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Attention Deficit Hyperactivity Disorder

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This is to certify that the doctoral study by

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has been found to be complete and satisfactory in all respects,
and that any and all revisions required by
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Executive Summary: Staff Education Project

Attention Deficit Hyperactivity Disorder

by

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Summary

A lack of knowledge among nurses and healthcare staff in providing evidence-based practice (EBP) medication treatment and patient care for individuals who have attention-deficit/hyperactivity disorder (ADHD) was evident at a Midwest substance use and mental health facility. For nurses and staff caring for those with ADHD, appropriate patient treatment is essential in helping patients avoid struggles in their daily lives. To address this problem, I developed, implemented, and evaluated a staff education program on ADHD treatment in the project. The practice question focused on whether participants of the education program improved their knowledge on medication and treatment management as well as different treatment options for ADHD clients.

The pre- and posttest questionnaires consisted of 20 multiple-choice questions, and data were analyzed using the normalized learning gain of averages formula. Among the five participants, the mean test score increased from 13.8 before the intervention to 17.6 after the intervention, resulting in a learning gain of 61.3%. The number of participants was small, but the results indicated that the education program effectively showed signs of improved knowledge about the topic.

Key recommendations include using EBP medication treatment options in nursing and staff caring for ADHD to improve patient care; reduce disruptive behavior; and reduce the risk of co-occurring conditions, such as anxiety, depression, and substance use. The project served to generate equitable mental health provisions for all patients who have ADHD and offers culturally appropriate care.

Background

Gap in Practice

ADHD is one of the most common neurodevelopmental disorders diagnosed in childhood that persists into adolescence and adulthood in about 60%–70% of cases (Barbuti et al., 2023). ADHD is characterized by symptoms of inattention, distractibility, disorganization, hyperactivity, and both behavioral and emotional impulsivity; these symptoms are associated with functional impairment that persists in adulthood in a substantial portion of individuals with childhood onset symptoms, even if they have not been met for formal criteria for the disorders defined in the *Diagnostic and Statistical Manual of Mental Disorders, 5* (Cortese, 2023). Inconsistent treatment for individuals with ADHD not using EBP medication treatment can result in adverse outcomes, including the risk of substance abuse, antisocial behaviors, and increased risk for accidents and mortality for those with ADHD (Cortese, 2023).

Project Purpose and Practice Question

The EBP question for this project was: Does the knowledge of staff who participate in ADHD medication management education improve their understanding of different medication and treatment options for ADHD clients? The gap in practice was staff inconsistency in using EBP medication treatment options for individuals with ADHD, and there was a need for further education about the use of stimulant and nonstimulant medication for patients to improve patient outcomes. The purpose of this project was to develop, implement, and evaluate a staff education program for nurses and healthcare staff on EBP treatments for patients who have ADHD. Improvement in staff knowledge and treatment options can ultimately result in improved patient functioning, reduction in symptoms, and enhancement of patient quality of life by providing individuals with the skills and strategies to manage their ADHD, whether through medication, therapy, or a combination of both.

Evidence Supporting the Project Change

I obtained the evidence produced to support this project from a review of the literature, which provided an overview of what previous researchers have discovered about EBP for individuals with ADHD and ADHD in substance use disorders (SUDs). My search for relevant literature took place in the Walden University Library's holdings, including the databases of CINAHL, ProQuest, Medline, PubMed, and Google Scholar. The first study reviewed was an experimental study that suggested that the use of stimulant medications predominantly has greater efficacy in treating individuals with severe ADHD and is the first-line treatment option (Castells et al., 2021). The authors reported that stimulant use resulted in more positive patient outcomes compared to the placebo group. Diagnosis of ADHD in individuals with SUD treatment is common and that the use of stimulant medications, such as Methylphenidate or Lisdexamfetamine, are appropriate for individuals with SUD (Chamakalayil et al., 2021). In another study, Van de Glind et al. (2020) recommended that all individuals who receive substance use care include an ADHD evaluation. This suggestion is due to the high likelihood of the individual having ADHD co-occurring with SUD, and a high rate of prevalence of comorbid ADHD and SUD is associated with elevated rates of additional comorbidities and risk factors for adverse outcomes. Stimulant use allows for prompt efficacy and safety, and at the same time, nonstimulant medications, although requiring some weeks to be fully effective, are helpful when a substance abuse history is detected (Mucci et al., 2021). Atamoxetine, a nonstimulant, is the safest, and Methylphenidate is a second-line treatment for those who have used this medication with positive outcomes in the past. The most widely used treatment for ADHD is stimulants, with additional recommendations for treatment including behavioral therapy, such as cognitive behavioral therapy (Nazarova et al., 2022). Individuals with SUD have a risk of stimulant abuse/misuse (Barbuti et al., 2023), and stimulants reduce psychiatric problems (Boland et al., 2020).

Staff Education Project Development

Project Setting and Participants

The setting and location were a Midwest substance use and mental health facility. Five staff members participated in the education program: one medical provider, two nurses, and two counselors.

Procedures for Developing and Implementing the Staff Education

The content of the education program focused on ADHD brain involvement, types of ADHD, assessment scales, medication types, psychiatric comorbidities of substance use and ADHD, psychotherapy, and stigma. The curriculum plan is found in Appendix A. The program included one 60-minute PowerPoint presentation (see Appendix B).

