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Qualitative Survey of a Collaborative Team Approach to Treating Autism Spectrum Disorder

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**Qualitative Survey of a Collaborative Team Approach to Treating
Autism Spectrum Disorder**

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College of Health Professions

December 2020

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Abstract

Autism Spectrum Disorder (ASD) is a developmental disorder that requires a multitude of different professionals for treatment services. Although research has found interdisciplinary care to be the optimal treatment approach for ASD, providers often work independently with little to no communication and collaboration. **PURPOSE:** To examine a unique interdisciplinary approach to ASD care that is utilized at KidsLink School/Neurobehavioral Center through a qualitative survey. This study determines the role of each interdisciplinary team member, the advantages and disadvantages of KidsLink's approach, what is unique about their approach, and how a collaborative approach affects individual team members. **METHODS:** An online qualitative survey was distributed to KidsLink's professional staff who are members on the interdisciplinary care teams. The survey results were read over three times in order to identify common themes and conduct a frequency analysis of codes across all participant responses. **RESULTS:** There were 23 participants and 11 different professional fields represented in the survey. Several common themes emerged from the data analysis including: communication and collaboration, consistency, clinician development, individualized care, efficiency, positive environment, and learning opportunities. **DISCUSSION:** This study is significant as no other research study on ASD interdisciplinary care was found that represents as many as 11 different professionals collaborating together. Participants stated more overall advantages than disadvantages to interdisciplinary care and explained they receive more support than other professionals in their fields. The study broadly concludes that the interdisciplinary approach used at KidsLink School/Neurobehavioral Center offers several advantages for the professionals on the team, the parents, and the child.

Introduction

Autism Spectrum Disorder (ASD) is a broad and complex developmental condition that is characterized by challenges with social skills, repetitive behaviors, and speech and nonverbal communication. Due to the condition's increasing complexity and wide range of symptoms, there are several different professionals that are involved in the care and treatment of an individual with Autism Spectrum Disorder. Although the United States does use a multidisciplinary approach, interprofessional collaboration between professions is not always the case resulting in practitioners working independently. In order to achieve complete interprofessional collaboration, those involved on the individual's care team must expel the concept of profession-centrism and work as one cohesive team (Strunk, 2017).

In order to gather more research on the collaboration of professionals who treat ASD, this study examines a unique interdisciplinary approach to ASD care that is utilized at KidsLink School/Neurobehavioral Center. KidsLink is both a neurobehavioral center and a school that offers individualized treatment by recognizing how multiple settings impact the behavior and development of children with special needs. To maximize interdisciplinary collaboration, both settings, the neurobehavioral center and the school, are located under one roof. This set up works to promote collaboration among the school, home, and community-based settings to allow for more comprehensive services. As stated on the company's website, "We embrace an interdisciplinary approach to intervention, including collaboration among medical professionals, mental health professionals, speech and language pathologists, occupational therapists, physical therapists, educators, and related services personnel, as deemed appropriate to meet the comprehensive needs of our child patients and their families" (Our Approach to Individualized Treatment, 2020).

This study answers the following research questions:

1. What is the role of each professional team member?
2. What are the advantages and disadvantages of KidsLink's approach?
3. What makes KidsLink's approach unique?
4. How does a collaborative approach affect individual team members?

This project will provide a synthesis of findings about the multidisciplinary approach used at KidsLink School/Neurobehavioral Center in order to spread knowledge and awareness.

Ultimately, this project will serve to educate the public on the different professionals needed for ASD treatment and how they can effectively work together to offer to the best possible care.

Literature Review

According to the Centers for Disease Control, Autism Spectrum Disorder (ASD) has become one of the fastest growing developmental disabilities in the United States as it affects one out of 68 children (as cited in Strunk, 2017). In the United States, ASD is considered the second largest permanent developmental disability in children. ASD is classified as a complex neurodevelopmental disorder which results in co-occurring medical, communicational, behavioral, and educational difficulties. In order to properly care for all of these needs, people with ASD require care from several different disciplines including psychology, social work, occupational therapy, physical therapy, speech pathology, education, nursing, dietetics, psychiatry, and physicians (Strunk, 2017). Due to the complex nature of ASD, it is critical that a multidisciplinary approach is utilized in order to treat the child in a wholistic manner. While it is common for someone with ASD to have an extensive treatment team of professionals, it is not as common for these professionals to collaborate. Interprofessional collaboration promotes

interaction and shared clinical experiences through intentional communication via meetings, shared planning, and debriefing (Strunk, 2017).

For a number of chronic health conditions, including developmental and behavioral disorders, there is an inadequate standard of care. These fragmented health care systems, specifically for physical and behavioral needs, operate with separate and distinct settings, care management approaches, and providers (Shahidullah, Gazi, Mezher, et al., 2018). As stated by the article's authors, "These fragmented systems lead to diminished quality of care as a result of inefficiencies, lack of communication, duplication and gaps in services, and patients feeling overwhelmed and marginalized in their care" (Shahidullah, Gazi, Mezher, et al., 2018, p. 1496). The integrated care movement was created to combat this problem by seeking to make health care more accessible and effective. This movement includes the coordination of physical and behavioral health services offered within one system of care. The integrated care movement is a newer concept that has been reemphasized via the Patient Centered Medical Home model in the Patient Protection and Affordable Care Act (Shahidullah, Gazi, Mezher, et al., 2018).

