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Co-occurring Autism Spectrum Disorder and Attention-Deficit/Hyperactivity Disorder in a 12-Year-Old Female: A Case Report and Clinical Insights

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ABSTRACT

Background: Autism spectrum disorder (ASD) and attention-deficit/hyperactivity disorder (ADHD) frequently co-occur, yielding additive impairments in social communication, executive control, and participation; female presentations are often under-recognized due to subtler phenotypes and compensatory strategies. Objective: To describe the diagnostic reasoning, measurement considerations, and staged management of a school-aged girl with co-occurring ASD and ADHD, emphasizing attention-related measurement bias and a data-driven care pathway. Methods: Case report anchored to the original evaluation epoch (chronological age ≈12 years). Multi-informant and multimethod assessment included clinical interview and observation, Childhood Autism Rating Scale (CARS total), Conners' Teacher Forms (T-scores from two raters), Portage Guide to Early Education (PGEE; domain current functioning ages), Raven's Colored Progressive Matrices (CPM), and Learning Disabilities Diagnostic Inventory (LDDI). A coordinated intervention combined ABA-informed behavioral strategies, speech–language therapy with visual systems, individualized education program accommodations, parent-mediated generalization, and psychiatry referral for ADHD pharmacotherapy. Results: CARS total 33 (mild–moderate range) with elevations in social reciprocity/communication; Conners' profiles showed markedly atypical inattention/hyperactivity across settings; PGEE indicated 5–8-year functional lags across domains; CPM fell <5th percentile under high distractibility; LDDI revealed diffuse academic weakness. Across 17 sessions, on-task duration and routine adherence improved under structured scaffolds; spontaneous reciprocity and generalized attention remained limited. Intellectual-impairment specifier was retained provisionally pending re-evaluation after attention optimization. Conclusion: In ASD–ADHD comorbidity, attention-state effects can depress cognitive/achievement scores and misguide specifiers. A staged approach—optimize attention first, then re-test cognition/adaptation—supports accurate classification and improves educational and therapeutic yield.

Keywords
Autism Spectrum Disorder; Attention-Deficit/Hyperactivity Disorder; Comorbidity; Female Phenotype; Executive Dysfunction; Measurement Bias; Case Report.

INTRODUCTION

Autism spectrum disorder (ASD) and attention-deficit/hyperactivity disorder (ADHD) are highly prevalent neurodevelopmental conditions that often co-occur, producing overlapping yet distinct impairments in social communication, executive control, and self-regulation that complicate clinical recognition and delay targeted intervention (1). Contemporary diagnostic frameworks define ASD by persistent deficits in social communication and interaction with restricted, repetitive behaviors, and define ADHD by developmentally inappropriate inattention and/or hyperactivity–impulsivity across settings with clinically significant functional impact; when these phenotypes converge, symptom boundaries blur and everyday functioning is disproportionately affected relative to either diagnosis alone (1). From a population standpoint, girls are particularly vulnerable to under-recognition because of subtler social presentations, compensatory strategies, and internalizing features that mask impairment in classroom and clinical settings, thereby postponing referral and compressing the window during which early supports are most effective (2,3).

Cognitive and neurobehavioral endophenotypes shared across ASD and ADHD—particularly executive dysfunction, working-memory inefficiency, and altered reward sensitivity—provide a mechanistic basis for their frequent comorbidity while also elevating measurement error during assessment; attentional dysregulation, for example, can depress observed cognitive performance on nonverbal problem-solving tasks and academic probes independent of true ability (2). In practice, this creates a biostatistical challenge: test scores may underestimate latent competence when obtained under high distractibility, inflating the risk of misclassification toward global intellectual impairment or diffuse learning disorder and obscuring the more actionable proximal driver—sustained attention failure (2). The clinical corollary is that assessment batteries for suspected ASD–ADHD comorbidity in school-aged girls should integrate multi-informant behavioral ratings, direct observation, and cognitive/achievement testing under attention-optimized conditions to separate trait limitations from state-dependent performance decrements (1,2).