Collection and Analysis of Evidence

I searched for relevant literature in the Walden University Library to incorporate into the PowerPoint presentation; I specifically searched in the databases of CINAHL, ProQuest, Medline, PubMed, and Google Scholar. My searches were focused on ADHD medication and treatment management as well as medication management for individuals with SUDs that was published from 2019 to 2025. I reviewed guidelines and also researched the best practices recommended for use in individuals with ADHD. Findings from research and conversations with nursing staff and leadership at the project site supported the need for increased knowledge on caring for individuals with ADHD. The literature reviewed supported evidence-based ADHD medication management and treatment options with updates and guidelines to improve patient outcomes and staff knowledge.

Evaluation Process

I delivered a PowerPoint presentation on ADHD in the community room of the project site facility. A pen-and-paper, 20-question pre- and posttest questionnaire were completed by the five participants both prior to and immediately after the presentation. Each question was worth 1 point, with a score of 20 being the highest possible score. I analyzed the pre- and posttest questionnaire scores using the normalized learning gain of averages to measure the knowledge gained participants from the presentation. The normalized learning gain is a descriptive statistical method that measures the effectiveness of an educational course in promoting conceptual understanding and has become the standard measure for reporting scores on research-based concept inventories (Coletta & Steinert, 2020). The formula for calculating a learning gain is (postlearning score minus prelearning score) / (maximum score minus prelearning score) x 100 (Coletta

& Steinert, 2020). Each participant also provided feedback on the quality and relevance of the education program by completing a program evaluation (see Appendix D).

Results

Knowledge Gain Results

I analyzed the data collected from the pre- and posttest questionnaires using the normalized learning gain of averages. The learning gain formula was calculated by dividing (posttest score minus the pretest score) by (20 minus the pretest score) and then multiplying by 100. Among the five participants, I found an overall increase in the scores after the educational intervention. The mean test score increased from 13.8 before the intervention to 17.6 after the intervention. The calculated percentage learning gain of averages indicated a 61.3% improvement in participants' knowledge of medication and treatment of ADHD (see Table 1).

Table 1
Learning Gain Pre- and Posttest Score Results

Participant ID	Pretest score	Pretest %	Posttest score	Posttest %	Learning gain %
1	11	55%	17	85%	66.7%
2	18	90%	19	95%	50.0%
3	12	60%	17	85%	62.5%
4	14	70%	19	95%	83.3%
5	14	70%	16	80%	33.3%
M	13.8		17.6		61.3%

Evaluation of the Staff Education Program

I distributed a program evaluation (see Appendix D) form to assess how useful the participants viewed the educational program. Out of the five participants, the consensus was that staff "strongly agreed" that the presentation content was relevant to their needs for increased knowledge on ADHD medication and treatment management. One participant answered “agree" to two of the questions asked about the presentation. Staff members reported that they will incorporate the new knowledge they obtained into their current practice.

Impact on the Organization

The use of stimulant medications for individuals with ADHD and SUDs can improve patient outcomes in addition to their psychological well-being (Chamakalayil et al., 2021). Although there is a risk for substance abuse with stimulants, the benefit of treating ADHD with the appropriate medications outweighs the risk. Incorporating EBP into patient care can result in improvement in academia, social skills, occupational success, self-esteem, and confidence as well as reduced disruptive behavior; risk of co-occurring conditions, such as anxiety and depression; and reduced substance use (Mucci et al., 2021).

Limitations

The most significant limitation of this small group study was the sample size, which restricts the statistical power, generalizability, and reliability of the findings. A small study may not be able to detect an actual effect and could be prone to bias.

Project Relevance Beyond Project Site

A growing body of evidence is informing providers and healthcare workers on EBP pharmacological and treatment options for individuals with ADHD. If not effectively treated, ADHD can lead to adverse patient outcomes that include increased substance abuse, antisocial behavior, and risk for accidents and mortality (Cortese, 2023).

The goal of appropriate treatment for individuals with ADHD is to improve academic and social skills, occupational success, self-esteem, and confidence, while reducing disruptive behavior; risk of co-occurring conditions, such as anxiety and depression; and substance use. When ADHD is effectively managed, individuals experience a significant reduction in core symptoms and see improvement in various aspects of their daily lives.

Conclusions

Treating ADHD with EBP in a mental health and substance use facility significantly improved patient outcomes and operational efficiency by improving treatment adherence, reducing symptoms, and increasing patient satisfaction. While requiring updated staff training, the positive long-term impacts on patients' academic and social lives, along with adherence to standardized care guidelines, make EBPs a beneficial investment for mental health and substance use facilities.

Further Recommendations

Although stimulant medications are the first-line treatment for ADHD, and pharmacotherapy management of ADHD is cost-effective, treatment should be individualized according to the patient's needs (Petlovanyi & Tsarkov, 2020). The use of medication and cognitive behavioral therapy will result in improved focus, a reduction in hyperactivity and impulsivity, enhanced academic and work performance, and increased self-esteem. Therapy provides practical skills for organization and time management, while medication helps stabilize brain chemistry, making it easier to learn and apply these skills (Smith & McVeigh, 2025). This integrated approach also reduces the risk of developing co-occurring conditions and improves relationships with family and friends.

Implications for Nursing Practice

The nurse role for ADHD management varies, and requirements for training and certification for specialties differ from state to state in the United States (Kleve et al., 2022). Although nurses are involved in many tasks throughout the day, they should be involved in almost every aspect of ADHD management, including assessment and diagnosis, psychosocial support, medical and nonmedical treatment, and helping to lead therapeutic services for ADHD treatment. With nursing involvement, patients acquire increased care and support that is important when caring for individuals with lifelong chronic conditions (Kleve et al., 2022).

