

RESEARCH REPORTS

SELF-REPORTED ADHD IN A CONVENIENCE SAMPLE OF EMS CLINICIANS

Nicole Hansen, EdD, EMT-P*¹; Charles A. Foat, PhD, NRP, FAEMS²

Author Affiliations: 1. NYU Langone Hospital - Long Island, Mineola, NY, USA; 2. Emergency Medical Science, Johnson County Community College, Overland Park, KS, USA.

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**Corresponding Author:*

nicoledietschehansen@gmail.com

ABSTRACT

Background: ADHD is a neurobehavioral disorder marked by challenges with attention, hyperactivity, and/or impulsivity, often impairing functioning across academic, occupational, and social domains. While ADHD affects approximately 5% of children and 2.5% of adults, recent research suggests that this decline in prevalence may not reflect true symptom remission but the freedom to gravitate toward novel, fast-paced environments—such as emergency medical services (EMS)—where previously inhibiting traits promote success. This study examines the prevalence of ADHD traits within the EMS workforce.

Methods: This cross-sectional, descriptive study received prospective IRB review and exemption. Participants included EMS professionals who completed an anonymous online survey consisting of a demographic questionnaire and the Wender Utah Rating Scale (WURS-45), a validated retrospective self-report instrument for recalling childhood symptoms, behaviors, and traits associated with ADHD. The WURS-45 includes the WURS-25 core items and additional factor items to generate fitted diagnostic values. The survey was administered via Microsoft Forms and distributed through social media and email lists from February 2 to February 24, 2025.

Results: A total of 554 respondents met inclusion criteria. Of the full non-probability sample, 322 (58%) reported a formal ADHD diagnosis, while 145 (26%) reported no formal psychiatric diagnosis. Based on WURS-25 scoring, 338 of 554 participants (61%) scored above the clinical cutoff of 30. Linear and multivariate regression analyses were conducted to determine if relationships existed between ADHD-indicators (formal diagnosis and/or positive screening) and (1) the number of barriers to completing EMS education and (2) the highest level of EMS certification attained. Although individuals with formal ADHD diagnosis and/or a positive screening experienced statistically more barriers to EMS attainment, no statistically significant relationship existed between a positive diagnosis/screening and EMS certification achievement.

Conclusions: The prevalence of ADHD traits in this EMS sample far exceeds that of the general adult population. However, neither a formal ADHD diagnosis nor elevated WURS-25 scores predicted lower EMS educational outcomes.

INTRODUCTION

Attention deficit hyperactivity disorder (ADHD) is a commonly diagnosed neurobehavioral life span disorder associated with challenges with attention, hyperactivity, and/or impulsivity (American Psychiatric Association, 2013). An ADHD brain has fewer dopamine receptors in the reward center than a neuro-

typical brain, making daily routine under-stimulating and often leaving the individuals seeking novel, dynamic, and unpredictable experiences (Friedman, 2014; Moëll et al., 2015). Clinically, ADHD is associated with comorbid psychiatric disorders, including anxiety, depression, substance abuse disorder (SUD), and posttraumatic stress disorder (PTSD), which may complicate diagnosis and/or treatment (Howlett et al., 2018; Mohammadi et al., 2021).

ADHD impacts an estimated 5% of children and impairs daily functioning across multiple settings, including academic, occupational, and social environments, with up to 70% of individuals reporting persistent challenges (Cortese et al., 2023; London & Landes, 2022; Varrasi et al., 2022). Although it is generally believed that adult ADHD is less prevalent due to symptom improvement or resolution (London & Landes, 2022), a recent systematic review and meta-analysis of global data estimate the prevalence of persistent adult ADHD and symptomatic ADHD to be 2.58% and 6.76%, respectively (Song et al., 2021).

Research investigating the phenomenon behind how individuals “grow out” of their ADHD symptoms suggests that the freedom of adulthood allows young adults to pursue opportunities best suited to their interests, compensatory strategies, and neurodiverse strengths (Lasky et al., 2016; Sedgwick et al., 2019). In the correct environment, childhood symptoms previously labeled as undesirable “weaknesses” are reframed as skills and strengths, such as pattern recognition, working well under pressure, creative problem solving, hands-on skills, and hyperfocus (Friedman, 2014; Johnson & Ahluwalia, 2025; Lasky et al., 2016; Sedgwick et al., 2019; Taylor et al., 2024). The dynamic, unpredictable nature of the prehospital setting may be highly appealing for individuals with ADHD, but despite the inherent qualities of this occupational environment, there is a lack of information regarding rates of ADHD in the emergency medical services (EMS) workforce. However, the literature does support that EMS personnel experience mental health conditions, such as anxiety, depression, PTSD, and SUD, at rates far exceeding that of the general population (Alzahrani et al., 2025; Hruska & Barduhn, 2021; Morrison et al., 2021; Petrie et al., 2018; Wagner et al., 2020).

