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REVIEW ARTICLE

A Holistic Educational Therapy Approach for Autism and Comorbid Emotional-Behavioral Disorders

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ABSTRACT

Children with autism spectrum disorder (ASD) and comorbid emotional and behavioral difficulties (EBD) often face significant challenges across multiple domains, including cognitive development, emotional regulation, adaptive behavior, social interaction, and family functioning. These difficulties not only impair daily functioning but also complicate intervention planning and long-term outcomes. Educational Therapy (EdTx), an integrative, holistic, and systematic approach targeting foundational learning and self-regulatory capacities, offers distinct advantages for this population. Its comprehensive and multidimensional assessments, individualized educational planning, flexible instructional strategies, neuroscience-informed and learning-capacity-oriented philosophy, and strong emphasis on parent involvement collectively provide a robust framework for intervention. Through these strengths, EdTx aims to enhance children's skill acquisition, daily functioning, and psychological well-being, while also reducing parental stress and strengthening family dynamics. In the long term, it may promote sustainable development and improved social adaptation. However, despite its potential, EdTx faces notable limitations, including high service costs, a shortage of trained professionals, limited global dissemination, and the need for cultural adaptation. More empirical research is needed to systematically evaluate its effectiveness in addressing ASD with comorbid conditions. Overall, EdTx presents a structured and integrative framework capable of supporting the holistic development, adaptive functioning, and social integration of children with ASD and comorbid EBD.

Keywords: *Autism Spectrum Disorder, Educational Therapy, Emotional and Behavioral Disorders, Individualized Educational Plan, Parent Support*

1. INTRODUCTION

Autism Spectrum Disorder (ASD) is a neurodevelopmental condition characterized by persistent deficits in social communication and interaction, alongside restricted, repetitive patterns of behavior and interests (American Psychiatric Association, 2013). Recent research indicates that a substantial proportion of school-aged children with ASD (estimated between 30% and 70%) also present with comorbid emotional and behavioral disorders (EBD), including anxiety, depression, aggression, impulse control difficulties, and challenges in emotional regulation (Salazar et al., 2015; Lai et al., 2019). This comorbidity not only exacerbates the severity of core ASD symptoms but also contributes to more widespread impairments in daily functioning (Gordon-Lipkin et al., 2018; Kerns et al., 2021). Compared to children with ASD alone, those with both ASD and EBD tend to show more inconsistent responses to interventions, higher levels of family stress, and greater difficulty with school adjustment (Dovgan & Mazurek, 2019; Clauser et al., 2021). These patterns highlight the urgent need for comprehensive and individualized intervention models that can effectively address the complex cognitive, emotional, and behavioral needs of this population.

Over the past few decades, interventions targeting ASD with comorbid EBD have primarily centered on Applied Behavior Analysis (ABA) and Cognitive Behavioral Therapy (CBT) (Ozsahin et al., 2021). While both approaches are effective in addressing specific behavioral or emotional symptoms, they often fall short of meeting the multidimensional needs of these children. ABA typically emphasizes discrete skill acquisition and behavior modification but may not adequately support academic learning, social communication, or sensory regulation (Eckes et al., 2023). Similarly, CBT can improve emotional coping and problem-solving within structured sessions but often lacks continuity in supporting executive functioning, adaptive daily skills, and the real-world application of these abilities (Wang et al., 2021). As a result, many children experience fragmented interventions, where progress in one domain does not generalize to other critical areas, limiting overall functional outcomes and real-life adaptation.