Implications for Positive Social Change, Diversity, Equity, and Inclusion

ADHD adversely affects individuals' social inclusion, erects barriers to effective healthcare, results in negative attitudes towards ADHD, and misinformation or the lack of information regarding disease process and symptoms are risk factors for individuals to feel socially excluded (Smith & McVeigh, 2025). Compared to White individuals, Black, Hispanic, and Asian children with ADHD receive less treatment, which also includes fewer visits with their providers and lower medication utilization (ADDitude Magazine, 2024). Barriers to care in these ethnic groups include difficulties obtaining continuing care due to financial constraints, inadequate insurance, limited transportation, or a lack of childcare. Individuals with ADHD also experience stigma, discrimination, and bias that affect their experience with obtaining and engaging in care (Spencer et al., 2025). This project's implications for positive social change for individuals with ADHD include increased public awareness, more widespread acceptance of neurodiversity, and improved education and workplace accommodations. ADHD should be recognized as a legitimate neurological condition that presents both challenges and strengths.

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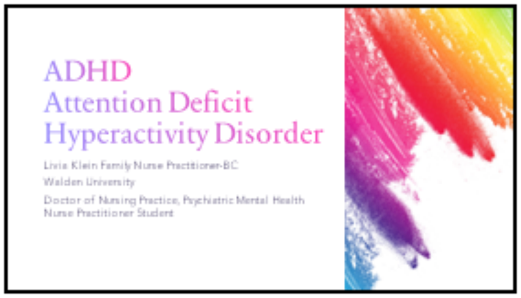
Appendix A: Curricular Plan

ADHD Attention Deficit Hyperactivity Disorder

Learning Objectives:
1. Identify ADHD brain involvement, types of ADHD, statistics, and underdiagnosed/ untreated ADHD
2. Identify hypoactive/hyperactive ADHD types, Assessment Scale, Medication types
3. Describe psychiatric comorbidities of substance use and ADHD, psychotherapy, and stigma

Learning Objective	Detailed Content Outlined	Method of Presentation	Method of Evaluation	Source of Evidence
1. Increased Staff Awareness on ADHD	Brain involvement, types of ADHD, statistics, underdiagnosed ADHD, Untreated ADHD	PowerPoint	Pre/Post test Item # 1,3,4,5	Borland et al. (2022) https://additudemag.com/statistics-of-adhd/
2. Staff will be able to recognize diagnosis criteria, assessment tools, medication types for treatment, and side effects of medications	Hypoactive/Hyperactive Type criteria, ASRS assessment scale, ADHD medication types	PowerPoint, ASRS handout	Pre/Post Test Item #6, 8, 9, 10	American Psychiatric Association. (2022). Diagnostic and statistical manual of mental disorders (5th ed., text rev.). Cortese, S. (2023) https://my.clevelandclinic.org/health/treatments/11766-adhd-medication
3. Staff will be able to describe ADHD treatment with Comorbid Substance Use Disorders (SUD), Medication Abuse, Psychotherapy, Stigma	Psychiatric comorbidities, ADHD with Cocaine/Alcohol /Cannabis/Opioid use, Types of Psychotherapy for ADHD, Stigma	PowerPoint	Pre/Post Test Item # 11,12, 13, 14, 15, 16, 17, 18, 19, 20	Barbuti, et al. (2023)

Appendix B: PowerPoint Presentation



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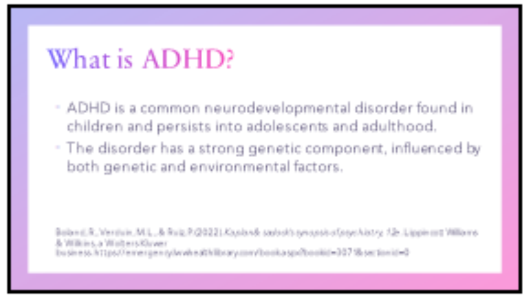

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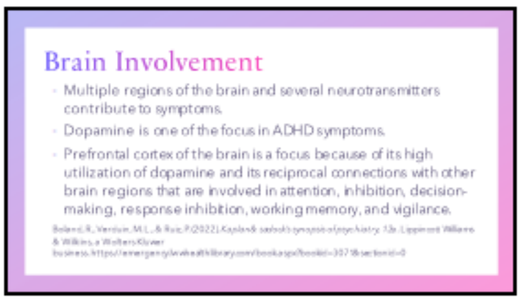

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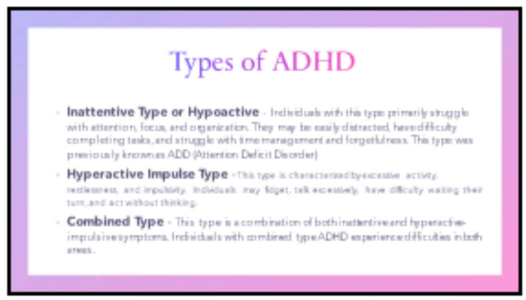

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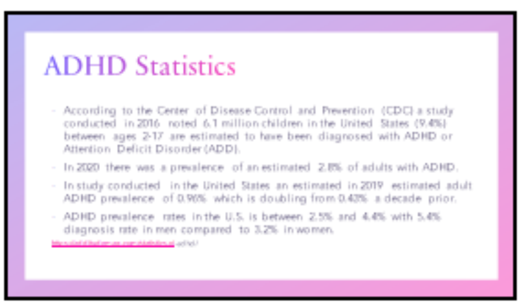

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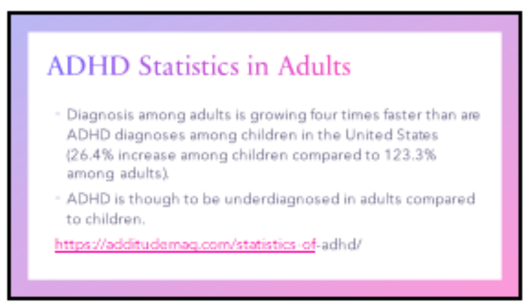

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What is the reason for underdiagnosed ADHD in the adult population?

