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Cognitive and social predictors of adaptive functioning in children with autism spectrum disorder: State of art

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Abstract

Context and relevance. The study of adaptive functioning in children with autism spectrum disorder (ASD) is critically important for identifying factors that influence their successful long-term adaptation in society. The theoretical basis of the study encompasses key cognitive constructs, including metacognitive knowledge about one's own mental states (theory of mind) and metacognitive control processes (executive functions). **Objective.** To analyze and synthesize current research on the key cognitive (intelligence, theory of mind, executive functions) and social (family socioeconomic status) predictors of adaptive functioning in children with ASD. **Hypothesis.** Deficits in theory of mind and executive functions may act as more significant predictors of adaptive behavior than IQ, while family socioeconomic status (SES) serves as an important contextual factor influencing adaptive outcomes. **Methods and materials.** The article employs a systematic narrative review methodology. A comprehensive search and analysis of scientific literature from international peer-reviewed databases published between 2014—2025 was conducted. **Results**. The results demonstrate that IQ is an unreliable indicator of future adaptive functioning success in children with ASD. In contrast, deficits in theory of mind and executive functions are more significant predictors, mediating difficulties in social communication, self-care, and daily living skills, even in children with preserved intelligence. The role of SES is primarily indirect, mediating access to early diagnosis and interventions. **Conclusions**. Adaptive functioning in ASD is a multidimensional construct determined by multilevel and interconnected predictors. The findings underscore the necessity of a comprehensive approach to studying and supporting adaptation, moving beyond IQ-based predictions to include targeted development of social cognition and self-regulation, while considering the family's socioeconomic context.

Keywords: adaptive functioning, autism spectrum disorders, cognitive development, theory of mind, executive functions, socioeconomic status

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Когнитивные и социальные предикторы адаптивного функционирования у детей с расстройствами аутистического спектра: современное состояние проблемы

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Резюме

Контекст и актуальность. Изучение адаптивного функционирования у детей с расстройством аутистического спектра (РАС) является крайне важным для выявления факторов, влияющих на их успешную долгосрочную адаптацию в обществе. Теоретической основой исследования выступили ключевые когнитивные конструкты, включая метакогнитивные знания о собственных психических состояниях (модель психического) и процессы метакогнитивного контроля (исполнительные функции). **Цель.** Проанализировать и синтезировать современные исследования ключевых когнитивных (интеллект, модель психического, исполнительные функции) и социальных (социально-экономический статус семьи) предикторов адаптивного функционирования у детей с РАС. **Гипотеза.** Дефициты модели психического и исполнительных функций могут выступать более значимыми предикторами адаптивного поведения, чем IQ, в то время как социально-экономический статус семьи (SES) служит важным контекстуальным фактором, влияющим на результаты адаптации. **Методы и материалы.** В статье использована методология систематического нарративного обзора. Был проведен комплексный поиск и анализ научной литературы в международных рецензируемых базах данных за период с 2014 по 2025 год. **Результаты.** Результаты демонстрируют, что IQ является ненадежным индикатором успешности адаптивного функционирования в будущем у детей с РАС. Напротив, дефициты модели психического и исполнительных функций выступают более значимыми предикторами, опосредуя трудности в социальной коммуникации, самообслуживании и повседневных навыках, даже при сохранном интеллекте. Роль SES является преимущественно опосредованной, влияя на доступ к ранней диагностике и интервенциям. **Выводы.** Адаптивное функционирование при РАС представляет собой многомерный конструкт, определяемый многоуровневыми и взаимосвязанными предикторами. Полученные данные подчеркивают необходимость комплексного подхода к изучению адаптации, предполагающего переход от прогнозов на основе IQ к целенаправленному развитию социального познания и саморегуляции с учетом социально-экономического статуса семьи.

Ключевые слова: адаптивное функционирование, расстройства аутистического спектра, когнитивное развитие, модель психического, исполнительные функции, социально-экономический статус

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Introduction

Adaptive functioning is typically defined as an individual's ability to effectively meet the daily demands of their environment by performing socially significant, culturally expected, and age-appropriate actions necessary for independent living (American Psychiatric Association, 2013; Schalock, Luckasson, Tass , 2021). It encompasses several domains, including social skills, self-care abilities, and the application of functional skills that enable successful adaptation to educational, professional, and community contexts (Sparrow, Cicchetti, Balla, 2005).

The study of adaptive functioning and its influencing factors in children with ASD is crucial for early identification of deficits that hinder socialization and daily independence. Despite many children with ASD having intelligence within normative ranges, their adaptive behavior often lags significantly behind age-appropriate norms, necessitating an analysis of key factors affecting successful adaptation.