The concept of integrated care, the coordination of care across setting and providers, is exceptionally crucial for children with special needs as they typically require longitudinal care within a chronic care model (CCM) (Shahidullah, Gazi, Mezher, et al., 2018). Care coordination involves a group of professionals from multiple setting collaborating to streamline information and roles in order to offer efficient, continuous, and effective treatment (Shahidullah, McClain, Azad, et al., 2020). The CCM recognizes that ASD involves profound impairments that utilize several different settings and care systems (Shahidullah, Gazi, Mezher, et al., 2018). Although integrated care is emphasized in the medical setting, there is a lack of research on treatment models that coordinate care between the medical and educational settings (Shahidullah, McClain,

Azad, et al., 2020). The extensive diagnostic criteria for ASD highlights the need for the conglomeration of services across both the medical and educational settings to adequately address the needs of this pervasive disorder. Due to the fact that ASD falls on a spectrum, a wide range of individualized symptoms are present. Children with ASD are also diagnosed with comorbid conditions related to their physical, cognitive, and mental functioning (Shahidullah, Gazi, Mezher, et al., 2018). Physical and mental comorbidities associated with ASD include “epilepsy, sleep disorders, attention deficit hyperactivity disorder, gastrointestinal disorders, feeding/eating challenges, obesity, anxiety, depression, and bipolar disorder” (Shahidullah, McClain, Azad, et al., 2020, p. 1). According to the American Academy of Child and Adolescent Psychiatry (AACAP), the multifaceted nature of ASD necessitates comprehensive services (as cited in Shahidullah, Gazi, Mezher, et al., 2018). Integrated care is especially imperative as children with ASD transition throughout life from early childhood to school age to adulthood. When these life transitions take place, there is typically a transfer of services which can easily result in miscommunication. While the AACAP guidelines for ASD treatment discuss an integrated approach using verbiage such as “comprehensive” and “collaborative”, there is no discussion of a definitive approach to care coordination (Shahidullah, Gazi, Mezher, et al., 2018, p. 1497).

Due to the overwhelming amount of treatment options and lack of integrated care among the medical, home, and educational settings, it is not surprising that families tend to experience compelling challenges with timely identification, diagnosis, and management of their child’s needs. Farmer et al conducted a study where 371 parents of children with ASD were asked to complete a questionnaire about access to coordinated care (as cited in Shahidullah, Gazi, Mezher, et al., 2018). The results showed that 29.9% of the children received integrated care

leaving more than half of the children (70.1%) with unmet needs. The highest unmet need was found within behavioral therapy. Additionally, challenges associated with coordinated care are increased within underserved communities (Shahidullah, Gazi, Mezher, et al., 2018).

The three central systems of care for children with complex developmental disabilities include the medical, home, and educational settings. One of the large gaps in interdisciplinary care for children with ASD is within the medical and educational settings as they are both primary venues that serve as the center of coordination of care. In order to better comprehend this gap, the way each system functions must be analyzed. The medical setting model emphasizes regulations which endorse preventive and continuous services such as screenings and assessments. Primary care providers (PCP) are often the first point of contact for parents concerned with their child's developmental delays (Shahidullah, Gazi, Mezher, et al., 2018). PCPs have a large barrier to offer effective services for children with ASD due to a lack of time, training, and reimbursement. Because of this, PCPs typically rely on referring out to specialists as ASD patients often depend upon more medical, rehabilitative, behavioral health, and educational services than those with other special health care needs. The referred specialty care services include "gastroenterology, neurology, physical and occupational therapy, speech and language pathology, psychiatry, psychology, and other behavioral intervention services, among others" (Shahidullah, Gazi, Mezher, et al., 2018, p. 1498). Due to the multitude of professionals involved in ASD treatment and care, families face many barriers to access these specialty services including lack of qualified physicians to make referrals, extended wait times until initial appointment, and struggle with insurance coverage (Shahidullah, Gazi, Mezher, et al., 2018).

The second central care system for children with ASD is the educational system. The Individuals with Disabilities Education Improvement Act (IDEIA) enforces that children with

disabilities are to receive “free and appropriate public education” in the “least restrictive environment” from infancy to young adulthood (as cited in Shahidullah, Gazi, Mezher, et al., 2018, p. 1498). Children with ASD can be diagnosed as early as 18 months and qualify for early intervention services covered by most private health insurance policies. Part C of IDEIA specifies birth-to-three treatment services children with ASD qualify for; these services include Applied Behavioral Analysis (ABA) techniques, structured teaching, the developmental individual-difference relationship-based model, speech pathology, occupational and physical therapies, and social skills instruction. Once a child enters the school system, they will receive an Individualized Education Program (IEP) which serves to outline the services that the child will receive. School-based services are provided directly through in-house providers or contracted with community behavioral health agencies for services to be provided at school. Other than what is communicated through the parents, educational based providers have limited collaboration and communication with medical care providers. This gap in integrated care results in school-based providers having little knowledge of important factors that may impede a student’s academic success such as their physical conditions, medications, and somatic complaints (Shahidullah, Gazi, Mezher, et al., 2018).