- Most scientists believe adult ADHD remains underdiagnosed because diagnostic criteria for ADHD in the DSM-5 were developed for children, and because adults with ADHD often have comorbid psychiatric disorders that many mask the symptoms of ADHD.
- It is estimated that fewer than 20% of adults with ADHD are currently diagnosed and/or treated by psychiatrists.
- http://additudemag.com/statistics-of-adhd/

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What happens if we do not treat adults with ADHD?

- Untreated ADHD is associated with impaired quality of life for adults.
- Individuals with ADHD are more likely to face difficulty obtaining and maintaining employment compared to adults without ADHD, more so if they did not receive treatment in childhood.
- Individuals with ADHD are more likely to experience difficulties with all types of relationships (friendships, romantic, familial, etc.).
- Additional outcomes associated with ADHD include vulnerability to anxiety, mood disorders, negative habits, impaired driving safety, and even premature death from accidents.

http://www.additudemag.com/statistics-of-adhd/

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Diagnostic Criteria for ADHD using DSM-5 also known at Diagnostic and Statistical Manual of Mental Disorders

- **Inattentive Type or Hypoactive Type –** 6 or more of the following symptoms persisted for at least 6 months that is inconsistent with development level and negatively impacts directly on social and academic/occupational activities. Symptoms are not solely a manifestation of oppositional behavior, defiance, hostility, or failure to understand tasks and instructions. For older adolescents and adults (age 17 and older), at least five symptoms are required.
- Failure to give close attention to details or makes careless mistakes in school, work, or during activities.
- Difficulty sustaining attention in tasks or play activities.
- Often does not seem to listen when spoken to directly (mind seems elsewhere, even when not distracted).
- Often does not follow through on instructions and fails to finish schoolwork, chores, or duties in the workplace (starting a task but quickly losing focus and is easily distracted).
- Often has difficulty organizing tasks and activities (difficulty managing tasks, keeping materials and belongings in order, messy disorganized work, poor time management, fails to meet deadlines.

American Psychiatric Association (2022). Diagnostic and statistical manual of mental disorders (5th ed., text rev.).

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Diagnostic Criteria for ADHD using DSM-5 also known at Diagnostic and Statistical Manual of Mental Disorders – Inattentive Type or Hypoactive Type cont.

- Often avoids, dislikes, or is reluctant to engage in tasks that require sustained mental effort (schoolwork, homework, preparing reports, completing forms, reviewing lengthy papers).
- Often loses things necessary for tasks or activities (school materials, pencils, books, tools, wallets, keys, paperwork, eyeglasses, cellphone).
- Often easily distracted by extraneous stimuli (may be unrelated thoughts for adolescents or adults).
- Often forgetful in daily activities (doing chores, running errands, in adolescents and adults this many include returning calls, paying bills, or keeping appointments).

American Psychiatric Association (2022). Diagnostic and statistical manual of mental disorders (5th ed., text rev.).

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Diagnostic Criteria for ADHD using DSM-5 also known at Diagnostic and Statistical Manual of Mental Disorders

- **Hyperactive Impulse Type –** 6 or more of the following symptoms persisted for at least 6 months that is inconsistent with development level and negatively impacts directly on social and academic/occupational activities. Symptoms are not solely a manifestation of oppositional behavior, defiance, hostility, or failure to understand tasks and instructions. For older adolescents and adults (age 17 and older), at least five symptoms are required.
- Often fidgets with or taps hands or feet or squirms in seat.
- Often leaves seat in situations when remaining seated is expected (classroom, office or workplace, or in other situations that require remaining in place).
- Often runs about or climbs in situations where it is inappropriate (in adolescents or adults, may be limited to feeling restless).
- Often unable to play or engage in leisure activities quietly.

American Psychiatric Association (2022). Diagnostic and statistical manual of mental disorders (5th ed., text rev.).

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Diagnostic Criteria for ADHD using DSM-5 also known at Diagnostic and Statistical Manual of Mental Disorders — Hyperactive Impulse Type Cont.

- Often on the go, driven by a motor, uncomfortable sitting still for extended period of time, may be experienced by others as being restless or difficulty to keep up with.
- Often talks excessively.
- Often blurts out an answer before a question has been completed (completes people's sentences; cannot wait for turn in conversation).
- Often has difficulty waiting his or her turn (example – waiting in line).
- Often interrupts or intrudes on others (conversations, games, or activities; may use people's things without asking or getting permission; for adolescents and adults, may intrude into or take over what others are doing).

American Psychiatric Association (2022). Diagnostic and statistical manual of mental disorders (5th ed., text rev.).

