

Research Article

Using an Interdisciplinary Educational Video to Enhance Pediatric Residents' Understanding of Occupational Therapy Services

Thomas J*, Moriah C, Turkell J, Wagman M and Restivo J

Department of Occupational Therapy, State University of New York Downstate Medical Center, USA

*Corresponding author: Thomas J, Department of Occupational Therapy, State University of New York Downstate Medical Center, 450 Clarkson Avenue Brooklyn, NY 1120, Box 81, USA

Received: January 23, 2019; Accepted: March 12, 2019; Published: March 19, 2019

Abstract

In order to raise awareness of the benefits of early recognition of developmental delays in children and promote change project developers created a video to disseminate essential information to early childhood stakeholders. This video provides an overview of occupational therapy services in early childhood including the domains and skills addressed, common diagnoses, signs and symptoms to consider for a referral, and links to resources about the referral process. The content of the video consists of interviews with pediatric occupational therapists, pediatricians, and parents of children who have received occupational therapy services during early childhood. Although early recognition of developmental delays provides children with the most optimal opportunity to fully participate in age appropriate daily activities, the exposure to information for referrals needs improvement. As a result of uncertainty of qualification parameters and a lack of exposure to the role occupational therapists can play in child development pediatric residents do not refer all eligible children for rehabilitation. This comprehensive video attempts to bridge this gap and improve access to available services to improve the quality of life for infants, children, and families.

Keywords: Occupational Therapy; Early Intervention; Committee on Preschool Special Education; Pediatrician; Pediatric rehabilitation; Developmental delay

Abbreviations

EI: Early Intervention

Introduction

According to the Centers for Disease Control (2013), one in six children in the United States experiences a developmental delay, disability, or behavioral concern [1]. Pediatric occupational therapists provide services to these children in order to promote their health and well being through purposeful and meaningful activities to perform activities of daily living to their full potential. In early childhood, occupational therapists address developmental delays in the following areas: physical, cognitive, communication, social-emotional, adaptive, and sensory processing to support children and their families during routines related to feeding, sleeping, self-care, play, education, and social engagement [2]. Pediatric occupational therapy services are provided in hospitals, private clinics, schools, and the home.

Systematic reviews synthesizing research from four domains including social-emotional, feeding, cognitive, and motor performance in children from birth to five years of age demonstrated positive effects of occupational therapy early childhood services [3-6]. The National Early Intervention Longitudinal Study found that 71% to 76% of children who participated in EI services showed increased skills in performance areas such as social relationships, reasoning, problem solving, feeding, dressing, and self-care [7]. Early

intervention services helped 54% to 62% of children reach appropriate developmental milestones by the age of three [7].

Physical development is facilitated by increasing the opportunities for environmental exploration, hand use, bilateral coordination, motor planning, teaching caregivers positioning strategies, and improving how children navigate a multisensory world. Cognitive development is facilitated by supporting attention, instructing children on classifying objects, increasing listening and problem-solving skills, and minimizing environmental distractions. Communication and feeding skills are facilitated by providing instruction on communication devices and facilitating oral-motor skills of the jaw, lip, and tongue using sensory strategies. Social-emotional development is facilitated by encouraging self-regulation and interaction with others, improving social skills, teaching caregivers strategies to increase positive interactions with the child, and minimizing inappropriate behavior. Adaptive skills, such as those required in everyday activities to meet environmental demands, is facilitated by promoting independent feeding, dressing, and grooming skills [8]. Sensory processing skills can be facilitated with strategies that provide opportunities for controlled sensory experiences in order for the nervous system to modulate, organize, and integrate sensory information to increase adaptive responses [9].

Early intervention services are nationally mandated under the Individuals with Disabilities Education Act (IDEA) to children ages birth to three with or at risk for developmental delays [10]. Occupational therapists work in the home to educate parents and

caregivers about their child's needs to ensure that therapeutic strategies are implemented between sessions in the home to support their child's development [2]. Using a family-centered approach, occupational therapists provide the family with the tools they need to help their child reach their goals. Occupational therapists assess the need for assistive technology and adaptive equipment such as standers, walkers, bath chairs, electronic communication devices, adaptive utensils, and switch-operated toys.

As children age out of early intervention services, or if delays or disabilities become apparent beyond the age of three, services for children ages three to five can also be provided. Preschool-based occupational therapists in focus on academic achievement and social participation. Interventions include reducing environmental barriers in the classroom by adapting activities, implementing educational strategies, encouraging positive behavior traits, improving attention, and addressing sensory, cognitive, or motor needs to enhance independence. Occupational therapists evaluate a child's needs for assistive technology devices such as computer software, pencil grips, or modified seating. Occupational therapists collaborate with other professionals to ensure the child's needs are met not only in the classroom, but during social activities such as gym, recess and lunchtime [11].

