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Mental Health professionals' Knowledge, Attitudes, and Behaviors related to Adult Attention Deficit Disorder (ADHD) and Screening Pre and Post an Educational Intervention: A Quality Improvement Project

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**Mental Health Professionals' Knowledge, Attitudes, and Behaviors related to Adult
Attention Deficit Disorder (ADHD) and Screening Pre and Post an Educational
Intervention: A Quality Improvement Project**

A Scholarly Project Presented to the Faculty of the
Nicole Wertheim College of Nursing and Health Sciences

Florida International University

In partial fulfillment of the requirements

For the Degree of Doctor of Nursing Practice

By


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Director.

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Abstract

Background. Attention deficit/hyperactive disorder (ADHD) is a neurodevelopmental disorder characterized by inattention, hyperactivity, and impulsivity [DSM-IV-TR] (American Psychiatric Association (APA), 2000). ADHD is the most common childhood psychiatric disorder in the United States; however, there is an increased report of adults with ADHD that has not been well addressed until today. There is a need for a rapid, reliable, standard assessment tool to diagnose adult ADHD [Alder et al., (2009) cited in French et al., (2019)]. Using the Adult Self-Report Scale (ASRS) in outpatient settings can be a practical tool in identifying adult ADHD and offering appropriate treatment.

Purpose: The purpose of this quality improvement project was to increase the knowledge, attitudes, and behaviors of mental health professionals regarding Adult ADHD and the use of the World Health Organization Adult Self-Report Scale (ASRS) for screening Adult ADHD.

Methods: Using a Pre-test Posttest design, the sample included 10 mental health professionals (1 psychiatrist, 4 nurse practitioners, and 5 licensed social workers) from an outpatient setting who participated in an educational intervention on adult ADHD and screening using a PowerPoint presentation and discussion.

Results: Based on paired t-tests, the results indicated a statistically significant change ($p < .05$) from pre to post-test scores on knowledge, attitudes, and behaviors of mental health professionals in the diagnosis of adult ADHD and screening. Based on the results, mental health professionals (90%) following the educational intervention expressed that they were very likely

to use the World Health Organization Adult Self Report Screening (WHO ASRS) tool as an instrument to improve the diagnosis of adult ADHD.

Implications: Although this educational invention was effective, a replication of this study in diverse community mental health clinics is indicated to confirm the findings. Advance Practice Nurses are in the position to develop and implement quality improvement projects which advance the quality of care offered by mental health professionals, and insure accurate diagnosis and treatment of mental health conditions, such as adult ADHD.

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I. Introduction

Attention deficit/Hyperactivity disorder (ADHD) is a neurodevelopmental disorder that begins in childhood, prevails, and persists through adulthood (De la Pena et al., 2020). It is usually characterized by symptoms such as inattention, motor hyperactivity, and impulsivity. Those impairments affect intellectual functioning and impact education, vocation, family, accidents with injuries, social interactions of the person, and early mortality (De la Pena et al., 2020). According to the American Psychiatric Association, adults with ADHD have symptoms such as difficulty remembering information, organizing tasks, or completing work within time limits (Miller, 2016). Although it is known that ADHD persists into adulthood, it is only recently that the focus of attention on adult ADHD has gained importance (Kessler et al., 2006). The prevalence of ADHD in the adult population has increased. Clinicians may be reluctant to diagnose ADHD in the adult population. However, misdiagnosis or mistreatment may lead to serious consequences (De la Pena et al., 2020). Care provided for this group of patients is limited. Education regarding the screening, diagnosis, and treatment of adult ADHD is the focus of this quality improvement project.

Problem Statement

As a result of late attention to the topic, many adults with ADHD are undetected, undiagnosed, and mistreated. It is therefore vital to educate clinicians regarding ADHD and effective tools for screening this disorder. There is a controversy about the appropriate screening tool to be used to effectively assess and diagnose adult ADHD in the community, and primary care settings. However, only a limited number of screening tools do exist to effectively distinguish Adult ADHD from other mental health disorders (Bakare & Jordanova, 2020). In

order to facilitate the identification and treatment of adult ADHD, a strong and valid tool like the World Health Organization Adult Self-Report Scale (ASRS) may be used by mental health professionals for screening purposes. Improvement in the diagnosis of adult ADHD can help decrease the burden of mental health disorders, as well as associated comorbidities.

Scope of the Problem

ADHD, as a neurodevelopmental disorder, was identified in the late 1800s by a Scottish doctor, named Alexander Crichton during his assessment of children (Walters & Barrett, 1993). As a behavioral disorder, it is commonly diagnosed in childhood and sometimes persists into adulthood. In America, the disorder was observed and extended to adulthood first in the late 1960s, but it was not publicly known until after the publication of the Diagnostic and Statistical Manual of Mental Disorder. The pathophysiology of ADHD is unclear, but studies show an interaction between genetic and environmental factors (Sun et al., 2018, cited in Kessi et al., 2022). The characteristic of the disorder can be inattention, hyperactivity and/or impulsivity, or a combination that will impact work, task organization, relationship, and concentration (Kesser et al., 2010). There is an alarming increase, estimated at 4.4%, in the prevalence of adult ADHD (Kesser et al., 2006). In addition, an estimated 120 million Americans are losing their jobs each year resulting in income losses of about \$138 billion which is an economic burden for those diagnosed and society (Miller, 2016). The similarity in symptoms with other mental health disorders can confuse providers during the screening process and lead to a delay in the diagnosis; therefore, it is crucial to have an effective and efficient way to distinguish adults with ADHD from adults without ADHD.

Significance to Nursing

Due to the overlapping symptoms with other conditions, adults who visit the clinic may complain about anxiety or depression, which are symptoms medicated by the provider and lead to misdiagnosis and ineffective treatment of the real issue (Bastiaens & Galus, 2017). De la Pena et al. (2010) report that adults who have not been diagnosed with ADHD earlier in their life experience a psychological burden that affects their social life tremendously. They experience trouble concentrating on a small task, feel inferior, and have mental breakdowns that can lead to suicidal thoughts. There are devastating long-term consequences of untreated adult ADHD, such as psychological distress, drug abuse, depression, mood swing, gambling, risky sex, car accidents, trouble with the law, and economic losses reported at the workplace. Due to the issues in maintaining a stable mindset, they have difficulties with relationships, and eventually, this may lead to premature death (De la Pena et al., 2020).

Healthcare professionals have an important responsibility to diagnose adult ADHD. Using the Adult Self-Report Scale (ASRS) in outpatient settings can be a practical tool in identifying adult ADHD and offering appropriate treatment. The ASRS is a six-question checklist which is a subset of the WHO's 18-question ASRD which indicates symptoms consistent with adult ADHD (Kessler et al., 2005). The ASRS was found to have a high sensitivity (95.0%) for screening and detecting potential ADHD (Glind et al., 2013).

This DNP project will implement an educational intervention to improve the knowledge, attitudes, and behaviors of mental health clinicians in outpatient settings regarding adult ADHD and the use of the ASRS screening tool for diagnosis and treatment.

Knowledge Gaps

Recent data indicates a tremendous rise in adults with undiagnosed ADHD whose lives are being negatively affected by the disease including anxiety, depression, substance abuse, unhealthy relationships, unemployment, and even death (Kesser et al., 2006). Clinicians recognize the increasing incidence and prevalence; however, over seventy-seven percent of clinicians report that they do not have a reliable tool to assess adults [Alder et al., (2009) cited in French et al., (2019)]. Due to the serious consequences related to the misdiagnosis of ADHD among adults, this study aims to evaluate the mental health clinicians' knowledge, attitudes, and behaviors related to the screening and diagnosis of adults with ADHD pre and post an educational intervention.

II. Summary of the Literature

Attention deficit/hyperactive disorder (ADHD) is a neurodevelopmental disorder characterized by inattention, hyperactivity, and impulsivity. It is an Axis I disruptive behavioral disorder according to the Diagnostic and Statistical Manual of Mental Disorder-Fourth Edition [DSM-IV-TR] (American Psychiatric Association (APA), 2000). Etiologies do not explain the real cause but associate the problem with genetic, and environmental factors (Sun et al., 2018, cited in Kessi et al., 2022). It is characterized by hyperactivity, impulsivity, and inattention. ADHD is the most common childhood psychiatric disorder in the United States; however, there is an increased report of adults with ADHD that has not been well addressed until today. Despite the attention that researchers are now focusing on the topic, the validity and diagnostic criteria are still confusing to clinicians when it comes to assessing adults (De la Pena et al., 2020).

Furthermore, the difficulty in diagnosing adults with ADHD may be due to the high rate of their multiple comorbidities. Due to the overlapping symptoms with other mental illnesses, providers may be reluctant to increase the false positive rate of adults diagnosed with ADHD. This struggle to detect the disorder in adults may lead to misdiagnosis and untreated depressive mood, bad behaviors, substance use as a coping mechanism, and premature death (De la Pena et al., 2020). Not having a rapid, reliable, standard assessment criterion for adults with ADHD makes the diagnostic process very difficult for clinicians (De la Pena et al., 2020). Using the Adult Self-Report Scale (ASRS) in outpatient settings can be a practical tool in identifying adult ADHD and offering appropriate treatment. The ASRS is a six-question checklist, a subset of the World Health Organization's (WHO) 18-question ASRD, with four or more check marks to indicate symptoms of adult ADHD (Kessler et al 2005).

History of ADHD

ADHD was identified by physicians in Germany, however, it was only in 1902 that 43 medical childhood cases of impulsivity and difficulties with self-control and attention were recognized (Barkley, 2015). In the early 20s, German doctors recognized that some children that could not stay still, had difficulty following rules, and could not get along with other children. This pattern was identified in children between 3 to 6 years old. Doctors described it as "hyperkinetic syndrome" (Rutter, Graham, & Yule, 1970, cited in Walters & Barrett, 1993). During the same period, there was an epidemic of encephalitis and influenza that affected children and those who survived had symptoms associated with ADHD, reported as being hyperactive, irritable, and fussy with a lack of control (Hohman, 1922). In reporting the relationship between the encephalitis sequels and ADHD symptoms, researchers discovered that there were adults who were not previously diagnosed with ADHD but exhibited the same ADHD

symptoms. After further retrospective research and interviewing respective informants, they concluded that those adults had ADHD during their childhood. Since then, many criteria have emerged to help assess the disorder. Yet, clinicians still are struggling to understand the disorder and the diagnostic criteria that change over time (Micheline et al., 2018).

It was only in 1968 that the American Psychiatric Association's (APA) "Diagnostic and Statistical Manual of Mental Disorders" (DSM) included ADHD symptoms in its list of disorders. In 1980, the condition was renamed Attention Deficit Disorder (ADD) which included two characteristics: Hyperactivity and without hyperactivity.

With modern testing in the early 1980s, ADHD awareness became public as educators and parents began to watch for early signs in children. Several longitudinal studies on previously diagnosed children with ADHD revealed the persistence of similar symptoms in adulthood (Childress & Berry, 2012, cited in Kessi et al., 2022). In America, the disorder was observed and extended to adulthood first in the late 1960s, but it was not publicly known until after the DSM-IV (APA, 1996) and the DSM-IV-TR (APA, 2000) were written (Landes & London, 2021). The DSM-IV listed three subtypes of ADHD: inattentive, hyperactive/impulsive, and a combined type that included all symptoms. In 2013, the APA published the new edition of DSM-5 which reveals that ADHD presentation and symptoms can change over a lifetime of a human being (Micheline et al., 2018).