The third central system of care for children with ASD is the home setting. Dynamic family relationships play a crucial role in the development and outcomes of a children with ASD. Parents of children with ASD are faced with several different challenges involving their child’s physical, behavioral, and mental health. Families will often have more than one child with a developmental concern. Both of these parental factors create limited time for employment and subsequent financial burden, marital strain, and marginalization within their community. Several studies have proven the negative mental health outcomes for parents of children with ASD.

Despite these parental burdens, there is substantial evidence that point to parental characteristics, such as self-efficacy and social support, that determine mental health outcomes. The lack of integrated care for ASD lays the burden of managing and coordinating services on parents. This may include parents managing and coordinating care between in-home intervention therapies, medical services, community specialty care providers, and school-based providers. Russell and McCloskey examined parent's perceptions of integrated care and interactions with their medical providers and found that parents reported that these providers were ill-equipped to manage the challenges associated with ASD and were only purposed for general health maintenance. Additionally, parents were not aware of support at home or school for behavioral services and community resources. The study concluded that parents of children with ASD are often dissatisfied with the quality and quantity of services (as cited in Shahidullah, Gazi, Mezher, et al., 2018). A collaborative multidisciplinary approach to ASD is reportedly preferred by families (as cited in Shahidullah, McClain, Azad, et al., 2020).

Parent's involvement with their child's ASD treatment plays a large role in the generalization and transfer of skills. By implementing continuous care plans that are consistent with therapy, parents can be effective interventionalists. When care providers teach and inform parents about their child's treatment plans, they are able to carry the treatment plan into the home environment. This collaboration of care across environments improves parent-child interactions and increases the amount of intervention the child receives. Generalizing intervention plans is critical as research suggests that children who receive intensive treatment have significantly more improvement compared to those who receive less treatment (Burrell & Borrego, 2012). Other factors that influence treatment outcomes are early intervention, intense and continuous intervention, and parental involvement in treatment. It is important for parents to be involved in

treatment because they “can provide important assessment, diagnostic, and educational information, can assist in educational planning and goal setting, and can be effective in implementing treatment” (Burrell & Borrego, 2012, p. 425).

A collaborative multidisciplinary approach to ASD offers several benefits including more effective communication, a reduction in stressors for families, earlier diagnoses to permit timely intervention, and improved medical and behavioral health services. As it has been well established that integrated care is optimal for ASD treatment, how to execute this model needs to be addressed. School psychologists are positioned to coordinate this collaborative team approach as these professionals receive a wide range of training in child development, developmental disabilities, psychological assessment, academic, behavioral, and mental health interventions; consultation, data-based decision making; and partnering with families and other professionals. McClain et al (2019) conducted a recent survey of school psychologists who provide services to students with ASD. The survey results established that 67% of these professionals participate in interprofessional collaboration outside of the school system (as cited in Shahidullah, McClain, Azad, et al., 2020). The respondents identified several barriers to collaborative care with PCPs and other non-school based professionals including limited time, lack of knowledge about the education eligibility process, and difficulties communicating information (Shahidullah, McClain, Azad, et al., 2020).

Due to the multitude of different professionals and providers involved in ASD treatment and care, there are many different working relationships and collaborations among individual professionals. For example, speech-language pathologists (SLP) and board-certified behavioral analysts (BCBA) commonly work together and tend to have difficulty navigating an interprofessional approach. The source of these difficulties and discomforts may arise from

overlap in scope of practice, divergence in theoretical orientation, and profession-specific terminology (Morgan, 2020). This can be further exacerbated when collaborations are enforced by administration resulting in possible competitive and defensive working conditions between professionals. Lindee Morgan (2020) believes those with ASD are best-served when both the SLP and BCBA can curate an environment of appreciation each professional's training and knowledge, and can reinforce the legitimacy of each respective profession. Morgan offers tangible suggestions to help smooth the working relationship between SLPs and BCBA's when co-treating ASD. Clinicians must have clarity on where their personal competence and experience falls within their professional scope of practice in order to provide the highest quality of care and model a transparent representation of clinical strengths and weaknesses. By identifying similarities between speech-language pathology and behavior analysis principles, clinicians are able to establish productive and cooperative interprofessional relationships. Defensive professionalism creates division among clinicians; in order to combat this, professionals must have conceptual humility and respectfully inquire about differences and disagreements between practices. Lastly, Morgan emphasizes the importance of leveraging each professional's areas of competence by highlighting the unique skills that both SLPs and BCBA's offer (Morgan, 2020).

The Centre for Studies in Family Medicine at The University of Western Ontario conducted a study examining conflict on interprofessional primary health care teams (PHCTS) through in-depth interviews with 121 participants from 16 PHCTs (as cited in Brown, 2011). The data analysis determined three main themes including sources of team conflict, barriers to conflict resolution, and strategies for conflict resolution. Sources of team conflict were found in role boundaries, scope of practice, and accountability. Role boundary issues were described as a

lack of understanding of each other's roles: "People don't understand each other's roles and how important each other's roles are on that interdisciplinary team," stated a social worker interviewee (Brown, 2011, p. 6). Scope of practice causes conflict when professionals do not have a clear comprehension of other team members' scope of practice. Issues of accountability can result in conflict when team members do not take responsibility for their roles. Participants identified four main barriers to conflict resolution including lack of time and difficulty with workload balance, people in less powerful positions feeling intimidated and silenced, lack of recognition or motivation to address conflict, and avoiding confrontation for fear of causing other team member's emotional discomfort (Brown, 2011). The last main theme discussed strategies for conflict resolution by examining different team strategies and personal strategies. Team strategies focused on developing conflict resolution policies and procedures and dependence on team organization leaders to negotiate and resolve team conflict. Personal strategies focused on open and direct communication, an eagerness to find solutions, being respectful, and practicing humility (Brown, 2011).