At the educational interface, cross-situational ADHD symptoms are central to functional impairment in autistic students, manifesting as brief on-task spans, disorganization, and task abandonment that undermine instruction and adaptive skill acquisition despite intact interest or partial

competence (4). Longitudinal and experimental data link these attentional and executive difficulties to academic underachievement and social participation barriers, with additive effects when ASD and ADHD co-occur; importantly, multi-source ratings from teachers offer ecologically valid evidence for diagnostic thresholds and for monitoring change under school-based interventions (4). Executive-trajectory studies further show that inattention and cognitive control problems track with classroom productivity and response to behavioral scaffolds across development, reinforcing the need to combine clinical diagnosis with objective, repeated measures that are sensitive to small but meaningful gains in sustained engagement (5).

Early, multimodal intervention—pairing structured behavioral teaching with speech-language therapy, parent-mediated strategies, and individualized educational plans—improves adaptive functioning and participation for autistic children, especially when supports are embedded across home–school contexts and delivered with sufficient intensity (6). For co-occurring ADHD, evidence supports behavioral approaches as foundational, while adding ADHD-targeted pharmacotherapy can increase baseline attention and "instructional receptivity," thereby improving the yield of skill-building interventions; combined, these strategies produce more robust and generalizable improvements than either pathway alone (7). Taken together, the literature suggests a pragmatic PICO frame for school-aged girls with ASD–ADHD: in this population (P), a coordinated, multimodal program emphasizing structured behavioral supports and communication interventions with consideration of ADHD pharmacotherapy (I), compared with routine care or singly focused therapies (C), is hypothesized to improve attention regulation, social-communication, adaptive/academic performance, and generalization across settings (O) (1–7).

Despite this guidance, two critical knowledge gaps limit decision-making at the case level. First, there is insufficient case-anchored detail on how attentional dysregulation during testing distorts cognitive estimates in autistic girls with comorbid ADHD, and how that distortion should influence specifier selection and re-evaluation timing in real-world clinics (2). Second, while multimodal care is recommended, reports rarely align observational data, multi-informant psychometrics, and session-level response to structured scaffolds into a coherent, measurable plan that schools and families can implement and track using simple, reliable indicators such as on-task minutes, completion rates, conversational turns, and cross-context generalization (4–7). Addressing these gaps requires methodical description of diagnostic reasoning under uncertainty, explicit acknowledgment of measurement bias, and pre-specified monitoring metrics that permit iterative, data-informed adjustment of supports (1–7).

Against this background, the present case report describes a school-aged female with co-occurring ASD and ADHD, synthesizing developmental history, cross-setting behavior, and psychometric data to illustrate how attentional state can depress nonverbal and academic test performance and how a staged, multimodal plan can be operationalized and monitored using clinically meaningful, low-burden metrics (1–7). The objective is to provide clinically transferable guidance for differentiating true cognitive limitation from attention-related performance suppression and to outline a data-driven intervention pathway that integrates behavioral, speech-language, educational, and potential pharmacologic components, tailored to the female phenotype of ASD–ADHD (1–7). Accordingly, our research question is: in a school-aged girl with ASD and ADHD, does a coordinated, staged management approach that first optimizes attention and then re-assesses cognition and adaptation yield a more accurate diagnostic specification and measurable improvements in attention, social-communication, and adaptive/academic participation than routine, non-staged care (1–7)?

CASE INFORMATION AND CLINICAL FINDINGS

The patient is a school-aged female referred for evaluation of longstanding social-communication difficulties, restricted and repetitive behaviors, pervasive inattention, and academic underachievement reported across home and school contexts. She lives with both parents and one younger sibling in a supportive environment without known family history of ASD or ADHD; per caregiver report, early development was globally delayed, including social smile, neck control, independent sitting and crawling, first words at approximately the second year of life, and independent walking closer to the end of the second year. A prior history of episodic events initially labeled "seizures" was later reclassified as severe food-allergy reactions after careful dietary monitoring, with resolution following cessation of anticonvulsants; no ongoing neurological disorder has been identified. For internal coherence and biostatistical transparency, all developmental discrepancy calculations in this report are anchored to the original evaluation epoch at a chronological age of approximately 12 years (CA ≈ 144 months), which matches the scoring framework used for the Portage Guide to Early Education (PGEE) and related psychometrics; subsequent sessions and school observations occurred after that epoch and are described qualitatively to preserve the validity of the age-referenced scores while acknowledging the longitudinal clinical context (1).