Differences in adaptive functioning between typically developing children and those with ASD manifest across various domains. Children with ASD frequently experience challenges in social adaptation, communication, and daily living skills, which may stem from limited adaptive resources and atypical behavioral response formation. While typically developing children exhibit balanced adaptive behavior profiles, children with ASD may display pronounced deficits in specific areas despite intact intellectual abilities (Kanne et al., 2011). Additionally, research highlights gender differences: girls with ASD tend to show higher adaptive skills compared to boys, possibly due to less pronounced repetitive behaviors (Napolitano et al., 2022).

Studies also confirm that early adaptive functioning levels are significant predictors of developmental trajectories. For instance, higher adaptive and language skills in pre-

school correlate with better long-term adaptation (Sparrow, Cicchetti, Balla, 2005). Additionally, the age of diagnosis plays a critical role: the earlier a child receives a diagnosis and begins targeted support, the greater the likelihood of successful adaptation (Eisenhower et al., 2021).

Adaptive functioning in ASD can be influenced by various factors. Social context and supportive environments, including the involvement of parents, specialists, and educators, can significantly enhance the development of necessary skills (Pickles et al., 2016). Individual differences, such as temperament characteristics, personality traits, and cognitive ability profiles, also play a crucial role in the development of adaptive skills. Furthermore, the type and severity of ASD symptoms directly determine the rate and quality of new skill acquisition (Franchini et al, 2023).

Among the most extensively studied factors influencing adaptive functioning in ASD are intellectual ability, social cognition, and self-regulation, including executive functions. Research demonstrates that while IQ has traditionally been considered a primary predictor of adaptation, in children with ASD it does not always correlate with actual levels of daily living skills, particularly in domains of social interaction and self-care (Kanne et al., 2011; Chatham et al., 2018). Impairments in social cognition, including theory of mind, significantly impact social adaptation in children with ASD, predisposing them to difficulties in interpersonal interactions (Rosell et al., 2020; Chiu et al., 2023). Self-regulation deficits, manifested in impaired emotion regulation, impulsivity, and difficulties adapting to environmental changes, also negatively affect the development of adaptive behavior (Restoy et al., 2024). Executive functions — particularly working memory, cognitive flexibility, and inhibition — play a crucial role as fundamental mechanisms for organizing daily activities and independent functioning (Demetriou et al., 2018).

The goal of this study is to analyze the key factors influencing adaptive functioning in children with autism spectrum disorder (ASD), including cognitive abilities (intelligence, theory of mind, and executive functions) and socioeconomic factors. By reviewing existing research, we aim to clarify why high cognitive potential does not always lead to successful daily adaptation, identify the most significant predictors of adaptive behavior, and highlight the role of environmental conditions in shaping developmental outcomes. The findings will contribute to a better understanding of adaptive challenges in ASD.

Methods

This article employs a systematic narrative review methodology to synthesize and critically analyze the current body of research on adaptive functioning and its cognitive predictors in children with Autism Spectrum Disorder (ASD). The primary methods used include a scientific-critical and systematic analysis of the phenomenon and its underlying mechanisms, followed by synthesis, generalization, and scholarly processing of the compiled international research.

A comprehensive search for relevant scientific literature was conducted in international peer-reviewed databases, including Scopus, Web of Science, PubMed, and PsycINFO. The search focused on publications from the last decade (2014—2025), with particular emphasis on high-impact studies from the most recent five years to ensure the relevance of the findings. The selection of materials was performed using the following key search terms and their combinations: «adaptive functioning», «adaptive behavior», «autism spectrum disorder», «ASD», «theory of mind», «executive functions», «cognitive functions», «intelligence», «IQ», «socioeconomic status», «SES», and «Vineland».

Special attention was paid to articles published in leading international journals in the fields of psychology, psychiatry, and neurodevelopment, such as Journal of Autism and Developmental Disorders, Autism, Autism Research, Child Neuropsychology, and Frontiers in Psychology.

The initial search yielded a significant number of publications. The final selection for in-depth analysis was based on the criteria of relevance to the research problem, methodological rigor (e.g., use of standardized assessment tools, longitudinal design where applicable), and publication in a high-ranking, peer-reviewed journal. This process resulted in the analysis of the sources presented in the reference list of this article.

Cognitive Factors and Their Impact on Adaptive Functioning in Children with ASD

Adaptive functioning in children with ASD is a complex phenomenon that does not always correlate with cognitive abilities. Recent studies indicate that even children with ASD and above-average IQs (>70) often exhibit adaptive skills far below expected levels (Lupi et al., 2023). This dissociation underscores the need to examine additional predictors of adaptive functioning.