ASD is a multifaceted and complex disorder that has created an unprecedented opportunity for impactful, multidisciplinary collaboration between specialized professionals. Sensory function in persons with autism spectrum disorder is a heightened interest between neurologists and occupational therapists (OTs) for whom sensory processing is a focal point. Although research for sensory function in ASD has diversified and potential for interdisciplinary collaboration has increased, this team approach has yet to be fully utilized due to significant practical barriers to transcending disciplinary silos. Divergent goals, values, approaches, and terminology among neurologists and OTs often result in practitioners working independently (Cascio, 2016). For example, the primary goal of neurologists is to apply the scientific method to

describe sensory function in ASD while the primary goal of the OT is to assess how sensory differences may impact daily life for persons with ASD. The central values of a neurologist include reductionism and objectivism while the central values of the OT include the therapist-client bond, purposeful activity, and participation. In order to achieve these goals and values, each professional adheres to different methods and guidelines: neurologists focus on fidelity and rigor in stimulus control and delivery in response measurement while OTs focus on theoretical frameworks, ethical principles, and evidence-based practice (EBP). The fourth barrier, differences in terminology, creates separate interdisciplinary dialogue and lexicons. For OTs, “multisensory integration” alludes to the structure of various types of sensations needed to uphold performance in activities of daily living (ADLs) (Cascio, 2016, p. 2). On the other hand, neurologists define “multisensory integration” as the impact of one sensory system on another resulting in a behavioral or perceptual change (Cascio, 2016, p. 2).

Despite these barriers of individual goals, values, approaches, and terminology, neurologists and OTs have a number of mutual disciplinary landscapes. One specific example of potential cross-disciplinary communication is that both professionals generally assume that atypical behavioral responses to sensory stimuli in person with ASD result from inconsistencies in the structure and/or function of brain regions culpable for sensory processing (Cascio, 2016). Another shared perspective is that both OTs and neurologists operate with the belief that sensory function in individuals with ASD is vulnerable to environmental influences and is thus manageable with treatment. These are just two of the many examples of correspondence in care that suggest a tremendous synergistic potential for future interprofessional communication and collaboration for ASD treatment (Cascio, 2016).

Upon entering the workforce, many professionals have not received sufficient preservice instruction on how to collaborate when providing services for children with ASD. An instruction-service delivery gap in the education of speech-language pathologists was identified as SLPs are often expected to participate on interdisciplinary teams, but often they receive minimal instruction and training on how to do so (Self, 2017). Lundblom (2012) published a thorough literature review that revealed no information on how SLP students were receiving interprofessional education (IPE) even though the extent and quality of preservice education has been significantly correlated to professional success (as cited in Self, 2017). Despite there being strong evidence to support IPE, barriers to the development and implementation of IPE tend to be created by institutes of higher education. Frequently noted barriers to IPE include the addition and coordination of both coursework and clinical experiences into an already intense and busy curricula; a greater focus on individual achievement; and insufficient funding and limited support for flexible scheduling (Self, 2017). The World Health Organization (2010) reported how a student is educated tends to correlate into the manner he or she practices (as cited in Self, 2017).

To combat this problem, Wichita State University (WSU) developed a field-based autism interdisciplinary diagnostic team for SLP students based on the American Speech-Language-Hearing Association's (ASHA) recommendations that IPE be included into communication science and disorders programs coupled with the need to prepare students to provide effective interprofessional ASD treatment services. The purpose of this interdisciplinary team was to provide students from different disciplines the opportunity to observe and participate in real-world collaborative, interprofessional experiences (Self, 2017). The expected outcome was that students would be given a safe place to ask questions, offer input, and listen to a variety of professionals express their thoughts on multiple situations throughout the evaluation process.

When students were surveyed about the autism interdisciplinary diagnostic team, three common themes about the experience were identified: new knowledge was gained, the opportunity was exciting, and it resulted in self-realization and role acceptance. Students on the team also acknowledged the benefits of observing and participating in interprofessional collaboration in a safe, authentic diagnostic setting. Through SLP student-supervisor feedback sessions, students indicated that the interdisciplinary team experience allowed them the opportunity to increase their clinical confidence through practice collaborating with professionals from other disciplines (Self, 2017).