Incidence and Prevalence

Even though research is advanced in both children and adolescent populations, there is a great difficulty regarding the diagnosis in adults. Recently, the national replication survey of adult people has illustrated an alarming increase estimated at 4.4% in the prevalence of adults

with ADHD with 62 % of them being male (Kesser et al., 2006). According to Wilens, Biedermen, and Spencer (2002), about 90% of ADHD children extend their diagnosis through adulthood. ADHD affects around 5% of school-aged children and half of them continue to experience symptoms in adulthood (Andersson et al., 2020). In addition, recent studies show that the rate of ADHD in the US has increased by over half percent from 2007 to 2016. Moreover, about 120 million adult Americans are losing their jobs each year (Silverstein et al., 2017). Due to the overlapping symptoms with other mental conditions and the lack of standard screening protocols that can assist in the diagnosis, clinicians tend to disregard the disorder in adults (Kessi et al., 2022). Not diagnosing ADHD correctly can have a tremendous impact on adults' personal lives, as well as on the economy. It is crucial for mental health clinicians to effectively identify and diagnose Adult ADHD.

Pathophysiology of ADHD

The pathophysiology of ADHD is still very unclear, and the diagnostic criteria are not reliable, but studies suggest an interaction between genetic and environmental factors (Sun et al., 2018, cited in Kessi et al., 2022). In the brain, the center for attention thought, emotions, behaviors, and actions are regulated by the prefrontal cortex, cerebellum, and caudate via the influence of neurotransmitters like dopamine and norepinephrine receptors (Sun et al., 2018, cited in Kessi et al., 2022). According to Arnsten and Pliszka (2011), cited in Kessi et al. (2022), the dysregulation of certain neurotransmitters cited above combined with genetic factors and neurochemical factors could be a cause of the disorder. In addition, social and environmental components, such as poverty, malnutrition, dysfunctional family, divorce, and unemployment could precipitate ADHD in certain populations. Scientists also mentioned the possibility of lead

poisoning, tobacco, and alcohol use during pregnancy, and low birth weight could be risk factors (Sun et al., 2018, cited in Kessi et al., 2022).

Genetics factors

As a neurodevelopmental condition, ADHD has genetic correlations related to heritability. Studies of twins found that the heritability of ADHD was between 70% and 80% and it could emerge from childhood to adulthood (Faraone & Larsson, 2019 cited in Andersson et al., 2020). Moreover, a genetic etiology was also shown with adoption studies on ADHD children demonstrating how greater the risk to have ADHD with biological relatives than with adoptive family. Recent studies show a correlation between rare chromosomal deletion and duplications with neurodevelopmental disorders such as ADHD (Zheng, 2013). It was found that decreased levels of catecholamines and serotonin, and imbalance in dopaminergic and nonadrenergic hormones may contribute to the symptoms of ADHD.

Environmental factors

There is a long list of environmental factors related to ADHD, including tobacco and alcohol use, lead poisoning during pregnancy, nutritional defects, low weight, poverty, and dysfunctional family (Sun et al., 2018, cited in Kessi et al., 2022). However, it is still difficult to determine the exact cause of the disorder; Therefore, scientists rely on potential risk factors which play an important role in the upbringing and emotional health of a child and could contribute to mental instability (Zheng, 2013).

Diagnostic and Statistical Manual of Mental Disorders

According to the American Psychiatric Association (2000), The DSM-5 outlines ADHD criteria; however, those diagnostic criteria are very vague and result in multiple interpretations. Because of that uncertainty, each provider uses his gut or has his own opinion regarding the diagnostic validity of adults with ADHD.

In the first edition of the Diagnostic and Manual of Mental Disorders (DSM-I), ADHD was described as “minimal brain dysfunction,” then as “hyperkinetic reaction of childhood” in the DSM-II IN 1968 (DSM-I, 1952 cited in Zheng, 2013). In 1980, the DSM-III focused on motor hyperactivity side of the disorder but also on the inattention component and described it as “attention-deficit disorder with or without hyperactivity disorder” (Zheng, 2013). In 1987, the DSM-III reviewed its name to Attention Deficit Hyperactivity Disorder (ADHD) which stayed the same for DSM-IV (1994), DSM-IV-TR (2000), through the new DMS-5 (Zheng, 2013).

In the *DSM-IV-TR* (2000), the criteria were refined, and subtypes were outlined as a predominantly inattentive subtype (ADHD-I), a predominantly hyperactive-impulsive subtype (ADHD-H), and a combined subtype (ADHD-C; DSM-IV-TR, 2000 cited in Billingsley-Jackson, 2008). With the combined type, patients will present both hyperactivity and inattention for a period of a minimum of six months and have six or more symptoms of each diagnostic criterion that affect their daily functioning. The symptoms of inattention and hyperactivity are well elaborated in the DSM-5. During the development of the DSM-IV-TR, empirical studies were mostly conducted on children, but the results were extrapolated to adults as well. This may be the

reason why more information is still needed to determine the appropriate criteria to diagnose adults with ADHD (Billingsley-Jackson, 2008).

The diagnostic criteria of ADHD have been altered over the years, and despite the constant change, there is still a barrier to diagnosing mid to late adulthood ADHD (Bakare & Jordanova, 2020). Today, the characteristics of ADHD are described as hyperactive/impulsive, and inattentive while in the past, it was explained as brain damage, or learning disabilities (Barkley, 2015). As time goes on, researchers are still searching for the real cause of hyperactivity in children, and one new result may invalidate the old result. Because of this ongoing concern regarding the true etiology, it is difficult to clearly understand the symptoms and make a clear-cut diagnosis.

Issues Related to Diagnosis of adult ADHD

Many providers are more comfortable diagnosing anxiety or depression than adult ADHD. According to Adler and Alperin (2015), a survey of prescription medication indicate that only 10% of adults with ADHD were treated in the recent year. In one of Adler's surveys on adult ADHD, 77% of primary care physicians reported that adult ADHD was not well understood, and 75% reported that there were poor quality and unreliable assessment tools [Alder et al., (2009) cited in French et al., (2019)]. During the same survey, seventy-two percent recognized that it was more difficult to diagnose adults than children with ADHD. The reason for primary care physicians' skepticism is mainly due to the controversy around the topic. Originally, it was only a children's disorder; then it was extended to adulthood without sufficient studies on a large scale. It was later determined that adults have more inattention than hyperactivity with the perception that they can control their impulses on their own. Furthermore,

there is concern regarding the abuse of psychostimulant medication by adults ADHD and finally the lack of confidence of providers about diagnosing adults with ADHD and its treatment (French et al., 2019).

It is obvious that providers have knowledge about the existence of adult ADHD, but they need help to diagnose it accurately. There are different criteria that adults must meet to get an ADHD diagnosis: (1) onset before age 12; (2) persistence for more than six months; (3) affecting daily functioning; and (4) significant symptoms that are best explained only by ADHD and not another psychiatric disorder (French et al., 2019). The lack of understanding and confidence about adult ADHD expressed by primary care physicians should be compensated by critical training on the most reliable and efficient way to diagnose the disorder. Screening tools have been found to be very cost-effective and a time saver for clinicians during the diagnostic process. However, Bakare and Jordanova (2020) report that many clinics use multiple comprehensive and diagnostic interviews that are confusing and less practical. Using the right screening tool allows clinicians to recognize ADHD features and identify the right diagnosis.

Screening Tools

Screening tools are found to be an efficient and practical approach not only within outpatient clinics, but also in the workplace. It is cost-effective and a time saver for an effective diagnostic assessment of adult ADHD. Adler et al. (2009) conducted a survey on adult ADHD using a Likert scale given to 400 primary care physicians and Eighty-five percent of them reported that “they would take a more active role in diagnosing and treating adult ADHD if an easy-to-use, relatively quick to administer screening tool was developed and validated by physicians or institutions they respect” [Adler et al. (2009) cited in French et al., (2018)]. There

are many scales that have been studied for the same purpose but only two will be cited in this review.

The World Health Organization Adult Self-Rating Scale (ASRD) has been so far a good predictor for ADHD diagnosis with high sensitivity of 95.0% and specificity of 98.3% (Baggio et al., 2021). The adult ASRS for DSM-5 is an instrument created by the World Health Organization parallel to the DSM-IV counterpart with fewer variables and integer scoring for rapid calculation (Ustun et al., 2017). It was revised from ASRS-IV to ASRS-5 to better fit the DMS-5 adult ADHD criteria and it is recognized as a good psychometric instrument widely used in the United States (Ustun et al., 2017). The ASRS is a 6-item questionnaire with four items from the previous edition and two items from new non-DSM criteria (Bastiaens & Galus, 2017).

The Wender Utah Rating Scale (WURS) is another screening tool used to assess adult ADHD with respectable sensitivity (Bakare & Jordanova, 2011). Originally, it was a twenty-five item questionnaire, but it was revised to four items to decrease the time commitment for completion. It is reported that the shorter version is very useful in detecting adults with ADHD within the non-ADHD population. However, the WURS leans more toward childhood retrospective symptoms and has lower sensitivity of 79.6 % and specificity of 60.3% than ASRD (Daigre et al., 2015). In addition, the WURS is found to be more related to dysfunctional personality traits than attentional performance which is a crucial point in adult ADHD and it may not be able to independently predict when ADHD is absent (Bakare & Jordanova, 2011).

Many studies have compared the WURS and the ASRS. It was concluded that the ASRS had 73.6% specificity in patients that were positive with ADHD and negative in WURS for adult

ADHD (Daigre et al., 2015). The new ASRS-5 endorsed by the WHO has a higher specificity, and it is used to assess the adult population with or without ADHD (Ustun et al., 2017).

Social Impact and Comorbidities

A longitudinal study of adults with ADHD shows their chronic problems related to social insertion, interpersonal relationships, occupational and emotional issues, educational underachievement, substance abuse, criminal behavior, and suicidal ideation (Miller, 2016). It is obvious that adults with ADHD develop additional disorders due to their poor health. Those affected find themselves cast out by society and they may lose their jobs due to a lack of focus at work. Studies show that more than 120 million Americans are losing their jobs each year resulting in and which is an economic burden for those diagnosed and society (Miller, 2016). Therefore, it is a great necessity for clinicians to have the most effective knowledge, attitudes and behaviors regarding adult ADHD and efficient screening tools used to identify, assess, diagnose and treat adult ADHD.

III. Purpose/ PICO Clinical Question/SMART Goals

Purpose: The purpose of this quality improvement project was to increase the knowledge, attitudes, and behaviors of mental health clinicians regarding adult ADHD and the use of the World Health Organization Adult Self-Report Scale (ASRS) for screening Adult ADHD.

PICO Clinical Question: For mental health clinicians in a community outpatient setting, will an educational intervention regarding adult ADHD and the use of the ASRS, change their pre-test and post-test scores on knowledge, attitudes, and behaviors related to the diagnosis and screening of adults with ADHD?

SMART Goals: The study had a PICO goal that was specific, measurable, relevant, achievable and time bound.

- **Specific:** The goal of the study was to educate mental health clinicians regarding adult ADHD and the assessment tool to screen the disorder.
- **Measurable:** At the end of the study, changes from pretest and posttest scores regarding mental health clinicians' knowledge, attitudes and behaviors related to adult ADHD diagnosis and screening was measured.
- **Achievable:** The goal of the project was achieved as statistics indicated that mental health clinicians increased their knowledge, attitudes and behavior scores related to the diagnosis and screening of adult ADHD. Therefore, the organization would be encouraged to provide resources for ongoing goal achievement.
- **Relevant:** The goal was to increase the diagnosis and treatment rate of Adult ADHD and help decrease the long-term consequences of undiagnosed adult ADHD.
- **Time-bound:** The project has a short time limit due to the urgency of the issue.

