



QI ARTICLE

Facilitator Guides' Impact on Diagnosing and Managing Pediatric Mental Health Conditions: A Pilot Study

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ABSTRACT

As the prevalence of pediatric mental health conditions grows, it is important that pediatricians have the tools to address them accurately and effectively. There is a profound observed gap in faculty and resident knowledge and comfort in caring for patients with pediatric mental health diagnoses. To bridge this gap, our study evaluated the use of eight facilitator guides by faculty to improve their knowledge and comfort with the diagnosis and treatment of ADHD, depression, anxiety, and trauma. A questionnaire with Likert scales and multiple-choice knowledge questions was given to the University of South Florida Pediatric faculty. Faculty attended a development session on using the guides and implemented them during pre-clinical education sessions with trainees. After three months, a postintervention questionnaire assessed participants' guide usage, including the same knowledge questions and comfort scales. Tests were analyzed via a paired Wilcoxon Signed Ranks Test. Of thirteen faculty meeting study criteria, ten completed both assessments: a 76.9% participation rate. For the knowledge test, the pre-test average score was $61.5\% \pm 11.5\%$ SD, and the post-test was $69.2\% \pm 13\%$ SD; the difference was nonsignificant. There was a significant increase in comfort in ADHD diagnosis ($P=.025$) and ADHD management ($P=.046$), both from Moderately Comfortable to Very Comfortable, as well as Anxiety Management ($P=.034$), from Modestly Comfortable to Moderately Comfortable. Facilitator guides, with an accompanying training session, can increase faculty comfort in the diagnosis and management of ADHD and anxiety management. Future directions include expanding to other institutions to increase sample size.

INTRODUCTION

Pediatric mental health (MH) conditions increased during the COVID-19 pandemic, with 1 in 4 children experiencing increased depression symptoms and 1 in 5 experiencing increased anxiety symptoms.^{1,2,3} Currently, there is a profound gap between the number of children facing MH issues and the availability and accessibility of services.⁴ This disparity emphasizes the need for pediatricians, as primary care providers, to be able to comfortably diagnose and treat MH conditions in children and adolescents.

The American Board of Pediatrics Entrustable Professional Activity (EPA) 9 is “assess[ing] and manag[ing] patients with common behavioral/MH problems.” This EPA requires the most supervision, and graduating pediatric trainees feel the least prepared, especially regarding confidence, time, and knowledge as significant barriers.^{6,7} Furthermore, pediatric residency training programs lack sufficient resources, like trained faculty experts, to teach how to identify and manage MH conditions.⁸

The study faculty created eight facilitator guides to bridge this gap to increase their knowledge and comfort with diagnosing and managing pediatric MH conditions. Our primary study aim was increasing faculty knowledge of MH conditions with eight facilitator guides on diagnoses including anxiety, depression, trauma, and attention-deficit/hyperactivity disorder. Our secondary goal was increasing pediatric faculty comfort in diagnosing, treating, and managing MH.

METHODS

Setting and Participants

This project was a longitudinal descriptive study conducted at the University of South Florida Morsani College of Medicine during the 2021-2022 academic year. Invitations with the consent document and first questionnaire were emailed to all faculty of General Pediatrics (n=10) and Internal Medicine-Pediatrics (n=3; N=13). Study locations included HealthPark Pediatrics, 17Davis Pediatrics, and South Tampa Center Medicine-Pediatric Clinic.