Educationally, the patient transitioned from mainstream to special education in response to persistent academic and behavioral challenges—limited intelligibility of expressive speech, difficulty sustaining attention, organizational failures around materials and homework, and rigid adherence to routines that disrupted classroom participation. Despite these challenges, the family implemented early supports and the school instituted targeted accommodations, and over several months the patient began to initiate simple greetings, add brief conversational turns with prompting, and tolerate structured peer interactions in small, supportive settings. Consistent with female presentations of neurodevelopmental disorders, social difficulties were often subtle and partially masked by compliant demeanor and situational compensation, which likely contributed to delayed recognition and referral (2,3).

Clinical interviewing and direct observation showed a shy, reserved, and self-directed interaction style with minimal spontaneous initiation outside of requests. Topic maintenance was poor and characterized by perseveration on circumscribed interests, including repetitive singing of the alphabet song. Repetitive motor behaviors were present, notably hair pulling and repeatedly pointing to a previously healed finger scratch. A strong need for sameness was evident in rigid compliance with expected timetables, even when that interrupted tasks, and in distress around changes in sequence or demand. Attention was fleeting, with frequent distractibility to ambient stimuli; task engagement deteriorated rapidly when cognitive load or duration exceeded tolerance, often precipitating anxiety, irritability, and occasional anger. Organizational and time-management problems were pervasive, reflected in lost materials, incomplete assignments, and inefficient task initiation and transition. Expressive speech was effortful and frequently unclear, and paired social-skills exercises required multiple prompted repetitions to achieve even brief, reciprocal exchanges. Protective factors included a cohesive, engaged family, early introduction of structured supports, and access to special education, while perpetuating factors included insistence on sameness, reduced cognitive flexibility, executive dysfunction, and limited insight into social cues, each of which can amplify functional impairment in the presence of co-occurring ASD and ADHD (1–3,4).

Standardized assessment data converged with these observations. On the Childhood Autism Rating Scale, the total raw score was 33, consistent with mild–moderate autism, with elevations in domains indexing relating to people, imitation, emotional response, and verbal and nonverbal

communication, alongside relative strengths in visual and listening responses and sensory modulation for taste, smell, and touch. Two independent teacher Conners' ratings documented markedly atypical inattention/cognitive problems and hyperactivity indices in one setting and significant inattention with pronounced hyperactivity and moderate social difficulties in another, thereby establishing cross-situational impairment that is required for ADHD diagnosis and that carries direct educational relevance for individualized supports and monitoring (1,4). PGEE profiling confirmed global developmental delay, with current functioning ages substantially below CA across socialization, self-help, cognitive, motor, and language domains; the mean discrepancy at the 12-year epoch was on the order of five to eight years, with socialization relatively less impaired than cognition but still below age expectations. On Raven's Colored Progressive Matrices, raw performance fell below the 5th percentile; however, test behavior was characterized by high distractibility, inconsistent effort, and premature disengagement, conditions that are well known to depress observed nonverbal reasoning in children with ADHD symptoms and that warrant cautious interpretation of intellectual level pending re-evaluation under attention-optimized conditions (2,5). The Learning Disabilities Diagnostic Inventory showed low stanines across listening, speaking, reading, writing, mathematics, and reasoning, supporting a picture of diffuse academic weakness more parsimoniously explained by global developmental delay plus attention/executive dysfunction rather than a circumscribed specific learning disorder in a single academic domain. Taken together, the multi-informant ratings, direct observation, and psychometric profile satisfy DSM-5-TR criteria for ASD (social-communication deficits with restricted and repetitive behaviors beginning in early development and producing clinically significant impairment) and for ADHD with a predominantly inattentive presentation documented across settings; at the same time, attentional state during testing likely suppressed measured cognitive performance, so the specifier of accompanying intellectual impairment is retained as a working judgment and flagged as provisional pending repeat cognitive and adaptive assessment after attention has been therapeutically optimized (1–5).