The purpose of this study was to quantify the frequency of EMS clinicians in a convenience sample who self-report and/or screen positive for ADHD on a validated instrument. The secondary aim was to explore relationships between ADHD indicators and educational outcomes. Symptomatology associated with ADHD can create unique challenges for EMS professionals, including, but not limited to, difficulties attaining desired learning outcomes, obstacles to ongoing career development, development of mental health comorbidities, and persistent burnout. Better understanding the frequency of ADHD in this population and the relationships between ADHD-related indicators and educational outcomes can better inform program design to support learning and mental health needs.

METHODS

STUDY DESIGN AND SETTING

This study employed a cross-sectional, descriptive research design, which received prospective IRB determination of exemption before data collection. EMS professionals were recruited via social media posts and email distribution lists. Respondents completed

an online questionnaire hosted in Microsoft Forms between February 2 and February 24, 2025. The questionnaire included a demographic survey and the 45-item Wender Utah Rating Scale (WURS-45), a validated screening tool described below. The online questionnaire did not employ forced-response items; participants were allowed to skip any question they did not wish to answer. As a result, item-level sample sizes may vary across variables. In addition, participants were provided with space to add free text comments if desired.

MEASURES

DEMOGRAPHIC SURVEY

The demographic survey consisted of 15 items and collected information regarding age, ethnicity, EMS level attained, traditional educational level attained, diagnoses (before age 18, after age 18, after starting EMS), and compliance with prescribed therapies (if any).

The final item on the survey asked participants to describe the obstacles they experienced while completing their EMS education by selecting all applicable options from a list of nine potential barriers.

WENDER UTAH RATING SCALE (WURS)-45

The WURS-45 is a 45-item retrospective self-report instrument used to assess childhood symptoms of ADHD and persistence into adulthood (Gift et al., 2021; Reimherr et al., 2021; Reimherr, 2022). Each item is rated on a 5-point Likert scale from zero (“Not at all or very slightly”) to four (“Very much”). Responses to these 45 items are then calculated to produce six scores: a raw score calculated by adding the values from the 25 items that comprise the WURS-25, and five factor scores—Disruptive Mood/Behavior, ADHD, Academic, Social, and Anxiety/Dysphoria.

WURS-25 scores of 30 or higher most accurately identify ADHD in community samples (sensitivity = 91%, specificity = 92%, PPV = 93%, NPV = 90%). In clinical settings, scores of 46 or higher perform best (sensitivity = 62%, specificity = 86%, PPV = 72%, NPV = 79%). Cross-referencing calculated factor scores substantially improves accuracy by more effectively differentiating ADHD from major depressive disorder (MDD) and generalized anxiety disorder (GAD). In community settings, this method yields a sensitivity of 92%, a specificity of 89%, a positive predictive value of 89%, and a negative predictive value of 90%. In clinical settings, the corresponding indices are as follows: sensitivity = 80%, specificity = 93%, positive predictive value = 87%, and negative predictive value = 89%.

RESULTS

DESCRIPTIVE ANALYSIS

DEMOGRAPHICS

Five hundred fifty-four respondents met the inclusion criteria—279 (50%) males, 273 (49%) females, and 2 (0.3%) individuals who chose “other” or declined to respond. The average age of respondents was 52. As seen in Figure 1, participants self-reported as identifying as the following ethnic backgrounds: 496 (89.5%) White, 18 (3.2%) Hispanic, 1 (0.1%) Black, 4 (0.7%) Asian, 3 (0.5%) American Indian or Alaska Native, and 28 (5%) Bi- or Multi-racial.

Regarding traditional education, respondents were asked to share the highest level of traditional education they attained. In the United States, there is no consensus regarding mandating a degree requirement for EMS professionals, and only 23 universities in the United States offer EMS-related degrees (Engel, 2022; National Highway Traffic Safety Administration (NHTSA), 2021). In addition, 32% of American EMS providers reported their highest level of education to be a high school degree (Engel, 2022), which closely aligns with the findings of this study. Participants were relatively evenly distributed between a high school diploma/GED, associate's degree, and bachelor's degree, 158 (28.5%), 184 (33.2%), and 132 (23.8%), respectively, while 66 (11.9%) held a master's degree, and 14 (2.5%) obtained a doctorate. Participants were not asked to share their academic major or degree history; therefore, it is unknown how many had completed an associate's or bachelor's degree prior to obtaining their EMS certification.

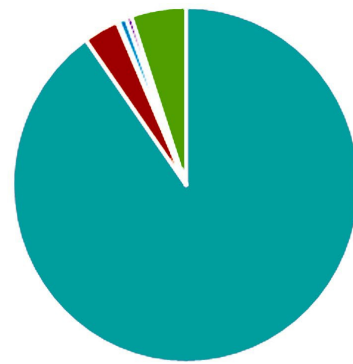


Figure 1. Ethnic background.