Educational Therapy (EdTx) offers a promising alternative. It is an interdisciplinary intervention approach that integrates principles from education, psychology, and neuroscience. Unlike ABA or CBT, which primarily target behavioral change or emotional coping strategies, EdTx adopts a holistic framework aimed at strengthening the foundational cognitive, socio-emotional, sensory, and motor processes essential for learning and self-regulation (Association of Educational Therapists, 2023). Although EdTx has been extensively applied to children with learning difficulties, intellectual disabilities, and behavioral challenges, empirical research on its effectiveness for neurodiverse populations, especially children with ASD, remains limited, despite its growing use in clinical practice (Chia & Wong, 2014; Duman et al., 2017; Chia, 2025). Recent case studies suggest that EdTx may benefit autistic children across multiple domains, including academic performance, communication, and sensory regulation (Singh, 2024; Saudah, 2025). Additionally, it appears to enhance parental understanding of autism, improve emotional coping strategies, and increase confidence in caregiving. These preliminary findings point to the potential of EdTx as a comprehensive, family-centered intervention.

While EdTx is well-established in many Western contexts, its implementation across Asia remains limited. In the United States, the development of EdTx has been supported not only by a growing evidence base but also by structured professional training pathways, including graduate programs and certification systems provided by organizations such as the Association of Educational Therapists (AET). These frameworks contribute to standardized knowledge, practice, and professional accountability. In contrast, many Asian countries lack comparable structures, which restricts both the availability and quality of EdTx services. For example, in China, ASD interventions have traditionally focused on behavioral management and rehabilitation training, such as Speech Therapy (ST), Occupational Therapy (OT), and Physical Therapy (PT), often delivered in isolation. Educational and therapeutic services tend to operate independently, with limited interdisciplinary collaboration. These systemic challenges underscore the pressing need for broader implementation, professional

standardization, and the development of integrated, family-centered models tailored to the needs of children with ASD and comorbid EBD in the Asian context.

Given these gaps and growing needs, the present study aims to systematically examine the potential and applicability of EdTx as a structured and integrative intervention for children with ASD and comorbid EBD. The article first outlines the specific challenges faced by this population and their families. It then introduces the strengths of EdTx, including its multidimensional assessment processes, individualized education planning, core intervention principles, and emphasis on parental involvement. Despite its promising advantages, EdTx still faces barriers related to dissemination, accessibility, cost, cultural adaptability, and cross-disciplinary integration. Addressing these challenges will require further research and practice-based exploration to evaluate the effectiveness and scalability of EdTx within diverse sociocultural settings.

2. EDUCATIONAL THERAPY FOR ASD WITH COMORBID EBD

2.1 Intervention Challenges

Children with ASD and co-occurring EBD often exhibit multidimensional functional profiles, each marked by distinct strengths and weaknesses. This complexity makes both assessment and the development of individualized intervention plans particularly challenging. Clinicians must account for interactions across domains, identify priority goals, and tailor strategies to each child's unique developmental needs. However, even carefully designed intervention plans are frequently disrupted by unforeseen difficulties stemming from comorbid symptoms. A child's engagement and performance can fluctuate based on their emotional state and environmental context: periods of calm may support active participation, whereas stress or unexpected changes can trigger meltdowns, aggression, or avoidance, ultimately compromising the continuity and effectiveness of interventions.

One commonly observed emotional condition is *learned helplessness,* a psychological state in which children perceive their actions as having little or no effect on outcomes, leading to diminished effort and initiative (Buzzai et al., 2020). This mindset often arises from repeated failures, inconsistent feedback, or negative responses from caregivers, teachers, or peers. Learned helplessness can significantly reduce motivation, self-efficacy, and willingness to acquire new skills, thereby increasing the overall difficulty of intervention (Dweck & Goetz, 2018). In addition, behavioral comorbidities, such as hyperactivity and impulsivity, further complicate implementation by impairing sustained attention and task engagement.

