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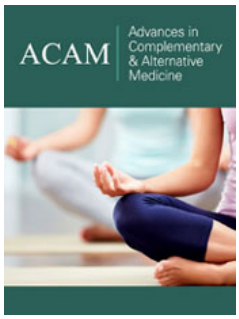
Commentary

A Commentary on Physical Activity Research with Children on the Autism Spectrum: The Parental Influence

ISSN: 2637-7802



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Abstract

Children diagnosed with autism spectrum disorder display greater levels of sedentary behavior when compared to their neurotypical peers, leading to a higher risk of negative health outcomes. Traditional physical activity research has identified a number of determining factors that may influence a child's physical activity levels, with parent physical activity engagement, support, and attitudes having substantial impact. This influence may be moderated by the parent- child relationship shared within the family system, yet the application of this moderating factor into the ASD population is problematic. As such, this commentary examines the current parent-child physical activity literature, how the parent-child relationship differs in family managing ASD, and finally we propose new prospectives requiring research to examine the distinctiveness of the parent-child relationship in family's managing an ASD diagnosis in effort to provide clarity regarding the role parents may play in promoting physical activity engagement in children with ASD.

Keywords: Autism Spectrum Disorder; Parent; Physical Activity; Relationships; Commentary

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Submission: September 08, 2025
Published: November 03, 2025

Volume 9 - Issue 1

How to cite this article: Andrew C Parks* and Jordan A Blazo. A Commentary on Physical Activity Research with Children on the Autism Spectrum: The Parental Influence. Adv Complement Alt Med. 9(1). ACAM. 000701. 2025.
DOI: 10.31031/ACAM.2025.09.000701

Introduction

The role of parental physical activity on child health outcomes is a multifaceted topic that encompasses various dimensions of health, including a) physical fitness, b) mental well-being, and c) social development [1-3]. It has been shown that parents play a crucial role in modeling the actions used to shape their children's attitudes and behaviors towards physical activity, laying the basis for the child's future relationship with physical activity and health [4,5]. For instance, Morgan et al. [6] found that parental modeling of physical activity is positively associated with children's sports participation and overall fitness levels. This modeling effect is further supported by research indicating that when both parents engage in regular physical activity, children are approximately 5.8 times more likely to be active compared to those with inactive parents [7,8]. This suggests that the behaviors exhibited by parents can directly influence their children's lifestyle choices.

Which has resulted in a research emphasis to include parents as a determining factor for children's physical activity behaviors, particularly within the U.S. where public health initiatives are seeking to address the continued rise in obesity, sedentary lifestyles, and negative health outcomes observed in children [9]. The positive physical and mental health outcomes associated with parents promoting physical activity among their children have been well documented over the years. Obesity prevention research has shown that children of active parents are less likely to be overweight or obese, and that increases in parental involvement in physical activities will often translate into healthier lifestyle choices for the entire family [10]. Obesity and mental health research has shown that parental support and encouragement for physical activities significantly enhance children's motivation to engage in sport and physical activity, resulting in greater maintenance of healthy weight status [11].

Further, parental research by George et al. [12] has indicated that parental attitudes and beliefs about physical activity significantly affect their children's engagement in exercise. Specifically, it was noted that parents who express positive attitudes towards physical activity and provide encouragement create an environment that fosters children's participation in sport and recreational activities.

This level of social and emotional support from parents is a key factor in promoting physical activity in children, and when combined with direct participation in physical activity by the parent these factors may prove to have an even greater impact. While all of these determining factors and the complexities of the family unit-specifically the parent-child dyad-are receiving attention from the research world, a concern for these authors has arisen that we feel must be addressed. Traditionally, research findings collected on a broad demographic of individuals has provided opportunity for application of these findings into other similar populations. Yet, in the world of sport and physical activity it has become apparent that the application of findings often does not seamlessly translate from one population, demographic, socioeconomic status, etc. to another. This has led to the need for specific exploration of each unique group to highlight factors that are distinctive to those individuals. With regard to the parent-child relationship, we are concerned that the application of findings observed in the general population cannot be readily translated to parents with children diagnosed with Autism Spectrum Disorder (ASD).