Of respondents who reported holding a master's degree or a doctorate degree, 82.7% were also certified as a paramedic or specialty paramedic (38% female, 60% male). Figure 2 displays the gender breakdown between each level of traditional education achieved.

Participants were asked to identify the highest level of EMS certification attained: EMT, AEMT, paramedic, or specialty paramedic. In the survey, the term "specialty paramedic" was defined as any EMS-specific certifications that were obtained after paramedic certi-

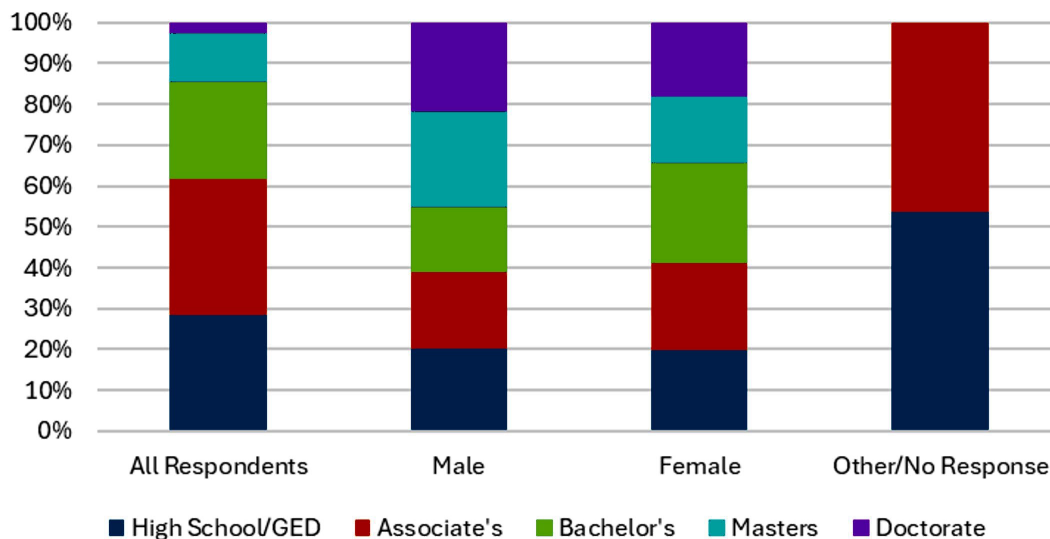


Figure 2. Traditional education levels.

fication, such as critical care, community paramedic, and/or flight paramedic. The majority of respondents (299, 54%) were paramedics; 115 (20.8%) were EMTs, 45 (8.1%) were certified as AEMTs, and 95 (17.1%) obtained specialty paramedic certifications. Figure 3 details the gender breakdown of each certification level.

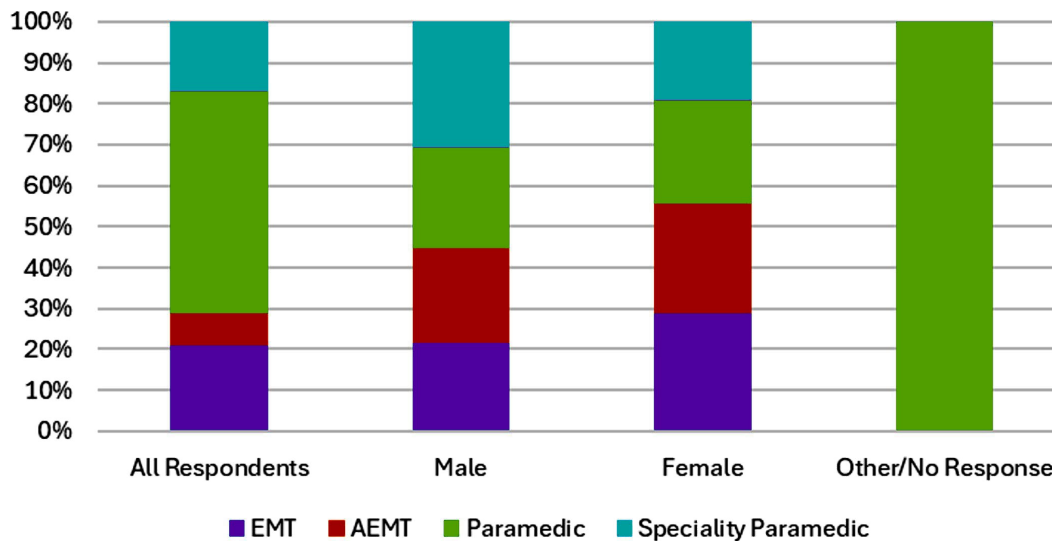


Figure 3. EMS attainment levels.