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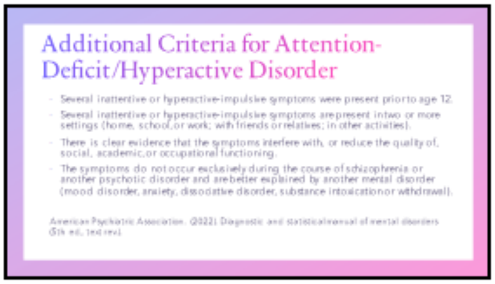

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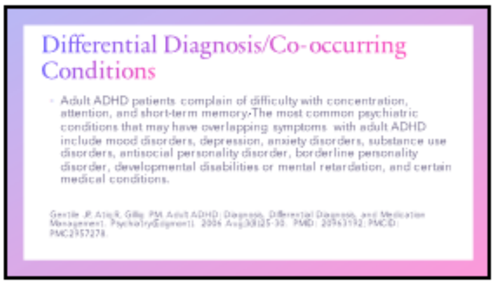

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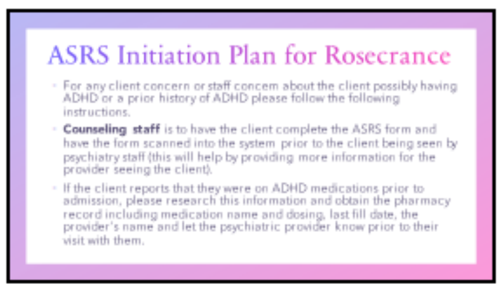

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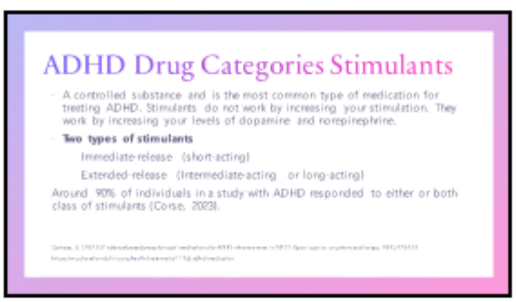

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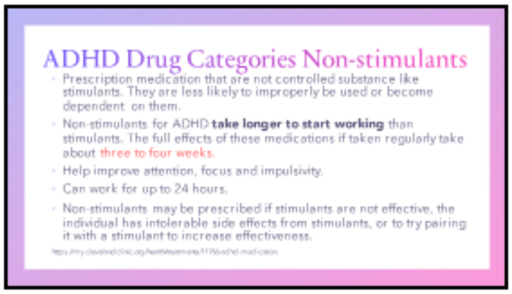

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Dose Optimization

- There is an increased likelihood of client discontinuation due to adverse events with increased doses of stimulants.
- Benefits of stimulants in term of efficacy decreased when doses were titrated beyond 30mg/day for methylphenidate or 20mg/day for amphetamines.
- Flexible titration until the stimulant is well tolerated is associated with the best efficacy and acceptability.
- Using doses beyond the recommended ones could be an option when the client has not presented with a partial response, however there is only some degree of improvement at the maximum recommended dose. Higher dosing could be considered in individuals with overweight/obesity when a partial response was obtained at the licensed dose and tolerability has been satisfactory.

Cortese, S. (2023). Evidence-based prescribing of medications for ADHD: where are we in 2023. Expert opinion on pharmacotherapy, 24(4), 425-434.

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Adult ADHD treatment with Comorbid Substance Use Disorders (SUD)

- In adults with ADHD, hyperactivity usually improves, while inattention, impulsivity, and emotional dysregulation persist or even worsen, resulting in social, interpersonal, and work impairment.
- Adults with ADHD show numerous psychiatric comorbidities, such as alcohol/substance use, mood, anxiety, eating, and impulse control disorders, which complicate the clinical picture and therapeutic management and are associated with poor treatment outcomes.
- Nearly 25% of young adults with SUD meet the diagnostic criteria for ADHD (Barbuti et al., 2023).
- Individuals with ADHD with SUD is more severe with earlier age onset, higher likelihood of polydrug-abuse and suicidal behaviors, a higher rate of relapse, more hospitalizations, and lower treatment adherence.
- Screening for ADHD symptoms in all patients seeking treatment for substance use disorder is necessary (Barbuti et al., 2023).

Barbuti, M., Maiello, M., Spera, V., Pallucchini, A., Brancati, G. E., Maremmani, A. G., & Maremmani, I. (2023). Challenges of treating ADHD with comorbid substance use disorder: Considerations for the clinician. Journal of Clinical Medicine, 12(9), 3096.

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Pharmacologic Treatment Strategies in ADHD patients with Comorbid SUD

- Current approved pharmacological agents for youth and adults with ADHD act by increasing dopamine and norepinephrine transmission and include stimulants (such as methylphenidate and amphetamines) and non-stimulant medications such as atomoxetine, guanfacine, clonidine, and bupropion (Barbuti et al., 2023).
- All guidelines agree that stimulants, especially in extended-release (ER) form are the first-choice treatments for ADHD in both children and adults (Barbuti et al., 2023).
- When stimulant medications are ineffective, poorly tolerated, or contraindicated, non-stimulant medications are considered.

Barbuti, M., Maiello, M., Spera, V., Pallucchini, A., Brancati, G. E., Maremmani, A. G., & Maremmani, I. (2023). Challenges of treating ADHD with comorbid substance use disorder: Considerations for the clinician. Journal of Clinical Medicine, 12(9), 3096.

