



# Improving ADHD Education in Medical School

Reilly Quist, MS4, Christine Waasdorp-Hurtado, MD, Jamie Baker, MD  
University of Colorado School of Medicine, Colorado Springs Branch



## Background

ADHD is the second most common pediatric diagnosis after asthma and the most common pediatric psychiatric diagnosis with an estimated prevalence between 8.7% to 15.5%. Due to the shortage of pediatric psychiatrists, primary care physicians are responsible for most of the diagnosis and treatment of children with ADHD. Despite this, adequate training in this topic is lacking. Many pediatric and family medicine residencies focus on inpatient rotations and receive less training in areas like developmental, behavioral, and mental health. Studies show that many primary care physicians continue to believe in common misconceptions about ADHD etiology, diagnosis, and treatment. Up to 2/3 of children who meet criteria for ADHD aren't diagnosed and therefore don't receive treatment or beneficial school services. This is important because untreated ADHD is associated with lower levels of end educational achievement, increased rates of depression and anxiety, divorce, and substance abuse while early and consistent treatment is associated with decreased risk of these comorbidities later in life. By improving education about ADHD we have the opportunity to improve the lives of many children and the adults they'll one day become.

## Innovation Objectives

Improve medical student comfort with and understanding of the assessment, diagnosis, and treatment of ADHD with hopes to improve the care they are able to provide future patients with ADHD.

## Program Description

Pre-test to assess beginning knowledge/attitudes  
Pre session work: online ADHD curriculum with additional paper on treatment options  
Zoom didactic session with ADHD overview, reflection discussion, and case studies  
Post-test to assess changes in knowledge/attitudes