Although intellectual level has traditionally been regarded as one of the key predictors of successful adaptation, the relationship between intelligence and adaptive functioning in children with ASD proves to be complex and ambiguous. On one hand, children with intellectual disabilities (IQ < 70) demonstrate significantly poorer adaptive outcomes, which correlates with less favorable life trajectories (Kanne et al., 2011). However, preschool-aged children with ASD often show low adaptive skills despite preserved intellectual functioning, challenging the direct dependence between cognitive development and adaptation (Chatham et al., 2018). Several studies reveal persistent differences in adaptive functioning even when controlling for similar IQ levels measured by standardized tests.

Emerging evidence confirms the persistence of IQ threshold effects in ASD, with recent studies identifying a range of 70-85 as critical for substantial declines in adaptive skills (Igliozzi et al., 2024). Paradoxically, contemporary research emphasizes that even individuals with IQ scores above 100 frequently exhibit clinically significant impairments in social adaptation, particularly in complex real-

world settings (Alvares et al., 2020; Yon-Hern ndez et al., 2023).

The mechanisms underlying this discrepancy between cognitive abilities and adaptive functioning in children with ASD are multifaceted and reflect the complex neuropsychological profile of autism spectrum disorder. ASD is characterized by significant heterogeneity in cognitive functioning, where preserved or even superior abilities in specific domains such as rote memory or visuospatial processing often coexist with marked deficits in abstract reasoning and social cognition (Demetriou et al., 2018). This uneven cognitive profile significantly limits the predictive validity of full-scale IQ scores for real-world adaptive functioning. Furthermore, children with ASD who have high IQ scores may develop sophisticated compensatory strategies, often referred to as «masking,» which allow them to perform adequately in structured testing environments while continuing to experience significant functional impairments in everyday situations (Livingston et al., 2019). These compensatory mechanisms, while potentially beneficial in controlled settings, frequently fail to generalize to the complex and unpredictable demands of real-world social interactions. Additionally, motivational factors play a crucial role in this dissociation, as many children with ASD demonstrate reduced intrinsic motivation to engage in socially adaptive behaviors, creating a significant gap between their cognitive potential and actual behavioral performance (Jahromi, 2017).

The presented data reveal significant limitations in using IQ as a predictive measure of adaptive functioning in ASD. The observed contradictions between studies may stem from several factors: methodological differences in assessment approaches (standardized tests versus real-world behavior), developmental dynamics (with widening gaps often emerging during adolescence), and sample heterogeneity. A particular challenge lies in the persistent mismatch between formal cognitive scores and actual social adaptation, highlighting the need for comprehensive evaluation protocols that integrate both neuropsychological profiles and real-world functioning (Fossum et al., 2025; Terroux et al., 2024). This discrepancy underscores the importance of moving beyond IQ-based predictions to develop more nuanced, ecologically valid assessment frameworks that better capture the complex relationship between cognitive abilities and daily adaptive skills in ASD populations.

Theory of Mind in Autism and Adaptive Functioning: Significance and Impact

Theory of mind (ToM) constitutes a mental mechanism of social cognition and represents an individual's cognitive capacity to attribute mental states — including beliefs, intentions, desires, and emotions — to others, while utilizing these attributions to predict and explain behavior (Sergienko, 2014). This capacity emerges during early childhood and serves as the foundation for successful social interaction, cooperation, and empathy. In children with ASD, theory of mind development is frequently impaired, which multiple studies identify as a key pathogenic factor underlying deficits in social communication and adaptive behavior (Polónyiová, Kruyt, Ostatníková, 2024).

Indeed, the majority of research confirms this statement. Early studies showed a positive correlation between understanding first-order false beliefs (the mastery of which allows for predicting others' behavior based on knowledge of their beliefs) and high scores on the Vineland Adaptive Behavior Scales (Frith, 1994). More recent studies have also confirmed the relationship between success in understanding first-order false beliefs, communicative competence, and positive social behavior in children with ASD (Berenguer et al., 2018). Meanwhile, a longitudinal study demonstrated that theory of mind mediates the relationship between language development and communication skills, though not socialization outcomes (Bennett et al., 2013).

Contemporary empirical research highlights that challenges in ASD are associated not only with deficits in explicit mentalizing (i.e., the conscious ability to reason about mental states), but also with limitations in applied and spontaneous theory of mind (Lebedeva, Ilina, 2024). In their 2020 study of children with ASD without intellectual disabilities, Roselló and colleagues demonstrated heterogeneity in theory of mind profiles and their significant association with autism symptom severity, levels of adaptive functioning, and pragmatic language skills. The authors emphasize that even when successfully completing classical false belief tasks, many children fail to demonstrate the ability to apply this knowledge in real-world social situations. Specifically, more pronounced deficits in applied mentalizing are associated with reduced communicative flexibility and socio-pragmatic competence. Theory of mind deficits in children with ASD manifest not only in cognitive task performance but also in daily life, where they are associated with impairments in adaptive functioning. As noted by Sparrow et al. (2005), adaptive behavior encompasses the ability to effectively manage everyday tasks and respond to social environmental demands. Children with ASD who experience difficulties interpreting and predicting others' behavior often struggle to participate in complex social scenarios (e.g., team activities, peer interactions), which adversely affects their capacity to adapt to various social contexts. Furthermore, limited understanding of others' mental states constrains the development of autonomy and decision-making skills, as effective social interaction requires continuous consideration of others' intentions and reactions.

