 49, 14-24
14. Thusharika D. Dissanayaka, Shayama Banneheka 2014 Awareness in Physiotherapy Amongst High School Students. International Journal of Scientific and Research Publication, Volume 4, Issue 7, July (2014)
15. Victoria L. Chester and Matthew Calhoun 2012 Gait Symmetry in Children with Autism.
16. Amir Hossein Memari, Ramin Kordi, Vahid Ziaee, Fatemah Sadat Mirfazeli, Mohammad S.2012 Setoodeh Weight Status in Iranian Children with Autism Spectrum Disorders: Investigation of Underweight, Overweight and Obesity. A.H. Memari et al./ Research in Autism Spectrum Disorders 6 (2012) 234-239
17. Jonathan A. Weiss Yona Lunsy the Brief Family Distress Scale: A Measure of Crisis in Caregivers of Individuals with Autism Spectrum Disorder. Final publicationwww.springerlink.com
18. Dr. Shweta Kulkarni et.al,2017 Effectiveness of group therapy on social interaction in autistic children, International journal of multidisciplinary research and development, volume 4; issue1; January2017, pg.no.80-84