Turning to Pediatricians for Support

In some cases, children who are identified as having developmental delays are not referred for rehabilitative services. Research shows that up to 78% of toddlers under the age of three meet the criteria for eligibility nationwide, but only 1.48% to 6.98% of these children are actually enrolled in services [10]. This disparity illuminates the need to provide occupational therapy services in early childhood to all eligible children. Pediatric residents and pediatricians play a fundamental role in narrowing this gap of care.

According to the American Academy of Pediatrics, pediatricians perform frequent developmental screenings on infants until they approach school age to determine possible delays in reaching developmental milestones [12]. Parents strongly value and often rely solely on the input received from pediatricians to identify potential health problems [13]. Concurrently, occupational therapists depend on referrals from pediatricians to refer children for an evaluation by a specialist.

Research shows that more than two-thirds of pediatricians and approximately half of pediatric residents indicated that they had no training to guide them in referring their patients to physical, speech, or occupational therapy, and only 15% of pediatricians indicated they would feel comfortable prescribing occupational therapy [14]. Among the pediatricians who saw patients with learning disabilities, only 34% often or always referred these children to occupational therapy [15]. Pediatric residents indicated that supplementary education about developmental disabilities would improve their base of knowledge in future practice [16].

It is important to highlight that the low number of occupational therapy referrals by pediatricians may be due to pediatricians' beliefs that an established medical diagnosis is required in order for a child to be eligible for services [17]. However, according to referral criteria for EI, a diagnosis is not always necessary since services may also be

appropriate for children without an established diagnosis.

Advocating for a Referral before a Prescription

Research suggests a rise in the amount of children prescribed medication to treat behavioral disorders such as attention deficit disorder (ADD) and attention deficit hyperactivity disorder (ADHD) [18]. One study analyzing the use of pharmacological treatment in youth from 1995-2004, found that there had been a 4.63% increase in chronic drug use as a form of treatment for these disorders [18]. Currently, over 10,000 children aged two to three are receiving prescription medication for ADHD outside of pediatric guidelines [19].

It is essential to emphasize that there are occupational therapy interventions available that address many of the behaviors that pharmacological treatment aim to treat. If pediatricians become more aware of these interventions then they may be less likely to prescribe medication as an initial course of treatment, and more likely to make a referral for occupational therapy.

Using an Educational Video to Reach a Large and Diverse Audience

Educational videos are highly effective learning tools [20]. A video exploring the topic of early treatment was created and developed to educate future pediatricians during their schooling, pediatric residents in the field, families who are unsure if they should be concerned about their child's development, and can offer pediatricians a resource to inform parents about the benefits of occupational therapy services. In turn, for a family just beginning occupational therapy services, this video can play a role in a smooth transition for services. In the video, parents express concerns about developmental milestones and typical warning signs. Concerned parents can bring mentioned signs to their pediatricians' attention as a basis for discussion. The video can be freely accessed on State University of New York Downstate Medical Center's website: <https://www.downstate.edu/chrp/ot/resources/index.html> (Occupational Therapy in Early Childhood: A Guide for Pediatricians and Caregivers).

Not only does this video explain how occupational therapy in early childhood is implemented but also includes an example of the referral process. It highlights that children from birth to three years of age are eligible for EI services if an evaluation finds that a child has a developmental delay or disability in one or more of the following areas of development: cognition, communication, physical/motor, social/emotional, adaptive/self-help [21,22]. The video can ultimately be used to educate all participants of the EI process.

Materials and Methods

The developed educational video is approximately seven minutes in duration and includes interview clips, images, and information about pediatric occupational therapy. The video highlighted clips of interviews with pediatricians, developmental pediatricians, pediatric occupational therapists, and parents of children who have received occupational therapy services. Pediatric residents and fellows in developmental pediatrics served as consultants to ensure that the content of the video was relevant and useful to pediatric residents.

In order to receive feedback regarding the efficacy of this project, the video was previewed by medical students and pediatric residents. Two different viewing sessions were held at the pediatric clinics at New York hospitals, Coney Island Hospital and State University of New York Downstate University Hospital of Brooklyn. Following the viewing, a Likert-scale survey was administered and project developers conducted an informal discussion to discern the strengths of the video and gather further information.

Results and Discussion

The viewers reported that the video was helpful in increasing their knowledge and understanding about early intervention and specifically pediatric occupational therapy. The participants also proposed that the video would be a beneficial addition to their educational training. In addition, the medical students expressed that the video proved to be helpful and it would be appropriate to be used as an educational resource for individuals choosing to pursue a career in pediatrics. This feedback validated the developer's initial intention to distribute this product to pediatric residency programs. This video is available as a resource on SUNY Downstate Medical Center's webpage, published on The American Academy of Pediatrics (Chapter 3 for NY), and has been used by American Occupational Therapy Association for educational purposes.