With prevalence rates rising to 1 in 31 children diagnosed with ASD [13], more families than ever are navigating the challenges associated with this diagnosis. Additionally, it has been shown that a diagnosis of ASD not only has a financial impact on the family, but a physical, mental, and social, influence – all areas shown to be targets for parent-child physical activity research. Lastly, children with ASD have been shown to exhibit an increase in sedentary behavior [14,15], putting them at a greater risk for negative health outcomes when compared to their typically developing peers. To complicate matters further, as children with ASD get older, they have also shown a significant decline in physical activity participation [16-18]-potentially reflecting a lifelong struggle with physical activity behaviors. As such, it is the belief of the authors that parent-child research addressing physical activity behaviors in children with ASD, should address two key areas of potential difference in this population: 1) the social relationship between the parent and child and 2) the physical activity of the parent or caregiver.

Social relationship between parent & child with ASD

A diagnosis of ASD can dramatically influence the dynamic of a family, introducing new financial obligations, time-constraints, behavioral challenges, communication deficits, and mental health concerns. The injection of these new tasks and burdens into the household not only affects the individual receiving the diagnosis, but the whole family. For example, parents of children with ASD often experience heightened levels of stress compared to parents of typically developing children [19,20]. This stress arises from the demands of managing the time commitments and behavioral challenges that come with an ASD diagnosis, and can result in feelings of hopelessness and frustration [21]. Further exacerbating these sensitivities to stress, parents also report feelings of isolation and lack of social support, mirroring reports that parents of children with ASD exhibit patterns of social withdrawal [22]. These withdrawal patterns are a hallmark characteristic of ASD in those diagnosed, but when combined with the parent's perception of isolation and a penchant to pull back socially the development of a healthy parent-child relationship can be substantially impacted [23].

Overcoming these stressors can be quite challenging but is commonly achieved through communication and positive coping mechanisms. Yet, the atypical communication patterns observed in those with ASD frequently lead to misunderstandings and frustration on both sides, resulting in parents finding it difficult to connect with their children emotionally due to the child's struggles to express their own feelings and appropriately respond to social cues [23,24]. Although a diagnosis can have a significant impact on the family, how the parents choose the embrace the diagnosis has also been shown to lead to more positive parent-child relationships [25]. A positive coping strategy, in which parents adopt a problem-focused approach to addressing the stressors brought on by an ASD diagnosis, has been shown to result in better mental health outcomes for the parents and more frequent positive interactions with their children. Physical activity participation has been shown to also provide an opportunity for positive coping. When parents engage in physical activity, they report feelings of less stress, greater control in the moment, and a more relaxed mind [19,20,26].

Despite these benefits associated with physical activity, participation for parents of children with ASD is significantly lower when compared to their peers whose children are not diagnosed. Research examining this trend has shown that parents report a number of barriers to participation in physical activity, many of which can be traced back to their child. For example, parents reported a lack of facilities or spaces to be active, yet when pressed for details it was revealed that the facilities/spaces lacked adequate support for their children (i.e., no appropriate care services so child could be nearby, unsafe equipment for children to also participate, or lack of guidance for how children could safely participate; Healy et al. [21]; Marchand & Healy [27]; Willis et al. [28]. These responses suggest a desire to include the child in the parent's physical activity participation. Given the demonstrated ability for physical activity and sport to foster the development of unique relationships, the inclination to include the parent in the child's physical activity (and vice-versa) may provide an opportunity to positively impact both the child and parent's physical, mental, and social well-being.

Physical activity of the parent

The role of parental involvement in interventions for children with ASD plays a critical part in shaping the parent-child relationship, with research indicating that when parents are actively involved in therapeutic interventions, children with ASD often show improved social skills and emotional regulation [29]. Benefits from this involvement also extend to the parents, who report a greater sense of agency and competence [30]. However, in the majority

of physical activity intervention studies completed with children diagnosed with ASD, parents are included as reporting-based participants only. In these studies, parents are asked to report on their child's physical activity levels, the perception of their child's physical activity engagement, or the perception of barriers to their child's physical activity. A small number of studies specifically ask the parent to report on their own physical activity participation, and for those that do-the information is collected through self-report methods (i.e., interview and survey).