Family circumstances also play a critical role in determining intervention outcomes. Caregivers of neurodiverse children often experience chronic stress, fatigue, social stigma, and symptoms of anxiety or depression (Ang & Loh, 2019). These stressors may reduce parental sensitivity and responsiveness, leaving children's emotional and behavioral needs unmet and potentially exacerbating their difficulties (Hickey et al., 2020). This dynamic can lead to a self-reinforcing negative cycle, where emotional dysregulation impedes learning and disrupts parent–child interactions (Hickey et al., 2019). Financial and material constraints further limit access to essential services such as Educational Therapy (EdTx), psychological support, or multidisciplinary care. Additionally, the intensity of certain interventions, such as high-frequency therapy sessions or demanding daily routines, can increase the psychological burden on parents and contribute to caregiver burnout. Altogether, these factors may compromise the supportive and nurturing family environment necessary for the healthy development of autistic children.

In summary, the complex functional profiles of children with ASD and EBD, combined with the varied challenges faced by their families, present significant barriers to effective intervention. As such, successful intervention approaches must be integrative, systematic, and thoughtfully designed to support the needs of both the child and their caregivers.

2.2 Advantages of Educational Therapy

Educational Therapy (EdTx) is a systematic, multidisciplinary intervention designed to enhance the overall functional abilities of individuals with learning and developmental challenges (AET, 2023). Its primary focus is on strengthening the foundational capacities that support learning and development, such as cognitive processing, emotional regulation, sensory integration, and behavioral control, through an evidence-based, structured, and holistic approach. Unlike traditional tutoring or exam preparation, which typically targets context-specific academic skills, EdTx emphasizes the development of transferable abilities that can be applied across a variety of real-world settings.

A key feature of EdTx is its collaborative model, which actively involves parents and teachers in reinforcing therapeutic strategies both at home and in school. This coordinated support system plays a critical role in improving outcomes and ultimately enhancing the quality of life for children with ASD and co-occurring EBD.

The following sections explore the advantages of EdTx in assessment, individualized intervention planning (IIP) and implementation, and family-centered support, highlighting its potential to optimize developmental and functional outcomes for children with ASD and comorbid EBD.

2.2.1 Comprehensive Assessment Framework

In Educational Therapy (EdTx), the assessment process begins with the careful selection of evaluation content, often guided by the Hierarchical Model of Abilities and Skills, which is grounded in the Cattell-Horn-Carroll (CHC) theory of intelligence (Schneider & McGrew, 2012). This model organizes human functioning into five interrelated, hierarchically structured modules, offering a comprehensive framework for evaluation.

The first module examines foundational cognitive abilities, such as language, abstract reasoning, problem-solving, short-term memory, and cognitive flexibility. These assessments help educational therapists understand a child's intellectual profile and learning potential. Such insights prevent over-investment in areas of innate difficulty, optimize intervention efficiency, and reduce repeated frustration that may result from poorly matched learning goals.

The second module assesses sensory processing and motor coordination. It provides detailed insights into a child's proprioceptive, vestibular, tactile, visual, and auditory sensitivities and regulatory abilities. These findings guide the design of learning environments and instructional materials tailored to each child's sensory profile. For instance, identifying children who are prone to sensory overload enables educational therapists to create low-stimulation, structured settings that promote attention, emotional regulation, and engagement.

The third module evaluates daily living skills and social adaptation, covering areas, e.g., toileting, dressing, eating, personal hygiene, and social interaction. Understanding a child's level of independence in these areas allows educational therapists to adjust instructional pacing, task difficulty, and support measures, ensuring that learning goals are developmentally appropriate and functionally relevant.

The fourth module focuses on social-emotional and behavioral abilities. Tools such as the *Draw-a-Person Test* (DaPT; El-Shafie et al., 2019) and the *Thematic Apperception Test* (TAT; Calderon & Kupferberg, 2022) help identify potential risk factors including anxiety, depression, aggression, and emotional avoidance, i.e., factors that can impede learning and social participation. Integrating

strategies that address these emotional and social challenges can significantly enhance the effectiveness and efficiency of interventions.

The fifth module involves a comprehensive assessment of cognitive-behavioral and academic abilities. This includes evaluating language expression, reading comprehension, mathematical reasoning, abstract thinking, and executive functions (EF). Data from this module allow educational therapists to pinpoint specific obstacles to classroom learning and design personalized educational plans that may include visual aids, task segmentation, and time management strategies.

