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Using Remote Consultation to Decrease Several Challenging Behaviors in Children with Autism Spectrum Disorder(*)

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استخدام الاستشارة عن بعد لتقليل العديد من السلوكيات الصعبة لدى الأطفال المصابين باضطراب طيف التوحد

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الملخص

تهدف هذه الدراسة إلى تحديد ما إذا كان بإمكاننا زيادة عدد الأماكن التي يتم فيها استخدام خدمات تحليل السلوك التطبيقي من خلال تنفيذ التدريبات والاستشارات المختلفة عن بعد. مما سيساعد على تحسين جودة الخدمات المقدمة للأطفال المصابين بالتوحد والوصول إلى النتيجة المرجوة وهي الحصول على خدمات علاجية فعالة. باستخدام مبادئ العلاج بتحليل السلوك التطبيقي، وهو نهج راسخ ومدعوم تجريبيًا في مجال اضطراب طيف التوحد، يتم تقديم مجموعة شاملة من الخدمات لتسهيل اكتساب القدرات الأساسية لدى الأطفال المصابين بالتوحد. تشمل هذه الخدمات العديد من المهارات الأساسية، بما في ذلك على سبيل المثال لا الحصر، الاهتمام البصري، والإدراك السمعي، والاستقصاء، والتقليد، بالإضافة إلى كفاءات أكثر تقدمًا مثل القراءة والكتابة، والتواصل اللفظي، وأخذ وجهات النظر. بالإضافة إلى ذلك، يعالج علاج ABA بشكل فعال ويخفف من السلوكيات الصعبة التي تعيق عملية التعلم لدى الأطفال المصابين بالتوحد. غالبًا ما يقدم اضطراب طيف التوحد للأفراد مجموعة من السلوكيات الصعبة، والتي تنطوي على تلك التي تنطوي على العدوان تجاه الآخرين، والميول لإيذاء النفس، ونوبات الغضب الشديدة. وقد تظهر هذه السلوكيات في أشكال متباينة، مثل الخدش أو العض أو الضرب أو الركل. بالإضافة إلى ذلك، قد يُظهر الأفراد المصابون باضطراب طيف التوحد سلوكيات اجتماعية تتأثر بالخدش أو الفرك المفرط، أو شد الشعر، أو عض اليد، أو ضرب الرأس، أو الصفع على الوجه. يتم ملاحظة هذه الأعراض بشكل شائع بين الأفراد المصابين باضطراب طيف التوحد وتتطلب اهتمامًا وتدخلًا دقيقًا. في بعض الأحيان، قد يظهر واحد أو أكثر من هذه الأفعال في نوبة غضب شديدة، وتختلف في تكرارها ومدتها وشدتها عبر طيف التوحد. هذه المشاكل السلوكية تجعل التعامل مع الطفل صعباً للغاية، مما يضطر المعلمين والمعالجين إلى طلب المساعدة والمشورة من مصادر ووجهات أخرى.

يستعرض هذا البحث ما إذا كان بإمكان المتخصصين في هذا المجال تقديم الاستشارات عن بعد للمعلمين والمعالجين العاملين مع الأطفال المصابين بالتوحد. ركز هذا البحث على تقديم المشورة للحد من السلوك العدواني لدى بعض الأطفال المصابين بالتوحد من خلال تدريبهم على إجراءات امتثال معينة.

الكلمات المفتاحية: تحليل السلوك التطبيقي، اضطراب طيف التوحد، الرعاية الصحية عن بعد، الاستشارة عن بعد، العدوان، المشكلات السلوكية، التحديات السلوكية.

Using Remote Consultation to Decrease Several Challenging Behaviors in Children with Autism Spectrum Disorder

