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**COMPREHENSIVE APPROACHES
TO AUTISM SPECTRUM DISORDER TREATMENT:
A SYNTHESIS OF RECENT RESEARCH**

Research on interventions for Autism Spectrum Disorder (ASD) spans various domains, offering promising avenues for treatment and support. Studies have explored diverse approaches, including behavioral therapies, physical activities, pharmacological treatments, and technology-driven interventions.

The UK Pre-school Autism Communication Therapy (PACT) was adapted for non-specialist delivery in South Asia, demonstrating sustained impact on autism symptoms [2]. Cognitive Behavioral Therapy (CBT) has shown efficacy in reducing anxiety symptoms in children with ASD [6]. Pivotal Response Treatment (PRT) combined with parent training has been effective in improving social communication skills [1].

Vitamin D supplementation has shown potential in improving ASD symptoms [14], while transdiagnostic CBT interventions have led to significant improvements in emotion regulation and mental health [4].

Additionally, interventions such as *Lactobacillus plantarum* supplementation [9] and high-dose folinic acid treatment [10] have shown promise in addressing ASD-related symptoms.

Digital interventions like the Superpower Glass have demonstrated efficacy in improving social behavior [8]. Furthermore, game-based exercise training programs [16] and structured physical activity programs [13] have shown positive effects on motor skills and social interaction in children with ASD.

Studies have also explored the impact of equine-assisted therapy [7], Tai Chi Chuan training [15], and yoga interventions [11] on motor skills and behavior.

Telehealth-delivered functional communication training [3] and pharmacological treatments targeting specific symptom domains [5] have also shown promise in reducing problem behaviors and addressing associated symptoms.

Physical activity interventions have emerged as a particularly effective approach, with meta-analyses indicating significant improvements in social interaction, communication, motor skills, and autism severity [12, 17].

Overall, these findings highlight the diverse range of interventions available for ASD, underscoring the importance of personalized, multidisciplinary approaches in supporting individuals with ASD and their families.

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