In a recent systematic review by Parks, Blazo, & Reichter (In Review), only seventeen research studies were identified where both child and parent physical activity levels were reported, and of those included studies only two utilized objective measures of physical activity for both child and parent [20,31]. In an effort to enrich this field of data, it is the belief of the authors that the inclusion of objective measures of physical activity for both child and parent should be included in future studies. While this does challenge the feasibility of study design, the improved accuracy and precision of these methods will greatly enhance the quality of the data and the interpretations possible. Understandably, inclusion of these measures is not always practical, in which case it is suggested that, at minimum, both child and parent data be collected during intervention protocols for physical activity in an effort to account for the effect parent physical activity participation may have on the child's measured outcomes.

Conclusion

By identifying and accepting the potential differences in the family system resulting from a child's diagnosis of ASD, we can better account for the determinates of physical activity the family may provide. The goal of this commentary is to present the need to expand our understanding of the relationship dynamics within a family managing ASD, and how those relationships may impact the physical, mental, and social well-being of the parents and children. Furthermore, it has been demonstrated that physical activity may influence, and be influenced by, these familial relationships. Therefore, we also provide two suggested methods for future work to account for these interdependent connections within the family, and the impact they may have on overall health.

Statements and Declarations

Author disclosure statement

The author(s) declared no potential conflicts of interest with respect to the research, authorship, and/or publication of this article.

Funding

The author(s) received no financial support for the research, authorship, and/or publication of this article.

Acknowledgment

We would like to acknowledge all the studies, and authors, whose work has provided the foundation for this perspective.

References

1. Davidson G, Bunting L, McCartan C, Grant A, McBride O, et al. (2024) Parental physical activity, parental mental health, children's physical activity, and children's mental health. Frontiers in Psychiatry 15: 1405783.
2. Erkelenz N, Kobel S, Kettner S, Drenowatz C, Steinacker JM (2014) Parental activity as influence on children`s BMI percentiles and physical activity. Journal of Sports Science & Medicine 13(3): 645-650.
3. Su DLY, Tang TCW, Chung JSK, Lee ASY, Capio CM, et al. (2022) Parental influence on child and adolescent physical activity level: A meta-analysis. International Journal of Environmental Research and Public Health 19(24): 16861.
4. Crumbley CA, Ledoux TA, Johnston CA (2019) Physical activity during early childhood: The importance of parental modeling. American Journal of Lifestyle Medicine 14(1): 32-35.
5. Welk G, Wood K, Morss G (2003) Parental influences on physical activity in children: An exploration of potential mechanisms. Pediatric Exercise Science 15(1): 19-33.
6. Morgan PJ, Lubans DR, Callister R, Okely AD, Burrows TL, et l. (2011) The 'healthy dads, healthy kids' randomized controlled trial: Efficacy of a healthy lifestyle program for overweight fathers and their children. International Journal of Obesity 35(3): 436-447.
7. Jago R, Fox KR, Page AS, Brockman R, Thompson JL (2010) Parent and child physical activity and sedentary time: Do active parents foster active children? BMC Public Health 10(1): 194.
8. Moore LL, Lombardi DA, White MJ, Campbell JL, Oliveria SA, et al. (1991) Influence of parents' physical activity levels on activity levels of young children. The Journal of Pediatrics 118(2): 215-219.
9. U S Department of Health and Human Services (2018) Physical activity guidelines for Americans, 2nd (edn). Washington, DC, USA.
10. Gaston A, Edwards SA, Doelman A, Tober JA (2014) The impact of parenthood on Canadians' objectively measured physical activity: An examination of cross-sectional population-based data. BMC Public Health 14(1): 1127.
11. Lian Y, Peijie C, Kun W, Tingran Z, Hengxu L, et al. (2021) The influence of family sports attitude on children's sports participation, screen time, and body mass index. Frontiers in Psychology 12: 697358.
12. George VA, Shacter SD, Johnson PM (2011) BMI and attitudes and beliefs about physical activity and nutrition of parents of adolescents with intellectual disabilities. Journal of Intellectual Disability Research 55(11): 1054-1063.
13. Shaw KA, Williams S, Patrick ME, Prado MV, Durkin MS, et al. (2025) Prevalence and early identification of autism spectrum disorder among children aged 4 and 8 years-autism and developmental disabilities monitoring network, 16 sites, United States, 2022. MMWR Surveillance Summaries 74(2): 1-22.
14. Draheim CC, Williams DP, McCubbin JA (2002) Prevalence of physical inactivity and recommended physical activity in community-based adults with mental retardation. Mental Retardation 40(6): 436-444.
15. Todd T, Reid G (2006) Increasing physical activity in individuals with autism. Focus on Autism and Other Developmental Disabilities 21(3): 167-176.
16. MacDonald M, Esposito P, Ulrich D (2011) The physical activity patterns of children with autism. BMC Research Notes 4: 422.
17. Pan CY (2008) Objectively measured physical activity between children with autism spectrum disorders and children without disabilities during inclusive recess settings in Taiwan. Journal of Autism and Developmental Disorders 38(7): 1292-1301.