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Abstract

This study aims to determine whether we can increase the number of places where applied behavior analysis services are used by implementing different training and consultations remotely. This will help improve the quality of services offered to children with autism and reach the intended outcome, which is the acquisition of efficient therapeutic services. Utilizing the principles of Applied Behavior Analysis (ABA) therapy, a well-established and empirically supported approach within the realm of Autism Spectrum Disorder (ASD), a comprehensive range of services are offered to facilitate the acquisition of fundamental abilities in children with autism. These services encompass various essential skills, including but not limited to visual attention, auditory perception, inquiry, and imitation, as well as more advanced proficiencies such as literacy, verbal communication, and perspective-taking. Additionally, ABA therapy effectively addresses and mitigates challenging behaviors that hinder the learning process in children with autism. ASD often presents individuals with a range of challenging behaviors, entailing those that involve aggression towards others, self-injurious tendencies, and severe temper tantrums. These behaviors may manifest in divergent forms, such as scratching, biting, hitting, or kicking. Additionally, individuals with ASD may exhibit social behaviors influenced by excessive scratching or rubbing, hair pulling, hand biting, head banging, or slapping oneself in the face. These symptoms are commonly observed among individuals with ASD and require careful attention and intervention. Occasionally, one or more of these actions may be present in a severe tantrum, vary in frequency, duration, and severity across the autism spectrum. These behavioral problems make dealing with the child very difficult, forcing teachers and therapists to seek help and advice from other sources and destinations.

This research reviews whether specialists in the field, can provide teleconsultations for teachers and therapists working with children with autism. This research focused on counseling to reduce aggressive behavior in some children with autism by training them in certain compliance procedures.

Keywords: Applied Behavior Analysis, ABA, Autism Spectrum Disorder (ASD), Telehealth, Remote consultation, Aggression, Problem behavior, Behavioral challenges.

Introduction

Autism Spectrum Disorder (ASD) is typified by a complicated developmental disorder that includes recurrent difficulties with social communication, narrow interests, and repetitive conduct. Although autism is thought to be a lifelong condition, each autistic person experiences these difficulties to varying degrees, which affects how well they can function (American Psychiatric Association, 2021).

Kids with ASD frequently show significant levels of co-occurring behavioral issues (Bauminger et al., 2010; Gray et al., 2012; Hartley et al., 2008; Kanne and Mazurek, 2011; Mazurek and Kanne, 2010). The manifestation of multiple problem behaviors is frequently detected among individuals with ASD, which can encompass aggression towards others, self-injurious behaviors (SIB), and severe tantrums. A survey conducted on a sample of 2327 individuals diagnosed with ASD revealed that over 40% of them were engaged in both aggression and self-injurious behaviors. This emphasizes the significance of addressing and managing these challenging behaviors in individuals with ASD to promote their overall well-being and quality of life (Edelson S.M, 2021).

Among the behaviors that constitute aggression are biting, kicking, hurling items, and clawing oneself or others. Excessive rubbing or scratching, hair pulling, hand biting, head bashing, or face slapping are examples of SIB. One or more of these actions may occasionally be present in severe tantrums. The frequency, length, and intensity of each of these behaviors vary across individuals on the autism spectrum.

Children with autism often exhibit behaviors that deviate from what is considered typical, and these behaviors typically serve a purpose or have a reason behind them. For example, they may engage in destructive behaviors such as throwing objects or making loud noises to gain attention from their parents. This behavior is driven by their desire to draw attention to themselves. However, it is important to approach these problem behaviors with patience and guidance to minimize and reduce them effectively. By allowing patient guidance, the likelihood of encouraging positive behavior increases.

Similar to other children, children with autism may also display crying or whining behaviors when they want to avoid or discontinue a task, they do not want to engage in. If these behaviors occur excessively, it is essential to address them by engaging in open communication and yielding reassurance with patience. By understanding their needs and granting support, these behaviors can be effectively managed and reduced. These co-occurring behavioral issues put children with ASD, their families, and therapists at risk for a variety of detrimental consequences. They also exacerbate impairment, cause diagnostic confusion, and delay therapy. Behavior issues can impede a child's progress in many developmental domains by interfering with daily functioning, education, and intervention outcomes (Kanne and Mazurek, 2011; Matson and Wilkins, 2007; Taylor and Seltzer, 2011). Beyond the impact of the primary symptoms of ASD, behavior issues in children with the disorder can also have an impact on the psychological health of parents, potentially adding to higher levels of parenting stress, despair, and anxiety (Estes et al., 2013; Hastings et al., 2005; Lecavalier et al., 2006; McStay et al., 2013; Tomanik et al., 2004; Carter et al., 2009; Herring et al., 2006).