By applying this hierarchical model, EdTx ensures that assessment data are both comprehensive and meaningful, providing a well-rounded understanding of each child's abilities and needs.

In addition to identifying which functional domains to assess, the selection of appropriate measurement tools is equally crucial, as it directly influences the accuracy and reliability of the data collected. Cross-Battery Assessment (XBA) is a widely used psychological and educational methodology that allows evaluators to select the most suitable subtests or subscales from multiple standardized test batteries, integrating them into a single, coherent assessment plan (Flanagan et al., 2013).

Typically, this approach starts with a core assessment tool that covers broad cognitive domains, such as the *Wechsler Intelligence Scale for Children-Fifth Edition* (WISC-V; Wechsler, 2014). Supplementary subtests from other instruments are then added to address areas not fully captured by the primary test. The XBA approach offers several key advantages. First, it ensures comprehensive coverage of relevant cognitive and academic domains, minimizing the risk of overlooking critical abilities. Second, it enables cross-test comparisons, providing a more nuanced and reliable profile of the child's functional level. When two assessments measuring the same ability yield consistent results, confidence in the accuracy of those findings increases. Conversely, discrepancies between test results signal the need for further investigation, prompting clinicians to consider potential interfering factors and refine their assessment strategies accordingly.

Third, XBA is highly flexible, making it especially suitable for autistic children with EBD. It allows clinicians to customize test combinations based on the child's unique clinical presentation and individual needs.

Overall, the assessment process in EdTx is structured, methodologically rigorous, and thorough. The resulting profile of abilities and skills is designed to be nuanced and well-rounded, serving as a solid foundation for personalized, evidence-based intervention planning.

2.2.2 Individualised Education Planning

By systematically analyzing a child's performance across multiple domains, EdTx transforms assessment data into actionable interventions, establishing personalized, realistic, and developmentally appropriate learning goals. This process involves mapping broad ability domains, identified through assessment results, onto specific skill elements using established frameworks such as the CHC model of cognitive abilities, the Social-Emotional Learning (SEL) model, and the physical fitness framework (Ross & Tolan, 2018).

The CHC model, widely recognized in cognitive science, organizes human cognitive functions into broad abilities, such as fluid reasoning, crystallized knowledge, short-term memory, and visual processing, each of which can be further subdivided into narrower, teachable skills (Schneider & McGrew, 2012). Similarly, the SEL model classifies social-emotional competencies into measurable skills, including self-regulation, impulse control, stress management, and social understanding. The

physical fitness framework identifies key components such as balance, coordination, strength, and endurance.

Together, these frameworks form a structured skills taxonomy, which is akin to a ‘competency periodic table,’ that links broad ability domains to specific, teachable skills. For instance, if a child’s visual processing abilities are underdeveloped, educational therapists may analyze related sub-skills such as visualization, spatial scanning, and mental imagery. Targeted exercises like puzzles, figure rotation tasks, and map-path memorization activities can gradually improve these sub-skills, thereby enhancing the child’s overall visual processing abilities.

Within the context of the SEL model, if deficits are observed in self-regulation, interventions may focus on skill areas like impulse control and stress management. Techniques, e.g., breathing exercises, delayed gratification games, and situational role-playing, are employed to promote emotional regulation and self-management. This systematic mapping ensures that intervention plans are evidence-based, precise, and tailored to each child’s unique developmental profile, rather than relying on subjective interpretations or generalized strategies.

Beyond individualizing learning objectives, EdTx places strong emphasis on the deliberate selection of instructional methods and the design of the learning environment. An integrative analysis of a child’s characteristics, including sensory preferences and cognitive processing style, guides the selection of optimal instructional modalities. For example, children with a visual learning preference may benefit from diagrams, flowcharts, and imagery, while those with an auditory preference may respond better to spoken explanations, audio recordings, or rhythmic reading (Bross et al., 2022).