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ADHD and Cocaine Use Disorder

- Between 15.1% and 25% of individuals who use cocaine have ADHD.
- Combined type ADHD is the most common in these clients at 72.8% of the cases.
- Long-term treatment with stimulants at high doses may be effective in controlling ADHD symptoms in these clients.
- Methamphetamine and Amphetamine dosing should be 40% higher in those with ADHD and cocaine use disorders.
- However, stimulant use regardless of comorbidity with ADHD have little impact on amphetamine abuse or dependence.
- Problem with treating SUD/Cocaine use disorder is the potential for misuse of stimulants. However, this appears to be a less common with methylphenidate than with amphetamine medications.

Barbuti, M., Maiello, M., Spera, V., Pallucchini, A., Brancati, G. E., Maremmani, A. G., & Maremmani, I. (2023). Challenges of treating ADHD with comorbid substance use disorder: Considerations for the clinician. Journal of Clinical Medicine, 12(9), 3096.

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ADHD with Alcohol Use Disorder (AUD)

- Individuals with ADHD have a lifetime prevalence of AUD up to 43% and 3-11% for those with moderate or severe AUD (Barbuti et al., 2023).
- ADHD is associated with impulsivity, and a younger age of onset of alcohol use results in tendency to binge drink and have a higher risk of relapse.
- Risk of AUD in ADHD clients increases when comorbidities such as bipolar, conduct disorders, antisocial personality, and eating disorders are present.
- ADHD and AUD is associated with worse treatment outcomes and a higher number of comorbidities.
- It is thought that dopaminergic activity with AUD patients cause a decrease release in the dopamine limbic system and reduces availability of dopaminergic receptors.
- **Treatment option:** Atomoxetine on ADHD symptoms and alcohol use is effective in reducing ADHD symptoms, however Atomoxetine does not have an impact on relapse into heavy drinking.

Barbuti, M., Maiello, M., Spera, V., Pallucchini, A., Brancati, G. E., Maremmani, A. G., & Maremmani, I. (2023). Challenges of treating ADHD with comorbid substance use disorder: Considerations for the clinician. Journal of Clinical Medicine, 12(9), 3096.

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ADHD with Cannabis Use Disorder

- Cannabis is the most commonly used illicit drug.
- Cannabis use has been associated with several psychiatric disorders particularly ADHD.
- Adolescents with cannabis use disorder received a diagnosis of ADHD in 33.2% to 38.1% of cases reviewed (Barbuti et al., 2023).
- Tetrahydrocannabinol (THC) binds to cannabinoid receptors in the brain, causing a feeling of well-being, euphoria, and anxiolysis in addition to altering systems involved memory, concentration, and time perception.
- Chronic cannabis use alters executive functions in a similar way that ADHD does with impaired sustained attention and working memory and possibly alters response inhibition, impulsivity, cognitive control, reward processing, circadian rhythms, and motivation.
- Neurotransmitters such as dopamine, norepinephrine, gamma-aminobutyric acid (GABA), acetylcholine, histamine, and opioid peptides are influenced by cannabis.

Barbuti, M., Maiello, M., Spera, V., Pallucchini, A., Brancati, G. E., Maremmani, A. G., & Maremmani, I. (2023). Challenges of treating ADHD with comorbid substance use disorder: Considerations for the clinician. Journal of Clinical Medicine, 12(9), 3096.

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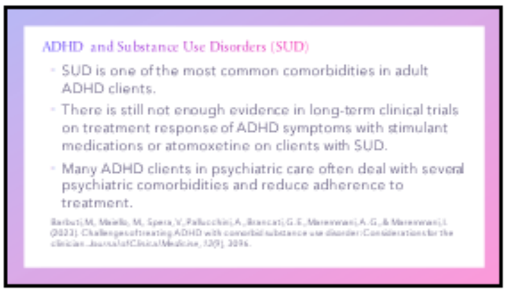

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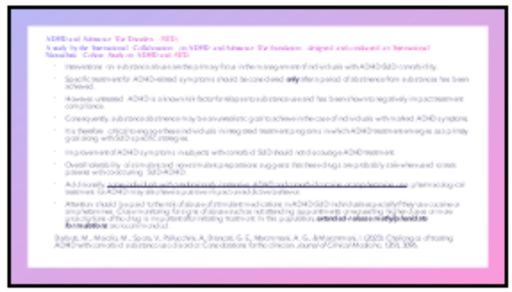

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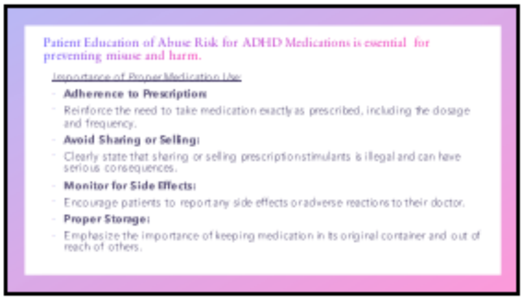

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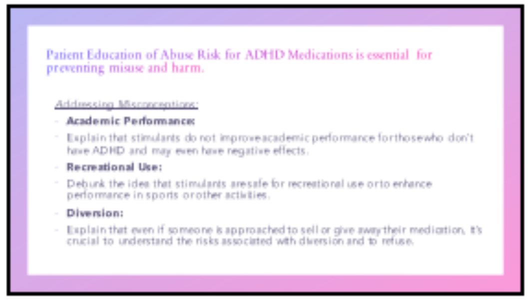

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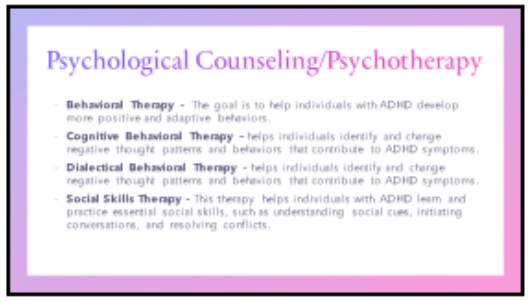