On the other hand, the results of some studies show that a low level of theory of mind does not always lead to impairments in social interaction. For instance, Livingston and colleagues demonstrated that some autistic individuals use compensatory mechanisms to exhibit adequate social behavior despite their low scores on theory of mind tasks (Livingston et al., 2019). They link these compensatory strategies to the phenomenon of «camouflaging» or «masking» (Fombonne, 2020), which allows autistic individuals to copy others' behaviors to blend into their social circle by following pre-formulated rules. The authors associate this

ability to compensate for social interaction impairments primarily with the development of executive functions.

Thus, theory of mind is considered a factor in the development of adaptive skills in the majority of research, primarily due to its proven influence on social interaction, which is a key component of adaptive functioning. However, a relatively good theory of mind does not always guarantee successful social interaction in autistic children, just as, conversely, a poor understanding of others' beliefs and emotions does not always lead to impairments in social behavior and, consequently, in the adaptive functioning of children. Further research, including longitudinal studies, should focus on investigating the relationship between various theory of mind indicators and social functioning to gain a clearer understanding of the contribution of theory of mind to adaptive functioning outcomes in ASD.

Executive Functions and Adaptive Functioning in Children with ASD

Executive functions represent another well-established predictor of adaptive functioning in children with ASD (Fossum et al., 2025). Executive functions play a crucial role in cognitive behavioral regulation, enabling planning, control of one's actions, adaptation to changing conditions, and management of emotional responses. In children with ASD, deficits in this domain are observed from an early age and significantly impact adaptive functioning, including socialization, acquisition of self-care skills, and capacity for independent living (Terroux et al., 2024).

Empirical evidence indicates that the developmental level of executive functions may serve as a more significant predictor of adaptive behavior than general intellectual ability (Terroux et al., 2024). Preschool children with ASD demonstrate particularly pronounced impairments in inhibition, cognitive flexibility, and working memory, which directly correlate with socialization difficulties and challenges in daily functioning (Igliozzi et al., 2024; Lupi et al., 2023). Deficits in emotional regulation and attentional shifting appear especially consequential in this context, as they directly predict lower adaptive functioning levels (Leung et al., 2016). These impairments persist into adulthood, evidenced by enduring cognitive inflexibility and inhibitory control deficits that affect planning, household organization, and occupational performance (Yon-Hernández et al., 2023).

To identify the specificity of executive functions deficits in ASD, a meta-analysis of studies was conducted, which revealed significant reductions in planning, working memory, inhibition, and flexibility in individuals with ASD (Hemmers et al., 2022). The absence of statistically significant correlations between theory of mind and executive functions subdomains in this study challenges the hypothesis that mentalization impairments are solely due to executive function deficits. This underscores the need for a multifactorial approach to studying the cognitive structure of ASD and highlights the relative autonomy of distinct cognitive processes. At the same time, age-related dynamics are emphasized: as individuals mature, certain aspects related to information integration improve, while mentalization deficits persist, demonstrating stability and diagnostic significance.

Studies also show that difficulties in cognitive flexibility, working memory, and emotional regulation in children with ASD negatively impact daily functioning and socialization. There is a noticeable trend toward reduced ability to adapt to new situations, as well as challenges in self-care and social initiative. This is supported by a number of studies (Igliozzi et al., 2024; Lupi et al., 2023; Leung et al., 2016), whose findings are consistent across key measures.

Particular attention should be given to the study by Wang et al. (2025), which examines the relationship between EF components and social functioning in children with ASD. The study found that reductions in both metacognitive and behavioral regulation scores were strongly associated with deficits in social perception, adaptive behavior, and pragmatic skills. «Hot» executive functions, particularly emotional regulation and impulse control, play a special role. Additionally, a link was established between physical fitness and EF levels, suggesting physical activity may serve as a potential mediator in developing social competence. The authors emphasize the necessity of a multidisciplinary approach that incorporates EF development into social and behavioral intervention programs.

The relationship between executive functions and the severity of autistic symptoms is supported by findings from multiple studies. Research has demonstrated that children with more pronounced difficulties in social communication and restricted repetitive behaviors (RRB) show lower levels of EF (Lupi et al., 2023). Cognitive flexibility and self-regulation abilities emerge as particularly significant predictors of socialization and adaptive functioning.