Teaching methods are further adapted based on the child’s cognitive and behavioral profile. For children with limited executive functioning, hypersensitivity to change, or short attention spans, structured instruction featuring clear rules, step-by-step guidance, and visual supports is often most effective (Virues-Ortega et al., 2013). Additionally, because children exhibit varying levels of symptom severity, interventions are adjusted in intensity and pacing. The frequency and duration of sessions are carefully planned to avoid fatigue and sensory overload (Linstead et al., 2017).

The learning environment itself is also strategically modified to support emotional regulation and engagement. Elements such as quiet zones, soothing areas, transition cues, and adjustments to lighting or noise levels are incorporated (Sanz-Cervera et al., 2018; Black et al., 2022). These environmental modifications help the child feel more secure and in control, which enhances participation, emotional stability, and the overall effectiveness of the intervention.

2.2.3 Intervention Principles for Long-Term Development

EdTx is deeply grounded in neuroscience research, applying scientific findings to inform both its theoretical framework and educational practices (Tan et al., 2025). One of its foundational principles is neuroplasticity. That refers to the capacity of the brain to reorganize its structure and function by strengthening existing synapses or forming new connections in response to experiences, learning, or environmental stimuli (Sasmita et al., 2018). This principle highlights the malleability of cognitive, emotional, social, and behavioral abilities, as the underlying neural circuits can be shaped through targeted training and supportive environments.

Since adaptive neural changes result from sustained, feedback-driven practice, neuroplasticity underscores the importance of repetition, staged learning, and real-world application when acquiring new skills (KHabbache & Ait Ali, 2024). It also supports the integration of cross-domain skills (Paraskevopoulos & Herholz, 2013), allowing EdTx to design activities that target multiple competencies simultaneously, such as academic development, emotional regulation, and social

functioning. These integrative tasks are especially beneficial for individuals facing multidimensional challenges.

Furthermore, neuroplasticity ensures that learning leads not only to observable behavioral changes but also to the strengthening of underlying neural networks, promoting long-term growth and improved adaptability to future challenges (Kolb & Gibb, 2011).

Another core principle guiding EdTx is the emphasis on 'teaching students how to learn' rather than solely focusing on what to learn. This approach centers on fostering autonomous learning and strengthening executive functioning (EF), i.e., both of which are critical for academic success and daily life management, particularly in children with neurodevelopmental conditions (Pellicano, 2012; Masouleh & Jooneghani, 2012).

Autonomous learning promotes active participation in the learning process, encouraging the development of intrinsic motivation, self-directed behavior, and strategic decision-making. To support this, educational therapists adopt a structured teaching approach, breaking complex tasks into smaller, manageable steps (Hume et al., 2021). This method not only helps children gradually develop systematic thinking and problem-solving skills but also allows them to regain a sense of control and confidence. Over time, this structure facilitates a transition from passive learning to active, independent problem-solving.

Executive functioning (EF) encompasses cognitive control skills such as planning, organization, attention regulation, task switching, self-monitoring, and impulse control. EdTx addresses EF-related difficulties through various instructional techniques (including repeated practice, stepwise instruction, strategy training, and generalization) as well as supportive tools like checklists and timers. These methods aim to build self-regulation and independence in learners.

Ultimately, as children improve their EF and autonomy, they become more capable of functioning as lifelong, self-directed learners, able to flexibly navigate academic and real-world challenges.

In summary, guided by neuroscience-informed principles and a learning-to-learn philosophy, EdTx fosters both immediate skill acquisition and long-term developmental growth.

2.2.4 Parent Support

EdTx not only focuses on the development of the child but also emphasizes the well-being and functioning of the entire family. Parents of children with developmental disorders often experience significant stress, both practical and emotional. This stress may stem from ongoing caregiving responsibilities, the coordination of multiple professional services, and the management of challenging behaviors. These demands can strain parental well-being and overall family functioning, which may, in turn, affect the effectiveness of interventions for their children (Osborne et al., 2007).