Therapists must possess the ability to manage and regulate these challenging behavioral issues, substituting acceptable behaviors for problematic ones. But occasionally, the number of autistic specialists and applied behavior analysis techniques practitioners is insufficient. With the use of Applied Behavior Analysis (ABA) techniques, children with autism can enhance their social skills, communication skills, play skills, self-care abilities, and behavior management abilities. Additionally, ABA can lessen behaviors such as hostility, inattention, and shouting. Consequently, parents and therapists are perplexed and reluctant to address these behavioral issues and identify their root causes.

Advancements in technology have made it easier and more convenient for therapists to provide a wide range of services remotely, including behavioral health assessment, supervision, consultancy, education, diagnosis, intervention, and access to information across distances. Smart devices and high-speed Internet connectivity allow therapists to easily communicate with clients and their medical teams, rendering necessary consultations and services. This has aided numerous centers in obtaining consultations from specialists to address various issues they encounter in certain cases.

Through video conferences or the analysis of videos that the center's therapists send, this study investigates whether experts in the fields of ABA and autism can offer the necessary advice to therapists working in autism centers in order to help them resolve patients' behavioral issues remotely.

Literature Review

There is still a deficiency of applied behavior analysts in many nations and many autistic centers and educational institutions, despite the broad success and efficacy of these techniques in the field of treating autism. For many schools and centers, this can be an issue because there is a dearth of instructors and therapists who possess the abilities needed to apply behavioral procedures, and it is challenging to include all specialists in training programs. In addition, a number of autistic clinics and schools lack local resources, which forces parents to travel great distances to access the knowledge of trained experts.

For instance, ABA therapies are not offered to children with autism spectrum disorder in Saudi Arabia due to a lack of ABA-trained experts in the country (Al-Qurini, 2011; Al-Rabiah, 2010). Less than 1,000 autistic kids are enrolled in the public education system out of 53,282 autistic individuals (King Salman Center for Disability, 2017). Many of these pupils receive evaluations and treatment from individuals who may not be sufficiently qualified, even while the government is working to ensure that education is accessible to all of these kids (Mercier et al., 2008). Consequently, this problem may be resolved by utilizing cutting-edge techniques like telehealth training (Alnmary et al., 2015).

Consequently, in order to broaden the scope of intervention and training beyond the conventional face-to-face paradigm, alternative models are being investigated; telehealth has the ability to do this (Ferguson et al., 2019). There is proof that parent education programs and general telehealth training can be enhanced with effective parenting interventions (Hay-Hansson and Eldevik, 2013). Using telehealth training to teach fundamental skills and perform functional analyses proved successful when it was combined with group instruction and individual feedback sessions (Frieder, Peterson, and Woodward, 2009).

We have observed a shift in the field of applied behavior analysis toward remote service provision starting in 2005. Annually, we witness a rise in the number of studies and diversity in telehealth service delivery, and researchers have been more intent on creating efficient, evidence-based training strategies to teach staff and parents a range of behavioral procedures in a multitude of ways.

Ferguson et al. (2019) examined all ABA research that employed telemedicine from 2005 to 2018, and they discovered that 28 studies in total that gave people with ASD access to behavior analysis treatments via telehealth. Multiple ABA interventions, evaluations, and training were incorporated in this research. The 28 investigations comprised a total of 293 interventionists. Of the research examining these subjects, 43% (n = 12) fell into the largest category: functional analysis (FA) and the functional communication training that followed (FCT) (Barretto et al., 2006; Benson et al., 2017; Gibson et al., 2010; Lindgren et al., 2015; Machalicek et al., 2009b, 2010, and 2016; Simacek et al., 2017; Suess et al., 2014 and 2016; Wacker et al., 2013a, b). Of the investigations, 36% (n = 10) used methods that were inspired by naturalistic and accidental teaching (Barkaia et al., 2017; Ingersoll et al., 2016; Ingersoll and Berger, 2015; Meadan et al., 2016; Neely et al., 2016; Vismara et al., 2009, 2012, and 2016; Wainer and Ingersoll, 2015). Of the studies that looked into behavior support strategies, two (n = 7%) looked at positive behavior support (Bearss et al., 2017; Kuravackel et al., 2018). A total of 7% (n = 2) of research looked at teaching participants how to do preference assessments (Higgins et al., 2017; Machalicek et al., 2009a). The latter two investigations concentrated on extensive training curricula intended to render participants a general understanding of behavior analysis concepts (Heitzman-Powell et al., 2014; Wilczynski et al., 2017). Furthermore, the analysis revealed that 86% (n=194) of the participants were parents, 9% (n=21) were direct front-line staff, such as ABA therapists, professionals working in university clinics, and other related professionals, and 4% (n=10) were teachers. The synthesis of 28 studies indicated that telehealth could be deemed as an acceptable platform for behavior-analytic interventions, assessments, and training interventionists to implement behavior-analytic procedures with children diagnosed with ASD via telehealth.

