Determining Effective Therapy Plans in Autism Spectrum Disorder: A Conceptual Framework

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ABSTRACT

Autism Spectrum Disorder (ASD) presents with diverse developmental, communicative, and sensory challenges, requiring therapy plans that are highly individualized rather than standardized. This concept paper explores the determination of therapy plans for ASD by synthesizing evidence from systematic reviews in four domains: behavioral interventions, speech and language therapy, occupational therapy, and sensory integration approaches. This paper conceptualizes therapy planning as an assessment-driven and adaptive process, highlighting the need for individualized, flexible, and multidisciplinary approaches in supporting ASD patients.

Keywords: Autism Spectrum Disorder, Therapy Planning, Review

INTRODUCTION

Autism Spectrum Disorder (ASD) is a neurodevelopmental disorder indicated by deficits in conduct, social functioning, and communication that start in childhood (*Management of Autism Spectrum Disorder in Children and Adolescents*).

Research on the global prevalence of autism was reviewed, considering how socioeconomic, racial, and geographic variables affect prevalence estimates. The estimation of the prevalence of autism spectrum disorder is one in 100 children, worldwide (Zeidan et al., 2022). The World Health Organization (WHO) has taken this matter seriously by producing WHO *Comprehensive Mental Health Action Plan 2013–2030* and World Health Assembly Resolution WHA73.10 for "global actions on epilepsy and other neurological disorders." (WHO).

Based on statistics from the Malaysian Health Ministry, 589 children in Malaysia who are 18 years of age or under were ASD in 2021, rising from 562 in 2020. ASD should be diagnosed clinically, through observation and comprehensive (Murugesan, 2024).

However, after diagnosis, young ASD patients especially should receive treatments such as Applied Behavior Analysis (ABA), speech, language and communication interventions, and Occupational Therapy (OT) (*Management of Autism Spectrum Disorder in Children and Adolescents*).

In addition, there is no one therapy plan that could fit all circumstances; therefore, the challenges lie in determining effective interventions across domains, namely: behavioral, speech, occupational, and sensory.

This paper does not empirically measure the effectiveness of therapy. Instead, it aims to develop an integrative conceptual framework that organizes how individualized therapy plans can be systematically designed across four core domains: behavioral, speech and language, occupational, and sensory integration. The framework synthesizes evidence from recent systematic reviews to highlight how assessment profiles, goal setting, and intensity decisions interact in optimizing therapeutic outcomes for ASD patients.

LITERATURE REVIEW

Therapy planning for ASD requires systematic consideration of assessment, goal setting, and intervention intensity. It involves comprehensive assessment, goal setting or domain-specific planning (behavioral, speech, OT, sensory), and determination of intensity, duration & context. Systematic reviews have been conducted with respect to each step:

Assessment as the Foundation of Therapy Planning

Determination of the therapy plan starts with a comprehensive assessment that may include the child's developmental, communication, behavioral, sensory, and social-pragmatic profile (Roberge & Crasta, 2022). The child's profile could also include the developmental stage, challenges, and age. The assessment results contribute to the customization of plans (Hryntsiv et al., 2025).

Similar criteria are presented by (Sandbank et al., 2023) with the addition of autism severity, adaptive functioning, and family/contextual factors. These child and family characteristics help determine which interventions are most suitable and how effective they are likely to be (Sandbank et al., 2023).

(Chung et al., 2024) also agree that the patient's profile includes the age, developmental level, strengths, and deficits. Functional behavior assessments (FBA) and skill assessments are used to identify target behaviors, skill deficits, and environmental factors influencing behavior.

(Jaicks, 2024) utilizes the Antecedent-Behavior-Consequence (ABC) model to determine the Severity of symptoms/domains affected as follows:

- Sensory processing
- Relationship-building skills
- Body and object use
- Language skills
- Social and self-care abilities

These functional domains were the main profiles assessed, and improvement in them determined therapy effectiveness.

While these models share the principle of individualized profiling, they differ in focus: (Roberge & Crasta, 2022) prioritize sensory regulation, (Sandbank et al., 2023) incorporate family and contextual adaptation, and (Chung et al., 2024) stress behavioral precision. This variation indicates that comprehensive assessment in ASD therapy should not rely on a single diagnostic orientation.

Goal and Domain Setting

Upon completion of the assessment, therapy goals must be tailored to the individual's developmental profile and functional needs. Standardized tools and clinical observation guide the selection of intervention goals (e.g., attention, self-regulation, communication, adaptive behavior). Interventions are tailored to the child's age, developmental level, baseline skills, and target outcomes, which are obtained from the assessment. For instance, language goals are set by assigning speech therapy, Augmentative and Alternative Communication (AAC), or Picture Exchange Communication System (PECS), depending on verbal ability (Roberge & Crasta, 2022)

(Hryntsiv et al., 2025) also matched the assessment results to the goals. Some examples are as follows:

- Non-verbal children: AAC/PECS or speech-generating devices.
- Pragmatic/social deficits: social communication therapies, play-based or Developmental, Individual-differences, Relationship-based Model also known as Floortime/DIR.
- Behavioral challenges: structured Applied Behavior Analysis (ABA) or Pivotal Response Treatment (PRT).

Sensory/self-regulation needs: sensory integration therapy or massage.