Eastern Kentucky University (EKU) also sought out to address the lack of interprofessional clinical education for ASD specifically for occupational therapy (OT) and psychology students as both fields commonly treat ASD. Although OTs and psychologists are common clinical partners when working with ASD, there are few opportunities for these professionals to interact during academic training. Arndt et al. (2009) recommended including clinical interprofessional educational opportunities to help students establish professional identity and better understand their professional role (as cited in Howell, 2011). Mueller et al. (2008) conducted a study on allied health graduates and found that IPE should occur during clinical placements rather than in the classroom setting (as cited in Howell, 2011). EKU developed a team of six students and two faculty participants were placed on interprofessional teams to plan and implement a social skills training program for children with ASD. The purpose of these teams was to offer hands-on, student-led clinical experience; conduct interdisciplinary collaborative learning through leadership partnerships; and teach children with ASD to engage in appropriate social skills behaviors (Howell, 2017). Students and faculty participants identified four main themes that they learned from this interprofessional clinical learning experience: who

they are as a professional, appreciating professional differences, communicating with each other to solve a problem, and focusing on the benefit of the kids. Similar to Wichita State University, ECU identified barriers to interprofessional education such as scheduling and limited faculty resources (Howell, 2011).

Methods

The goal of this project was to examine the unique team approach utilized at KidsLink in order to discover possible advantages and disadvantages, examine and define each professional's role as a member of the care team, and determine how the team collaborates as a unit. A qualitative online survey (see Appendix A) was developed via Qualtrics which proposed questions about demographics and ended with specific questions about KidsLink's interdisciplinary approach. To be a qualified survey participant, individuals must be a professional employee of KidsLink who treats clients with ASD. It should be noted that the Principal Investigator of this project works in a subdivision of KidsLink, but is not a member of the interdisciplinary team. In order to gather data from KidsLink employees, written consent from one of the founders of KidsLink was obtained (see Appendix B).

After the Institutional Review Board at the University of Akron approved the project, a description of the project and the link to the qualitative online survey was sent to KidsLink's Director of Operations who then sent the information out to KidsLink's professional employees. A consent form (see Appendix A) was required to be read and agreed upon before participants could gain access to the survey. The survey was available to employees from December 2019 to January 2020. It included eleven questions and took around 10-15 minutes to complete. After the surveys were completed, all of the data was read through by the Principal Investigator three times in order to identify common themes and conduct a frequency analysis of codes across all

participants. Once the themes were gathered, the data was checked by the Co-Investigator who approved over 90% of the themed analysis.

The first goal of this project was to examine the unique team approach utilized at KidsLink. The objective of this goal was that different team members would be asked what makes KidsLink's approach unique. The second goal was to discover the possible pros and cons of a multidisciplinary approach to Autism Spectrum Disorder. The objective of this goal was that themes were examined to understand possible benefits and/or drawbacks of a collaborative treatment approach. The third goal was to examine and define the individual roles each professional has as a member of the care team. The objective of this goal was carried out through an analysis of each professional team member's survey answers where the individual's impact will be established. The fourth and final goal was to determine how KidsLink's care team collaborates as a unit. The objective of this goal was accomplished by coding for themes that will determine what characteristics effectively impact the collaborative team as a whole.

Results

A total of 23 interdisciplinary team members at KidsLink participated in the online survey. The sample size of participants varied per question because not every question was applicable to some of the participants. The percent of participates per theme does not equal 100% as one participant's response could include more than one theme.

Table 1 shows the 11 different professional fields that were represented in the data. There were 23 total survey participants, but it should be noted that two of those participants listed more than one job title as reflected in the number of participants being 25. The two most highly represented disciplines include Board Certified Behavioral Analysts (BCBAs) and Educational Coordinators.

Table 1: What is your job title at KidsLink?

Job Title	Percent of participants (25)
Board Certified Behavioral Analyst	20%
Educational Coordinator	20%
Registered Behavioral Technician	16%
Speech Language Pathologist	12%
Occupational Therapist	8%
Physical Therapist	4%
Executive Director of the school	4%
Physician	4%
Registered Nurse	4%
Nurse Practitioner	4%
Curriculum Director	4%

Tables 2 and 3 show the range, mean, and median amount of time the participants have been working in their specific professional field and how long they have been working at KidsLink.

Table 2: How long have you been working in your field?

Range	23 years-6 months
Mean	8.3 years
Median	7 years

Table 3: How long have you been working at KidsLink?

Range	12 years-5 months
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Mean	4 years
Median	3 years

Table 4 breaks down participants' specific roles as members of the interdisciplinary team. Each role addressed a specific need that KidsLink's team serves including the behavioral, educational, medical, speech and language, occupational, and physical needs of a child with ASD. The three most common professional roles include treating behavioral needs, educational needs, and care coordination.

Table 4: What is your individual role as a member of the interdisciplinary team?

Themes	Percent of participants (23)
Behavioral needs	57%
Educational needs	43%
Care coordination	43%
Offer feedback	30%
Speech and Language needs	13%
Medical needs	13%
Occupational needs	9%
Physical needs	4%

Participants were asked to identify possible advantages of the collaborative team approach to ASD utilized at KidsLink. As shown in Table 5, the most common theme discussed among the professionals was the concept of different specialties and perspectives as a physical therapist stated:

“These children are impacted by a wide range of issues, medical through behavioral, it is important to work together to address all of the issues as a team so the child can make necessary progress. We all bring our unique strengths to the table. It is important that expectations are set and reinforced by all members of the team for consistency.”