IV. Organizational Assessment and SWOT Analysis

AHI is a private mental health facility in south Florida that became incorporated in 2009 as a solo practice. Its leadership includes a CEO/founder and 3 shareholders who are very supportive and provide guidance to the company. There is a monthly meeting reserved for the leaders. The company is specialized in the mental and behavioral well-being of children and adults. Their mission statement is to build the human spirit by providing comprehensive mental health services and their vision is to inspire confidence and respect in people's minds and

attitudes. AHI is a Christian-oriented company that aims to provide accessible services to the community. They are recognized for advocating for the rights of underserved populations.

The company has 2 branches, one in Pompano and another in Plantation. The overall staff number is 25, including 2 medical doctors and 2 nurse practitioners. Before Covid, the unit had an informatic technology (IT) department and an operational manager. Today, the organization has a client service department that oversees different programs including the adult program, children program, and transportation program for the psychosocial and rehabilitation service of children under 21 years of age. The CEO also has the role of operations manager and oversees all activities and makes sure that the computers, the building, the information technology, the hardware equipment, and policies and procedures are up to date.

The organization had activities with the community before Covid. They organize the “Peppermint Christmas Party” for adults and children in December, work in conjunction with churches to provide charities and clothes donations to the homeless, organize entertainment on special occasions, invite the community to participate, and foster growth from within. The culture within the company reflects mutual respect. The team organizes outdoor group encounters at the park or in a community center to help cheer the geriatric population in nursing homes in the neighborhood and the adult population of the community.

The organization has implemented a democratic leadership style where team members have freedom and feel that their opinion counts in the decision-making process. This organizational leadership model has brought them reliable results and increased the industrial performance of the company (Crosby, 2021). To reinforce the policy within the company, they have adopted the weekly thirty-minute meeting where they stress the goals of the company, the

training needed to achieve objectives, and the recommendations to make things better and the organization more effective. However, since Covid, things have gone astray. The company has lost many of its workers and it is taking a little longer time to recover. They recognized that they do not have the right person at the right place in the company. In addition, some employees are doing more than their required job and this situation can be overwhelming as per the employees.

SWOT Analysis

Collecting real data, interpreting what is found, and using that as a basis for decisions and ideas for change and improvement is very important in each organization. This organizational assessment allowed a deep understanding of the dynamics taking place in this company and make recommendations for improvement. Knowing the strengths, weaknesses, opportunities, and threats of a company is a great advantage that helps to better prepare against competitors.

Strengths

Knowing an organization's strengths is very crucial for any organization that wants to stand out and succeed.

- AHI has established a non-discriminatory policy that accepts any type of mental illness except drug addiction.
- AHI is very active within the community and organizes educational activities that gather and entertain people.
- AHI is in constant communication with the pastoral congregation to help the community with counseling and well-being education.
- AHI has the support of 2 well-trained, knowledgeable, and nationally recognized psychiatrists.

- AHI provides internships for graduate students and residency internships at Aventura hospital where they are affiliated.
- AHI is accredited by JCAHO, and they are part of the Broward Center behavioral mental health committee.
- AHI promotes a diversity of cultures and is led by faith.

Weakness

Despite their existence and resilience for more than a decade, the company still has several challenges to address.

- AHI has encountered turnovers lately because they are fiscally unable to provide medical insurance to their employees.
- AHI does not have any pending lawsuits or leverage high debt but the management reports not having the right people at the right place.
- AHI cannot determine their reputation because they only conduct once a year survey but do not share the results with staff.
- It has been reported that the CEO hires people to help them but they are not being qualified for the position.

Opportunities

Most often, there are external opportunities that help companies to grow or boost their economy like joint ventures or alliances that help strengthen the partnership to further the mission/vision of the company.

- At AHI, the CEO has a strong partnership with Aventura hospital.
- AHI is exploring new initiatives such as substance abuse and court visitation.

- AHI is hoping to finance the training of their staff to reduce costs and improve the company efficiency.
- AHI is working to hire the right person in the right position to reduce unnecessary labor cost and improve quality.
- AHI supports the policy of discharging patients when they have achieved their goal, and to reduce bureaucracy and processes that make it difficult to serve people effectively.
- Financial increase in funds approved by President Biden's administration for the mental health and behavioral sector provides an opportunity to support staff.

Threats

It is important for any business to know and understand what can be external potential barriers or threats that could handicap the business.

- A large percentage of AHI's revenue is acquired through the care of children and diverse programs to help children.
- AHI has had less revenue this fiscal year.
- AHI is not paying attention to competitors.
- AHI uses limited technology, and it disadvantages productivity.

<h2 style="text-align: center;">SWOT Analysis of AHI</h2>
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<p>Strengths (Internal)</p> <ul style="list-style-type: none"> • Christian organization • Strong board and credentialed psychiatrists • Good support team • Nondiscriminatory to employees • Community attachment • Accepting internships • JACHO certification 	<p>Weakness (Internal)</p> <ul style="list-style-type: none"> • Increase turnover • Lack of medical insurance to retain employees • Small organization • Poor internal policies and overlooking the procedures • Lack of right people for the right job
<p>Opportunities (External)</p> <ul style="list-style-type: none"> • Possible joint venture partnerships • Work in collaboration with churches for charity and education • Desire to expand the project to patients with substance abuse and court visitation • Flexibility • Work to reduce cost 	<p>Threats (External)</p> <ul style="list-style-type: none"> • Providers do not honor their hours of services • High percentage of revenue from care of children • Slow adaptation of new technology • Still dealing with COVID-19 impact on the company • Negligence in not knowing the strength of the competitors • Not much incorporation of the global economy, politics, or regulation in the day-to-day operation of the company.

V. Definition of Terms

Attention Deficit/Hyperactivity Disorder (ADHD): Is a neurodevelopment disorder with childhood onset before the age of 12 and characterized by inattention, impulsivity, and hyperactivity (Keith, 2015).

Attitudes: Are defined with various synonyms such as ‘beliefs’, ‘values’, and ‘willingness’ (Luke & Uta, 2022).

Behavior: Refers to ‘action’ and ‘activities’ (Luke & Uta, 2022).

Mental health clinicians: Refers to licensed individuals who provide psychological or psychiatric services to adults (Luke & Uta, 2022).

World Health Organization Adult Self-Report Scale (WHO ASRS): Is a diagnostic tool that consists of six out of eighteen questions for the assessment of ADHD symptoms (Kessler et al., 2005).

VI. Conceptual Underpinning and Theoretical Framework of the Project

The study will be guided by the Self-care Theory of Dorothea Orem (Okafor, 2019) which focuses on the practice of activities that an individual can initiate to maintain or improve well-being.

Orem’s Self-Care Deficit Theory

One of the grand theories that was used as an approach to this study was Orem’s theory and nursing process which represents the clinician’s role in the process of patient’s self-care

(Okafor, 2019). Orem's Self-Care Deficit Theory (SCDT) was established to help assess the impact of a patient's self-care deficit linked to illness. The framework provided by the SCDT may help decrease adult ADHD complications and improve the quality of care they receive in a clinical setting (Okafor, 2019).

Orem emphasizes health deviation self-care required in the condition of illness when people seek medical assistance and clinicians have the duty to be aware of the conditions and carry out effective medically prescribed measures. She describes the nursing process as the assessment of the problem, designing a plan, using the scientific rationale to support the diagnosis, implementing treatments, and evaluating the outcome. This theory is very specific to each situation and informs nursing education and nursing research.

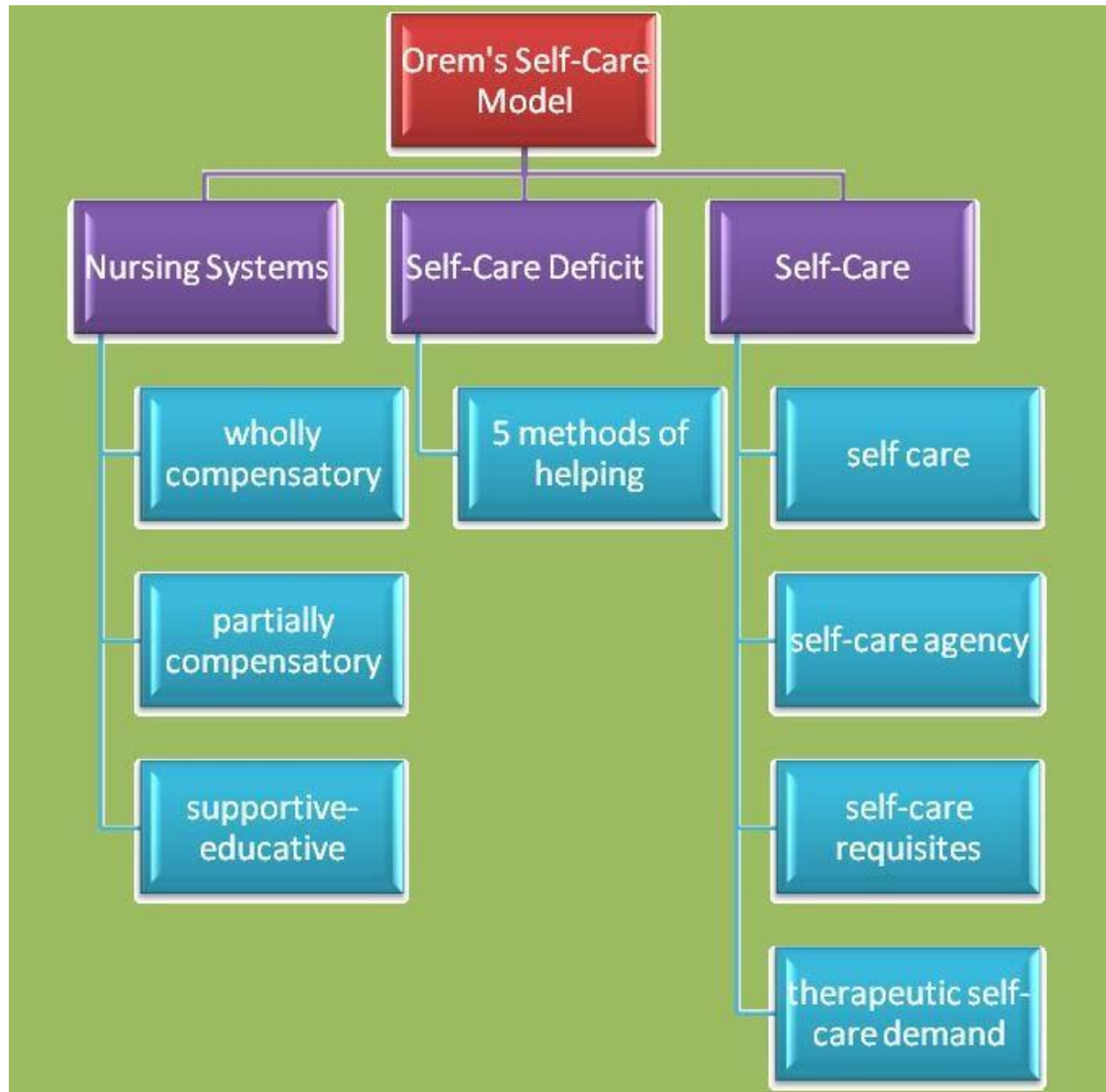
Orem has developed three theories consisting of the "Theory of Self-care," the "Theory of Self-care Deficit," and the "Theory of Nursing Systems" (Nursing Theories, 2011). Orem defined self-care as activities that patients can do daily to maintain their health, as well as reducing their self-care deficit associated with their age, bad health, handicap, or disability. She defined nursing systems as interventions that are performed by clinicians to help maintain the patient's good health.

