



شبكة المعلومات الجامعية  
التوثيق الإلكتروني والميكرو فيلم

# بسم الله الرحمن الرحيم



**HANAA ALY**



شبكة المعلومات الجامعية  
التوثيق الإلكتروني والميكروفيلم



## شبكة المعلومات الجامعية التوثيق الإلكتروني والميكروفيلم



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# جامعة عين شمس التوثيق الإلكتروني والميكروفيلم

## قسم

نقسم بالله العظيم أن المادة التي تم توثيقها وتسجيلها  
علي هذه الأقراص المدمجة قد أعدت دون أية تغييرات



## يجب أن

تحفظ هذه الأقراص المدمجة بعيدا عن الغبار



**HANAA ALY**



# **Adult Attention Deficit Hyperactivity Disorder (ADHD) Diagnosis among Patients Diagnosed by Non-Psychotic Affective Mood Disorders**

Thesis

*Submitted for the Partial Fulfillment of  
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By

***Nermeen Muhammed Abd Allah Abd El Hafez***  
*M.B.B.Ch. Faculty of Medicine, Ain Shams University*

Under Supervision of

**Dr. Nermeen Mahmoud Shaker Ibrahim**

*Professor of Psychiatry  
Faculty of Medicine, Ain Shams University*

**Dr. Doha Mostafa El Serafi**

*Assistant Professor of Psychiatry  
Faculty of Medicine, Ain Shams University*

**Dr. Ahmed Adel Abd El Gawad**

*Lecturer of Psychiatry  
Faculty of Medicine, Ain Shams University*

*Faculty of Medicine  
Ain Shams University  
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بِسْمِ اللَّهِ الرَّحْمَنِ الرَّحِيمِ

# قَالَ

لَسْبَّانِكَ لَا أَعْلَمُ لَنَا  
إِلَّا مَا عَلَّمْتَنَا إِنَّكَ أَنْتَ  
الْعَلِيمُ الْعَظِيمُ

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# Dedications

*It is my genuine gratefulness and warmest regard that I dedicate this work to all the participants my family, my professors, my colleagues and the patients.*

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# List of Abbreviations

Abb.	Full term
AAQOL	Adult ADHD Quality of life Scale
ACE+	ADHD Child Evolution
ADD	Attention deficit disorder
ADHD	Attention deficit hyperactivity disorder
APA	American Psychological Association
ASRS	Adult self-report scale
BD	Bipolar Disorder
CAARS	Conners' Adult ADHD Rating Scales
CADDRA	Canadian ADHD Research Alliance
CBT	Cognitive Behavioral Therapy
CO	Combined Type ADHD
DA	Dopamine
DIVA	Diagnostic Interview for ADHD in Adults
DSM IV	Diagnostic and statistical manual of mental Disorder IV
EEG	Electroencephalogram
EF	Exceptive functions
ER	Extended Release
GA	Gamblers Anonymous.
HI	Hyperactive impulsive
ICD10	Tenth International Classification of Diseases
IQ	intelligence quotient
MAS	Mixed Amphetamine Salts
MDD	Major Depression Disorder
NCSR	National Comorbidity Survey Replication
NDDs	Neurodevelopmental Disorder
NE	Nor Epinephrine
PN	Predominantly Inattentive ADHD
RCTs	randomized controlled trials
RDoC	Research Domain Criteria
SCID I	Structured Clinical Interview for DSM Disorders
SGAs	Second Generation Anti-Psychotic

# List of Abbreviations cont...

Abb.	Full term
<i>SNRIs</i> .....	<i>Serotonin and norepinephrine reuptake inhibitors</i>
<i>SSRIs</i> .....	<i>Selective serotonin reuptake inhibitors</i>
<i>SUD</i> .....	<i>Substance use disorder</i>
<i>US</i> .....	<i>United States</i>
<i>WAIS</i> .....	<i>The Wechsler Adult Intelligence Scale</i>
<i>WFIRS</i> .....	<i>Weiss Functional Impairment Rating Scale</i>
<i>WMH</i> .....	<i>The World Mental Health</i>
<i>WMS III</i> .....	<i>Wechsler Memory Scale – 3rd Edition</i>
<i>WPAI</i> .....	<i>Work Productivity and activity impairment questionnaire</i>
<i>WR ADDs</i> .....	<i>Wender Reimherr Attention deficit disorder Scale</i>
<i>WURs</i> .....	<i>Wender Utah Rating Scale</i>