The Executive Director of the KidsLink School addressed the themes of consistency, individualized care, family support, communication and collaboration, and clinician development:

“The team approach really helps to help a child meet their potential as the team works collaboratively to assess and treat the whole child, their needs and support the family. The connectivity of the team approach allows the skills being addressed with a child to be addressed more consistently and effectively across team members to maximize student learning. It is also helpful for clinician development to work as a team and learn about the different disciplines and to dive deeper into getting to know an individual client.”

Table 5: What are the possible advantages of using an interdisciplinary approach when treating ASD?

Themes	Percent of participants (23)
Different specialties and perspectives	57%
Care consistency	43%
Individualized care	35%
Clinician development	35%
Treatment plan success	30%
Communication and collaboration	26%
Family support	17%
Generalization of skills & treatment	9%

Evidence Based Practice	9%
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Table 6 shows the possible disadvantages participants have experienced as members of the interdisciplinary team. Two of the most common themes included differing opinions and inconsistency in care, treatment, and collaboration among professionals as explained by an educational coordinator, “Possible disadvantages of using an interdisciplinary team approach when treating ASD includes conflict (incompatible schools of thought that neither side is willing to give on), treatment drift, and varied programming implementation.”

Another common response was that there are no disadvantages to interdisciplinary ASD care. A physical therapist explained the advantageous approach, “I can't imagine that there are any...I don't experience any disadvantages. Regardless of the diagnosis, teamwork is always the best approach for treatment of children with special needs.”

Table 6: What are the possible disadvantages of using an interdisciplinary approach when treating ASD?

Themes	Percent of participants (23)
Different opinions	26%
None	26%
Inconsistency	26%
Miscommunication	17%
Different training & research methods	17%
Time consuming	9%

Participants were asked what they think makes KidsLink’s collaborative approach to ASD unique compared to other centers. Table 7 shows 11 different themes identified, with

communication and collaboration present in half of the participants' responses. This theme and others such as efficiency, interdisciplinary care, size, location, and support were discussed by a speech pathologist:

“Given that KL is a small entity, it truly makes the interdisciplinary approach and ability for clinicians to work together more efficient. We are all in the same space and know one another and our patients so we are much easier and more inclined to talk about a patient and collaborate. Most other centers have more transient staff and different departments which does not lend itself to collaboration. KidsLink also moves beyond just therapies, by also including medical and psychological supports.”

Table 7: What do you think makes KidsLink's approach to interdisciplinary care unique compared to other centers?

Themes	Percent of participants (23)
Communication and collaboration	50%
Efficiency	32%
Interdisciplinary care	32%
Consistency	23%
Location	23%
Support	18%
Positive environment	18%
Professional Experience	18%
Size	14%
Data based	9%
Individualized	9%

Table 8 presents themes that compare how KidsLink’s team approach to ASD care affects the individual team members when compared to other colleagues in their field. The most common theme was the concept of professional support and input. A registered nurse explained the how important it is for a child’s medical and educational needs to be met under the same roof:

“I cannot imagine the complicated process that most teachers have to go through to get in contact with their student’s medical team. Having parents act as this intermediate must be challenging to get information quickly and accurately shared. We are able to see the student in the classroom environment and fully grasp what challenges and successes the student is having. The pace at which we can keep up with changes or escalations in behavior allow us to stay on top of med changes in a way that would not be possible elsewhere. Also, the relationships I am able to build with these students and their families is unlike any relationship I would be able to foster in a traditional healthcare setting.”

Table 8: How do you think the interdisciplinary team approach at KidsLink impacts your job compared to the colleagues in your field who do not experience this same team approach?

Themes	Percent of participants (22)
More professional support & input	59%
Better clinician	36%
More learning opportunities	32%
Advantageous to patients/clients/students	27%
Higher consistency	27%
More efficient	18%
Higher job satisfaction	18%
More communication & collaboration	14%

Table 9 discusses shared ideas for improving interdisciplinary ASD care, with communication and collaboration being the most frequent theme. An educational coordinator discussed this theme, “I believe collaborative care for treating ASD must include a level of home communication. I promote home communication as much as possible as it relates to every member of the team, although parents are more likely to communicate with some members more than others (for example, emailing me about speech as opposed to contacting the SLP).” Another common theme was to implement more meetings as a Registered Behavioral Technician shared, “More meetings involving a client’s entire team to keep everyone on the same page when it comes to that clients individual programming and needs.”

Table 9: What ideas do you have to improve collaborative care for treating Autism Spectrum Disorder?

Themes	Percent of participants (21)
Communication & collaboration	38%
Interdisciplinary care	19%
Meetings	19%
Training opportunities	14%
Understanding other professionals	14%
Generalization of skills	10%

Discussion

With 23 total participants and 11 different professional fields represented, this study is significant as no other research study on ASD collaborative care was found that includes data as broad as this study. When reviewing literature on interdisciplinary care for ASD, research on this topic only represented two to three disciplines, such as Cascio (2016) and Shahidullah, McClain,

Azad, et al. (2020). As shown in Table 2 and Table 3, there is a wide range of professional experience both within a particular field and working at KidsLink. Professional experience in a particular field ranged from 23 years to 6 months and time spent at KidsLink ranged from 12 years to 5 months. This wide range of experience and number of disciples represented in the participant analysis further validates the data.