DIAGNOSTIC ASSESSMENT

The diagnostic assessment integrated multi-informant ratings, standardized tests, and direct clinical observation administered at the original evaluation epoch anchored to a chronological age of ~12 years (CA ≈ 144 months) to preserve the validity of age-referenced scores. All instruments were delivered in a quiet room with planned movement breaks, visual schedules, and first/then prompts; nevertheless, attentional drift and off-task behavior were observed and are noted where they plausibly depressed performance. Test editions/forms were documented as Childhood Autism Rating Scale (15-item format; "CARS/CARS-2 total" reported here as CARS total), Conners' Teacher Forms from two independent raters (reported as T-scores), Portage Guide to Early Education (PGEE; domain-level current functioning ages), Raven's Colored Progressive Matrices (CPM), and the Learning Disabilities Diagnostic Inventory (LDDI). Interpretation followed publisher guidelines and DSM-5-TR criteria for ASD and ADHD with cross-situational impairment confirmed by converging teacher ratings (1,4). Given well-described state effects of inattention on nonverbal and academic test performance, cognitive scores were interpreted cautiously with plans for re-evaluation under attention-optimized conditions (2,5).

Developmental milestones (parent report, corroborated by records). Caregivers described a pattern of global delay across early motor and social milestones. The table aligns typical ages with achieved ages and notes the delay magnitude qualitatively, using the same anchors later referenced in PGEE interpretation (1,2).

Table 1 Milestone

Milestone	Typical age	Achieved age	Status	Brief note
Cry after birth	Immediately	Immediately	Achieved	No neonatal complications reported
Eye contact	6–8 weeks	8–9 weeks	Slightly delayed	Emerging social attention
Social smile	2–3 months	4–5 months	Delayed	Reduced early reciprocity
Neck holding	3–4 months	6–7 months	Delayed	Axial control lag
Sitting	6–7 months	9–10 months	Delayed	Gross-motor delay
Crawling	7–8 months	10–12 months	Delayed	Gross-motor delay
Walking	11–17 months	20–24 months	Delayed	Late independent ambulation
First word	12–18 months	20–24 months	Delayed	Language onset late

Autism symptom severity (CARS total = 33). Scores reflected mild–moderate autistic features with elevations in social reciprocity and communication domains and relative strengths in basic visual and auditory responding. Domain raw scores are listed to support transparency in DSM mapping to criteria A/B (1).

Table 2 CARS domain (15 items)

CARS domain (15 items)	Raw score	Interpretation
Relating to people	2.5	Mild–moderately abnormal
Imitation	2.5	Mild–moderately abnormal
Emotional response	2.5	Mild–moderately abnormal
Body use	2.5	Mild–moderately abnormal; repetitive movements (e.g., hair pulling) observed
Object use	2.5	Mild–moderately abnormal; requires frequent prompts
Adaptation to change	1.5	Mildly abnormal; distress with transitions
Visual response	1.0	Age-appropriate
Listening response	1.0	Age-appropriate
Taste/smell/touch	1.0	Age-appropriate modulation
Fear or nervousness	2.0	Mildly elevated; easily frightened
Verbal communication	2.5	Mild–moderately abnormal; reduced intelligibility, echolalia/perseveration
Nonverbal communication	2.5	Mild–moderately abnormal; poorly coordinated gestures/facial affect
Activity level	3.0	Moderately abnormal; restlessness
Level/consistency of intellectual response	3.0	Moderately abnormal; inconsistent effort
General impressions	3.0	Moderately abnormal global presentation
Total	33	Mild–moderate autism range

ADHD and associated features (Conners' Teacher Forms, T-scores). Two teachers independently rated symptoms across school contexts. Teacher A showed markedly atypical elevations across core ADHD and global indices; Teacher B corroborated significant inattention and hyperactivity with moderate social difficulties, establishing cross-situational impairment central to ADHD diagnosis and educational planning (1,4).