## Results

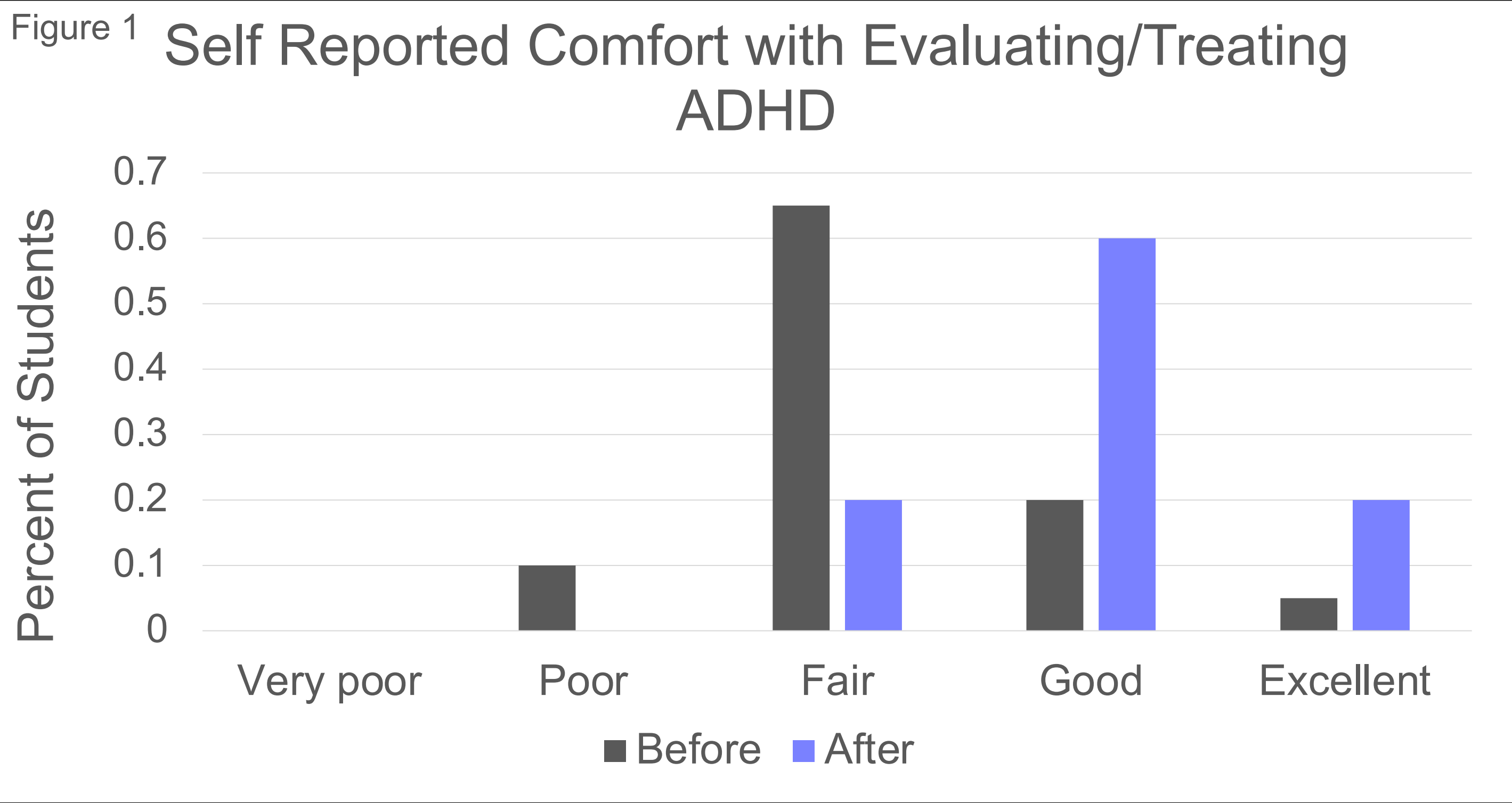


Table 1: Student Perceptions Before and After Intervention

Survey Question	Pre-session mean ± SD	Post-Session Mean ± SD	P-value
My level of knowledge of ADHD	3.308 ± 0.480	4.231 ± 0.439	< 0.001
My comfort level with the initial evaluation and management of ADHD	3.152 ± 0.689	4.000 ± 0.577	< 0.05