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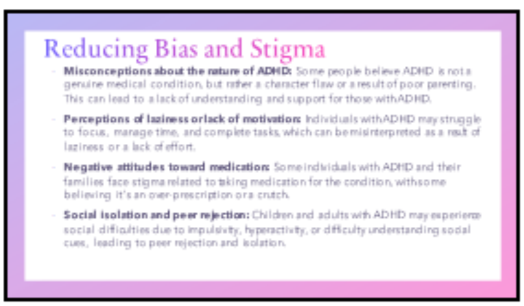

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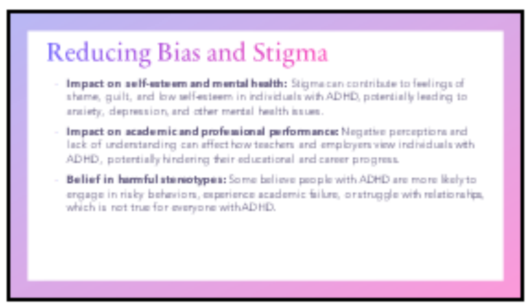

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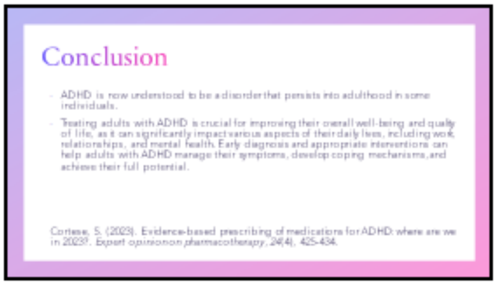
Conclusion
ADHD is now understood to be a disorder that persists into adulthood in some individuals.
Treating adults with ADHD is crucial for improving their overall well-being and quality of life, as it can significantly impact various aspects of their daily lives, including work, relationships, and mental health. Early diagnosis and appropriate interventions can help adults with ADHD manage their symptoms, develop coping mechanisms, and achieve their full potential.
Cortese, S. (2023). Evidence-based prescribing of medications for ADHD: where are we in 2023?. Expert opinion on pharmacotherapy, 24(4), 425-434.

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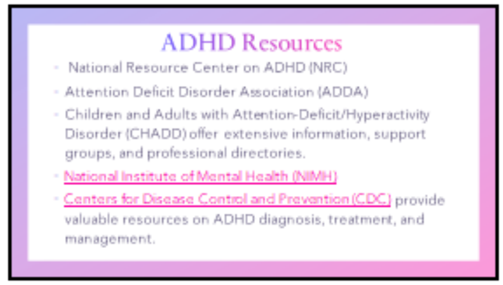
ADHD Resources
National Resource Center on ADHD (NRC)
Attention Deficit Disorder Association (ADDA)
Children and Adults with Attention-Deficit/Hyperactivity Disorder (CHADD) offer extensive information, support groups, and professional directories.
National Institute of Mental Health (NIMH)
Centers for Disease Control and Prevention (CDC) provide valuable resources on ADHD diagnosis, treatment, and management.

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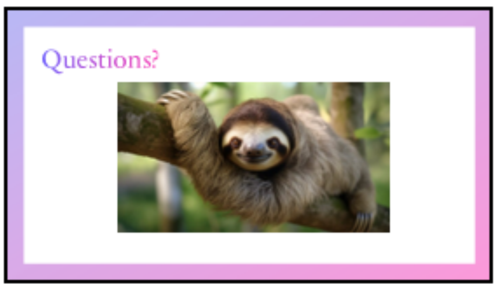
Questions?

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References

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Appendix C: Pre-/Posttest

Knowledge of Attention Deficit Hyperactive Disorder (ADHD)

Circle the correct answer for the following questions.

1) What kind of disorder is ADHD?
a. Urological disorder
b. Neurodevelopmental disorder
c. Addictive Disorder
d. None of the above

2) What are the Types of ADHD?
a. Hyperactive or Inattentive Type disorder
b. Hypoactive or Impulsive Type disorder
c. Both Hyperactive and Hypoactive
d. Hyperactive, Hypoactive, and Combined Type

3) ADHD is more common in:
a) Females
b) Males
c) Both females and males are equally affected
d) I don't know the answer to this

4) What is the percentage of adults currently diagnosed with ADHD and/or treated by psychiatrists/mental health providers?
a) 50%
b) 40%
c) more than 50%
d) Less than 20%

5) What happens if we do not treat ADHD in adults?
a) Nothing
b) They do not have any mental health issues
c) They experience a diminished quality of life
d) They experience a diminished quality of life and may also have problems with anxiety and mood disorders

6) In Inattentive/Hypoactive Type ADHD, the person:
a) Can pay close attention in school, work, and during activities
b) Is very organized
c) Can listen to conversations without difficulty when spoken to
d) Often has difficulty following through with instructions, fails to finish school work/chores/or duties in the workplace

7) In children with ADHD, 6 or more symptoms need to be persistent for at least 6 months for hypoactive or hyperactive ADHD. How many symptoms are required for individuals who are 17 years and older according to the Diagnostic and Statistical Manual of Mental Disorders (DSM-5)?

a) At least 7 symptoms
b) At least 4 symptoms
c) At least 5 symptoms
d) Children and Adults both need six or more symptoms