Table 3 Conners scale

Conners scale	Teacher A T	Interpretation	Teacher B T	Interpretation
Oppositional	82	Markedly atypical	54	Average
Inattention/Cognitive problems	90	Markedly atypical	78	Markedly atypical
Hyperactivity	90	Markedly atypical	89	Markedly atypical
Anxious–Shy	90	Markedly atypical	62	Mildly atypical
Perfectionism	74	Markedly atypical	52	Average
Social problems	84	Markedly atypical	67	Moderately atypical
ADHD Index	90	Markedly atypical	66	Moderately atypical
CGI: Restless–Impulsive	90	Markedly atypical	80	Markedly atypical
CGI: Emotional Lability	90	Markedly atypical	57	Slightly atypical
CGI: Total	90	Markedly atypical	73	Markedly atypical
DSM-IV: Inattentive	90	Markedly atypical	68	Moderately atypical
DSM-IV: Hyperactive–Impulsive	90	Markedly atypical	73	Markedly atypical
DSM-IV: Total	90	Markedly atypical	71	Markedly atypical

Adaptive/developmental functioning (PGEE). Domain-level current functioning ages (CFA) were compared to CA ≈ 144 months. Large negative discrepancies were evident across domains, with socialization a relative (still impaired) strength. Values for language were not available in the source dataset and are flagged for completion at re-assessment (1,2).

Table 4 Domain

Domain	CA (mo)	CFA (mo)	Δ = CA – CFA (mo)	Interpretation
Socialization	144	68.4	75.6	Below age-equivalent level
Self-help	144	66.1	77.9	Below average
Cognitive	144	52.1	91.9	Below average
Motor	144	60.4	83.6	Below average
Language	144	—	—	Not recorded; to be obtained at follow-up

Nonverbal reasoning (Raven's CPM). Raw score was 8, falling below the 5th percentile for age. Examiner notes documented frequent off-task drift, variable effort, and early termination tendencies, all consistent with attentional state effects known to depress CPM performance in youth with ADHD features; accordingly, this score is treated as a lower-bound estimate pending retest with attention supports or after ADHD treatment optimization (2,5).

Academic skill profile (LDDI). The LDDI pattern showed diffuse weakness across listening, speaking, reading, writing, mathematics, and reasoning rather than a circumscribed, modality-specific deficit, aligning with global developmental delay compounded by attention/executive dysfunction. Stanines and percentiles are reported to facilitate educational planning.

Table 5 LDDI domain

LDDI domain	Raw	Percentile	Stanine	Interpretation
Listening	45	7	2	Likely learning difficulty
Speaking	47	12	3	Likely learning difficulty
Reading	40	19	3	Likely learning difficulty
Writing	48	25	4	Likely learning difficulty
Mathematics	29	12	3	Likely learning difficulty
Reasoning	19	3	1	Likely learning difficulty

Synthesis and DSM-5-TR mapping. Converging evidence supports ASD with persistent social-communication deficits and restricted/repetitive behaviors beginning in early development, and ADHD with predominant inattention documented across settings with clinically significant impact. The ASD specifiers of language impairment and accompanying intellectual impairment are justified by functional communication limitations, diffuse academic weakness, and PGEE/CPM patterns; however, because attentional dysregulation likely suppressed measured cognition, the intellectual-impairment specifier is retained as provisional, with a priori plans to re-evaluate nonverbal/verbal cognition and adaptive behavior after attention optimization to avoid misclassification based on state-dependent underperformance (1,2,4,5).