To address these challenges, educational therapists begin by establishing a strong therapeutic alliance with parents. This involves sharing professional knowledge, teaching practical strategies, and providing emotional support. Educational therapists are trained to understand the psychological development and role transitions parents experience at different stages of parenthood, enabling them to offer more tailored support. Ellen Galinsky's (1987) theory of the Six Stages of Parenthood offers a valuable framework for understanding how parents evolve emotionally, cognitively, and behaviorally as they raise their children. A solid grasp of this theory allows educational therapists to more accurately interpret parents' perspectives, anticipate shifting needs, and design sensitive, stage-appropriate interventions for families of children with autism.

For example, during the ‘Image-Making Stage’ (which occurs before a child’s birth), parents often envision a healthy, capable child (Fracasso, 2017). When a child is diagnosed with ASD around the age of two, the discrepancy between that imagined child and reality can trigger profound emotions (e.g., shock, grief, denial, or guilt). To support parents through this emotional crisis, educational therapists may use techniques such as empathetic listening (which fosters a sense of being truly heard and understood), normalization (explaining that such reactions are common among families in similar situations), and validation (affirming that these feelings are legitimate, not signs of weakness or being ‘too emotional’). This process helps parents move from mourning the imagined child to developing more realistic expectations and recognizing their child’s unique strengths and developmental potential.

In the ‘Authority Stage’ (ages 2–5), parents are primarily tasked with establishing rules and guiding socialization (Demick, 2019). For parents of children with ASD, however, challenges such as behavioral dysregulation, meltdowns, and communication barriers often undermine the effectiveness of conventional discipline strategies, leading to feelings of helplessness or inadequacy. Educational therapists help parents understand that discipline for children with developmental differences requires adapted approaches, rather than relying solely on verbal reasoning, punishment, or rigid enforcement. Practical strategies are introduced to ensure that parental authority is established in a supportive, child-sensitive manner. These may include implementing structured routines to increase predictability, introducing graded transitions to break down complex or abrupt changes, and offering structured choices that uphold boundaries while promoting autonomy. Collaborative and trusting therapist-parent partnerships (also known as therapeutic alliance) often lead to a range of positive outcomes, including increased parental engagement, reduced parent-child conflict, and greater resilience, all of which support the child’s overall functioning and development (Rilveria, 2022).

Psychoeducation is another key component of parent support in EdTx. Educational therapists equip parents with knowledge and strategies that empower them to support their children more effectively. This includes helping parents gain a deeper understanding of their child’s learning style, cognitive strengths and weaknesses, sensory patterns, and common triggers of emotional dysregulation, and also the underlying neurobiological mechanisms that contribute to their child’s challenges. Accurate, realistic understanding is crucial for appropriate and compassionate responses to behavioral difficulties (Hartley et al., 2013).

It is not uncommon for parents to misinterpret tantrums or challenging behaviors as willful defiance, which can lead to neglectful or punitive responses. Drawing on their expertise, educational therapists guide parents in understanding the atypical sensory experiences, social interpretation difficulties, communication barriers, and emotion regulation deficits that often underlie such behaviors. This perspective shift encourages parents to view their child as someone experiencing difficulty, not as inherently difficult. Such understanding fosters the adoption of more constructive and responsive parenting strategies (Kil et al., 2020).

Educational therapists also emphasize the importance of parental mental health, helping caregivers recognize how their emotional well-being affects both their own health and their child’s socio-emotional development. Practical tools for emotional self-care, stress management, and problem-solving are taught to help parents maintain emotional stability and cope effectively with the demands of caregiving (Neece et al., 2012). Additionally, parents are trained in home-based intervention activities that allow them to reinforce and extend the skills taught in therapy sessions. This is especially important for children with memory or generalization difficulties, as regular practice helps reduce forgetting and improves long-term learning outcomes. Applying skills related to social interaction, emotional regulation, and self-care within everyday routines also strengthens the transfer of learning across contexts. Engaging parents in this process increases their confidence, enhances their understanding of their child’s needs, and fosters a stronger sense of self-efficacy in supporting their child’s long-term development.