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# INTRODUCTION

Attention-deficit/hyperactivity disorder (ADHD) is a psychiatric disorder associated with considerable personal and societal burden. While ADHD is well recognized in the pediatric population, where it was first described as a clinical diagnosis in the 1930s. Then focus has shifted to include the recognition and management of the condition in adults (DSM-IV). ADHD is a disorder of inattention, hyperactivity, and impulsivity, affecting 5.3% of children (*Polanczyk et al., 2014*).

ADHD has been extensively studied over the past four decades, especially in the United States (US), Canada, Europe, and Australia and more recently Eastern Asia (*Polanczyk et al., 2014*) and (*Thomas et al., 2015*). Scientific research on ADHD in the Middle East, and particularly Arab countries is relatively limited (*Alhraiwil et al., 2015; Alkhateeb & Alhadidi, 2016*).

While it is known that ADHD often persists into adulthood (*Goodman, 2007*), however has it been considered seriously in adults, becoming the focus of clinical and epidemiological studies (*Wilens & Dodson, 2004*). In fact, the National Comorbidity Survey Replication (NCSR) reported that 36.3% of adults (aged 18–44 years) with a retrospective diagnosis of childhood ADHD met DSM-IV criteria for adult ADHD in the US (*Kessler et al., 2005*). The World Mental Health (WMH) Surveys concluded that 2.8 % of adults across

20 countries (including Lebanon and Iraq from the Middle East) suffered from ADHD (*Fayyad et al., 2017*).

ADHD in adults often goes unnoticed and untreated, as majority of adults are not aware of it, leading to poor social, emotional, behavioral, and functional outcomes (*Ginsberg et al., 2014*). Indeed, clinical research suggests that adult ADHD patients are more prone to unemployment (*Kessler et al., 2005*).

Moreover, distinguishing ADHD from other comorbid psychiatric conditions that are more common in the clinical adult population is a challenge. As a matter of fact, as many as 80% of adult ADHD patients are estimated to meet criteria for at least one other mental health disorder (anxiety disorder, substance use disorder (SUD), bipolar disorder (BD), major depressive disorder...etc.) (*Barkley et al., 2008*). Consequently, patients are most likely treated for the comorbid disorder (*Fayyad et al., 2007; El Hayek et al., 2019*).

For instance, when looking at rates of anxiety disorders, some studies found a higher prevalence of panic disorder, posttraumatic stress disorder, social phobia, and other anxiety disorders in individuals with ADHD. Nevertheless, findings related to elevated rates of SUD and antisocial personality disorders among adult ADHD groups (versus adults without ADHD) were more consistent (*Gorlin et al., 2016*).

In addition, adult ADHD is reported to co-occur with BD. Meta-analysis examining comorbidity of ADHD and BD in adults identified rates ranging from 5% to 47%, regardless of whether comorbidity is assessed in ADHD or BD populations (*El Hayek et al., 2019*).

Often, adult ADHD has a more heterogeneous clinical presentation that transcends the typical motor symptoms described in pediatric populations and includes a wider spectrum of emotional dysregulation and functional impairment. As our diagnostic systems are evolving towards a more dimensional approach to the classification of mental disorders, so too is our understanding of adult ADHD. Today, practicing clinicians recognize the heritability of ADHD and the wide variability in clinical presentation of adult ADHD. As many as 80% of adults with ADHD have at least one coexisting psychiatric disorder (*Torgersen et al., 2008*), including mood and anxiety disorders, SUD, and personality disorders. This can complicate the recognition and diagnosis of ADHD in adults, and despite ongoing clinical controversy, the bulk of evidence suggests that ADHD remains under-recognized and under-treated in the adult population (*Katzman et al., 2016; Sobanski et al., 2007*).

Despite the challenges of recognizing ADHD in adults with complex clinical presentations, there are effective treatments available that have been demonstrated to improve clinical and functional outcomes, including important elements