Interventions/Outcomes Observed

The initial 15-minute questionnaire used nonidentifiable 3-digit codes to pair pre- and post-tests. It covered participant demographics, prior psychiatric training, clinic resources for MH concerns, estimates of patient panel MH diagnoses, 13 board-style knowledge questions, and Likert scales on faculty comfort in diagnosing and managing MH conditions. Knowledge questions were mapped with Pediatric EPA9 disorders and facilitator guide objectives, sourced from a commercially available General Pediatrics board review question bank. A three-hour development session, led by the Primary Investigator, Child and Adolescent Psychiatry Faculty, and fellows, introduced the guides similarly to how faculty were expected to use them during pre-clinical educational sessions with the trainees. Here was an interactive session incorporating a PowerPoint presentation, group work, and a scavenger hunt activity detailing information within the guides. This session allowed participants to learn how to use the guides and employ the knowledge within them in clinical practice. At the end of the session, participants received eight facilitator guides regarding different mental health diagnoses in the pediatric population. During the three-month intervention period, the faculty used them in a 20-minute guided question-and-answer small group interactive format with senior trainees, interns, and students before clinic. Formatted similarly to the Yale Primary Care Curriculum, the Yale Curriculum was also used during this time, but not on the topics of MH. At the end of the three months, the second questionnaire was sent, containing the same knowledge and comfort questions and new questions about guide usage frequency. No evidence-based questionnaire measuring knowledge and comfort in the assessment of EPA9 was found, so the study team created this assessment.

Outcome Analysis

We analyzed the knowledge tests and comfort scales with the paired Wilcoxon Signed Ranks Test.

IRB Statement

The study is IRB-approved (#003347), and informed consent was obtained prior to participation. However, consent was not required to participate in the faculty development session or access the facilitator guides.

RESULTS

Questionnaire data was collected on a HIPAA-compliant server. Of the 13 faculty members, all participated in the faculty development training. Ten completed Questionnaires 1 and 2, for a 76.9% participation rate. Five faculty members noted some previous continuing medical education training on mental health.

We observed a small, statistically non-significant improvement in faculty knowledge over the three-month study period: mean pre- and post-test questionnaire scores were $61.5\% \pm 11.5\%$ and $69.2\% \pm 13\%$, respectively ($P=.117$). Half of the faculty utilized the facilitator guides less than five times, and the other half used them five to ten times during the three-month study period, with no statistically notable difference in the scores between these groups.

There was a significant increase in participants' comfort with ADHD diagnosis and management, from 'Moderately Comfortable' to 'Very Comfortable' ($P=.025$ and $P=.046$, respectively). Interestingly, in the comfort with diagnosis analysis, there was a non-significant global decrease in the percentage who stated they were “very and moderately comfortable” in diagnosing depression, suicidality, and anxiety (Figures 1, 2).

There was also a significant increase in the comfort of managing anxiety, from 'Modestly Comfortable' during the pretest to 'Moderately Comfortable' on the post-test ($P=.034$) (Figure 2). In contrast to the general decrease in comfort with the diagnosis of

depression, suicidality, and anxiety, there was a non-statistically significant increase in the percentage of participants who stated they were “very and moderately” comfortable in their management (Figure 2). However, the data still suggests that faculty are more comfortable making these diagnoses than managing them (Figures 1, 2).