Applying the Orem Self-care Deficit Model (SCDM) (refer to Figure 1) in this study can illustrate how patients' perceptions of their disorder can influence their decisions to be proactive in seeking treatment. Due to social determinants of health, patients may be limited to provide self-care and need help from health professionals. This is where clinicians guided by Self-care Deficit Theory play an important role. Complications associated with adult ADHD can be devastating for quality of life when there is a delay in diagnosis and treatment management

(Miller, 2016). Based on the Self-care Deficit Theory, mental health clinicians can identify the patient's needs and provide supportive care in which the outcomes are favorable, and the complications are decreased.

Based on the Figure 1, the wholly compensatory is when the patient is incapacitated, and the nurse has to do a total care. In partial compensatory, the patient is able to partially perform their self-care activities and during the supportive education, the patient seeks guidance and education from the health care clinician for guidance so he or she may perform their self-care activities. Orem identified 5 methods of helping patient in the Self-care Deficit, such as acting for others, guiding others, supporting another, providing an environment to promote personal development and teaching another.

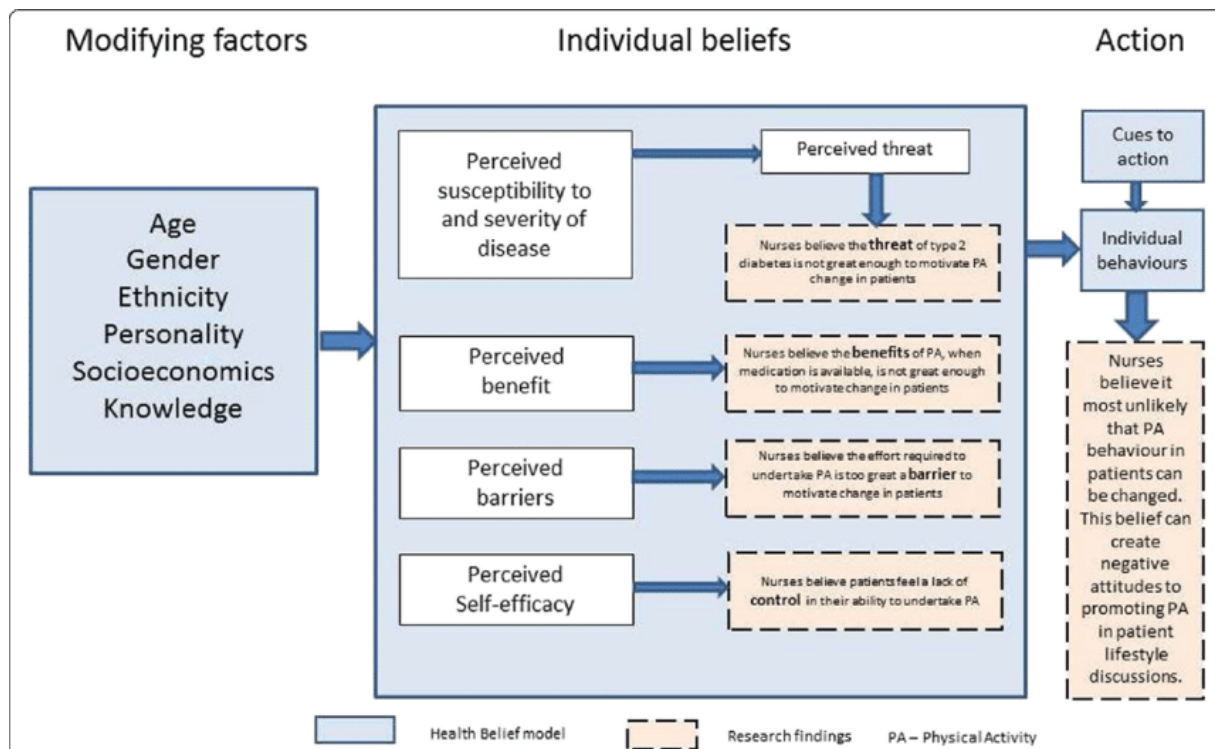
Figure 1. Orem's Self-care Model



Health Belief Model

The Health Belief Model (HBM) (Orrantia, 2018) is a model used to promote health and disease prevention. The HBM consists of five key factors that influence health behaviors: Perceived susceptibility (when an individual perceives a threat to sickness), perceived severity (belief consequences), perceived barriers (factors that prevent action), cues to action (exposure to factors that prompt action), and self-efficacy (confidence in the ability to succeed) (Orrantia, 2018) (refer to Figure 2). Due to genetic, environmental, or biological factors, people with ADHD can be susceptible to the disorder and may be strongly encouraged by the healthcare professionals to seek treatment. Patients may have barriers, such as financial issues, lack of insurance or transportation, that can hinder their treatment (Sibley et al., 2022). An additional barrier could be the lack of an effective diagnostic tool that can prevent clinicians from properly diagnosing affected patients. To overcome such barriers, patients and clinicians need to be educated regarding adult ADHD. Mental health clinicians need to be trained on the most rapid, effective, and efficient assessment tool used to diagnose ADHD in adults. The combination of the SCDM and HBM has guided this project whose goal is to enhance adult ADHD health outcomes. Although the HBM is a social model, it is used in the nursing practice and forms a framework for nursing research.

Figure 2: Health Belief Model



VII. Methodology

The purpose of this study was to increase the knowledge, attitudes, and behaviors of mental health clinicians regarding the diagnosis of Adult ADHD and the use of the World Health Organization Adult Self-Report Scale (ASRS) for screening Adult ADHD. The quality improvement (QI) has used an evidence-based practice (EBP) literature review, systematic review, and meta-analysis articles to help close the knowledge gap related to the issue (Walter, 2011). EBP Is mostly related to current research with clinical expertise conducted in different clinical settings (inpatient and outpatient).

The Plan-Do-Study-Act (PDSA) model has served as the quality improvement (QI) methodology to guide for this scholarly project. According to Walters (2011), a framework is a

structure that helps the researcher to measure, link, and validate outcomes and disseminate findings.

PDSA is a four-stage problem-solving model developed by W. Edward Deming Institute to help improve a process or carry out the change. The process helps organizations to make changes in small, testable cycles (Murray, 2018). It is a scientific method that helps plan goals and success measures (Plan); implement actions and collect data by using a checklist, flowchart, and chart to capture data as they happen (Do); analyze the data to determine improvement (Study); and determine if the plan was a success and worthy of being generalized locally within the organization for better outcomes related to the specific issue (Act) (Brau et al., 2019). If not, a better way to approach the problem is sought. The result of the QI project determines if the investment was worth the time and if there were unexpected results.

According to Murray (2018), there are three fundamental questions to ask at the beginning of the process: 1) What are we trying to accomplish? This project is trying to educate mental health clinicians and staff of the facility on the diagnosis of Adult ADHD and the use of the Adult Self-Report Scale as a reliable tool to assess adult ADHD and consequently improve their care; 2) How will we know that change is an improvement? When the clinicians at the facility can apply the screening tool while assessing for adult ADHD; and 3) What change can we make that will result in improvement? The use of WHO ASRS will help distinguish adults with ADHD from adults without ADHD and facilitate the diagnostic process while contributing to better outcomes.

“Plan stage”

In the planning stage, mental health clinicians during an organizational assessment were asked about their opinion regarding the issue, including their knowledge about the disorder, their comfortability in diagnosing the disorder, the tool they use to identify the disorder in the adult population and other barriers that could prevent them from determining the diagnosis. A literature review of the current guidelines/protocols was conducted.

In the planning of this project, several resources were used, such as support and approval from personnel, and organizations, time commitments from mental health clinicians, technology, and financial expenses. The CEO of the facility gave her approval for the project. The Florida International University's Institutional Review Board (IRB) approved the project before implementation.

Study design

The project uses a Pre-test and post-test design.

Setting

The study has been conducted in a psychiatric community outpatient clinical setting.

Sample

The sample consisted of 10 mental health clinicians, including 1 psychiatrist, 5 mental health counselors (psychologist, License Social Workers), and 4 psychiatric Mental Health Nurse Practitioners. The inclusion criteria included: 1) English-speaking; and 2) working as a mental health clinician at the facility. The exclusion criteria are: 1) non-English-speaking; and 2) not a mental health clinician at the facility.

Instruments

The study included a descriptive Demographic and Professional Data Forms identifying variables such as age, gender, and profession. A second instrument is the “Knowledge, Attitudes, and Behaviors of Mental Health Clinicians regarding the Diagnosis of Adult ADHD and related Screening.” It was developed by the DNP candidate based on the review of the literature and face/content validity was established by a review of the instrument by the DNP Lead Faculty and Clinical Preceptor. It consists of 19 items divided into 3 parts; 7 items for Knowledge, 7 items for Attitudes, and 5 items for Behaviors.

Intervention

A one-time educational intervention regarding the diagnosis and screening of adult ADHD was conducted at the facility within a 30-minute time-frame. The teaching strategies included a power-point presentation, case study, and discussion.

Data Collection

After identifying potential participants and explaining the purpose of the study to each participant through handout flyers, face-to-face communication, and emails, a written consent (Appendix A) was signed by interested individuals. A code number was assigned to each participant after the consent was signed and returned. A Demographic and Professional Data Form (Appendix B) was sent to participants via email. A pre-test survey regarding the “Knowledge, Attitudes, and Behaviors of Mental Health Clinicians regarding Adult ADHD and Screening” was sent via email to be completed before the educational interview. Each survey had the same code number assigned on the consent form and only the DNP candidate had the master

key to link the code number with the name of the participant. The study form and instruments were returned via email and kept in an encrypted protective computer in the locked office of the DNP candidate. Immediately after the intervention, a post-test, which was the same questions as the pre-test, was completed in hard copy on site and returned to the DNP candidate. The post-tests were carried in a locked briefcase to be stored in the locked file cabinet in the locked office of the DNP Candidate.

Data Management

Study data were maintained in an encrypted password-protected computer in the locked office of the DNP candidate. Hard copies of the study materials were kept in a locked file cabinet in the locked office of the DNP candidate.

Data Analysis

The Demographic and Professional Data Forms were analyzed using descriptive statistics. Changes in scores from the pre-test and post-test on the “Knowledge, Attitudes, and Behaviors of Mental Health Clinicians regarding the Diagnosis of Adult ADHD and related Screening” was determined using paired t-tests.

Protection of Human Subjects

Participants were told their participation was voluntary and that they could withdraw from the project at any time without negative consequences. They were made aware that there were no foreseeable risks related to participating in this project. The expected benefit of participation was an increase their knowledge, attitudes and behaviors regarding adult ADHD and related screening tools. It was expected that this project benefits society by helping mental

health clinicians understand the feasibility of using a self-report screening scale for a quick and efficient diagnosis of adult ADHD during the intake process of adult clients. There was no cost or payment to any participant. Confidentiality was maintained by the use of code numbers so that no personal identifiable information data was present on the study materials. The study materials were secured in an encrypted password-protected computer in the office of the DNP candidate for access or in a locked file cabinet in the locked office of the DNP Candidate. Only the DNP Candidate had access to study data. The study data was destroyed immediately following the completion of the project.