In addition to sharing knowledge and practical tools, educational therapists serve as empathetic listeners and emotional support providers for parents during daily interactions. Parents of children with developmental disorders often feel overwhelmed by anxiety and frustration and may find it difficult to process these emotions on their own. By listening attentively and responding with empathy, educational therapists create a safe, non-judgmental space for parents to express their feelings. Repeated exposure to this type of support can foster long-term emotional resilience (Chan et al., 2025). Educational therapists are also trained to monitor for signs of more serious psychological concerns (e.g., chronic anxiety, withdrawal, or mood dysregulation) and refer parents to appropriate mental health services when necessary.

Moreover, educational therapists help establish peer support networks, such as parent support groups or family resource teams, where caregivers can share experiences, express concerns, and exchange practical strategies. These networks reduce feelings of isolation and provide a sense of community (Sharma et al., 2022). Observing others navigating similar challenges, and witnessing their progress, can bolster hope and motivate parents to remain actively engaged in their child's development.

Overall, EdTx promotes a family-centered, trust-based alliance that integrates professional guidance, psychoeducation, emotional support, and community resources. This comprehensive support system not only empowers parents but also helps create a stable, nurturing environment that fosters optimal developmental outcomes for children. As such, EdTx offers a sustainable and effective model for long-term intervention.

3. DISCUSSION

EdTx offers a range of distinct advantages for children with ASD and comorbid EBD. It begins with comprehensive, multidimensional assessments that provide a thorough understanding of each child's strengths, challenges, and developmental profile. Based on these insights, EdTx facilitates the design of highly individualized education plans that address the child's specific cognitive, emotional, and behavioral needs. The approach employs flexible, evidence-based instructional strategies tailored to the child's learning profile, along with optimized learning environments that enhance engagement, facilitate skill generalization, and support long-term development. In addition, EdTx actively involves parents, fostering therapeutic alliances and providing guidance to strengthen family coping and ensure continuity of intervention. Taken together, these features position EdTx as a structured and integrative framework capable of addressing the complex, multidimensional needs of children with ASD and comorbid EBD.

However, despite its strong theoretical foundation and growing application, several critical limitations persist in the dissemination and research of EdTx. First, although EdTx has gained recognition and maturity in Western countries such as the United States and Germany, its global reach remains limited. While not a novel concept, its professional development and systematic implementation in many regions are still in the early stages or lack sufficient infrastructure. In Asia, this issue is particularly pronounced in developing countries and resource-limited areas, where the number of qualified educational therapists is inadequate and professional training and certification systems are underdeveloped. As a result, many children in need cannot access standardized, high-quality EdTx services. These disparities limit the broader application and social impact of EdTx, forcing many families to rely on unqualified tutors or fragmented support systems, thereby compromising both the effectiveness and consistency of interventions.

Second, the cost of EdTx is relatively high due to its specialized, individualized, and often long-term nature. Educational therapists are required to possess extensive knowledge in educational psychology and child development, along with the expertise to design interventions tailored to each child's unique

needs. These requirements contribute to significantly higher costs compared to conventional tutoring or single-modality interventions. Additionally, EdTx often involves multidisciplinary collaboration, which further increases overall expenses. Unfortunately, in many Asian countries, EdTx has not yet been integrated into public healthcare or educational insurance systems, leaving families to bear the financial burden. This exacerbates economic strain and limits access to high-quality interventions for lower-income families. Promoting the wider implementation of EdTx therefore requires policy-level action, including incorporating EdTx into special education and developmental health coverage, allocating public funding, and integrating available resources to reduce family costs and ensure equitable access.