SELF-REPORTED CHALLENGES TO EMS CERTIFICATION

Respondents were asked to clarify the challenges they experienced while completing their EMS education, with 46% of respondents reporting that they found completing their EMS education to be a challenge. Further clarification was requested regarding the nature of the challenges by asking participants to select all barriers they perceived from a list of 9 options. Respondents were asked to choose from the following barriers:

- I struggled to allocate appropriate time for studying and completing assignments.*
- I had difficulty remembering important deadlines and exam dates or bringing necessary materials.*
- I experienced challenges in keeping track of study materials, schedules, and certification requirements.*
- I struggled to complete and submit required shift or skills documentation on time.*
- I experienced challenges in maintaining concentration during long training sessions or while studying complex material.*
- I had difficulty absorbing and retaining large amounts of procedural information.*
- I was easily sidetracked during practical training or written exams.*
- I struggled with timed exams or multiple-choice questions due to attention issues.*
- I felt overwhelmed by the certification or performance pressures.*

The primary obstacle experienced by all respondents, regardless of subclassification (i.e., gender, EMS level) was “challenges in maintaining concentration.” Difficulty allocating

appropriate time and absorbing information were also frequently selected as major barriers to completing certification. Figure 4 details the frequency of reported barriers.

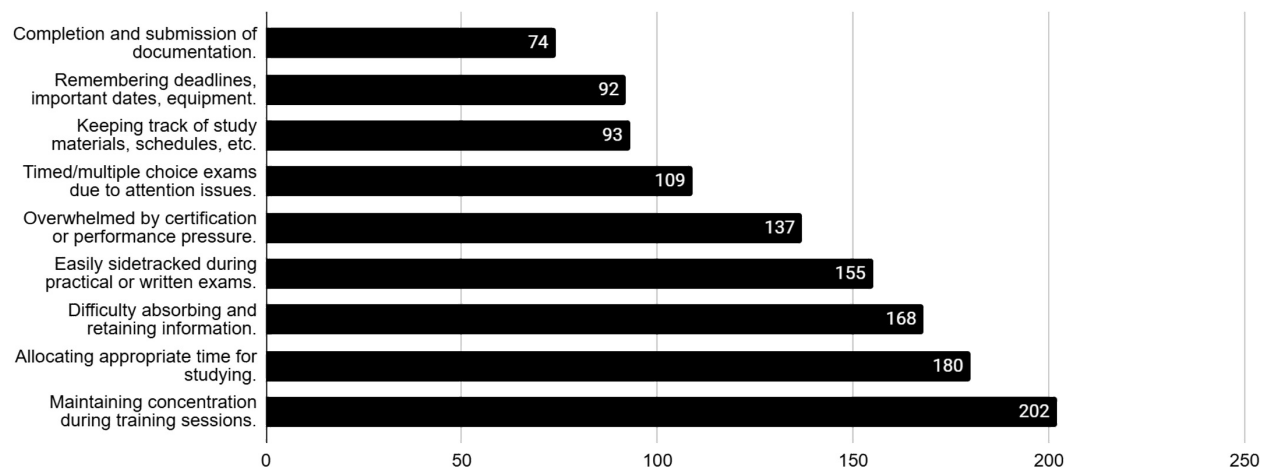


Figure 4. Barriers to EMS education.

On average, respondents experienced 2.1 barriers to completing their EMS education ($SD = 2.81$). When stratified by sex, female respondents reported a slightly higher mean number of barriers (2.24, $SD = 2.87$) than male respondents (2.9, $SD = 2.75$). The large standard deviations in both groups indicate substantial variability in the number of barriers reported by individual participants.

When stratified by timing of ADHD diagnosis, respondents who self-reported an ADHD diagnosis before age 18 reported a mean of 2.8 barriers ($SD = 2.80$), those diagnosed after age 18 reported 2.75 barriers ($SD = 2.81$), and those diagnosed after starting their EMS career reported 2.99 barriers ($SD = 2.81$). Subgroup means all exceeded the overall sample mean of 2.1 barriers.

Given the historical perception of ADHD as a male-only disorder (Attoe & Climie, 2023), the sample was also stratified by sex and timing of ADHD diagnosis to determine if female respondents were more significantly impacted by struggles related to under- or later-in-life diagnosis. Of 114 individuals self-reported having a diagnosis of ADHD prior to 18 years old, 66 were female, reporting an average of 2.3 barriers ($SD = 2.86$) and 48 were male, reporting an average of 2.77 barriers ($SD = 2.72$). 208 participants self-reported an ADHD diagnosis after age 18, 106 were female, reporting an average of 2.0 barriers ($SD = 2.88$), and 102 were male, reporting an average of 2.2 barriers ($SD = 2.75$). Of the 184 individuals who self-reported an ADHD diagnosis after starting their EMS career, 100 were female, reporting an average of 2.0 barriers ($SD = 2.86$), and 84 were male, reporting an average of 1.98 barriers ($SD = 2.75$).