“Do stage”

In the “Do Stage,” the plan was set in motion and implemented

“Study stage”

In the “Study Stage,” the results were analyzed.

“Act stage”

In the “Act Stage,” if the project was determined to be successful, it would be implemented during trainings at the facility.

VIII. Results

Sample Demographics and Professional Data

The sample consisted of one male (10%) and 9 females (90%), with an average number of years as a licensed mental health professional of 4.4 years (mean). Identify the various types of professionals

Most mental health professionals found the misdiagnosis of adult ADHD significant. In addition, they reported about 45.7% of first-time visit patients have a potential diagnosis of adult ADHD.

Knowledge Questionnaire regarding Diagnosis and Screening of Adult ADHD

The percentage of participants' responses to each question about their knowledge on screening and diagnosing adult ADHD are illustrated in Table 1.

Table 1

Knowledge Questionnaire on the Diagnosis and Screening of Adult ADHD Pre-and Post-Test Scores

Question	Pretest	posttest	%Change
ADHD is characterized by all these Except?			
Inattention	0	0	0%
Impulsivity	2 (20%)	0	20%↓
Hyperactivity	0	0	0%
Attention*	8 (80%)	10 (100%)	20%↑
ADHD can be diagnosed respectively in Adults			
True*	8 (80%)	10(100%)	20% ↑
False	2 (20%)	0	20%↓
Adults with untreated ADHD are susceptible to			
Divorce	0	0	0
Unemployment	0	0	0
Addiction and arrest	0	0	0
All of the above*	10(100%)	10(100%)	0

Difficulty finishing task is one of the most critical symptoms in hyperactivity type ADHD			
True*	9 (90%)	10(100%)	10%↑
False	1 (10%)	0	10%↓
The onset of symptoms of ADHD must be prior to the age of			
12*	7(70%)	10(100%)	30%↑
15	3(30%)	0	30%↓
18	0	0	0
What are the subcategories of ADHD?			
A-Predominantly Inattentive type	0	0	0
B-Predominantly hyperactive type	0	0	0
C-Combined type	0	0	0
D-All above*	9(90%)	10(100%)	10%↑
E- A&B	1(10%)	0	10%↓
According to the statistics, what percentage of males is found to have ADHD?			
20%	5(50%)	1(10%)	40%↓
69%*	4(40%)	9(90%)	50%↑
75%	1(10%)	0	10%↓

Note: % Change = Percent Change, * = The correct answer choice, ↑ = Increase in percent change, ↓ = Decrease in percent change

Two-Tailed Paired Sample T-Test

A two-tailed paired samples t-test was conducted to examine whether the mean difference in mental health clinicians' knowledge regarding the diagnosis and screening adults with ADHD. The change in the pre and post-test intervention scores was significant. The result of the two-tailed paired samples t-test was significant based on an alpha value of equal to 0.0044, $t(9) = 3.7720$, $p \leq 0.05$. This result indicates that the null hypothesis can be rejected and the difference in the mean scores of pre-and post-interventions was significant and different from zero. The mean

of Pre knowledge minus Post knowledge equals -20.0040. The results are presented in Table 2. A histogram of pre and post-test change scores is presented in Figure A.

Table 2

Two-Tailed Paired Samples t-Test for the difference Between Pre-Intervention and Post-Intervention on Mental Health Professionals Knowledge regarding Adult ADHD screening and diagnosis scores

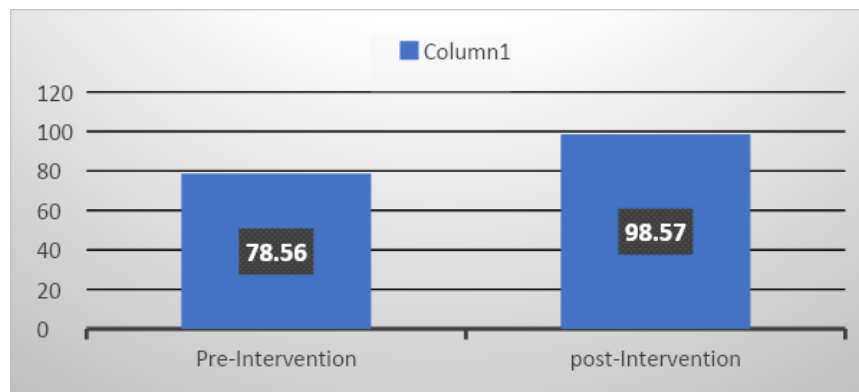
Pre-intervention		Post-Intervention		t	p	d
M	SD	M	SD			
78.56	15.43	98.57	4.51	3.77	0.0044	1.76

. N =10. Degrees of Freedom for the t-Statistic=9. D represents Cohen's d.

-Note

Figure A.

Differences in Scores of Mental Health Professionals Knowledge Regarding the Diagnosis and Screening of Adults with ADHD Pre and Post Intervention



Note: Comparison of the pre-test and post-test mean scores, 78.56% and 98.57% respectively

Attitudes Questionnaire on Diagnosis and Screening of Adult ADHD Pre-and Post-Test Scores

The percentage of participants' responses to each question about their attitudes regarding diagnosis and screening of adult ADHD are illustrated in Table 3.

Table 3**Attitudes Questionnaire on Adult ADHD Pre-and Post-Test Scores**

Question	Pretest	posttest	%change
Do you believe the best way to detect ADHD could be the use of screening tools?			
Yes *	9(90%)	10(100%)	10%↑
No	1(10%)	0	10%↓
How confident are you regarding your level of knowledge of adult ADHD			
Very confident	1(10%)	6(60%)	50%↑
Fairly confident	7(70%)	4(40%)	30%↓
Neutral	2(20%)	0	20%↓
Fairly non-confident	0	0	0
Very non-confident	0	0	0
How confident are you regarding your knowledge of the signs and symptoms of Inattentive type ADHD?			
Very confident	1(10%)	6(60%)	50%↑
Fairly confident	7(70%)	4(40%)	30%↓
Neutral	2(20%)	0	20%↓
Fairly non-confident	0	0	0
Very non-confident	0	0	0
How confident are you regarding your knowledge of the risk factor of ADHD?			
Very confident	1(10%)	7(70%)	60%↑
Fairly confident	6(60%)	3(30%)	30%↓
Neutral	3(30%)	0	30%↓
Fairly non-confident	0	0	0
Very non-confident	0	0	0
How confident are you in identifying the consequences of untreated adult ADHD?			
Very confident	2(20%)	9(90%)	70%↑
Fairly confident	3(30%)	0	30%↓
Neutral	5(50%)	1(10%)	40%↓
Fairly non-confident	0	0	0

Very non-confident	0	0	0
How confident are you in correctly diagnosing adult ADHD?			
Very confident	1(10%)	7(70%)	60%↑
Fairly confident	7(70%)	3(30%)	40%↓
Neutral	2(20%)	0	20%↓
Fairly non-confident	0	0	0
Very non-confident	0	0	0
How confident are you in the use of screening tools to diagnose adult ADHD?			
Very confident	1(10%)	5(50%)	40%↑
Fairly confident	5(50%)	5(50%)	0%↓
Neutral	4(40%)	0	40%↓
Fairly non-confident	0	0	0
Very non-confident	0	0	0

Note: % Change = Percent Change, ↑ = Increase in percent change, ↓ = Decrease in percent change

Two-Tailed Paired Sample T-Test

A two-tailed paired samples t-test was conducted to examine whether the mean difference in mental health professionals' attitudes regarding the diagnosis and screening of adults with ADHD. The change in pre and post-test intervention scores was significant. The result of the two-tailed paired samples t-test was significant based on an alpha value of equal to 0.0084, $t(9) = 3.3610$, $p \leq 0.05$. This result indicates that the null hypothesis can be rejected and the difference in the mean scores of pre-and post-interventions was significant and different from zero. The mean of pre attitudes minus Post Attitudes equals -19.2910. The results are presented in Table 4. A histogram of the changes in pre and post-test attitudes scores is presented in Figure B.

Table 4

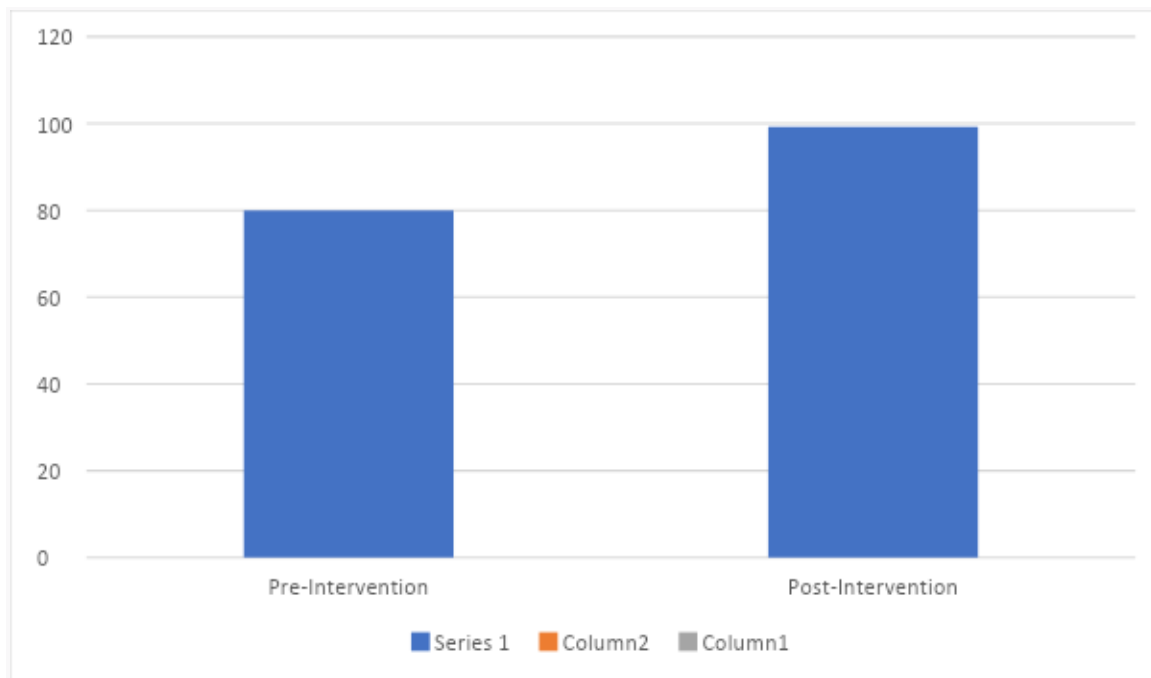
Two-Tailed Paired Samples t-Test for the difference Between Pre and Post-test Intervention on Mental Health Professionals' Attitudes regarding Diagnosis and Screening of Adult ADHD

Pre-intervention		Post-Intervention		t	p	d
M	SD	M	SD			
79.99	17.43	99.28	2.26	3.36	0.0084	1.55

-Note. N =10. Degrees of Freedom for the t-Statistic=9. D represents Cohen's d.

Figure B

Differences in Scores of Mental Health Professionals' Attitudes Regarding the Diagnosis and Screening of Adults with ADHD Pre and Post Intervention



Note: Comparison of the pre-test and post-test mean scores, 79.99% and 99.28% respectively

Behavior Questionnaire regarding Diagnosis and Screening of Adult ADHD

The percentage of participants' responses to each question about their behaviors related to the diagnosis and screening of adult ADHD are illustrated in Table 5.