18. Pan CY, Frey GC (2006) Physical activity patterns in youth with autism spectrum disorders. Journal of Autism and Developmental Disorders 36(5): 597-606.

19. Haegele JA, Lee J, Chang SH (2017) Physical activity of parents of children with autism spectrum disorder. International Journal of Disability, Development and Education 64(4): 368-377.

20. Ketcheson LR, Pitchford EA (2021) Promoting physical activity participation and nutrition education through a telehealth intervention for children on the autism spectrum and their caregivers. Contemporary Clinical Trials 107: 106496.

21. Healy S, Marchand G, Williams E (2018) "I'm not in this alone": The perspective of parents mediating a physical activity intervention for their children with autism spectrum disorder. Research in Developmental Disabilities 83: 160-167.

22. Smith J, Halliwell N, Laurent A, Tsotsoros J, Harris K, et al. (2023) Social participation experiences of families raising a young child with autism spectrum disorder: Implications for mental health and well-being. The American Journal of Occupational Therapy 77(2): 7702185090.

23. Beurkens NM, Hobson JA, Hobson RP (2013) Autism severity and qualities of parent-child relations. Journal of Autism and Developmental Disorders 43(1): 168-178.

24. Karst JS, Hecke AVV (2012) Parent and family impact of autism spectrum disorders: A review and proposed model for intervention evaluation. Clinical Child and Family Psychology Review 15(3): 247-277.

25. Freedman BH, Kalb LG, Zablotsky B, Stuart EA (2012) Relationship status among parents of children with autism spectrum disorders: A population-based study. Journal of Autism and Developmental Disorders 42(4): 539-548.

26. Garcia JM, Baker K, Diaz MR, Tucker JE, Kelchner VP, et al. (2019) Implementation fidelity of a mindfulness-based yoga program for children with autism spectrum disorder and their families: A pilot study. Advances in Neurodevelopmental Disorders 3(1): 54-62.

27. Marchand G, Healy S (2019) Implementation of project CHASE (Children with Autism Supported to Exercise): A facebook-delivered, parent-mediated physical activity intervention. PALAESTRA 33(3): 3.

28. Willis C, Nyquist A, Jahnsen R, Elliott C, Ullenhag A (2018) Enabling physical activity participation for children and youth with disabilities following a goal-directed, family-centred intervention. Research in Developmental Disabilities 77: 30-39.

29. Chan KKS, Leung DCK (2020) The impact of child autistic symptoms on parental marital relationship: Parenting and coparenting processes as mediating mechanisms. Autism Research 13(9): 1516-1526.

30. Poslawsky IE, Naber FBA, Daalen EV, Engeland HV (2014) Parental reaction to early diagnosis of their children's autism spectrum disorder: An exploratory study. Child Psychiatry & Human Development 45(3): 294-305.

31. Pan CY, Frey GC (2005) Identifying physical activity determinants in youth with Autistic Spectrum Disorders. Journal of Physical Activity and Health 2(4): 412-422.