In order to determine how KidsLink's interdisciplinary team functions as a unit, each professional's individual role as a member of the care team was broken down into 8 categories (see Table 4) that encompass the child's entire scope of care needs. The most common role among the participants was to address a child's behavioral needs (57%). Shahidullah, Gazi, Mezher, et al. (2018) found that highest unmet need for children with ASD was found within behavioral therapy. KidsLink's large scale focus across several different professionals on the behavioral needs of their students and clients is uncommon. Another important figure to note from Table 4 is the 43% of participants responsible for care coordination and the 30% of participants responsible for offering feedback. The role of care coordination involves organizing and communicating different treatment plans from different professionals to each of the team members involved with that specific child. Participants whose role is to offer feedback were typically the professionals that most often worked one on one with the child. This cycle of offering feedback, collaborating on care improvement, and then communicating treatment plan changes to all involved team members seems to be how KidsLink's interdisciplinary teams operate as a unit.

Several different advantages to utilizing an interdisciplinary approach when treating ASD were observed (see Table 5). The most frequently discussed advantage was having different specialities and perspectives (57%) involved on the integrated care team. Participants explained

the importance of having multiple different educational and experiential backgrounds collaborating together in order to create the most effective treatment plan. This concept of multidisciplinary perspectives plays into other advantages found such as care consistency, clinician development, and treatment plan success. Communication and collaboration (26%) was another common theme among the 23 participants. Another important advantage to note is the family support that interdisciplinary care provides. As stated in the literature review, when care providers teach and inform parents about their child's treatment plans, they are able to carry the treatment plan into the home environment which results in environmental generalization of skills and treatment, another observed advantage (Burrell & Borrego, 2012).

When asked what are the possible disadvantages to an interdisciplinary approach (see Table 6), 26% said different opinions, but recall that participants also stated different specialties and perspectives were an advantage. It should be expected when multiple different professionals with different training and educational backgrounds come together to create a cohesive treatment plan there will be differing opinions. How the team chooses to adapt and communicate dictates if individual opinions will be used as an advantage or disadvantage. Another disadvantage frequently quoted is different training and research methods among the interdisciplinary team members. This disadvantage relates to a research study by Cascio (2016) that found why neurologists and OTs often work independently when treating ASD is because of divergent goals, values, approaches, and terminology. Other disadvantages include miscommunication and the time-consuming manner of multidisciplinary interactions. Overall, participants listed several more advantages than disadvantages; 26% even said there are no disadvantages to interdisciplinary care.

KidsLink professional employees were asked what makes their interdisciplinary approach to ASD unique compared to other centers. Half of the participants mentioned the frequent theme of communication and collaboration (see Table 7). This theme was mentioned in 4 of the 9 tables. Strunk (2017) explains that interprofessional collaboration includes intentional communication via meetings and shared planning. Participants stated that KidsLink's approach is more efficient and consistent. Reasons for this include the multiple different professionals working at one location as the neurobehavioral center and the school are under one roof. KidsLink is also a small enough entity where everyone is familiar with each other and natural interprofessional relationships are able to develop and grow. These crucial relationships and interactions create a supportive and positive environment for the interdisciplinary team members. Participants also mentioned the wide range of professional experience that is seen at KidsLink which is supported by the 11 different disciplines that are represented in the survey responses. KidsLink utilizes Applied Behavior Analysis (ABA) which is a "therapy based on the science of learning and behavior" (Autism Speaks, n.d.). ABA requires intense data taking on the child's behavior which allows for progress to be tracked and team members to be on the same page. Lastly, participants talked about KidsLink's unique ability to offer individualized care since each child is given an interprofessional team that creates a specific treatment plan that include the child's behavioral, educational, speech, occupational, physical, and medical needs.

When comparing their experience at KidsLink to other colleagues in their field who are not members on interdisciplinary teams, 59% of participants stated the biggest difference is the amount of professional support and input they receive (see Table 8). Participants also stated that being on an interdisciplinary team helps them be a better clinician because it provides more opportunities to learn from other professionals. Survey participants explained that the

interdisciplinary approach employed at KidsLink is advantageous to both the parents and the child. The lack of integrated care at many centers and schools lays the burden of managing and coordinating services on parents (Shahidullah, Gazi, Mezher, et al., 2018). By offering all of the necessary services for a child at one location, parents are no longer responsible for coordinating care at KidsLink. Participants explained that KidsLink's approach allows for more consistency across care providers and is more efficient. Higher job satisfaction is correlated with this approach when compared to non-collaborative approaches. As the overarching theme of this study continues, KidsLink's approach enables more communication and collaboration among professionals.

The last question survey participants were asked is if they had any ideas for improvement on collaborative care for treating ASD. Again, the theme of communication and collaboration is repeated as 38% of participants mentioned the importance of it in their response (see Table 9). Not surprisingly participants stated that interdisciplinary care should be used to improve ASD treatment outcomes. Other ideas mentioned include meetings, training opportunities, understanding other professionals, and generalization of skills. More research would need to be done to determine the effectiveness of these ideas.