Table 5: Behaviors Questionnaire on Adult ADHD Diagnosis and Screening Pre-and Post-Test Scores

Questions	Pretest	Posttest	%change
How likely are you to use a screening tool when assessing a patient with ADHD?			
Very likely	6(60%)	9(90%)	30%↑
Likely	4(40%)	1(10%)	30%↓
Neither unlike nor likely	0	0	0
Unlikely	0	0	0
Very Unlikely	0	0	0
How likely are you to use the World Health Organization (WHO) Adult Self-Report Scale (ASRS) during an assessment?			
Very likely	3(30%)	9(90%)	60%↑
Likely	3(30%)	0	30%↓
Neither unlike nor likely	1(10%)	1(10%)	0
Unlikely	3(30%)	0	30%↓
Very Unlikely	0	0	0
How likely are you to change the way you screen adults with ADHD?			
Very likely	5(50%)	10(100%)	50%↑
Likely	2(20%)	0	20%↓
Neither unlike nor likely	1(10%)	1(10%)	10%↓
Unlikely	2(20%)	0	20%↓
Very Unlikely	0	0	0
How likely are you to change the way you screen I require more education on the screening tool for ADHD			

Yes	7(70%)	10(100%)	30%↑
No	3(30%)	0	30%↓
I believe all mental health professionals should use the screening tool to assess patients with ADHD			
Strongly Agree	6(60%)	10(100%)	40%↑
Moderately Agree	2(20%)	0	20%↓
Agree	2(20%)	0	20%↓
Moderately disagree	0	0	0
Strongly disagree	0	0	0

Note: % Change = Percent Change, ↑ = Increase in percent change, ↓ = Decrease in percent change

Two-Tailed Paired Sample t-Test

A two-tailed paired samples t-test was conducted to examine whether the mean difference of mental health professionals' behaviors regarding the diagnosis and screening of adults with ADHD. The change score from pre to post-intervention score was significant. The result of the two-tailed paired samples t-test was significant based on an alpha value of equal to 0.0576, $t(9) = 2.17$, $p \leq 0.05$. This result indicates that the null hypothesis can be rejected and the difference in the mean scores of pre-and post-intervention was significant and different from zero. The mean of Pre-behavior minus Post-behavior equals -18.00. The results are presented in Table 6. A histogram of pre and post-test scores is presented in Figure C.

Table 6

Two-Tailed Paired Samples t-Test for the difference Between Pre-Intervention and Post-Intervention Mental Health Professionals' Behaviors regarding Diagnosis and Screening of Adult ADHD

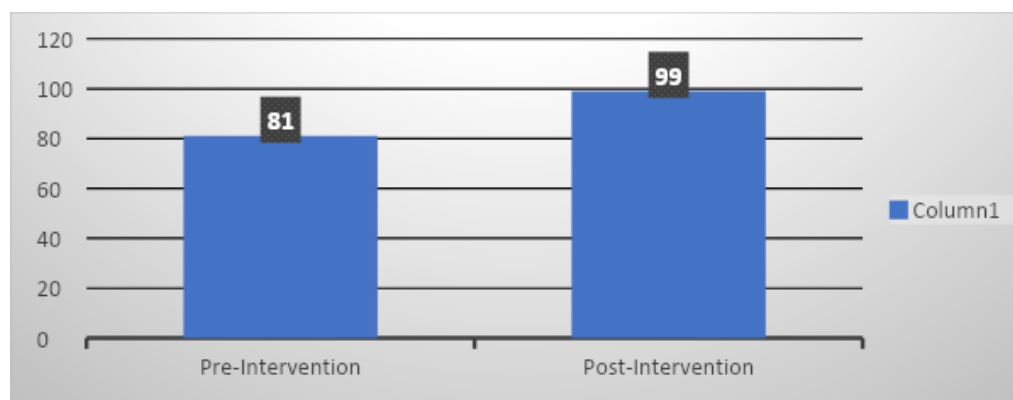
Pre-intervention		Post-Intervention		t	p	d
M	SD	M	SD			

81.00	25.58	99.00	..	3.16	2.17	0.057	0.98
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-Note. N =10. Degrees of Freedom for the t-Statistic=9. D represents Cohen's d.

Figure C

Differences in Score of Means of Mental Health Professionals' Regarding the Diagnosis and Screening of Adult ADHD Pre and Post Intervention



Note: Comparison of the pre-test and post-test mean scores, 81.00% and 99.00% respectively

IX. Discussion

The purpose of this study was to evaluate the Knowledge, Attitudes, and Behaviors of Mental Health Professionals related to the Diagnosis and Screening of Adult ADHD. All participants were mental health professionals at the facility, who care for adults with ADHD. Given the aging population, there is an increase in the need for accurate and effective assessments of adults with potential ADHD by mental health professionals (Bakare & Jordanova, 2020). Previous research suggests that clinicians lack an understanding of ADHD in adults and

believe that there is a lack of reliable assessment tools to correctly diagnose the disorder (De la Peña et al., 2020). However, Bakare and Jordanova (2020) report that many clinics use multiple comprehensive, diagnostic interviews that are confusing and less practical. Therefore, evaluating the knowledge, attitudes, and behaviors of mental health professionals related to the use of the WHO ASRS provides informs clinical practice and educational opportunities for providers.

In this QI project, the pre-test mean score regarding mental health professionals' *knowledge* related to adult ADHD and screening tool was 78.56% (SD15.43). Based on Table 1, only 20% of participants reported they knew the basic characteristic of ADHD. However, after the intervention, 100% of participants understood the disorder and how to utilize the ASRS to screen the disorder. After the educational intervention, the post-test knowledge mean score increased to 98.57% (SD 4.51). Table 2 indicates that the p-value was < 0.05 , which means that the null hypothesis was rejected and the change in knowledge was statistically significant. This result indicates the significant impact of the educational intervention on the participants.

Based on the data analysis, the pre-test mean score regarding the mental health professional's *attitude* related to adult ADHD and screening tool was 79.99% (SD 17.43). Post-test attitude scores indicated a significant increase in the attitude mean score to 99.28% (SD 2.26), with a p-value < 0.0084 , which was a statistically significant. Pre and post-intervention attitude questions regarding ADHD and screening tools and diagnosis are illustrated in Table 3. Based on Table 3, only 10% of participants reported being very confident regarding their level of knowledge of adult ADHD. However, after the intervention, 70% of participants reported being very confident with diagnosing ADHD and how to utilize the ASRS to screen the disorder. This indicates the value of an educational program regarding adult ADHD and use of screening tools.

However, this result also indicates that there are still 30% of mental health professionals in this sample who lack confidence in diagnosing adult ADHD and using a screening tool. Thereby, there is a need for ongoing education for existing health professionals at the facility and new employees.

Lastly, the pre-test means score regarding mental health professionals' *behavior* related to adult ADHD and screening tools was 81% (SD25.58). After the intervention, there was a significant change in the behavior mean score to 99% (SD 3.16), with a statistically significant p value of < 0.057 . Based on Table 5, 90% indicated that they were very likely to use an adult ADHD screening tool. It is important to mention here that before the training, no clinicians were using the WHO ASRS v 1 screening tool. This result indicates the significant impact of the educational intervention in the accurate and timely diagnosing of adults with ADHD. This is important because adults who receive early diagnosis and treatment of ADHD have a decrease in comorbid chronic diseases, such as heart disease, cancer, and diabetes conditions (Healthy People 2020, 2013).

X. Limitations of the Project

The limitations of the project include a small sample size given that the facility employees only 15 mental health professionals. In addition, the Mental Health Professionals' Knowledge, Attitudes, and Behavior regarding Diagnosis of Adult ADHD and Screening Questionnaire was developed by the DNP Candidate with only face/content validity established. Use of the questionnaire for future projects would provide an opportunity to develop construct validity of the instrument. Due to the limitations identified, the findings should be carefully interpreted and are not generalizable.

XI. Implications for Advance Practice Nursing

This quality improvement project indicates that an educational program regarding the diagnosis of adult ADHD and screening has significantly improved the knowledge, attitudes and behaviors of mental health professionals from pre to post educational intervention. The participants post-intervention expressed that they would very likely use the WHO-ASRS as time-effective and efficient screening tool to diagnose adult ADHD. Use of this screening tool may lead to the accurate diagnosis of adult ADHD and early treatment for patients receiving care in community mental health clinics. The findings of this QI project demonstrated that mental health professionals would benefit from educational training to improve their ability to confidently and accurately screen adults with ADHD. Advance Practice nurses (APNs) are recognized for their ability to implement system changes, such as educational initiatives that can improve the quality of care offered to diverse patient populations. This project should be replicated at other community mental health centers to further evaluate the effectiveness of this educational intervention in increasing the knowledge, attitudes and behaviors of mental health providers in the diagnosis of adult ADHD and screening.

XII. Dissemination Plan

According to the American Association of College of Nursing (AACN), dissemination of the DNP Project is the final step in sharing the knowledge gained with the academic and clinical community to improve healthcare outcomes. Dissemination of a quality improvement project can be via presentation, print or digital media (Stoner, 2018).

Dissemination through Presentation

This DNP Project will be disseminated by presenting the project at the Florida International University DNP Symposium. It will also be presented to the administrators and staff of the facility where the project was implemented. In addition, the DNP project abstract will be submitted to a local and regional American Psychiatric Nurse Association Annual conference for a podium or poster presentation.

Dissemination through Publication

The DNP Project will be submitted to the journal “Issues in Mental Health Nursing” for publication. By publishing a clinical article regarding Adult Attention Deficit Disorder, as well as the results of the DNP quality improvement project will expand the knowledge base of advanced practice nursing and related health professions regarding Adults with Attention Deficit Disorder and screening.

XIII. Conclusion

The findings of this quality improvement project suggest that by providing ongoing educational training to mental health professionals regarding adult ADHD and the use of the WHO-ASRS screening tool may increase the accurate diagnosis and treatment of adults with ADHD. This educational initiative supports the recommendation of the U.S. Department of Health and Human Services (2019) to provide comprehensive prevention strategies and early

treatment for individuals with mental health disorders. Early diagnosis and treatment of adults with ADHD has the potential to improve patient outcomes, such as decreasing co-morbidities and improving their quality of life

XIV. References

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XIV. Appendices IRB Approval Letter



MEMORANDUM

To: Dr. Deborah Sherman

CC: Charline Boufin Tebeu

From: Carrie Bassols, BA, IRB Coordinator *ceb*

Date: March 30, 2023

Proposal Title: "An Educational Workshop to Improve Mental Health Professionals' Knowledge, Attitudes, and Behaviors related to the Care of Adults with Attention Deficit Disorder (ADHD) and Screening, Based on Changes in Pre and Post-test Scores: A Quality Improvement Project"

The Florida International University Office of Research Integrity has reviewed your research study for the use of human subjects and deemed it Exempt via the **Exempt Review** process.

IRB Protocol Exemption #: IRB-23-0143 **IRB Exemption Date:** 03/30/23
TOPAZ Reference #: 112759

As a requirement of IRB Exemption you are required to:

- 1) Submit an IRB Exempt Amendment Form for all proposed additions or changes in the procedures involving human subjects. All additions and changes must be reviewed and approved prior to implementation.
- 2) Promptly submit an IRB Exempt Event Report Form for every serious or unusual or unanticipated adverse event, problems with the rights or welfare of the human subjects, and/or deviations from the approved protocol.
- 1) Submit an IRB Exempt Project Completion Report Form when the study is finished or discontinued.