In children with ASD, metacognitive components of EF — including working memory and behavioral organization — are strongly associated with levels of social functioning, whereas these associations are less pronounced in neurotypical children (Leung et al., 2016). These findings confirm the uniqueness of the underlying mechanisms of adaptation in autism and emphasize the need for targeted development of specific executive strategies within comprehensive intervention programs.

The accumulated evidence positions executive functions as a central — though incomplete — explanatory framework for adaptive functioning challenges in ASD. Three critical insights emerge from this synthesis: First, EF deficits appear more predictive of daily functioning than global cognitive measures, particularly for socialization and independent living skills (Terroux et al., 2024; Wang et al., 2025). Second, the EF-adaptation relationship shows domain-specific patterns, with emotional regulation and cognitive flexibility demonstrating stronger associations than working memory (Igliozzi et al., 2024). Third, developmental trajectories reveal compounding effects — while early EF deficits predict later adaptive challenges (Lupi et al., 2023), their impact interacts dynamically with environmental demands and compensatory strategies (Yon-Hernández et al., 2023)

The heterogeneity of EF profiles across the spectrum complicates generalized predictions, with some individuals showing near-typical performance on standardized tasks despite real-world functional impairments (Hemmers et al., 2022). Furthermore, cultural variations in adaptive expectations and measurement limitations (e.g., parent-report biases) may inflate observed EF-adaptation correlations. These nuances underscore the necessity of individualized, context-sensitive assessment approaches.

Adaptive Functioning in Children with ASD and Family Socioeconomic Status

In addition to cognitive predictors of successful adaptive functioning in ASD, a separate area of research focuses on assessing the influence of social factors, particularly family socioeconomic status (SES), in children with ASD. Higher paternal education levels and access to various resources, including early intervention programs, positively correlate with adaptive functioning levels and promote its development (Ibrahim et al., 2020).

A study involving preschool-aged children with ASD provides deeper insight into the role of SES in shaping adaptive behavior (Hodge et al., 2021). The authors used the IRSAD index — a composite measure of social well-being incorporating education, employment, income, and housing parameters — to assess family SES. Results demonstrated statistically significant effects of SES on adaptive functioning, particularly in the communication skills domain. However, after including cognitive variables (specifically verbal IQ) in the model, SES effects diminished to non-significant levels. This suggests SES operates primarily indirectly, mediating access to early diagnosis and interventions, as well as parental involvement levels, which subsequently determine cognitive and adaptive skill development.

Although SES does not emerge as a dominant factor, its importance as the social context shaping a child's adaptive behavior remains crucial, particularly during early developmental stages and in resource-limited settings.

Numerous contemporary studies confirm the substantial influence of socioeconomic factors on adaptive functioning in children with ASD (Ibrahim et al., 2020; St. John, Ausderau, 2021). Specifically, parental income and education levels, living conditions, and healthcare accessibility serve as significant predictors of daily living, social, and motor skill development in this population.

The study by Ibrahim et al. (2020), conducted with 3—6 year-old children with ASD in Egypt, revealed positive correlations between various SES components and adaptive behavior. Researchers employed the Vineland Adaptive Behavior Scales (VABS) and a socioeconomic status scale. The results showed that high parental education levels, their professional employment status, family material well-being, sanitary-hygienic living conditions, and access to medical services were statistically significantly correlated with such aspects of adaptive behavior as daily living skills ($r = 0.394$ for education, $r = 0.403$ for healthcare), socialization ($r = 0.355$ for education), and motor functions ($r = 0.274$ for employment, $r = 0.291$ for healthcare). Children from high-SES families demonstrated better scores on these scales compared to children from families with low and very low SES levels. Thus, the authors emphasize the necessity of considering social context when planning interventions aimed at developing adaptive skills in children with ASD, particularly in resource-limited countries.

The issue of SES in the context of adaptive functioning is also addressed in the study, which examined the relationship between family income level and functional independence indicators in children with ASD in the United States (St. John, Ausderau, 2021). Using parent questionnaire data and the SIB-R scale, the authors demonstrated that low family income was statistically significantly associated with lower levels of adaptive functioning. Even after controlling for variables such as age at diagnosis, symptom severity, and amount of therapy received, family income level remained a stable predictor of reduced daily living skills. The obtained results support the hypothesis that SES affects a family's ability to promote the development of a child's functional independence, including through access to therapeutic and educational resources, participation in additional programs, and the degree of parental involvement.

However, it was proposed that a different, economic-sociological perspective on the relationship between ASD and SES should be considered, with evidence demonstrating that having a child with ASD itself can be a factor in reducing family income (Montes, Halterman, 2008).