Across sex and diagnosis-timing strata, sex differences are small and inconsistent in direction, which does not support the idea that female EMS clinicians are more burdened by educational barriers associated with under- or late-diagnosis. ADHD is linked to more barriers than the general sample and is broadly comparable between genders within each diagnosis-timing group.

SELF-REPORTED DIAGNOSES

FORMAL DIAGNOSES

Respondents were asked to identify if they were ever formally diagnosed with ADHD and/or commonly associated comorbid conditions including autism, dyslexia, dyscalculia, dyspraxia, MDD, GAD, substance use disorder (SUD), and posttraumatic stress disorder (PTSD). Participants were also asked to indicate whether their diagnosis occurred before age 18, after age 18, or after they began their EMS career.

As detailed in Figure 5, 322 (58%) respondents reported a formal ADHD diagnosis and of those participants, 59 reported a formally diagnosed co-morbid condition. No respondents reported a formal diagnosis of MDD, GAD, or PTSD. This finding differs from previously reported prevalence rates in both EMS and ADHD populations (Britt et al., 2016; Howlett et al., 2018; Hruska & Barduhn, 2021; Mohammadi et al., 2021), likely reflecting under-recognition, under-diagnosis, or under-reporting rather than true absence.

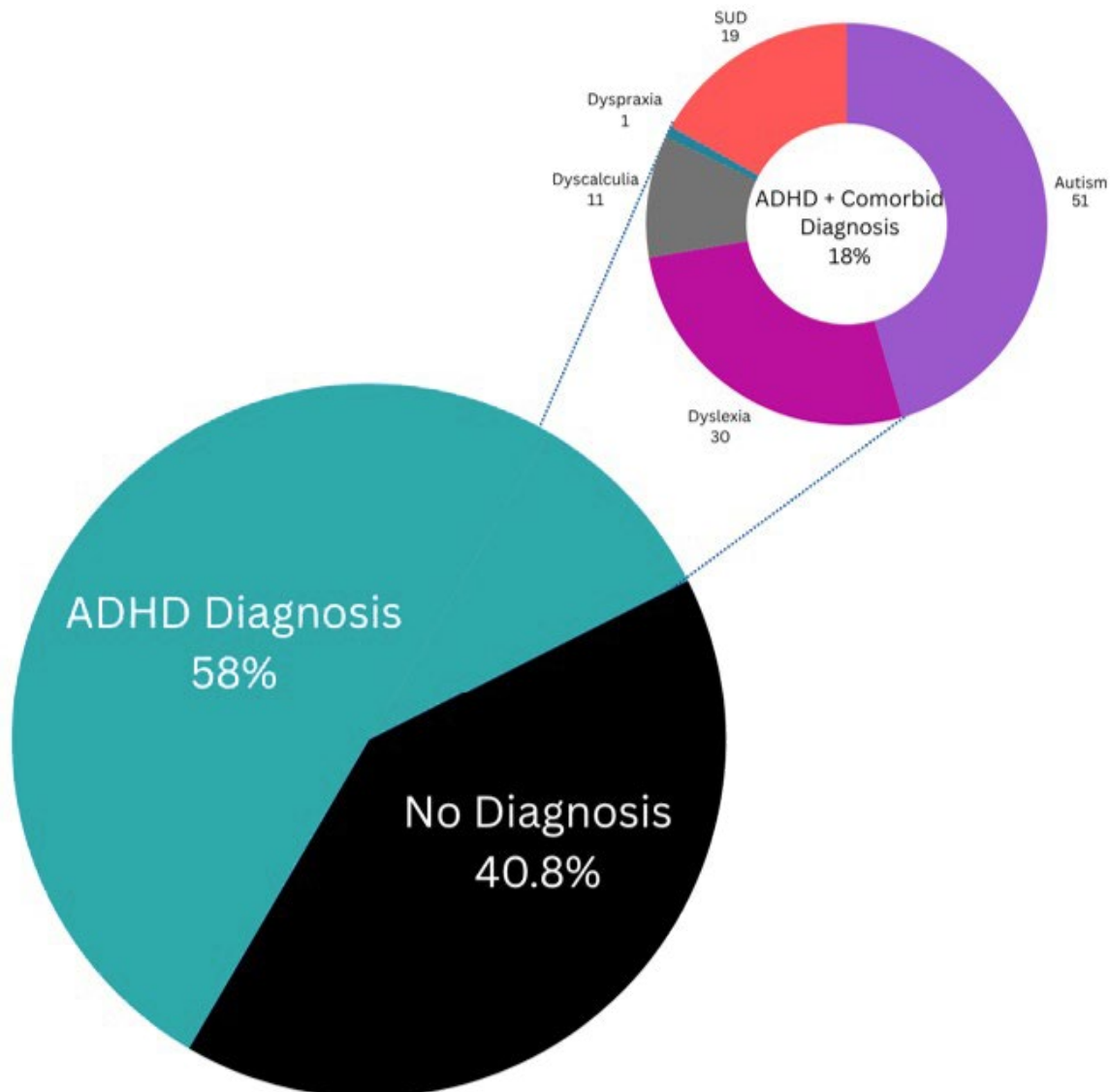


Figure 5. Formal diagnoses.

TREATMENT

Respondents with formal diagnoses reported adhering to the treatments outlined in Table 1.

Treatment	Before 18	After 18	After Starting EMS Career
Medication	139	269	248
Talk Therapy	85	151	148
CBT	52	91	82
Other/Unspecified	26	32	28
Multiple Therapies	114	220	321

WURS-45 SCREENING RESULTS

All respondents completed the WURS-45 inventory in full. Responses to the WURS-45 portion of the questionnaire were computed to generate a WURS-25 score and five factor scores by using the equations provided in the Handbook of Utah Scales for the Assessment and Treatment of ADHD in Adults, version 1 (Reimherr, 2022).

Table 1. Self-reported treatment modalities.

WURS-25 SCREENING

To classify screen-positive results, WURS-25 scores were analyzed using the pre-specified published community-setting cut-point of 30. Although no respondents self-reported formal MDD, GAD, or PTSD diagnoses, given the inherent nature and risk of EMS work, the existence of unrecognized or undiagnosed comorbid psychiatric concerns is statistically more likely (Britt et al., 2016; Hruska & Barduhn, 2021). Therefore, to increase sensitivity of the screening, the population was further stratified using the clinical setting cut point of 46.

Of respondents, 338 (61%) scored above the clinical cut-off of 30. Of those 338 participants scoring above 30, 186 participants scored 46 or higher representing 57% of the positive screening group and 33.6% of the cohort.