THERAPEUTIC INTERVENTION

The totality of developmental chronology, multi-informant ratings, direct observation, and standardized testing supports a dual neurodevelopmental formulation in which Autism Spectrum Disorder (ASD) and Attention-Deficit/Hyperactivity Disorder (ADHD) co-occur and interact to produce additive functional impairment across academic, social, and adaptive domains (1). Core ASD features are evident as persistent social-communication deficits—minimal spontaneous initiation outside of requests, difficulty initiating and sustaining conversation, poor topic maintenance, limited reciprocity, and unclear expressive speech—together with restricted and repetitive behaviors comprising perseverative vocalizations/interests, repetitive motor acts, and pronounced insistence on sameness that disrupts task continuity. These features originate in early development, align with observed functional impairment, and are not better explained solely by global developmental delay, satisfying DSM-5-TR criteria A–D, with criterion E addressed through the differential considerations below (1). Objective anchors include a CARS total of 33 in the mild–moderate range with elevations precisely in the domains that map to social reciprocity and communication (relating to people, imitation, emotional response, verbal and nonverbal communication) and relative strengths in basic visual and auditory responding, a pattern frequently seen when autistic features co-exist with attentional dysregulation (1,2).

Concurrently, ADHD—predominantly inattentive presentation—is supported by convergent, cross-situational evidence. Independent teacher Conners' forms demonstrated markedly atypical inattention/cognitive problems and hyperactivity indices in one classroom setting and significant inattention with pronounced hyperactivity and moderate social difficulties in another, thereby meeting the DSM cross-context requirement and explaining the pervasive short on-task spans, disorganization, and task abandonment observed clinically and reported educationally (1,4). These attentional and executive-control failures are mechanistically consistent with shared ASD–ADHD endophenotypes, including working-memory inefficiency and cognitive-control instability, which can suppress performance on nonverbal reasoning and academic probes independent of underlying ability (2). In this case, Raven's CPM fell below the 5th percentile under conditions of high distractibility and variable effort, and LDDI stanines were low across domains; taken together with broad PGEE delays, these findings reflect genuine functional impairment while also raising a measurement-bias caution that state-dependent inattention may have depressed observed cognitive scores (2,5).

On that basis, ASD specifiers are justified as follows. "With accompanying language impairment" is warranted by restricted vocabulary, reduced intelligibility, reliance on prompting for conversational turns, and CARS elevations for verbal and nonverbal communication, all of which generalize across settings and impede participation (1). "With accompanying intellectual impairment" is appropriate as a working specifier given diffuse functional delays on PGEE and very low CPM performance; however, because attentional dysregulation and inconsistent engagement plausibly lowered test output, this specifier is explicitly marked provisional pending re-evaluation of nonverbal/verbal cognition and standardized adaptive behavior under attention-optimized conditions or after ADHD treatment, to avoid misclassification based on state-related underperformance (2,5). The ASD severity qualifier "requiring substantial support" is supported by the breadth of social-communication needs, the frequency of RRB-driven disruption to routines, and the necessity for structured scaffolds across home and school to achieve modest gains, with clear educational and therapeutic resource implications (1).

Differential diagnosis was considered systematically. Intellectual Developmental Disorder (IDD) remains possible but not established; DSM requires deficits in intellectual functions and adaptive functioning, and while functional delays are broad, the testing context was confounded by severe inattention, making the CPM a lower-bound estimate rather than a stable indicator of g (1,5). A Specific Learning Disorder is less parsimonious because academic weakness was diffuse across modalities on LDDI rather than circumscribed to one skill cluster, and task behavior showed attention-linked breakdowns that better explain incomplete acquisition and poor work completion (1,4). A primary language disorder cannot account for the full phenotype because social reciprocity deficits and restricted/repetitive behaviors exceed language-only impairment, and the prior medical history of "seizures" reclassified as food-allergy reactions removes an active neurological mimic from consideration (1). Importantly, the female presentation—with relatively compliant surface behavior and partial social compensation—likely delayed recognition and should prompt gender-sensitive surveillance during follow-up, particularly as academic and social demands increase with age (3).

Synthesizing these data, the most accurate working formulation is ASD requiring substantial support, with accompanying language impairment and provisional accompanying intellectual impairment, co-occurring with ADHD—predominantly inattentive presentation—producing cross-context functional impairment in attention regulation, executive control, social-communication, and adaptive/academic performance (1–5). This formulation directly informs management: attention should be optimized first to improve instructional receptivity and reduce measurement bias, followed by re-assessment of cognition and adaptation to confirm or revise specifiers and to calibrate individualized educational and therapeutic plans (1–5).