Special Conditions: N/A

For further information, you may visit the IRB website at <http://research.fiu.edu/irb>.



Letter of Endorsement

02/02/2023

Dear Members of IRB,

I am writing this letter to extend my support and endorsement of the project titled "An Educational Workshop to Improve Mental Health Professional Knowledge, Attitudes, and Behaviors related to the Care of Adults with Attention Deficit Disorder (ADHD) and Screening, based on changes in Pre and Post-test Scores: A Quality Improvement Project" being conducted by Charline Boufin Tebeu, a Doctor of Nursing Practice Candidate from Florida International University.

We are eager to learn the outcomes of the Quality Improvement Project. I endorse Charline's project without any reservations. If you have any questions or need further details, please contact me at sswaby@assuranceofhope.org.

Sincerely,

Sharon Swaby,

A handwritten signature in black ink, appearing to read 'Sharon Swaby', is written over a horizontal line.

CEO AHI.

Assurance of Hope Institute, Inc.
5975 West Sunrise Boulevard, Suite 115 • Sunrise, FL 33313
P: (954) 368-6856 • F: (954) 400-7394 • ahi@assuranceofhope.org



ADULT CONSENT TO PARTICIPATE IN A RESEARCH STUDY

Clinicians' Knowledge, Attitudes, and Behaviors related to Screening for Adult Attention Deficit Disorder (ADHD) Pre and Post and Educational Intervention: A Qualitative Improvement Project.

SUMMARY INFORMATION

Things you should know about this study:

- **Purpose:** The purpose of the study is to increase the knowledge, attitudes, and behaviors of clinicians regarding Adult ADHD and the use of the World Health Organization Adult Self-Report Scale (ASRS) for screening Adult ADHD.
- **Procedures:** If you choose to participate, you will be asked to sign an informed consent, followed by completion of the Demographic and Professional Data Form and the Knowledge, Attitudes, and Behaviors of Mental Health Professionals regarding the adult ADHD Diagnosis and Screening Questionnaire as the pre-test. Tools. Afterward, you will attend an on-site 30-minute educational presentation that will be scheduled in coordination with your manager at a convenient time regarding Adult ADHD diagnosis and screening. Following the completion of the educational presentation, you will complete the same questionnaire as a post-test.
- **Duration:** This will take about 60 minutes.
- **Risks:** The main risk or discomfort from this research is the possibility to experience some stress related to time management since the educational presentation will be conducted during the work day.
- **Benefits:** The main benefit is the positive change in knowledge, attitudes, and behaviors of Mental Health Professionals regarding Adult ADHD diagnosis and screening.
- **Alternatives:** There are no known alternatives available to you other than not taking part in this study.
- **Participation:** Taking part in this research project is voluntary.

Please carefully read the entire document before agreeing to participate.

PURPOSE OF THE STUDY

Consent form (Appendix A)

The purpose of this study is to increase the knowledge, attitudes, and behaviors of clinicians regarding Adult ADHD and the use of the World Health Organization Adult Self-Report Scale (ASRS) for screening Adult ADHD.

NUMBER OF STUDY PARTICIPANTS

If you decide to be in this study, you will be one of 10 to 12 people in this research study.

DURATION OF THE STUDY

Your participation will involve the signing of the informed consent (5 minutes), completion of the Demographic and Professional Data Form (5 minutes), completion of the Knowledge, Attitudes, and Behavior Related to ADHD Pre-test (10 minutes), attendance at the educational seminar (30 minutes) and completion of the Post-test (10 minutes). The total duration of participation is therefore 60 minutes (1 Hr).

PROCEDURES

If you agree to be in the study, we will ask you to do the following:

1. Informed consent will be emailed to you for signature and you can email it back or drop it off in the locked box by the lounge room within 72hrs. A code number will be assigned to each participant.
2. Fill out the Demographic and Professional Data Form and Screening Questionnaire (Pre-Test) provided to you by email.
3. Bring the Demographic and Professional Data Form and the Pre-Test with you to the scheduled educational presentation.
4. Attend an on-site 30-minute educational presentation regarding Adult ADHD and its screening tool.
5. Immediately after the presentation finishes, the same questionnaire used for the pre-test will be distributed to you to be completed as a post-test at that time.

RISKS AND/OR DISCOMFORTS

It is expected that the study will have no to minimal risk/discomfort associated with participation with the possible exception of some associated stress of participating during the work day, although your participation has been approved by the employer. There will not be any economic or physical risk associated with the project.

BENEFITS

The main benefit is the positive change in knowledge, attitudes, and behaviors of Mental Health Professionals regarding Adult ADHD diagnosis and screening

ALTERNATIVES

There are no known alternatives available to you other than not taking part in this study. Any significant new findings developed during the research which may relate to your willingness to continue participation will be provided to you.

CONFIDENTIALITY

The records of this study will be kept private and will be protected to the fullest extent provided by law. In any sort of report we might publish, we will not include any information that will make it possible to identify you. Research records will be stored securely, and only will have access to the records. However, your records may be inspected by authorized University or other agents who will also keep the information confidential.

Code numbers will be assigned to the participant and kept in a master key which identifies the name of the participant, their email address, and their assigned code number. The master key will be kept in a separate file cabinet from the study data to protect the participant's confidentiality.

COMPENSATION & COSTS

There is lunch provided for participation in this study. There are no costs to you for participating in this study.

RIGHT TO DECLINE OR WITHDRAW

Your participation in this study is voluntary. You are free to participate in the study or withdraw your consent at any time during the study. You will not lose any benefits if you decide not to participate or if you quit the study early. The investigator reserves the right to remove you without your consent at such time that he/she feels it is in the best interest.

RESEARCHER CONTACT INFORMATION

If you have any questions about the purpose, procedures, or any other issues relating to this research study you may contact Charline Boufin Tebeu at FIU, 786-357-5140, Email: cbouf3@fiu.edu

IRB CONTACT INFORMATION

If you would like to talk with someone about your rights of being a subject in this research study or about ethical issues with this research study, you may contact the FIU Office of Research Integrity by phone at 305-348-2494 or by email at ori@fiu.edu.

PARTICIPANT AGREEMENT

I have read the information in this consent form and agree to participate in this study. I have had a chance to ask any questions I have about this study, and they have been answered for me. I understand that I will be given a copy of this form for my records.

Signature of Participant

Date

Printed Name of Participant

Signature of Person Obtaining Consent

Date

Demographic and Professional Data Form

1. What is your gender?

☐ Male

☐ Female

☐ Other _____

2. What professional license do you hold?

☐ Medical Doctor (MD)

☐ Advanced Practice Registered Nurse (APRN)

☐ Licensed Clinical Social Worker (LCSW)

☐ Licensed Mental Health Counselor (LMHC)

☐ Registered Nurse (RN)

☐ Other _____

3. How many years have you been a licensed mental health professional?

4. How significant a problem do you think adult ADHD is with new adult clients? Please select a number between 0 and 5 indicating the significance.

Not Significant

Very Significant

0

1

2

3

4

5

5. What percentage of adult clients when they first enter the practice do you think have ADHD? Please provide your best estimate.

_____ %

6. Do you use a screening tool to identify Adult ADHD during your assessment?

_____ Yes

_____ No

7. Have you ever considered using the World Health Organization (WHO) Adult Self Report Scale as a screening tool for adults with ADHD as part of the intake process for new adult clients?

_____ Yes

_____ No

If no, why not? (Please write your answer in the space provided below.)

8. The following are a list of commonly used ADHD screening measures for an adult and older adult population. Please select all evidence-based screening tools that you have used in your current or past clinical practice. (Please select all that apply.)

☐ Wender Utah Rating Scale (WURS)

☐ Diagnostic Interview for ADHD in Adults (DIVA) 2.0

☐ Adult ADHD Self-Report Screening Scale for DSM-5 (ASRS DSM-5) Screener

☐ Adult ADHD Self-Report Scale (ASRS)

☐ Adult ADHD Clinical Diagnostic Scale (ACDS) v1.2

☐ Adult ADHD Clinical Diagnostic Scale (ACDS) v1.2

☐ None

☐ Other _____

9. What barriers do you think might be encountered when implementing the use of the WHO ASRS for adults with ADHD during the intake of new adult clients? (Please select all that apply.)

☐ Lack of time

☐ Lack of cooperation by adult clients

☐ Lack of training

☐ Discomfort with administering screening measures

☐ Lack of access to the measure

☐ Unsure how to score the measure

☐ Other _____

10. If you were given training on the administration of the WHO ASRS for new adult clients, would you feel comfortable explaining the purpose of the screening measure and conducting the screening with a new adult client?

_____Yes

_____No

If no, why not? (Please write your answer in the space provider below)

Knowledge, Attitudes, and Behaviors Questionnaire on Adult ADHD

- 1- ADHD is characterized by all these **EXCEPT**?
 - A- Inattention
 - B- Impulsivity
 - C- Hyperactivity
 - D- Attention
- 2- Difficulty finishing tasks is one of the most critical symptoms in Hyperactivity type ADHD.
 - A- True
 - B- False
- 3- The onset of symptoms of ADHD must be prior to the age of ...
 - A- 12
 - B- 15
 - C- 18
- 4- ADHD can be diagnosed retrospectively in adults
 - A- True
 - B- False
- 5- What are the subcategories of ADHD? Select all that apply
 - A- Predominantly Inattentive type
 - B- Predominantly Hyperactive type
 - C- Combined type
 - D- All of above
 - E- A & C
- 6- According to the statistics, what percentage of males is found to have ADHD?
 - A-20%
 - B-69%
 - C-75%
- 7- Adults with untreated ADHD are susceptible to

- A- Divorce
- B- Unemployment
- C- Addiction and arrest
- D- All of above

8- In most cases, symptoms of ADHD can overlap with the symptoms of depression or anxiety.

Do you believe that the best way to detect ADHD could be the use of screening tools?

A-Yes

B-NO

9- How confident are you regarding your level of Knowledge of adult ADHD

A -Very Confident

B- Fairly Confident

C- Neutral

D- Fairly Non-confident

E-Very Non-confident

10- How confident are you regarding your knowledge of the signs and symptoms of Inattentive type ADHD?

A -Very Confident

B- Fairly Confident

C- Neutral

D- Fairly Non-confident

E-Very Non-confident

I

11- How confident are you regarding your knowledge of the risk factors of ADHD?

A -Very Confident

B- Fairly Confident

C- Neutral

D- Fairly Non-confident

E-Very Non-confident

12- How is your level of Knowledge regarding the consequences of Untreated adult ADHD in society?

A -Very Confident

B- Fairly Confident

C- Neutral

D- Fairly Non-confident

E-Very Non-confident

13- How confident are you regarding the diagnosis of Adult ADHD?

A -Very Confident

B- Fairly Confident

C- Neutral

D- Fairly Non-confident

E-Very Non-confident

14- How confident are you regarding the screening tool used to diagnose adult ADHD?

A -Very Confident

✍ B- Fairly Confident

C- Neutral

D- Fairly Non-confident

E-Very Non-confident

15 – How likely are you to use a screening tool when assessing a patient with ADHD?

A- Very Likely

B- Unlikely

C- Neither unlikely nor likely

D- Likely

E- Very likely

16-How likely are you to use the World Health Organization (WHO) Adult Self-Report Scale (ASRS) during an assessment?

A-Very Likely

B-Unlikely

C-Neither unlikely nor likely

D-Likely

E-Very likely

17-How likely are you to change the way you screen adults with ADHD?