Between 2019 and 2023, a total of 48 studies were conducted, presenting evidence for the effectiveness of applied behavior analysis techniques in distinct domains. These techniques were found to be effective in behavioral therapy, behavioral skills training, and consultation services, which involved video conference meetings with families and patients at their homes or with therapists at their centers. The consultation services consisted of addressing questions, conducting interviews, and giving information on available resources to support the individuals and their families (Tsami et al., 2019; Schieltz K.M. et al., 2020; Zoder-Martell et al., 2020; Allison L. Wainer et al., 2021; Karen Nohelty et al., 2021; Joy Pollard et al., 2021; Stephanie Gerow et al., 2022; Brittany M. Merrill et al., 2023; Anamiguel Pomales-Ramos et al., 2023).

General Methods

Participants

In a nonprofit autism center in Saudi Arabia, three female therapists are employed to work with children between the ages of 3 and 6, all of whom have been diagnosed with ASD. Each therapist faces the challenge of addressing behavioral problems exhibited by the children, such as aggression, biting, throwing objects, hitting, screaming, and prolonged crying. However, the therapists find themselves struggling due to their lack of understanding regarding the underlying causes of these behaviors and a lack of knowledge on how to effectively manage and prevent them. Despite their regular work with children with ASD, they have not been exposed to ABA techniques or training.

For this study, therapists were chosen as participants based on their role in working with children who displayed problem behaviors at the center. The selection criteria comprised their ability to deliver informed consent. The children and therapists were selected using convenience sampling, considering their suitability and meeting the specified criteria.

The children included in the study were referred by their therapists due to exhibiting aggressive behaviors that hindered their engagement in school activities. The inclusion criteria required obtaining informed consent from the parents or guardians of the students and receiving informed assent from each student and their respective therapist(s).

Child 1:

He was diagnosed with speech/language impairment and ASD at the age of five. Although he was nonverbal, he was able to express himself through image cards. He demonstrated responsiveness in pointing to options for food and other reinforcers. Upon receiving informed consent from his parents, he was selected to participate in this study, as per his teacher's statement that he displayed aggressive conduct, enclosing biting his therapist's hand and throwing things, particularly during academic assignments.

Child 2:

ASD and speech/language impairment were diagnosed at the age of six. His incapacity to orally articulate all of his needs and wants stemmed from his difficulty in both receptive and expressive communication. When presented with options, he was able to say aloud what he would like to eat or drink and what he did not want to do. He was able to speak one or two words both expressively and receptively, but, with time, he has regressed. He exhibited deficiencies in both expressive and receptive languages as well as social skills. He was selected to participate in this study subject to getting informed consent from his parents, assent from him, and consent from his classroom instructor. His teacher claimed that he predominantly displayed escape-maintained disobedience conduct, with attentiveness serving as a secondary purpose.

Child 3:

At five years old, he had really difficult behaviors and an ASD diagnosis in speech and language. When presented with options, he was able to express his needs and wants verbally. When given spoken instructions, he could follow step-by-step instructions, follow regular classroom routines, and recognize particular items by pointing to them or loudly pronouncing them. According to his teacher, he was engaged in self-injurious behavior (SIB). Examples cover head banging, ear hitting, hair pulling, and excessive rubbing and scratching, particularly during academic assignments and small group work. For these reasons, his participation in this study was chosen subject to his parents' informed agreement.