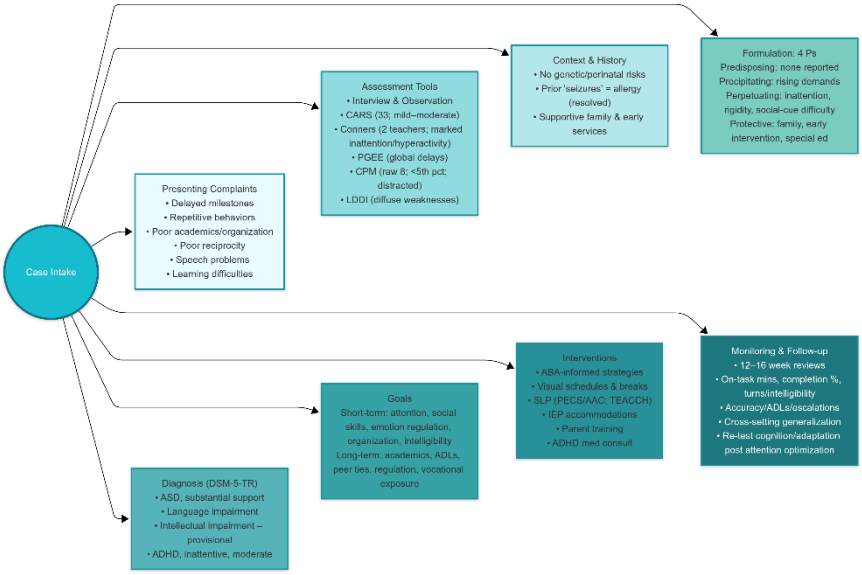

Figure 1 Study Flowchart

MANAGEMENT AND INTERVENTION PLAN

A coordinated, staged program was designed to (i) raise the attentional baseline to improve "instructional receptivity," (ii) deliver explicit social-communication teaching within visually structured routines, and (iii) embed parent–school generalization with low-burden, repeatable outcome metrics. The plan integrates behavioral, educational, speech–language, and medical components consistent with best-practice guidance for ASD and ADHD and tailored to female presentations where surface compliance can mask impairment (1–3). Foundational behavioral strategies include task analysis, shaping, prompt fading, differential reinforcement (DRA/DRI), and a token economy already acceptable to the patient (stars). Sessions use first–then schedules, brief work intervals (3–5 minutes rising by shaping to ≥10 minutes), and planned movement breaks to prevent attentional collapse (4–7). Speech–language therapy targets intelligibility and functional communication (sentence length, conversational turns, pragmatic cues), supported by visual systems (e.g., TEACCH-style work systems; PECS/AAC as needed) to reduce working-memory load and

increase successful initiations (6). School collaboration centers on an Individualized Education Program (IEP) with task chunking, visual schedules, predictable routines, movement breaks, and explicit reinforcement plans, with teachers logging on-task minutes and completion rates as proximal indicators (4). Parent-mediated training emphasizes antecedent adjustments (clear cues, reduced language load), consistent token contingencies, and home generalization checklists aligned with classroom targets (6,7). Because sustained inattention repeatedly truncated learning trials despite reinforcement, a child psychiatry consult for ADHD-targeted pharmacotherapy (stimulant or non-stimulant per contraindications and family preference) is recommended to lift the attentional floor and improve yield from behavioral and educational interventions (1,7). To respect measurement bias, re-testing of cognition and adaptive behavior is explicitly scheduled after attention optimization to refine the intellectual-impairment specifier and calibrate program intensity (2,5).