WURS-45 FACTOR SCORE SCREENING

The strength of the WURS-45 is the ability to calculate fitted “factor scores” to distinguish ADHD from confounding psychiatric diagnoses such as MDD and GAD. This is particularly useful in individuals who screened positive but scored less than 46 on the WURS-25 component of the inventory (Reimherr et al., 2021; Reimherr, 2022). Factor scores greater than 2 indicate an area of concern requiring further investigation (Reimherr, 2022). Factor scores were analyzed and cross-referenced for additional insight, as outlined in Table 2.

All 26 respondents had a WURS-25 score above 30, and 23 scored above 46. Within this subgroup, 100% had positive ADHD and Anxiety/Dysthymia factor scores; 16 (61.5%) respondents had positive Disruptive Mood/Behavior factor scores; and 18 (69%) had positive Academic factor scores. Of the full cohort, 26 (4.5%) individuals screened positive for a possible comorbid diagnosis of MDD or GAD. None of the respondents had a positive Social factor screening.

Factor	Number of Respondents with Positive Factor Score (>2) Stratified by WURS-25 Score		
	Total Cohort (n=554)	30-45 (n=152)	46+ (n=186)
Disruptive Mood/Behavior	71 (19%)	2	69
ADHD	178	52	118
Academic	84 (15%)	23	55
Social	11 (2%)	6	5
Anxiety/Dysthymia	148	38	103

Table 2. Cross-referenced WURS-25 screen & positive factor score.

Additionally, 8 individuals (6 female, 2 male) had a negative WURS-25 screen but a positive ADHD factor score. Of these, three had a formal ADHD diagnosis and reported adherence to at least one therapeutic intervention.

STATISTICAL ANALYSIS

Descriptive statistics were calculated to summarize participant characteristics and key study variables for the full sample and, where relevant, stratified by sex and by level of EMS certification. Linear and multivariate regression analyses were conducted to identify if any relationships existed between positive ADHD diagnosis and/or screening and EMS certification achievement. Linear and multivariate regression analyses were also conducted to identify if any relationships existed between positive ADHD diagnosis and/or screening and the number of barriers to EMS certification experienced.

INFERENTIAL STATISTICS

Analyses revealed no statistically significant relationships between ADHD indicators and EMS certification achievement. Although individuals with higher WURS-25 scores reported a greater number of perceived barriers to EMS certification attainment ($r = 0.312$), no statistically significant relationship exists between the number of barriers experienced and the level of EMS certification achieved ($R^2 = 0.002$, $p = 0.297$).