Settings & Materials

With a video camera and microphone at each location, the host site and the remote site were both located in Riyadh, Saudi Arabia, and were connected

to the Internet by Vsee®. Furthermore, the trainer and the three therapists shared data and videos via Google Drive. The meetings were conducted around two hours after the conclusion of the formal business hours, with a distance of roughly 35 kilometers between the two locations. Two sessions per week were held. At the initial meeting, the therapists were listened to, their most pressing issues with the children were discussed, recommendations were given, and the necessary processes were assigned for them to complete by the next meeting. During the second meeting, the researcher went over the data and outcomes gathered with the therapists and the percentages attained on the graphs by kids. They might have been asked to complete paper-based processes, data-collecting tasks, or video recordings distributed via Google Drive.

Dependent Variables

The study focused solely on a measure of noncompliance exhibited by each participant, both during the baseline phase and throughout each intervention condition. The term "noncompliance" was customized for each child, taking into account the researcher's examination of the children's records, written behavioral definitions, interviews with therapists, and direct ABC data results. Any additional problem behaviors that occurred alongside noncompliance were also individually delineated and incorporated into the definition for each participant.

Fidelity

Using the iPad, the researchers instructed the therapists to document any behavioral issues as they happened and then send the files for assessment after the session. Each study participant had at least one baseline session and both interventions were performed by the researcher using fidelity checklists. A meeting between the researcher and the proctor would have been scheduled to address any differences, devise a plan to more closely adhere to established protocols, and request that the proctor complete another fidelity checklist during the subsequent session if the fidelity checklists yielded a score lower than 80% at any point. Since the current study's fidelity rate was 100%, discrepancies did not need to be addressed or investigated. Each child's definition of noncompliance was established through a combination of factors, such as direct ABC data results, interviews with therapists, examination of student records, review of student behavioral graphs, and

collaborative efforts between the researcher and the child's therapist. A general definition of noncompliance, "5 seconds of nonresponsiveness to an instruction or 10 seconds of nonresponsiveness during an independent task", served as a baseline and was modified for each individual (Ward, Parker, and Perdikaris, 2017). Additionally, other behavioral definitions that aligned with participants' noncompliant behavior were incorporated into their respective definitions. Before collecting any baseline or intervention data, ABCs (Antecedent, Behavior, and Consequence) and open-ended functional assessment interviews were manipulated and analyzed to identify the underlying functions of each participant's noncompliance and determine if there were any accompanying problem behaviors. This process also helped establish the specific criteria for defining "noncompliance" for each individual.

General Procedures

Data Collection

Through remote meetings, the researcher requested that the therapists gather information from each participant using the ABC data sheet in order to identify the causes and effects associated with their noncompliant behavior and to draw conclusions regarding the purpose of their noncompliance. Additionally, during the trial, partial interval data for the dependent variable were recorded using data collecting sheets. The partial-interval recording was breaking the observation period up into smaller time intervals and recording whether or not the intended behavior happened during each of those intervals. In the current study, the length of each session was standardized at 10 minutes for each participant, which was deemed a sufficient amount of time for reflection. The duration of work appropriate for completing an academic assignment was determined based on each child's current level, as evaluated by the researcher, mentor, and participating therapists. The work sessions were structured as 10-minute intervals, which were further divided into 30-second periods. During each interval, the data logger would mark a "+" in the interval box if noncompliance behavior occurred, or a "-" if it did not occur. The number of instances of noncompliance in each 30-second period was counted and divided by the total number of periods to calculate the percentage of noncompliance per session. These findings were then documented on a chart. Data recording was done by using a writing instrument on printed data sheets while watching videos on an iPod or iPad that were recorded after the work sessions.

Standard Applied Behavior Analysis Procedures

A detailed task analysis of the typical classroom procedures for waiting and accepting "NO" responses was sent via email to each therapist involved in the study. Subsequently, the researcher carried out each process with them in a video conference, where the researcher plyed the role of the student and was engaged in manifold behavioral behaviors (such as hostility) that autistic students were known to exhibit. During the remote meeting, feedback was given regarding the proper application of any technique.