A-Very Likely

B-Unlikely

C-Neither unlikely nor likely

D-Likely

E-Very likely

18- I require more education on the screening tool for ADHD

A- Yes

B- NO

19-I believe all Mental Health Professionals should use the screening tool to assess patients with ADHD.

A-Strongly Agree

B-Moderately Agree

C- Agree

D-Moderately Disagree

E-Strongly Disagree

I

DNP Project Powerpoint

Clinicians' Knowledge, Attitudes, and Behaviors related to Screening for Adult Attention Deficit Disorder (ADHD) Pre and Post an Educational Intervention: A Qualitative Improvement Project"



I

Charline Boufin Tebeu, MSN, APRN, PMHNP-BC DNP Candidate
Nicole Wertheim College Of Nursing & Health Sciences

Deborah Witt Sherman, Phd, APRN, ANP-BC, ACHPN,FAAN
Doctor Of Nursing Practice Lead Professor

Marjorie Hardy-Hibbert, PhD, APRN, PMHNP
Clinical Preceptor

Introduction

What is Adult ADHD?

Attention deficit/Hyperactivity disorder (ADHD) is:

- A neurodevelopmental disorder that begins in childhood, prevails, and persists through adulthood (De la Pena et al., 2020).
- A mental health condition exhibited by difficulty maintaining attention (De la Pena et al., 2020).
- It is usually characterized by symptoms such as inattention, motor hyperactivity, and impulsivity. Those impairments affect intellectual functioning and impact: education, vocation, family, accidents with injuries, social interactions of the person, and early mortality (De la Pena et al., 2020).



DO YOU EXPERIENCE
THIS **ADHD** TRAIT ?



Problem Statement



- Many adults with ADHD are undetected and misdiagnosed (Kessler et al., 2006).
- Due to overlapping symptoms with other conditions, providers misdiagnose and mistreat the real issue (De la Pena et al., 2020).
- Not having a rapid, reliable, standard assessment criterion for adults with symptoms of ADHD, makes the diagnostic process very difficult for the therapist (De la Pena et al., 2020).

Incidence and prevalence

- ❖ Prevalence of 4.4% of adults with ADHD with 62 % of them being male (Kessler et al., 2006).
- ❖ The rate of ADHD in the US has risen from .43% in 2007 to .96% in 2016, thereby increasing to about 123% (Kessler et al., 2006)..

Background

Identification of ADHD

- ADHD was identified for the first time by German doctors in 1902 based on the impulsive behavior of children (Walters, 2011).
- ADHD is a childhood disorder that extends into adulthood.
- It was officially recognized in the DSM in 1968 (American Psychiatric Association (APA), 2000 cited in Walters, 2011).
- The disorder was renamed several times and the last revision was in 1987 to attention deficit hyperactivity disorder (ADHD) (Conners, 2015).

Risk factors of ADHD

It was found that ADHD could have some risk factors such as :

- Genetics
- Environmental
- Biological factors (Sun et al., 2018, cited in Kessi et al., 2022).



Background

Genetics factor:

- Studies conducted on twins found that the heritability of ADHD was between 70% and 80% and it could emerge from childhood to adulthood (Faraone & Larsson, 2019 cited in Anderson et al., 2020).

Environmental factor:

- Poverty, malnutrition, dysfunctional family, divorce, tobacco, alcohol, and unemployment were found to be risk factors (Faraone & Larsson, 2019 cited in Anderson et al., 2020).

Biological factor:

- The dysregulation of certain neurotransmitters (dopamine, norepinephrine) (Walters, 2015).



Purpose

The purpose of this study is to increase the knowledge, attitudes, and behaviors of clinicians regarding Adult ADHD and the use of the World Health Organization Adult Self-Report Scale (ASRS) for screening Adult ADHD.



Significance



Untreated adult ADHD may result in:

- Psychological distress, drug abuse, depression, mood swings, gambling, risky sex, car accidents, trouble with the law, and economic losses reported at the workplace (De la Pena et al., 2020).
- Trouble concentrating on a small task, feeling of inferiority, and mental breakdown can lead to suicidal thoughts (De la Pena et al., 2020).

Conceptual framework:
Dorothea Orem's self-care Deficit

Orem's Self-Care Deficit and Nursing Process

- Applying the Orem **Self-Care Deficit model** in this study illustrates how the complication of adults with ADHD can increase rapidly and may demonstrate how patients' perceptions of their disorder can influence their decisions to be **proactive in seeking treatment**.
- Due to certain social determinants of health, patients are sometimes limited to providing self-care and need help from health professionals. This is where therapeutic self-care theory plays an important role(Okafor, 2019).
- Complications associated with adult ADHD can be devastating for their quality of life when there is a delay in diagnosis and treatment management (Miller, 2016).

PICO Question

For Clinicians in an outpatient setting, will an Educational Intervention regarding the diagnosis of Adult ADHD use of the Adult Self-Report Scale (ASRS), change their pre and post-scores on knowledge, attitude, and behaviors related to the diagnosis of adult ADHD and Screening of Adult ADHD?

Population

Mental health professionals:

- Licensed therapists
- Mental health Nurse practitioners (NP)
- Psychiatrists (MD)

Intervention

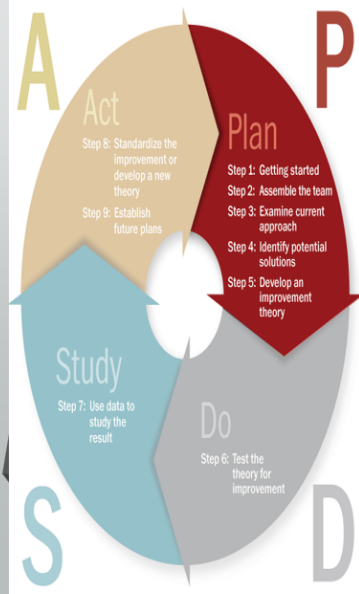
- Thirty-minute Powerpoint presentation (PPT) once

Comparison Pre and Post survey questions

Outcome Change in Knowledge, Attitudes, and behaviors of Mental Health Professionals regarding a diagnosis of adult ADHD and related screening.



Quality Improvement Methodology Plan, Do, Study, Act



Design: Pre-test/Post-test

Setting: Outpatient mental health community center

Sample: 10 including 1MD, 4NPs, 5 licensed mental health therapists

Intervention: Thirty-minute PowerPoint presentation (PPT) once

Instruments: Demographic and Professional Data Forms and Knowledge, Attitude, and Behavior survey regarding adult ADHD screening

Analysis: Describe statistics to analyze demographic and professional data; Paired T-test to measure pre and post-test scores

Protection of Human Subjects

- IRB approval of the project was obtained.
- Written informed consent was completed by interested individuals before data collection and stored in a locked file cabinet in the locked office of the DNP Candidate.
- Participants were told their participation was voluntary and that they can withdraw from the project at any time without negative consequences.
- There was no cost or payment to participants.
- Master key identified the name of the participant and their assigned code number to protect confidentiality. The master key was stored separately from the study data in a locked cabinet with access only by the DNP Candidate.

Data Collection and Management



Data Collection

- Potential participants were informed about the project through handouts, face-to-face communication, and emails.
- After agreeing to participate, demographic and Professional Data Form was sent and returned via email.
- Pre-test survey regarding Knowledge, Attitudes, and Behaviors related to the Care of patients with Adult ADHD was sent via email to be completed before the educational intervention and the same questionnaire as the post-test.

Management of data

- Electronic study data was maintained in an encrypted password-protected computer in the locked office of the DNP candidate.

Intervention

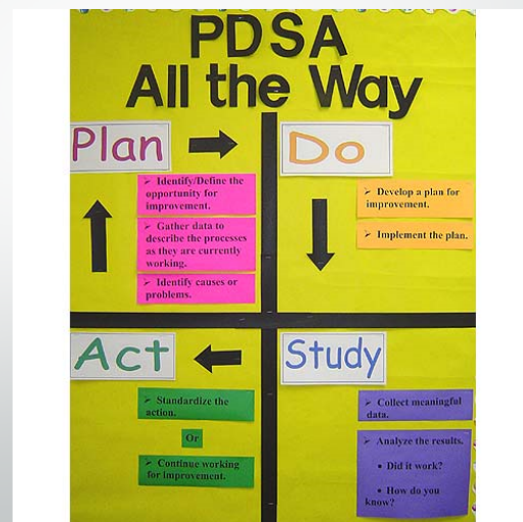


The intervention will be in person.

Educational presentation: duration 30 min discussion

The teaching strategy :

- PowerPoints
- Case study
- Discussion.



Results: Demographic and Professional Data

- The sample consisted of one male (10%) and 9 females (90%)
- Average number of years as a licensed Mental Health Professional 4.4 years (mean).
- Licensed Mental Health Professionals included: 1 psychiatrist, 5 mental health counselors (psychologist, License Social Workers), and 4 psychiatric Mental Health Nurse Practitioners.

Results: Knowledge, Attitudes, and Behaviors related to the Diagnosis of Adult ADHD

- **Knowledge**

A two-tailed paired samples t-test was conducted

The result was significant based on an alpha value of equal to 0.0044, $t(9) = 3.7720$, $p \leq 0.05$.

The pre-and post-interventions was significant and different from zero.

- **Attitudes**

A two-tailed paired samples t-test was conducted

The result was significant based on an alpha value of equal to 0.0084, $t(9) = 3.3610$, $p \leq 0.05$.

The pre-and post-interventions was significant and different from zero.

Results: Knowledge, Attitudes, and Behaviors related to the Diagnosis of Adult ADHD

- **Behaviors**

A two-tailed paired samples t-test was conducted.

The result was significant based on an alpha value of equal to 0.0576, $t(9) = 2.17$, $p \leq 0.05$.

The pre-and post-intervention was significant and different from zero

Discussion

- The pre-test mean score regarding mental health professionals' *knowledge* related to adult ADHD and screening tool was 78.56% (SD15.43).
- However, after the intervention, 100% of participants understood the disorder and how to utilize the ASRS to screen the disorder.
- After the educational intervention, the post-test knowledge mean score increased to 98.57% (SD 4.51).
- The pre-test mean score regarding the mental health professional's *attitude* related to adult ADHD and screening tool was 79.99% (SD 17.43).
- Post-test attitude scores indicated a significant increase in the attitude mean score to 99.28% (SD 2.26), with a p-value < 0.0084, which was a statistically significant.
- The pre-test means score regarding mental health professionals' *behavior* related to adult ADHD and screening tools was 81% (SD25.58).
- After the intervention, there was a significant change in the behavior mean score to 99% (SD 3.16), with a statistically significant p value of < 0.057.

Limitations

- Small sample size
- The instrument used for the project was developed by the DNP Candidate with only face/content validity established
- Due to the limitations identified, the findings should be carefully interpreted and are not generalizable.

Implications for Advanced Practice Nursing

- The findings of this QI project demonstrated that mental health professionals would benefit from educational training to improve with confidence the screening and diagnosis of adults with ADHD.
- Advance Practice nurses (APNs) to implement system changes, such as educational initiatives that can improve the quality of care offered to diverse patient populations.

Dissemination Plan

Dissemination through Presentation

- The project will be presented at the Florida International University DNP Symposium.
- To the administrators and staff of the facility where the project was implemented.
- DNP project abstract will be submitted to a local and regional American Psychiatric Nurse Association Annual conference for a podium or poster presentation.

Dissemination through Publication

- Submitted the project to the journal “Issues in Mental Health Nursing” for publication.

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