Based on analysis of representative data from the National Household Education Survey, the authors showed that families raising children with ASD lose an average of $6,200 USD per year, representing approximately 14% of their expected income. These losses are primarily due to the need to reduce workforce participation of one parent, most often the mother, to care for the child with special needs. Thus, having a child with ASD can not only limit a family's access to specialized services but also reduce overall SES, creating a vicious cycle of constrained opportunities and potential deterioration of the child's adaptive potential.

Most studies concur that family socioeconomic status (SES) represents a significant and multifaceted factor determining adaptive functioning levels in children with ASD. Higher SES facilitates earlier access to diagnosis and intervention services, creates favorable conditions for family engagement in educational and therapeutic processes, and consequently promotes the development of daily living, social, and motor skills. Conversely, lower SES — whether pre-existing or resulting from necessary reallocation of family resources — restricts access to developmental opportunities. These findings underscore the necessity for a comprehensive approach to organizing support for children with ASD that accounts for family socioeconomic vulnerability and recognizes macro-social conditions as crucial contextual factors for effective intervention.

Limitations and Prospects for Future Research

The current state of research on adaptive functioning in ASD, while insightful, is constrained by significant limitations. A primary issue is methodological heterogeneity, where studies utilize divergent assessment tools for key constructs like IQ, executive functions (EF), and adaptive behavior itself, making direct comparisons and meta-analyses challenging. This problem is compounded by a heavy reliance on cross-sectional data, which captures a single point in time and fails to elucidate the developmental pathways and causal mechanisms linking cognitive deficits to long-term adaptive outcomes. Furthermore, a critical flaw lies in the lack of ecological validity; performance on decontextualized, structured laboratory tasks (e.g., false belief tests for Theory of Mind) often starkly contradicts an individual's functioning in the complex, unpredictable real world, severely limiting the predictive power of these assessments.

These methodological challenges underlie several key contradictions in the literature. The most prominent is the IQ-Adaptation Paradox: despite IQ being a traditional prognostic marker, it consistently proves a poor predictor of daily living skills in ASD, especially for those without intellectual disability. This paradox is explained by multifaceted mechanisms, including neuropsychological heterogeneity (spiky cognitive profiles where strengths mask weaknesses), the use of compensatory strategies (camouflaging), and reduced social motivation. Another contradiction is the ToM-Behavior Discrepancy, where a low level of theory of mind does not always manifest as poor observable social behavior, and vice versa. This is largely mediated by executive functions, which allow individuals to effortfully simulate social understanding through learned rules and scripts, though often at a high cost to well-being. Finally, the role of Socioeconomic Status (SES) presents a contradiction: while some studies show a direct correlation with adaptive skills, others find its effect disappears after controlling for cognitive variables. This suggests SES operates primarily as an indirect, mediating factor by facilitating access to early diagnosis, high-quality interventions, and parental resources, which in turn foster cognitive and adaptive development.

To address these limitations and resolve contradictions, future research must adopt longitudinal designs to track the evolution of cognitive predictors, environmental factors, and adaptive outcomes from childhood into adulthood, identifying critical intervention windows. A major priority is enhancing ecological validity through methods like naturalistic observation, virtual reality scenarios, and experience sampling to better capture real-world functioning. There is also a pressing need to investigate the mechanisms of compensation, quantifying the neural and cognitive processes behind camouflaging and their long-term costs on mental health. Employing person-centered approaches (e.g., latent profile analysis) will help account for the extreme heterogeneity in ASD by identifying subgroups with distinct profiles. Ultimately, this refined understanding must translate into targeted intervention studies that move beyond generic methods to explicitly test whether training specific mechanisms like cognitive flexibility or applied social cognition directly improves adaptive functioning in everyday life.

Conclusions

The analysis of current research allows us to conclude that adaptive functioning in ASD represents a multidimensional construct influenced by multilevel and interconnected predictors. Research findings demonstrate that reduced adaptive functioning in ASD cannot be explained by any single factor and encompasses not only cognitive development but also environmental factors, including accessibility of diagnosis and contemporary interventions for families raising children with ASD.

The results of theoretical analysis indicate that the intellectual development level of children with ASD, previously considered the most established correlate of adaptive functioning, can no longer serve as a reliable indicator of successful socialization and independent living in adulthood. Despite high cognitive potential, many children with ASD experience significant difficulties in social adaptation, self-care, and daily living skills. This underscores the necessity of a comprehensive approach to studying adaptive functioning that incorporates analysis of social, cognitive, and environmental factors.

Research on the relationship between theory of mind, executive functions, and adaptive functioning highlights the need for targeted interventions within a multidisciplinary framework. Such an approach must account for the interconnected deficits in self-regulation and social cognition characteristic of autism spectrum disorders to promote successful adaptation and future social competence. Consideration of family socio-demographic characteristics — particularly parental income and education levels, along with access to evidence-based interventions — as significant determinants of adaptive functioning emphasizes the requirement for government-regulated policies ensuring timely access to diagnosis and early intervention services. These measures are crucial for facilitating successful transition to adulthood for individuals with ASD.