Waiting Procedure:

The therapist employs a waiting strategy to encourage the child to request a reinforcer or express interest in participating in an activity. This strategy involves initially introducing activities or items that are not highly reinforcing for the child. The therapist then instructs the student to "wait" and begins counting aloud, starting with very short intervals of 3 to 5 quickly while using their fingers to demonstrate the passage of time. If the child can wait without displaying significant problem behaviors (such as crying, screaming, and hitting) during the counting interval, the therapist immediately delivers the reinforcer. However, if the child continues to expose significant behavior during the count interval, the therapist says "Wait, I will count to 3" and restarts the count. The therapist gradually extends the time the child has to wait for a product or activity after the child completes three consecutive successful waits at the present interval. The goal is for the child to eventually reach a waiting time of 60 seconds without engaging in any problem behaviors.

Accepting "No" Procedure:

When the child demands a reinforcer, the therapist waits. Subsequently, the therapist answers the child with a firm "no" and begins timing the duration of each phase. According to the therapist, the first session should last no more than five seconds. While waiting, the therapist asks the kid to complete any more required trials or responses, praising and socializing them as needed. Subject to a proper response, the therapist may offer the requested reinforcer after the timer goes off. If the child stays out of trouble for the entire allotted time and keeps up with the other necessary responses for three more sessions in a row, the timer will be gradually extended until the child can go for 60 seconds without acting out. Repetition of "no" and a reset time interval are necessary if the kid exhibits troublesome conduct or disregards other needed responses.

Measures

Baseline

Every child had at least three baseline sessions recorded, and the necessary records were connected, and each therapist transmitted the recordings to the researcher. Interventions started as soon as the data demonstrated consistency regarding the period and factors that led to the creation of that habit.

It was discovered through data collecting that the majority of the noncompliance behaviors observed in children 1 and 2 were brought on by a desire to avoid waiting and complying. Child 3 became hostile after he was denied anything he wanted or denied the opportunity to obtain a toy, go on a stroll, or eat a particular food.

Intervention

The researcher requested that the therapists of children 1 and 2 carry out the waiting procedure on their respective charges. The therapist for child 3 was told to use the accepted "No" procedure.

Every day over a span of two work weeks, every therapist managed ten trials per child per session. Following every trial, the therapist recorded on the datasheet either a (+) for compliance behavior that happened throughout each period or a (-) for noncompliance. The therapist gauged the percentage of accurate responses at the conclusion of each session. After that, the data sheets were sent to the researcher by email at the end of the day, to discuss the outcomes in the following meeting.

Results and Dissection

The researcher performed a thorough investigation into the specific antecedents and consequences that triggered and sustained certain behaviors and discovered that these were often influenced by the actions of individuals in the surrounding environment. For example, individuals might display behaviors to escape a particular situation, such as a demand, or obtain something, such as attention from others or access to a preferred item.

Upon implementing the proposed procedures to modify the children's behavior, the researcher compared the behaviors observed during the baseline phase with those observed after the intervention. The results of this comparison yielded the following outcomes:

Child 1:

During the baseline phase, the child's compliance data remained consistently low, highlighting a stable and nonchanging pattern. The percentage of 30-second intervals with compliance behavior remained at 0% across all three baseline sessions.

Nevertheless, the data did not immediately show any discernible pattern once the waiting procedure was implemented. Though two sessions marked a decline in compliance, there was an overall trend of noncompliance behavior that escalated over time.

In contrast, the intervention data expressed variability and were consistently at a higher level than the baseline data. The graph depicting the intervention phase illustrated a notable decrease in noncompliance behavior, resulting in an increment in the percentage of intervals with compliance behavior.

Thus, these findings proved that the waiting procedure was more effective in reducing noncompliance behavior than the baseline measures. The interventions implemented had a positive impact, leading to a decrease in noncompliance and an increase in compliance behavior.

Child 2:

For the first two sessions of the baseline phase, the kid's compliance data was consistently low and stable, with a 0% compliance rate in the 30-second intervals. On the other hand, there was a noticeable improvement in the third baseline session, where a 40% compliance rate was recorded.

After the introduction of the interventions, the kid's compliance data initially reflected low levels and no clear trend during the three sessions of the waiting procedure. However, as the intervention continued, his compliance behavior started to increase for the remaining intervention sessions.

The therapist noted that although some problem behaviors persisted, they occurred quickly and temporarily, signifying a positive change in the child's behavior after the introduction of the waiting procedure.