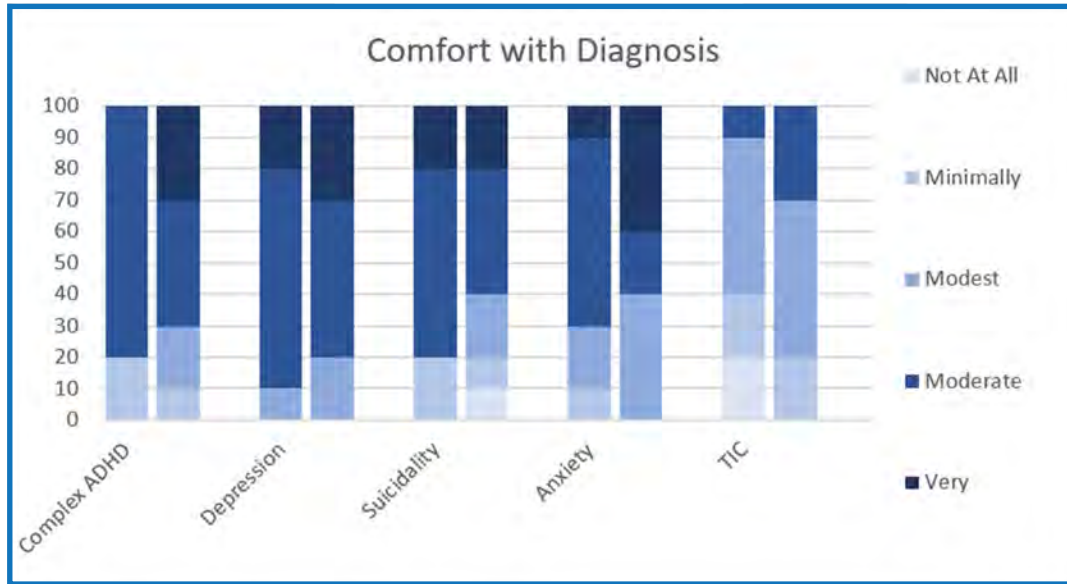


Figure 1: Participant ratings between 1-5 on their comfortability with diagnosing MH conditions in the pediatric population. Above each disease, the first column is pre-survey, and the later column is post-test. Abbreviations: ADHD, Attention Deficit Hyperactivity Disorder; TIC, Trauma-Informed Care. Rated on a 5-point Likert scale (1 = not at all comfortable, 5 = very comfortable).



Figure 2. Participant ratings between 1-5 on their comfortability with managing MH conditions in the pediatric population. Above each disease, the first column is pre-survey, and the later column is post-test. Abbreviations: ADHD, Attention Deficit Hyperactivity Disorder; TIC, Trauma-Informed Care. Rated on a 5-point Likert scale (1 = not at all comfortable, 5 = very comfortable).

DISCUSSION

As the prevalence of pediatric MH conditions increases, it is essential to diagnose and treat these children accurately; the next generations of pediatricians must be well-trained in the same. This study's results show the promise of faculty using facilitator guides to increase their knowledge and comfort in managing MH concerns, which is a common barrier for pediatric programs and trainees. While there was only significant improvement in the diagnosis and management of ADHD as well as the management of anxiety, this study shows that facilitator guides can improve this area in a format that many academic faculty are already using. The authors speculate that the lack of increase in diagnostic comfort of some of these MH conditions may be due to the wide range of presentations of these disorders and the overlap of their symptoms, as discussed in the guides.

Additionally, our faculty felt more comfortable with the diagnosis rather than the management of MH concerns. This adds weight to the need for comprehensive training programs for pediatricians to develop the skills to manage these concerns effectively.

The study design poses some limitations, including its small sample size and short intervention duration. Although questionnaires were administered to various faculty in the pediatric field (IM-Pediatrics, General Pediatrics), limiting to one institution prevents generalizability. Furthermore, self-administered surveys could introduce bias in comfort scale reporting due to factors at the time of the assessment and recall bias. The study methods also prevented the study team from monitoring guide use.

Despite these limitations, this study shows that facilitator guide use with trainees after a development session can increase faculty's knowledge and comfort with some MH disorders, specifically ADHD and anxiety. In the future, a retrospective electronic medical health record review would let us observe the tangible impact of these guides in faculty and trainee management. Chart reviews would allow insight into diagnoses, referrals, and medication management to assess the impact of faculty knowledge training on pediatric trainee practice habits. This will help assess the implementation of the knowledge in these guides and its impact on patient care. Future directions include expanding to different institutions to increase the sample size. Furthermore, post-test results demonstrated that half of the faculty utilized the facilitator guides less than five times, and the other half used them five to ten times during the three-month study period. Although there was no significant difference in the scores between both groups, future directions should include assessing barriers in guide implementation.

The intervention found that implementing facilitator guides about treating/managing pediatric MH issues improved their comfort in diagnosing and managing ADHD and managing anxiety in the pediatric population. Investing in faculty development through guides, like those used in this study, addresses a common barrier to improving Pediatric EPA9 within pediatric training programs, allowing program directors to begin bridging the gap in pediatric mental health care for faculty and trainees.

QR Code to Guides



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