DISCUSSION

In this convenience sample of EMS clinicians, 58% of respondents reported a formal ADHD diagnosis, and 61% screened positive on the WURS-25 using the community cut-point of 30. These proportions are dramatically higher than published estimates of persistent and symptomatic adult ADHD in the general population of 2.6% and 6.8%, respectively (Song et al., 2021). The observed difference likely reflects a combination of factors rather than a true 10- to 20-fold elevation in prevalence. First, topic-aware, self-selected recruitment may have preferentially attracted EMS clinicians with prior diagnosis or heightened interest in ADHD. Second, EMS work may genuinely appeal to individuals with ADHD traits, given its novelty, time pressure, and need for rapid problem-solving, concentrating neurodivergent professionals within this workforce. Third, increasing awareness and destigmatization of ADHD in adulthood may lead to higher rates of diagnosis among EMS clinicians. Given the older average age of the cohort (52), and the higher number of respondents diagnosed after age 18 (208), it is most likely that neurodivergent individuals entered the EMS occupation prior to official diagnosis. Accordingly, these findings should be interpreted as descriptive of this sample rather than as representative of prevalence estimates for the broader EMS workforce.

Lack of awareness of the prevalence of ADHD in the EMS population creates a synergistic effect in two pre-existing gaps: unsatisfactory preparation for EMS educators in accommodating neurodiverse students and inadequate mental health resources for EMS providers. People with ADHD typically possess skills that make them well-suited for EMS work, such as high-level problem-solving, creative and innovative thought processes, empathy, and excelling in chaotic and novel environments (Johnson & Ahluwalia, 2025). However, failure to acknowledge and cultivate these unique strengths is a missed opportunity to improve instructional methods and incorporate additional mental health training in EMS curricula.

SEX DIFFERENCES

This study included approximately equal numbers of male and female EMS clinicians, allowing for basic sex-stratified descriptive comparisons. Female respondents reported a slightly higher mean number of perceived educational barriers than male respondents; however, in regression models, sex was not significantly associated with the highest level of EMS certification attained. While these exploratory findings suggest potential sex-related differences in perceived challenges during EMS education, they do not indicate a sex-related disadvantage in ultimate certification achievement. Future studies with larger, probability-based samples and prespecified hypotheses should further investigate how sex and gender may interact with ADHD symptomology and/or timing of ADHD diagnosis and educational experiences in EMS training programs.

EMS EDUCATION

The 2021 National Education Standards indicate that the requirement for EMS educators is to “have a proper background, relevant knowledge and a degree or recognized and credible credential in the topic” (NHTSA, 2021). In a vast majority of EMS programs in the United States, providers are often educated and certified outside of the traditional higher education system by educators with little to no postsecondary education or formal qualifications in teaching or education (National EMS Advisory Council (NEMSAC), 2016; NHTSA, 2021). Many EMS educators do not have formal qualifications in teaching or education beyond state requirements to attain an instructor certification. The National Association of State EMS Officials’ (NASEMSO) standards for educators require only that educators have a high school diploma and are certified to the EMS level (i.e., EMT, paramedic) to which they are teaching (National Association of State EMS Officials, 2010). This may result in educators failing to recognize students with ADHD, and struggling to implement evidence-based teaching strategies or classroom management techniques better suited for neurodivergent students (Bailey et al., 2024).

Specific educator training on ADHD is an important component of influencing the frequency of applying effective classroom management techniques (Szép et al., 2021). Providing EMS educators with additional training and resources to manage a neurodiverse classroom may improve learning outcomes and provide long term benefits for EMS professionals. Current EMS instructional strategies may not be well-suited to the learning needs of individuals with ADHD. As supported by this study, respondents found many of the prevalent learning modalities to hinder their success, finding it challenging to sit for long lectures, prepare for frequent testing, absorb large quantities of knowledge in a short period of time, and complete self-directed learning (such as textbook reading).

Modifying classrooms to include more neurodiverse-informed learning strategies not only accommodates students with ADHD but may optimize learning outcomes for all students. Generalizable approaches, such as emphasizing organizational skills (i.e., interactive class calendars, detailed syllabus, digital reminders), active learning techniques (i.e., hands-on, simulation, group work), gamification of the classroom, and computer-aided instruction can help calibrate learning, improve executive functioning, and help trigger the neurological reward circuits to drive engagement and improve student outcomes (Friedman, 2014; Lasky et al., 2016). In addition, initiatives such as mindfulness training can also benefit all EMS professionals, regardless of neurodivergence, as it helps

improve inattention, emotional regulation, hyperactivity, working memory, cognitive inhibition, impulsivity, and performance monitoring.