Upon examining the data for child 2, it was evident that his compliance percentage has noticeably been heightened, and his response was significantly

improved compared to the baseline and preintervention data. Therefore, this suggested that the interventions had a positive impact on the child's compliance behavior.

Child 3:

The baseline sessions had a very low proportion of compliance—between 10% and 20%. His compliance behavior did not clearly change between the baseline and the interventions after the accepting "No" procedure was used, and the data stayed low for two sessions. His statistics were inconsistent after the third session, and he disclosed an increment in compliance in just one session. This suggested that although the intervention might have worked for him in the short term, it might not have the long-term effect of reducing his noncompliance behavior. Between the fourth and eighth sessions, his compliance data fluctuated. Then, the data stabilized within 90% for the final two sessions.

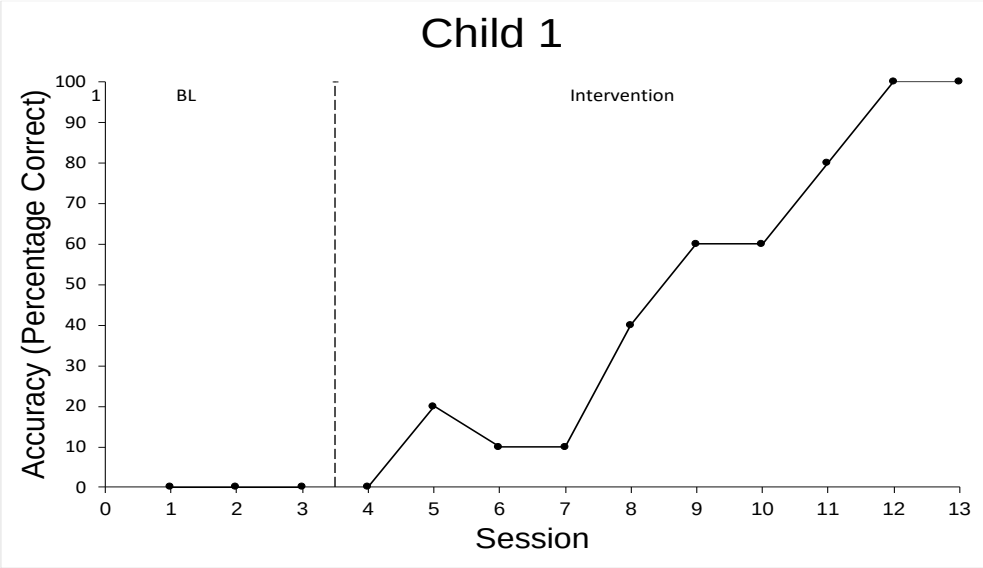

Figure 1. Child 1 percentage of compliance intervals during baseline and intervention (waiting procedure).

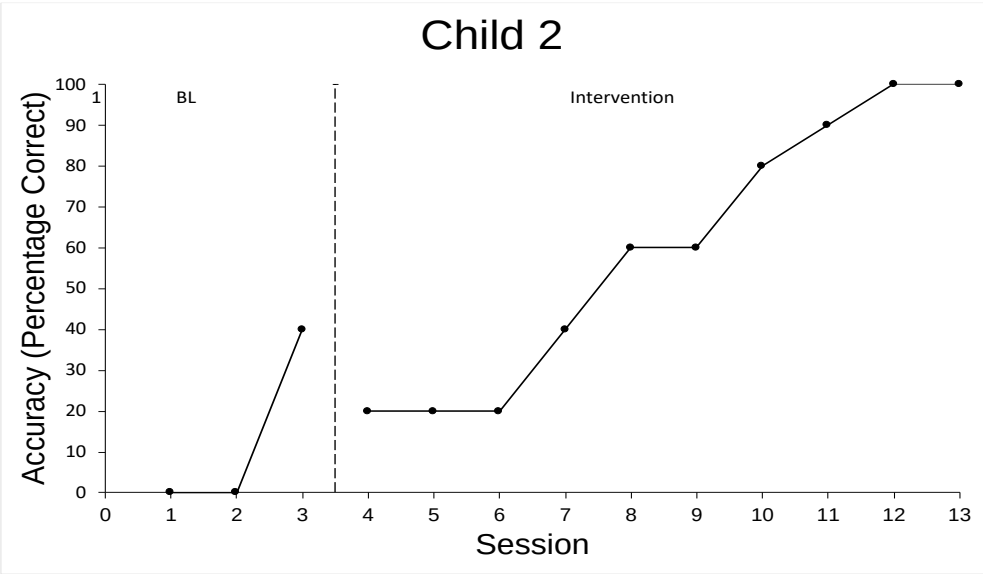

Figure 2. Child 2 percentage of compliance intervals during baseline and intervention (waiting procedure).