Early recognition of developmental delays in early childhood is an important step to prevent further complications throughout development. The earlier children are able to participate in rehabilitation, the more likely they are to reach positive outcomes [23]. Not only is early recognition important for the health of children and their families, but identifying problems and providing services at an early age is a more cost-effective strategy than waiting until the deficit worsens over time, which creates the need for more costly services [12]. Equipping future pediatricians with the proper screenings and sufficient knowledge about early childhood occupational therapy services can improve the treatment of children with, or at risk for, developmental delays and provide more opportunities for lifelong gains.

Conclusion

Due to the significant percentage of children who have disabilities, developmental delays, and behavioral difficulties who could benefit from occupational therapy services in early childhood, it is worthy to enhance the education available to parents and pediatricians. The video aims to assist in training future physicians to understand the goals of occupational therapy, when a child can be referred for an occupational therapy evaluation, and the broad scope of occupational therapy for children. Overall, this video seeks to enhance the education provided to healthcare professionals working on an interdisciplinary team to provide children with more comprehensive treatment and improve patient care.

References

- Centers for Disease Control and Prevention: Developmental Disabilities.
- American Occupational Therapy Association: Occupational Therapy for Young Children: Birth through 5 years of age.
- Case-Smith J. Systematic review of interventions to promote social-emotional development in young children with or at risk for disability. *American J of Occupational Therapy*. 2013; 67: 395-404.
- Case-Smith J, Frolek Clark GJ, & Schlabach TL. Systematic review of interventions used in occupational therapy to promote motor performance for children ages birth-5 years. *American J of Occupational Therapy*. 2013; 67: 413-424.
- Frolek Clark GJ, Schlabach TL. Systematic review of occupational therapy interventions to improve cognitive development in children ages birth-5 years. *American J of Occupational Therapy*. 2013; 67: 425-430.
- Howe T, Wang T. Systematic review of interventions used in or relevant to occupational therapy for children with feeding difficulties ages birth-5 years. *American J of Occupational Therapy*. 2013; 67: 405-412.
- Case-Smith J. From the desk of the guest editor—Systematic reviews of the effectiveness of interventions used in occupational therapy early childhood services. *American J of Occupational Therapy*. 2013; 67: 379-382.
- Clark CF, Polichino J, Jackson L. Occupational therapy services in early intervention and school-based programs. *American J of Occupational Therapy*. 2004; 58: 681-685.
- Pfeiffer BA, Koenig K, Kinnealey M, Sheppard M, Henderson L. Effectiveness of sensory integration interventions in children with autism spectrum disorders: A pilot study. *American J of Occupational Therapy*. 2011; 65: 76-85.
- Rosenberg SA, Robinson CC, Shaw EF, Ellison MC. Part C Early intervention for infants and toddlers: percentage eligible versus served. *Pediatrics*. 2013; 131: 38-46.
- American Occupational Therapy Association. What is the role of a school-based occupational therapy practitioner?
- Grissom M. Disorders of childhood growth and development: Screening and evaluation of the child who misses developmental milestones. *FP Essentials*. 2013; 41: 32-50.
- Sneed, RC, May WL, Stencel C. Physicians' reliance on specialists, therapists, and vendors when prescribing therapies and durable medical equipment for children with special health care needs. *Pediatrics*. 2001; 107: 1283-1290.
- Sneed RC, May WL, Stencel, CS. Training of pediatricians in care of physical disabilities in children with special health needs: results of a two-state survey of practicing pediatricians and national resident training programs. *Pediatrics*. 2000; 105: 554-561.
- Roberts G, Price A, Oberklaid F. Paediatrician's role in caring for children with learning difficulties. *Journal of Paediatrics and Child Health*. 2012; 48: 1086-1090.
- Burge P, Ouellette-Kuntz H, McCreary B, Bradley E, Lechner P. Senior residents in psychiatry: Views on training in developmental disabilities. *Canadian J of Psychiatry*. 2002; 47: 568-571.
- Silverstein M, Sand N, Glascoe FP, Gupta VB, Tonniges TP, O'Connor KG. Pediatrician practices regarding referral to early intervention services: Is an established diagnosis important? *Ambulatory Pediatrics*. 2006; 6: 105-109.
- Winterstein AC, Gerhard T, Shuster J, Zito J, Johnson M, Liu H, et al. Utilization of pharmacologic treatment in youths with attention deficit/hyperactivity disorder in Medicaid database. *Ann Pharmacother*. 2008; 42: 24-31.
- Shwarz A. Thousands of toddlers are medicated for A.D.H.D., report finds, raising worries. *New York Times*.
- Hurtubise L, Martin B, Gilliland A, Mahan J. To play or not to play: Leveraging video in medical education. *Journal of Graduate Medical Education*. 2013; 5: 13-18.
- Advocates for Children of New York: Guide to Early Intervention.
- Advocates for Children of New York: Referring children for preschool special education services.
- Feldman DE, Couture M, Grilli L, Simard MN, Azoulay L, Gosselin J. When and by whom is concern first expressed for children with neuromotor problems? *Arch Pediatr Adolesc Med*. 2005; 159: 882-886.