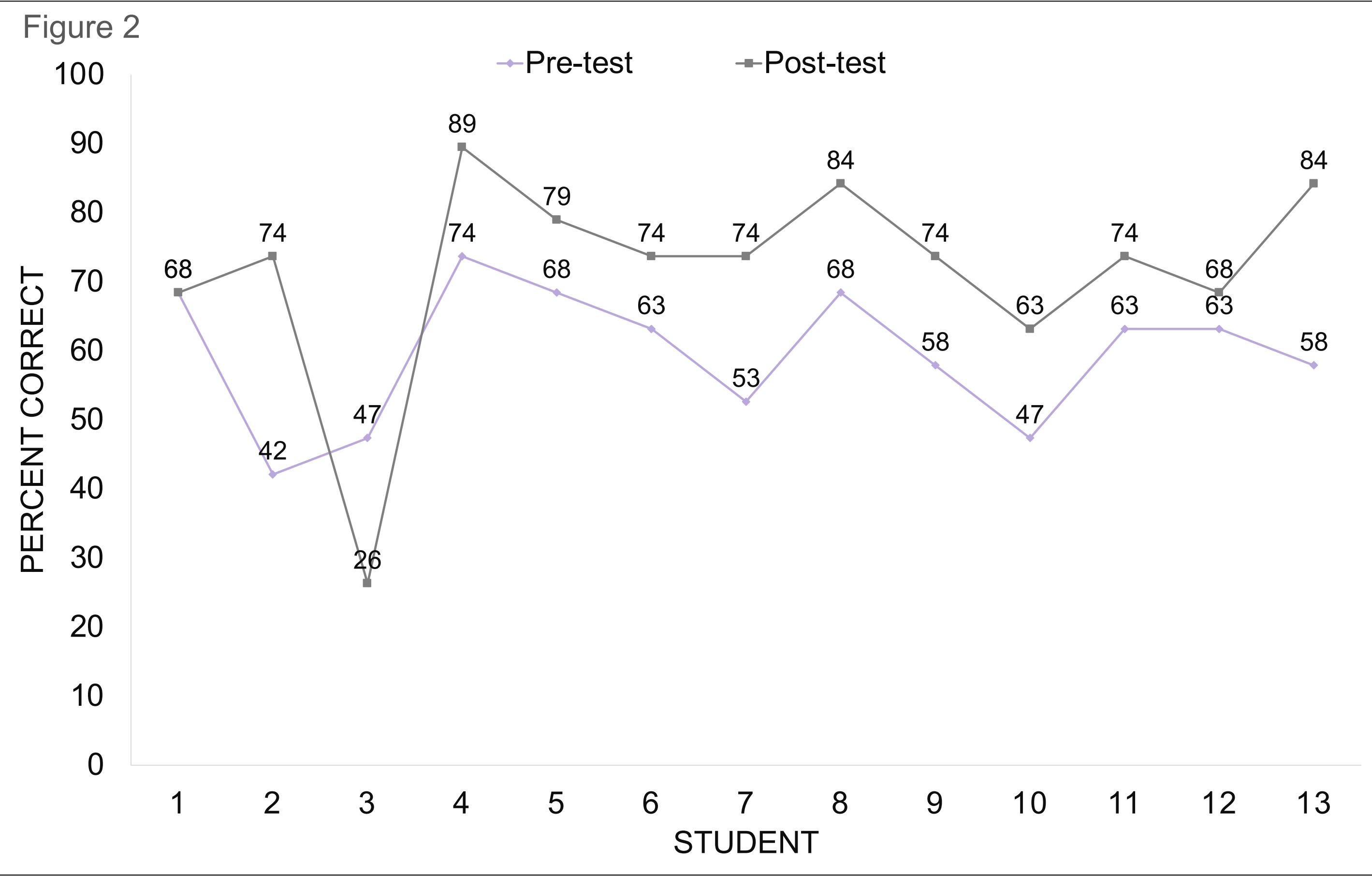


Table 2: Student Scores on pre- and post- survey questions

Question Type	Pre-session mean ± SD	Post-Session Mean ± SD	P-value
All questions	11.31 ± 1.84	13.62 ± 2.93	< 0.05
Multiple choice	5.31 ± 1.75	6.46 ± 2.03	< 0.05
True/False	6.00 ± 0.82	7.15 ± 1.34	< 0.05



Figure 3

## Discussion

The results of the pre-session survey confirmed that medical students lack confidence and knowledge in diagnosing and treating ADHD. This is significant given that the student in the study had formal teaching on ADHD a year prior and had recently studied ADHD in preparation for their psychiatry shelf exam. Another important finding was the discrepancy between student perception of knowledge and demonstrated knowledge of ADHD with students overestimating their knowledge and comfort. This may contribute to later deficiencies.

The post-session surveys showed that the methods chosen including the remote pre-session work and a live virtual didactic session were well received by students and were effective in producing this change with improvement in both attitudes and knowledge.

Future directions: further PDSA cycles to improve the resources provided, analysis of survey questions, and incorporate student feedback including increased Q&A and discussion time and smaller discussion group sizes. In conclusion, this study showed a need for increased training in child behavioral health disorders including ADHD in medical school and beyond.

## References

1. American Academy of Pediatrics (2019) SYSTEMIC BARRIERS TO THE CARE OF CHILDREN AND ADOLESCENTS WITH ADHD. Pediatrics Vol. 144
2. Green, Cori, MD, MS, Hampton, Elisa, MD, Ward, Mary J., PhD, Shao, Huibo, MS, & Bostwick, Susan, MD, MBA. (2014). The Current and Ideal State of Mental Health Training: Pediatric Program Director Perspectives. *Academic Pediatrics*, 14(5), 526-532.
3. Mangione-Smith, R., DeCristofaro, A. H., Setodji, C. M., Keeseey, J., Klein, D. J., Adams, J. L., ... & McGlynn, E. A. (2007). The quality of ambulatory care delivered to children in the United States. *New England Journal of Medicine*, 357(15), 1515-1523.
4. Halfon, N., Houtrow, A., Larson, K., & Newacheck, P. (2012). The Changing Landscape of Disability in Childhood. *The Future of Children*, 22(1), 13-42.
5. Tatlow-Golden, Mimi, et al. "What do general practitioners know about ADHD? Attitudes and knowledge among first-contact gatekeepers: systematic narrative review." *BMC family practice* 17.1 (2016): 1-15.
6. Figure 4. Quist, S. (Artist). (2021). *Wandering*