Краткое изложение содержания статьи на русском языке

Введение

Адаптивное функционирование обычно определяется как способность индивида эффективно удовлетворять повседневные требования среды посредством выполнения социально значимых, культурно ожидаемых и соответствующих возрасту действий, необходимых для самостоятельной жизни (American Psychiatric Association, 2024; Schalock et al., 2021). Оно охватывает несколько областей, включая социальные навыки, способности к самообслуживанию и применение

функциональных навыков, обеспечивающих успешную адаптацию к образовательной, профессиональной и социальной среде (Sparrow, Cicchetti, & Balla, 2005).

Изучение адаптивного функционирования у детей с расстройством аутистического спектра (РАС) крайне важно для раннего выявления дефицитов, препятствующих социализации. Несмотря на то, что у многих детей с РАС показатели интеллекта в пределах нормы, их адаптивное поведение часто значительно отстает от возрастных норм, что обуславливает необходимость анализа ключевых факторов, влияющих на успешную адаптацию.

Целью данного исследования является анализ ключевых факторов, влияющих на адаптивное функционирование у детей с РАС, включая когнитивные способности, модель психического, исполнительные функции и социально-экономические факторы.

Методы

В данной статье используется методология систематического обзора для синтеза и анализа современной базы исследований об адаптивном функционировании. Комплексный поиск соответствующей научной литературы проводился в международных рецензируемых базах данных: Scopus, Web of Science, PubMed и PsycINFO. Поиск был сфокусирован на публикациях за последнее десятилетие. Отбор материалов осуществлялся с использованием следующих ключевых поисковых терминов и их комбинаций: «адаптивное функционирование», «адаптивное поведение», «расстройства аутистического спектра», «РАС».

Особое внимание уделялось статьям, опубликованным в ведущих международных журналах в области психологии, психиатрии и нейроразвития. Конечный отбор для углубленного анализа основывался на критериях релевантности проблеме исследования, методологической строгости и публикации в высокорейтинговом рецензируемом журнале.

Когнитивные факторы и их влияние на адаптивное функционирование у детей с РАС

Адаптивное функционирование у детей с РАС представляет собой сложный феномен, который не всегда коррелирует с когнитивными способностями. Современные исследования показывают, что даже дети с РАС и IQ выше среднего (> 70) часто демонстрируют адаптивные навыки значительно ниже ожидаемого уровня (Lupi et al., 2023). Этот разрыв подчеркивает необходимость изучения дополнительных предикторов адаптивного функционирования.

Механизмы, лежащие в основе этого несоответствия, многогранны и отражают сложный нейропсихологический профиль РАС. Для РАС характерна значительная гетерогенность когнитивного функционирования, где сохранные способности в определенных областях (например, механическая память) часто сосуществуют с выраженными дефицитами абстрактного мышления и социального познания (Demetriou et al., 2018). Дети с РАС и высоким IQ могут развивать сложные компенсаторные стратегии («маскировка»), которые позволяют им адекватно функционировать в структурированных условиях тестирования, но не в непредсказуемых реальных социальных взаимодействиях (Livingston et al., 2019). Также критическую роль играют мотивационные факторы: многие дети с РАС демонстрируют сниженную внутреннюю мотивацию к социальному поведению (Jahromi, 2017).

Модель психического при аутизме и адаптивное функционирование: значение и влияние

Модель психического — это когнитивная способность приписывать ментальные состояния (убеждения, намерения, желания, эмоции) другим людям и использовать это для прогнозирования и объяснения их поведения (Sergienko, 2014). У детей с РАС развитие модели психического часто нарушено, что идентифицируется как ключевой патогенный фактор, лежащий в основе дефицитов социальной коммуникации и адаптивного поведения (Polónyiová et al., 2024).

Исследования подтверждают положительную корреляцию между пониманием ложных убеждений первого порядка и высокими показателями по Шкалам адаптивного поведения Вайнленд (Frith et al., 1994), а также связь с коммуникативной компетентностью и позитивным социальным поведением (Berenguer et al., 2018). Даже успешно выполняя классические задачи, многие дети не могут применить эти знания в реальных социальных ситуациях.

С другой стороны, результаты некоторых исследований показывают, что низкий уровень модели психического не всегда приводит к нарушениям в социальном взаимодействии. Некоторые дети с РАС используют компенсаторные механизмы («камуфляж»), чтобы демонстрировать адекватное социальное поведение, копируя поведение других по заранее сформулированным правилам (Livingston et al., 2018; Fombonne, 2020). Эта способность связывается с развитием исполнительных функций.

