The existing protocols for ADHD diagnosis are suitable for children > five years because they require two settings (school and home).

This project sought to standardize ADHD diagnosis in preschoolers by developing an evidence-based ADHD algorithm. Standardization was necessary to reduce the rate of misdiagnosis, as well as facilitate the integration of research evidence in clinical practice.

The purpose of this project was to standardize the diagnosis of ADHD among preschoolers by creating and implementing an evidence-based ADHD algorithm.

The diagnosis of ADHD has increased significantly among children, especially preschoolers. The high prevalence of ADHD in preschoolers has raised concerns over the possibility of misdiagnosis. In particular, there are no standardized tools and procedures for diagnosing ADHD in preschoolers.

The existing protocols for ADHD diagnosis are suitable for children > five years because they require two settings (school and home). This project sought to standardize ADHD diagnosis in preschoolers by developing an evidence-based ADHD algorithm. Standardization was necessary to reduce the rate of misdiagnosis, as well as facilitate the integration of research evidence in clinical practice.

The Iowa Model of Evidence-Based Practice and Roger’s Diffusion of Innovation facilitated the implementation process.

The rate of ADHD diagnosis reduced from 78.6% (pre-audit) to 22.6% (post-audit).

Providers supported the need of considering differential diagnosis when assessing preschoolers for ADHD (Z=-2.000, p=0.046).

The new algorithm improved the integration of research evidence in the ADHD diagnostic process.

Wilcoxon signed-rank test and Z-scores were used to measure differences between pre and post-test ADHD diagnosis scores. Furthermore, these tests measured the level of agreement between the pre and post-survey provider findings.

The evidence-based ADHD algorithm is more beneficial to providers considering the absence of specific guidelines for preschoolers.

The use of a standardized ADHD algorithm could be useful in reducing incidences of ADHD misdiagnosis in preschoolers. Educational interventions for providers are necessary to enhance the integration of evidence into practice. Clinician’s should take a leading role in supporting the implementation of quality improvement (QI) projects.

Further research with a large sample and multiple settings is necessary to validate these findings.
F-17 Evidence-Based Algorithm to Prevent the Misdiagnosis of Attention-Deficit Hyperactivity Disorder in Preschoolers

Nancy M. Branch, DNP, CPNP-PC

Background: The increasing cases of Attention-Deficit Hyperactivity Disorder (ADHD) among preschoolers aged three to five years has raised pertinent concerns over the possibility of misdiagnoses. The problem with misdiagnoses is that they are distorting the actual prevalence of ADHD in preschoolers, which then leads to inappropriate prescription of antidepressants. A pressing concern is the absence of validated, standardized ADHD diagnostic tool for preschoolers. Research evidence has shown that the existing diagnostic tools and criteria are inappropriate for assessing inattentiveness, impulsiveness, and hyperactivity among preschoolers based on findings from only a single setting. Currently, clinicians are relying on subjective reports from parents to diagnose ADHD in children. Additionally, the existing diagnostic tools do not capture the salient signs and symptoms of ADHD in preschoolers. As such, it is imperative to standardize the diagnosis of ADHD in preschoolers based on research evidence.

Objective/Purpose: The purpose of the scholarly project was to develop, implement, and evaluate an evidence-based algorithm for diagnosing ADHD in preschoolers aged between three and five years.

Method: The project was implemented at a pediatric primary care clinic in Southwest United States. The project included a purposive sample of four pediatricians and one pediatric nurse practitioner. The project employed the pre-/post-test quasi-experimental design without a control group. The new algorithm incorporated multiple assessment criteria and six validated diagnostic tools. The pediatric practitioners referred all preschoolers with a positive ADHD for behavioral therapy prior to considering pharmacological interventions. The project team administered surveys before and after the intervention to assess the knowledge base of the providers. The team also conducted pre- and post-test retrospective chart audits to assess the effectiveness of the algorithm in reducing cases of misdiagnoses. A feedback system was embedded in the chart audits to measure the level of adherence to the guidelines outlined in the evidence-based ADHD algorithm. The Wilcoxon signed-rank test and the Z-test scores were used to measure pre- and post-implementation outcomes.

Results: Findings from the project have shown that the diagnosis of ADHD among preschoolers reduced significantly from 78.6% before the audit to 22.58% after the audit. A notable finding was that three-year-old child was diagnosed with ADHD post-implementation, compared to 18% recorded at baseline. On the other hand, the knowledge gleaned from the educational intervention allowed the pediatric providers to conduct a comprehensive assessment of the differential diagnoses. Statistically significant changes were observed in item five of the post-survey \( (Z=-2.000, p=0.046) \), which queried the healthcare providers about the use of ASQ, Denver, MCHAT and other validated tools to rule out other disorders. The pediatric providers supported the need of considering differential diagnosis when assessing preschoolers for based on findings from the Wilcoxon signed-ranks test and the Z-scores.

Conclusion/Implications: Findings from the project have underscored the need of standardizing the diagnosis of ADHD in preschoolers based on research evidence. Notably, standardized processes enhance the integration of evidence in clinical practice, which improves the quality and safety of care. Additionally, these outcomes have generated valuable lessons that will support the replication of the evidence-based ADHD algorithm in other pediatric settings.