The program intensity and complexity can be matched according to the degree of functionality. Higher-functioning patients can be assigned to structured skill-building and social/vocational goals. Meanwhile, the lower-functioning patients are aimed for foundational developmental/behavioral support and focus on daily living skills. Therapy should also fit family capacity: parent-mediated if involvement is possible; and therapist-led or school-based if limited resources (Sandbank et al., 2023).

In summary, different types of goals or domains have different targets. Behavioral therapies such as Early Intensive Behavioural Intervention (EIBI), ABA, PRT, and Early Start Denver Model (ESDM) involve broad development, communication, and adaptive skills. Speech-language therapies expand vocabulary, improve comprehension, or support alternative forms of communication.

(Chung et al., 2024) and (Hryntsiv et al., 2025) also agree with (Sandbank et al., 2023) that therapy plans must consider the family's priorities, resources, and environment to sustain long-term engagement.

Based on the literature, there are two dominant principles: (1) behavioral frameworks, emphasizing structured learning and observable outcomes, and (2) developmental-contextual frameworks, prioritizing naturalistic learning and family participation. These two principles should be harmonized in a balanced conceptual framework by combining goal measurability with the natural environment.

Determining Therapy Intensity and Duration

The intensity of therapy in terms of duration, for example, hours/week, and adherence to a structured protocol affect outcomes. Higher intensity can be beneficial, but may not be effective if the hours exceed what is sustainable or appropriate (Roberge & Crasta, 2022).

Conversely, the amount of therapy (hours per week) is determined by the child's needs and capacity. Early intensive intervention could yield a greater impact (Chung et al., 2024). (Jaicks, 2024) suggest that some children's profiles allow for rapid initial gains, while others may need sustained intervention.

These differences highlight a central challenge: high-intensity therapies often yield stronger outcomes but risk overburdening families, whereas moderate or flexible schedules promote sustainability but may require longer durations to achieve measurable progress. Therefore, optimal intensity should be adaptively tailored to individual support needs, developmental stage, and environmental feasibility.

DISCUSSION

Ongoing monitoring and adjustment are needed for the whole therapy plan to work successfully. Outcomes are tracked systematically (using both standardized measures and functional observation). If progress is limited, the plan is adjusted, either by changing the intensity, modifying goals, or switching to a different intervention model. This iterative cycle ensures the therapy remains goal-directed and patient-specific (Roberge & Crasta, 2022).

Progress is tracked using criteria such as: speech development, communication/social skills, reduction of repetitive speech, use of alternative communication, and emotional/behavioral regulation (Hryntsiv et al., 2025). Progress is tracked continuously; therapy is adjusted if goals are not met or if new priorities emerge. The plan should also ensure that the improvements are meaningful to the child and family, not just reductions in problem behavior (Chung et al., 2024). Some profiles require special handling, such as Children with severe comorbid medical conditions, active pharmacological treatment, or prior occupational therapy (Jaicks, 2024).

The overall discussion identifies the main gap in current ASD therapy literature, which is the lack of integration among behavioral, sensory, and contextual domains, and the need for adaptable intensity management. The conceptual framework proposed here addresses these limitations by outlining a systematic, flexible, and multidomain structure for therapy planning.

The reviewed papers' findings are summarized in Table 1 below:

Table 1 Summary of reviews

Reference	Assessment	Domain/Goal	Intensity
(Chung et al., 2024)	Functional Behavior Assessment (FBA); skill assessments; individualized profiles	Applied Behavior Analysis (ABA), EIBI, PRT, Treatment and Education of Autistic and Related Communication Handicapped Children (TEACCH); focus on reducing challenging behaviors & teaching adaptive/communication skills	Intensive, often 20–40 hrs/week
(Hryntsiv et al., 2025)	Standardized speech & language assessments	Speech therapy, AAC, PECS, social communication interventions; match therapy to communication baseline	Frequency varies; intensity guided by language deficits & family capacity
(Roberge & Crasta, 2022)	Sensory processing assessments; observation of regulation/attention	Sensory Integration Therapy (SIT), massage, adaptive seating, weighted vests, sensory diets; to improve regulation, attention, engagement	Mixed: Massage & SIT showed short-term benefits; sessions often weekly, moderate duration
(Jaicks, 2024)	Autism Behavior Checklist (ABC): domains: sensory, relationship, body/object use, language, self-care	OT targeting functional skills, sensory regulation, self-care, and social interaction	Improvements are most visible in the first 5 sessions
(Sandbank et al., 2023)	Assessed moderators: age, baseline development level, autism severity, communication, adaptive functioning, family context	Developmental & behavioral early interventions: EIBI, ESDM, Naturalistic Developmental Behavioral Interventions (NDBI)s, parent-mediated programs	Optimal dosage varies, but intensive multi-session models are most effective

CONCLUSION

This paper develops a conceptual framework for systematic and individualized therapy planning in Autism Spectrum Disorder (ASD). The framework integrates three essential components: assessment, goal alignment, and adaptive intensity management into a continuous, feedback-driven process.

Future work could expand this conceptual framework into empirical validation or prototype development. Through its multidomain, adaptive design, the framework offers a path toward more inclusive, sustainable, and individualized therapy planning across the autism spectrum. In addition, the conceptual framework can be integrated with technology such as AI-based systems and applications.

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