OUTCOME AND FOLLOW-UP

Across 17 treatment encounters following the evaluation epoch (anchored to CA ≈ 12 years for score validity), progress was modest but clinically meaningful in structured contexts. The patient tolerated visually scaffolded, interest-linked tasks with longer on-task spans, earned tokens more consistently, and showed improved adherence to predictable routines (e.g., workstation transitions cued by visual timetables). Short conversational turns increased with modeling and gestural prompts, though intelligibility and spontaneous reciprocity remained limited. Dysregulation episodes decreased when demands were paced and success was shaped; however, attention still fractured quickly when cognitive load or duration exceeded tolerance, and task abandonment remained common without close scaffolding. These findings are consistent with the dual-diagnosis formulation: ASD-related social-communication deficits and insistence on sameness, compounded by ADHD-related inattention and executive-control failures, constrained generalization beyond structured settings (1–5). The family and school teams accepted the staged strategy: initiate medication consultation, maintain behavioral and speech–language supports, and conduct a planned re-assessment of cognition and adaptation once attention stabilizes to reduce state-related measurement error (2,5,7).

DISCUSSION

This case illustrates how ASD–ADHD comorbidity in a school-aged girl yields additive burden across learning, peer relations, and daily living, and how attentional state can depress observed nonverbal and academic performance—risking premature inference of global intellectual limitation if re-evaluation is not staged after attention improves (1–3). The markedly atypical Conners' profiles from two teachers establish cross-situational impairment central to ADHD diagnosis and link directly to classroom productivity barriers well documented in executive-trajectory studies (4,5). The CARS total (33; mild–moderate) with elevations in social reciprocity and communication domains anchors the ASD diagnosis, while the patient's female phenotype—subtle social difficulties, partial compensation, and compliant demeanor—helps explain delayed recognition and argues for gender-sensitive surveillance as curricular and social demands rise (1–3). Empirically, early, multimodal intervention improves adaptive and academic outcomes in ASD when supports are intensive, coordinated, and embedded across contexts, and ADHD-targeted pharmacotherapy can meaningfully augment behavioral gains by increasing baseline attention and learning trial density (6,7). A key practical lesson is operational: use low-burden, high-frequency metrics (on-task minutes, percent sessions completed without early termination, conversational turns, intelligibility ratings, accuracy/completion of scaffolded work) to drive iterative adjustments, avoiding sole reliance on infrequent standardized testing that may be confounded by attention at a single time point (4–7). Staging care—optimize attention first, then re-test cognition and adaptation—provides a principled pathway to refine specifiers and resource allocation, minimizing misclassification based on state-dependent underperformance (2,5).

LIMITATIONS AND FUTURE DIRECTIONS

Interpretation is constrained by attentional drift during testing, which can depress CPM and achievement estimates; the cognitive profile should therefore be considered a lower bound pending re-assessment under attention-optimized conditions (2,5). Teacher ratings, while ecologically valid, are susceptible to expectancy and context effects and should be triangulated with direct measures of classroom performance over time (4). A comprehensive, standardized language battery and a normed adaptive behavior scale were not completed at the evaluation epoch; both are needed to quantify the language-impairment specifier and to separate ability from performance suppression more precisely (1). Future directions include (i) implementing ADHD pharmacotherapy (if indicated) alongside existing behavioral and speech–language supports; (ii) re-testing nonverbal/verbal cognition and adaptive behavior after attention stabilizes; (iii) expanding pragmatic-language targets with generalization probes across home–school; and (iv) maintaining gender-sensitive surveillance to detect internalizing manifestations that can camouflage impairment in girls (1–3,6,7). Programmatically, we recommend 12–16-week review cycles using predefined SMART indicators to enable data-informed escalation or tapering of support intensity (4–7).

CONCLUSION

Convergent developmental, behavioral, and psychometric evidence supports ASD with language impairment and ADHD—predominantly inattentive presentation—in a school-aged girl, with functional impact across academic, social, and adaptive domains (1–5). Attentional dysregulation likely suppressed observed cognitive performance, so the accompanying intellectual-impairment specifier is retained provisionally, with a priori re-evaluation planned after attention optimization to prevent misclassification (2,5). A staged, multimodal program—structured behavioral teaching, visually supported speech–language therapy, coordinated IEP accommodations, parent-mediated generalization, and consideration of ADHD pharmacotherapy—offers the highest likelihood of measurable improvements in attention regulation, social-communication, and participation, and provides a practical template for iterative, data-driven care in female ASD–ADHD comorbidity (1–3,6,7).

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