It is important to distinguish between educational attainment and clinical performance. Our findings demonstrate that neither a formal ADHD diagnosis nor an elevated WURS-25 score was associated with lower EMS certification levels; however, we did not evaluate on-the-job performance, quality of care, or patient outcomes. No inferences can be drawn from this study regarding how ADHD traits may affect day-to-day clinical performance. Future research incorporating objective performance metrics is needed to examine potential relationships between ADHD symptomatology, educational experiences, and quality of work in the field.

MENTAL HEALTH OUTCOMES

Despite research exploring various protective factors that EMS professionals exhibit against developing PTSD, psychological impairments amongst this population are significantly higher than the general population (Brooks & Brooks, 2021; Hruska & Barduhn, 2021). Previous studies determined the prevalence of PTSD in ambulance personnel to be approximately 11% as compared to 3.5% as seen across the general population of the United States and 1.1% internationally (Petrie et al., 2018). The EMS population also has a higher-than-average prevalence of anxiety (15%), depression (15%), and general psychological distress (27%) than the general American population (Petrie et al., 2018).

Neurodivergence, specifically ADHD, is closely associated with other psychiatric comorbidities such as anxiety disorders, depression, and substance abuse (Johnson & Ahluwalia, 2025; Mohammadi et al., 2021). In a longitudinal study of American soldiers, it was determined that soldiers with ADHD are more likely to experience anxiety and depression, developing PTSD post-deployment (Howlett et al., 2018). Like the armed services, EMS is a profession with an above-average risk profile for mental health struggles including anxiety, depression, and PTSD due to the high potential for consistent exposure to traumatic stressors (Britt et al., 2016; Hruska & Barduhn, 2021). Given the lack of research regarding ADHD within the EMS workforce, it is essential to explore the possibility that the combination of trauma exposure, un- or misdiagnosed ADHD, and limited education in managing well-being, resilience, and effective coping mechanisms are contributing to the ongoing mental health crisis in this population (Alzahrani et al., 2025; Ntatamala & Adams, 2021; Petrie et al., 2018).

LIMITATIONS

Several important limitations of the study are noted. Recruitment relied on topic-aware convenience sampling, which may introduce selection and coverage bias. As a non-probability sample, findings are not generalizable to broader populations. Given the open and convenient recruitment, as well as participant awareness, the findings are descriptive and not intended as population prevalence estimates. In addition, although the WURS-25 is considered the criterion standard for ADHD self-reporting, and application of the additional 20 items included in the WURS-45 boosts performance, as a self-report inventory, the possibility of recall bias exists. Additionally, the survey platform did not require forced responses. Participants could leave items unanswered, which may have introduced item non-response, reducing the effective sample size for some variables.

Because respondents could selectively omit sensitive or burdensome items, missing data may not be completely at random, potentially biasing some descriptive estimates.

The cross-sectional survey design limits interpretations to associations only, without temporal or causal inference. Data collection occurred over a short period, which increases the potential for missing or duplicate responses. Analyses are unweighted; estimates for small subgroups may be unstable. Further research is encouraged by repeating the study with a stronger, topic-blind approach to sampling. Including items in the demographic survey specific to common challenges experienced by adult learners is recommended for a more robust analysis of barriers to EMS education.

Although the WURS-45 is a validated and reliable self-report instrument, patients with complicated psychiatric presentations (i.e., substance dependence/abuse, PTSD, etc.) may reduce the efficacy of the instrument (Reimherr, 2022). Given the self-reporting nature of the demographic survey, as well as the possibility of under- or misdiagnosis of psychiatric comorbidities in the EMS population, the sensitivity and specificity of the WURS-45 may be reduced in this population. A formal ADHD diagnosis requires a psychological interview with a qualified clinician.

CONCLUSIONS

The frequency of ADHD traits in this EMS sample far exceeds that of the general adult population. EMS professionals are at a higher-than-average risk for developing secondary psychological issues due to their chosen occupation. Confirmatory studies using representative samples are encouraged to better understand the prevalence of primary risk factors within the population, such as ADHD.

Neurodiversity is only a disability when in an environment not suited to the diverse strengths (Johnson & Ahluwalia, 2025). Despite the increased frequency of formal ADHD diagnoses and positive WURS-25 screenings, there was no correlation with lower EMS certification attainment. Although individuals with formal diagnoses and positive screenings self-reported experiencing more challenges during their EMS education than those without a diagnosis or positive screening, it was not a limiting factor to attaining EMS certification. Rather, positive factor score screenings associated with ADHD-specific symptomatology, such as academic difficulties and anxiety, may contribute to the increased perception of obstacles. Despite this, neither a formal ADHD diagnosis nor an elevated WURS-25 score corresponded to lower EMS educational outcomes. Further investigation regarding ADHD-related indicators and educational outcomes is warranted to better inform program design to focus on targeted supports for learning and mental health needs of neurodivergent individuals without assuming inherent academic disadvantage.

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