Исполнительные функции и адаптивное функционирование у детей с РАС

Исполнительные функции (EF) являются другим предиктором адаптивного функционирования у детей с РАС (Fossum et al., 2025). Они играют критическую роль в когнитивной регуляции поведения, включая планирование, контроль действий, адаптацию к меняющимся условиям и управление эмоциональными

реакциями. Дефициты в этой области наблюдаются с раннего возраста и значительно влияют на адаптивное функционирование, включая социализацию, приобретение навыков самообслуживания и способность к независимой жизни (Terroux et al., 2024).

Эмпирические данные показывают, что уровень развития исполнительных функций может быть более значимым предиктором адаптивного поведения, чем общие интеллектуальные способности (Terroux et al., 2024). У детей дошкольного возраста с РАС особенно выражены нарушения когнитивной гибкости и рабочей памяти, которые напрямую связаны с трудностями социализации (Igliozzi et al., 2024; Lupi et al., 2023).

Связь между тяжестью симптомов РАС и уровнем исполнительных функций подтверждается множеством исследований: дети с более выраженными трудностями в социальной коммуникации и ограниченным повторяющимся поведением показывают более низкие уровни исполнительных функций (Lupi et al., 2023).

Адаптивное функционирование у детей с РАС и социально-экономический статус семьи

Отдельная область исследований фокусируется на оценке влияния социально-экономического статуса семьи (SES), на адаптивное функционирование детей с РАС. Более высокий уровень образования родителей и доступ к различным ресурсам, включая программы раннего вмешательства, коррелирует с уровнями адаптивного функционирования и повышает его развитие (Ibrahim et al., 2020).

Исследования показывают статистически значимое влияние SES на адаптивное функционирование, особенно в сфере коммуникативных навыков. Однако после включения в модель когнитивных переменных (в частности, вербального IQ) эффект SES уменьшается до незначительного уровня (Hodge et al., 2021). Это показывает, что SES действует опосредованно, открывая доступ к ранней диагностике и интервенциям, а также уровень вовлеченности родителей, которые в дальнейшем определяют развитие когнитивных и адаптивных навыков.

Многочисленные исследования подтверждают значительное влияние социально-экономических факторов (доход и образование родителей, условия жизни), на развитие навыков повседневной жизни, социальных и моторных навыков у детей с РАС (Ibrahim et al., 2020; St. John, Ausderau, 2021). Однако также есть и обратная связь: наличие ребенка с РАС само по себе может быть фактором снижения дохода семьи из-за необходимости одного из родителей (чаще матери) сокращать трудовую деятельность для ухода за ребенком (Montes, Halterman, 2008).

Ограничения и перспективы будущих исследований

Современные исследования адаптивного функционирования при расстройствах аутистического спектра (РАС) сталкиваются с рядом серьезных ограничений. К ним относятся методологическая неоднородность (разные подходы в исследованиях), преобладание разовых срезов и низкая экологическая валидность (данные получены в искусственных условиях, а не в реальной жизни). Эти проблемы существенно снижают предсказательную силу существующих оценок.

Именно эти методологические сложности лежат в основе ключевых противоречий, обнаруживаемых в научной литературе: «IQ — Адаптация»: показатель IQ оказывается слабым предиктором того, насколько хорошо человек с РАС справляется с повседневными задачами в реальной жизни. Несоответствие «Модель психического — Поведение»: низкие результаты в тестах на модель психического не всегда проявляются в плохом наблюдаемом социальном поведении. Верно и обратное: относительно успешное поведение может маскировать внутренние трудности. Неоднозначная роль социально-экономического статуса: Одни исследования показывают прямую связь между социально-экономическим статусом семьи и развитием адаптивных навыков у ребенка с РАС, в то время как в других показано, что этот эффект исчезает при учете когнитивных факторов.

Для преодоления этих ограничений будущие исследования должны: внедрять лонгитюдные дизайны для изучения развития навыков во времени, повышать экологическую валидность, используя методы оценки в естественной для человека среде, изучать компенсаторные механизмы.

Заключение

Анализ современных исследований позволяет заключить, что адаптивное функционирование при РАС представляет собой многомерный конструкт, определяемый многоуровневыми и взаимосвязанными предикторами. Сниженное адаптивное функционирование не может быть объяснено единственным фактором и обусловлено не только когнитивным развитием, но и средовыми детерминантами, включая доступность диагностики и интервенций.

Уровень интеллектуального развития, ранее считавшийся основным предиктором, не является надежным индикатором успешной социализации и независимой жизни во взрослом возрасте, что подчеркивает необходимость комплексного подхода. Исследования связи модели психического, исполнительных функций и адаптивного функционирования актуализируют развитие целевых интервенций в рамках междисциплинарного подхода, учитывающего взаимосвязанные дефициты саморегуляции и социального познания.

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