This research study is limited as it does not include representation from all of the disciplines on KidsLink's interdisciplinary team. The survey is qualitative and therefore limited as answers from participants are subjective and opinion based. Future research on KidsLink's unique interdisciplinary approach to treating ASD may include gathering data on treatment success by comparing those with ASD who have been treated at KidsLink versus a person with ASD who has not received interdisciplinary services. This study could be further advanced by interviewing all of professionals on a specific team for one child to see how the team intricately

functions and collaborates. Parents could also be interviewed or surveyed to see how the care provided at KidsLink serves as an advantage or disadvantage to them and their family as a whole.

Conclusion

The study broadly concludes that the interdisciplinary approach used at KidsLink offers several advantages for the professionals on the team, the parents, and the child. The rationale behind this research project was to gather information on a unique approach that has proven to be successful with several different cases of ASD. The public can benefit from the outcome of this study by utilizing the information given and researching more on the topic of collaborative care. Ultimately, this project serves to educate the public about the different professionals that care for those on the autism spectrum and how they can effectively work together in order to offer to the best possible care for those with ASD.

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To Katrina Mullen, the Director of Operations at KidsLink, for sending out my survey twice to ensure I received my target number of participants. Her persistence and willingness to help is the reason for the project's broad participant range.

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Appendix A: Qualitative Survey

Q13.

INFORMED CONSENT

Introduction: You are invited to participate in a survey questionnaire pertaining to the interdisciplinary team approach used at KidsLink to treat clients with Autism Spectrum Disorder. The study is being conducted by undergraduate student Theresa Duff under the advising of Dr. Scott Palasik during this fall 2019 semester and spring 2020 semester in the Department of Speech-Language Pathology and Audiology at The University of Akron. The goal of this study is to examine the unique interdisciplinary team approach utilized at KidsLink in order to discover possible advantages and disadvantages, to examine and define each professional's role as a member of the care team, and to determine how the team collaborates as a unit.

Participants: A KidsLink professional employee who treats clients with Autism Spectrum Disorder.

Exclusionary Criteria: Those who are not professional employees at KidsLink will not be able to participate in this study.

Procedure: This survey questionnaire will ask questions about your professional demographics, the team approach utilized at KidsLink, and the individual role you contribute to the care team.

The questionnaire should take no more than 10-15 minutes.

Contact: For any questions or concerns regarding this survey questionnaire, please e-mail Scott Palasik at: spalasik@uakron.edu or Theresa Duff at: tad97@zips.uakron.edu. This project has been reviewed and approved by The University of Akron Institutional Review Board. If you have any questions about your rights as a research participant, you may call the IRB at (330) 972-7666.

Risks and Benefits: There are no anticipated risks to this study. You can benefit by adding to the limited research published pertaining to the interdisciplinary team approach to treating clients with Autism Spectrum Disorder.

Payment / Costs: Participation in this study is voluntary; there will be no financial payment for participating.

Confidentiality: Your name will not be asked for, thus any and all answers provided on this survey will be anonymous. The identifying information asked in the survey will be reported in the final results. The only people permitted to view participant's individual responses are Theresa Duff, undergraduate student researcher, and Scott Palasik, project advisor.

Consent: I understand that this study is being conducted for the purpose of undergraduate research at the University of Akron. Through this document the researcher has explained how the study will be completed, what I will have to do, and how long my participation is required. I am aware that my full participation in this study is voluntary. I am fully aware that my name will be anonymous and will not be used in any manner. I am aware that no compensation will be provided for completing this questionnaire. By agreeing to this terms and conditions I consent my participation in the study and will fill out the following questionnaire to the best of my ability.

- Yes, I agree to the terms and conditions.
- No, I do not agree to the terms and conditions.



Q1. What is your job title at KidsLink?

Q2. How long have you been working in your field?

Q3. How long have you been working at KidsLink?

Q4. Can you explain what you do at KidsLink on a daily basis in some level of detail?

Q5. What are the possible advantages of using an interdisciplinary team approach when treating Autism Spectrum Disorder?

Q6. What are the possible disadvantages of using an interdisciplinary team approach when treating Autism Spectrum Disorder?

Q7. Have you worked at a different facility that treated Autism Spectrum Disorder?

- Yes, I have.
- No, I have not.

Q8. What do you think makes KidsLink's approach to interdisciplinary care unique compared to other centers?

Q9. What is your individual role as a member of the interdisciplinary team?



Q10. How do you think the interdisciplinary team approach at KidsLink impacts your job compared to the colleagues in your field who do not experience this same team approach?

Q11. What ideas do you have to improve collaborative care for treating Autism Spectrum Disorder?



Appendix B: Informed Consent

KidsLink
Neurobehavioral Center

10/1/2019

Dear Institution Review Board:

KidsLink Neurobehavioral Center has approved Theresa Duff for implementation of her honors research project. Theresa will be working on this project along with her project sponsor, Dr. Scott Palasik. Her research, "Qualitative Survey of a Collaborative Team Approach to Treating Autism Spectrum Disorder," will be conducted at KidsLink. We look forward to inviting Ms. Duff to work with our staff for a survey questionnaire to assist in her data collection and are happy to support her research efforts.

Sincerely,
Nevada Reed, MD
Pediatric Neurologist
KidsLink Neurobehavioral Center

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