Cultural adaptability is another essential consideration. The theory and practice of EdTx are rooted in Western developmental psychology, and its core principles and intervention methods must be flexibly adapted for use across diverse cultural contexts. This is necessary to respect cultural differences in emotional expression, parent-child relationships, and educational values. For instance, in some Asian cultures where direct emotional expression is less emphasized, educational therapists may need to use indirect methods, such as metaphors, analogies, or storytelling, to teach emotion regulation. Furthermore, variations in parental involvement and educational expectations require culturally sensitive approaches to build cooperative relationships with families and maximize intervention outcomes. In China, for example, where academic competition is particularly intense, parents and teachers often prioritize short-term academic success over broader developmental goals. In such contexts, educational therapists must work to shift focus toward process-oriented learning, executive function development, and long-term holistic growth.

To address these limitations, future research should focus on several key areas. First, longitudinal studies are needed to evaluate the long-term effectiveness of EdTx, as most existing research emphasizes short-term outcomes or single-case reports and lacks systematic follow-up data. Longitudinal research can scientifically assess the sustained impact of EdTx on emotion regulation, academic performance, social adaptation, and independent living skills. This helps in understanding both the stability of intervention effects and the developmental trajectories of children receiving EdTx. Findings from such research can guide clinical practice by informing individualized intervention planning and refining therapeutic strategies.

Second, more research on cultural adaptability and diversity is essential. These studies can support the development of flexible, culturally responsive EdTx models that ensure inclusivity and effectiveness across different cultural settings. Such models would also encourage greater family and community engagement in the intervention process.

Finally, interdisciplinary collaboration should be further explored. Since EdTx is often implemented alongside speech-language therapy (SLT), occupational therapy (OT), and psychological counseling, future research should examine coordination mechanisms, scheduling strategies, and collaborative frameworks to improve the efficiency and coherence of multidisciplinary interventions. By clarifying the roles and contributions of each professional, it is possible to establish a child-centered, integrated, and cross-disciplinary service system that enhances outcomes and meets the diverse needs of children with developmental challenges.

4. CONCLUSION

Children with ASD and comorbid EBD present with complex clinical profiles and diverse needs, making traditional, single-focus interventions insufficient to address their multidimensional challenges. EdTx, as a systematic and multidisciplinary intervention model, emphasizes the comprehensive development of core capacities such as cognition, emotion regulation, sensory integration, and executive functioning. Through rigorous, multidimensional assessments and the integration of cross-test data, EdTx enables the creation of highly individualized educational plans tailored to each child’s unique profile. When

combined with flexible teaching strategies and optimized learning environments, this approach leverages the child's strengths, facilitates the generalization of skills, and supports long-term developmental progress.

In addition, EdTx places strong emphasis on the establishment of therapeutic alliances and parent support, which enhances family coping capacity, ensures continuity and effectiveness of intervention, and builds a scientifically informed, precise, and sustainable framework for comprehensive care.

Nonetheless, EdTx currently faces several challenges, including limited empirical research, shortages of trained professionals, high service costs, and issues related to cultural adaptability. These barriers constrain its widespread implementation, limit the verification of long-term outcomes, and raise concerns regarding service equity and quality assurance.

Future efforts should prioritize large-sample, longitudinal studies to systematically evaluate the effectiveness and long-term stability of EdTx. Additionally, promoting culturally sensitive and contextually adapted interventions will enhance its applicability across diverse social and cultural settings. It is equally important to further explore interdisciplinary collaboration mechanisms to optimize scientific rigor, increase intervention efficacy, and improve accessibility for all populations.

In summary, while there is still room for improvement, EdTx offers a strong theoretical foundation and a practical framework for addressing the complex and evolving needs of children with ASD and comorbid EBD. With continued research, policy support, and the development of robust service systems, EdTx holds the potential to become a cornerstone intervention, promoting holistic development and facilitating the social integration of this population.

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The author has declared that no competing interests exist.

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