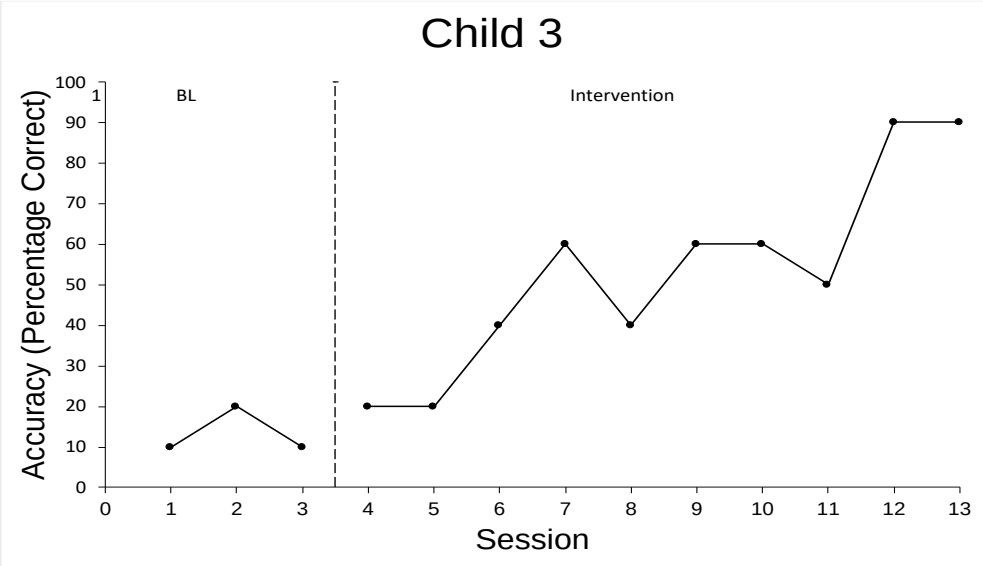

Figure 3. Child 3 percentage of compliance intervals during baseline and intervention (accepting "NO" procedure).

Conclusion

This study aimed to assess the potential efficacy of telehealth counseling in supporting educators or therapists in managing and decreasing certain problematic behaviors involving their students. With each of the three therapists doing two distinct waiting and accepting "No" procedure, teleconsultation employing these techniques proved to be beneficial.

The effectiveness of imparting remote counseling and training has proven to be a valuable solution for therapists facing challenges in treating children with behavioral problems. This approach addresses the difficulties therapists encounter in referring these children to specialized therapists located outside their area. It is particularly beneficial for children with autism, who often struggle with adapting to new people.

By offering remote care, children can continue working with the same therapist, which fosters consistency and familiarity. This consistent therapeutic relationship, combined with remote access to care, allows for ongoing support and intervention to ameliorate their behavior. This arrangement benefits all parties involved, including the child, the therapist, and the child's family.

Overall, remote counseling and training produce an effective means of overcoming the barriers faced by therapists in accessing specialized care for children with behavioral problems. It ensures continuity of care, which is especially crucial for autistic children, and facilitates their behavioral improvement while maintaining a familiar therapeutic relationship. Children with the autism spectrum often disclose a strength in comprehending and adhering to rules. This strength can be harnessed to facilitate skill development by establishing clear guidelines regarding desired behaviors and appropriate actions. By establishing explicit rules, we can make the implicit "hidden" rules of social interaction and daily routines more apparent, organized, and easily understandable for them. Consequently, giving training on specific procedures can significantly assist them in effectively achieving their goals and aid those who work with them in effectively managing any potential behavioral challenges that may impede their progress.

Declarations

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Conflict of Interests

None reported.

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