8) What is the adult assessment tool used for ADHD evaluation?
a) Adult ADHD evaluation form
b) Adult ADHD Self-Report Scale (ASRS)
c) Patient Health Questionnaire (PHQ-9)
d)GAD-7 tool

9) ADHD drug categories are:
a) Stimulants
b) Non-stimulants
c) Antidepressants
d) Stimulants, non-stimulants, and antidepressants

10) Non-stimulant ADHD medications work faster than stimulants.
a) True
b) False

11) Individuals with ADHD and Substance Use Disorders may experience:
a) Fatigue
b) Mood and anxiety issues
c) Sexual dysfunction
d) Mood, anxiety, eating, and impulse control disorders

12) Which long-term stimulant medication at a high dose may be effective in controlling ADHD symptoms in individuals with ADHD and Cocaine Use Disorder.
a) atomoxetine hydrochloride (Strattera)
b) viloxazine (Qelbree)
c) bupropion hydrochloride (Wellbutrin)
d) methylphenidate or amphetamine

13) The risk of Alcohol Use Disorder in ADHD clients increases when:
a) An individual has a high stress job
b) An individual is social
c) An individual has comorbidities such as bipolar, conduct disorder, antisocial personality, and eating disorders
d) A & B are correct

14) Cannabis use has been associated with several psychiatric disorders, particularly which of the following?
a) Obsessive Compulsive Disorder
b) Bipolar Disorder
c) ADHD
d) Autism Spectrum Disorder

15) Studies indicate that co-medication with ADHD treatment should be started when?
a) Immediately during detox treatment
b) Right after detox treatment

c) It can be started at any time
d) After stabilization of opioid maintenance treatment
16) How do stimulants affect academic performance for individuals without ADHD?
a) Stimulants help them study better.
b) Stimulants improve academic performance for individuals without ADHD.
c) Anyone can take stimulants, and they will have a positive effect from the medication.
d) Stimulants do not improve academic performance for individuals without ADHD.
17) A form of psychotherapy for individuals with ADHD includes:
a) Group Therapy
b) Cognitive Behavioral Therapy
c) Psychodynamic Therapy
d) Humanistic Therapy
18) Individuals with ADHD:
a) Have a genuine medical condition
b) No not have a genuine medical condition
c) ADHD is due to poor parenting
d) Have a character flaw
19) Individuals who abuse stimulants may experience a risk of which of the following?
a) Stimulant misuse can cause no harm or health issues
b) Stimulant misuse can cause irritability, aggression, paranoia
c) Stimulant misuse can improve focus
c) Stimulant misuse does not cause withdrawal symptoms such as fatigue, depression, and sleep problems
20) Children and adults with ADHD may experience:
social difficulties due to impulsivity, hyperactivity, or difficulty understanding social cues, leading to peer rejection and isolation.
a) Have the ability to make friend easily
b) Are often social butterflies

c) Have social difficulties due to impulsivity, hyperactivity, or difficulty understanding social cues, leading to peer rejection
d) Do not experience any stigma related to taking ADHD medications

Key for Pre-/Posttest

1) b -Neurodevelopmental disorder
2) c - Hyperactive, Hypoactive, and Combined Type
3) b - Males
4) d - Less than 20%
5) d - They experience a diminished quality of life and may also have problems with anxiety and mood disorders.
6) d - Often has difficulty following through with instructions, fails to finish school work/chores/or duties in the workplace.
7) c - At least 5

8) b - Adult ADHD Self-Report Scale (ASRS)
9) d - Stimulants, non-stimulants, and antidepressants
10) b - False
11) d - Mood, anxiety, eating, and impulse control disorders
12) d- methylphenidate and amphetamine
13) c - An individual has comorbidities such as bipolar, conduct disorder, antisocial personality, and eating disorders.
14) c - ADHD
15) d - After stabilization of opioid maintenance treatment
16) d -Stimulants do not improve academic performance for individuals without ADHD.
17) b - Cognitive Behavioral Therapy
18) a - Have a genuine medical condition
19) b - Stimulant misuse can cause irritability, aggression, paranoia
20) c - Have social difficulties due to impulsivity, hyperactivity, or difficulty understanding social cues, leading to peer rejection

Appendix D: Program Evaluation

Your responses and comments will help improve future educational programs. Please circle your rating on each item below:

Strongly Disagree (SD), Disagree (D), Undecided (U), Agree (A), Strongly Agree (SA)

Criteria	SD	D	U	A	SA
Program objectives were clearly defined.	**1**	**2**	**3**	**4**	**5**
All of the program objectives were met.	**1**	**2**	**3**	**4**	**5**
The materials were the right level of complexity for my background.	**1**	**2**	**3**	**4**	**5**
The course materials helped to support the program objectives.	**1**	**2**	**3**	**4**	**5**
The content was relevant to my needs.	**1**	**2**	**3**	**4**	**5**
The facilitator demonstrated a good understanding of the program materials.	**1**	**2**	**3**	**4**	**5**
The facilitator encouraged questions.	**1**	**2**	**3**	**4**	**5**
The facilitator made the subject understandable.	**1**	**2**	**3**	**4**	**5**
The presentation slides were clear.	**1**	**2**	**3**	**4**	**5**
The program content was presented clearly.	**1**	**2**	**3**	**4**	**5**
The time allowed for this program was right.	**1**	**2**	**3**	**4**	**5**
The setting was conducive to my learning.	**1**	**2**	**3**	**4**	**5**

Please complete the following

The most useful part of the education program was:
The least useful part of the education program was:
The session could have been improved by: