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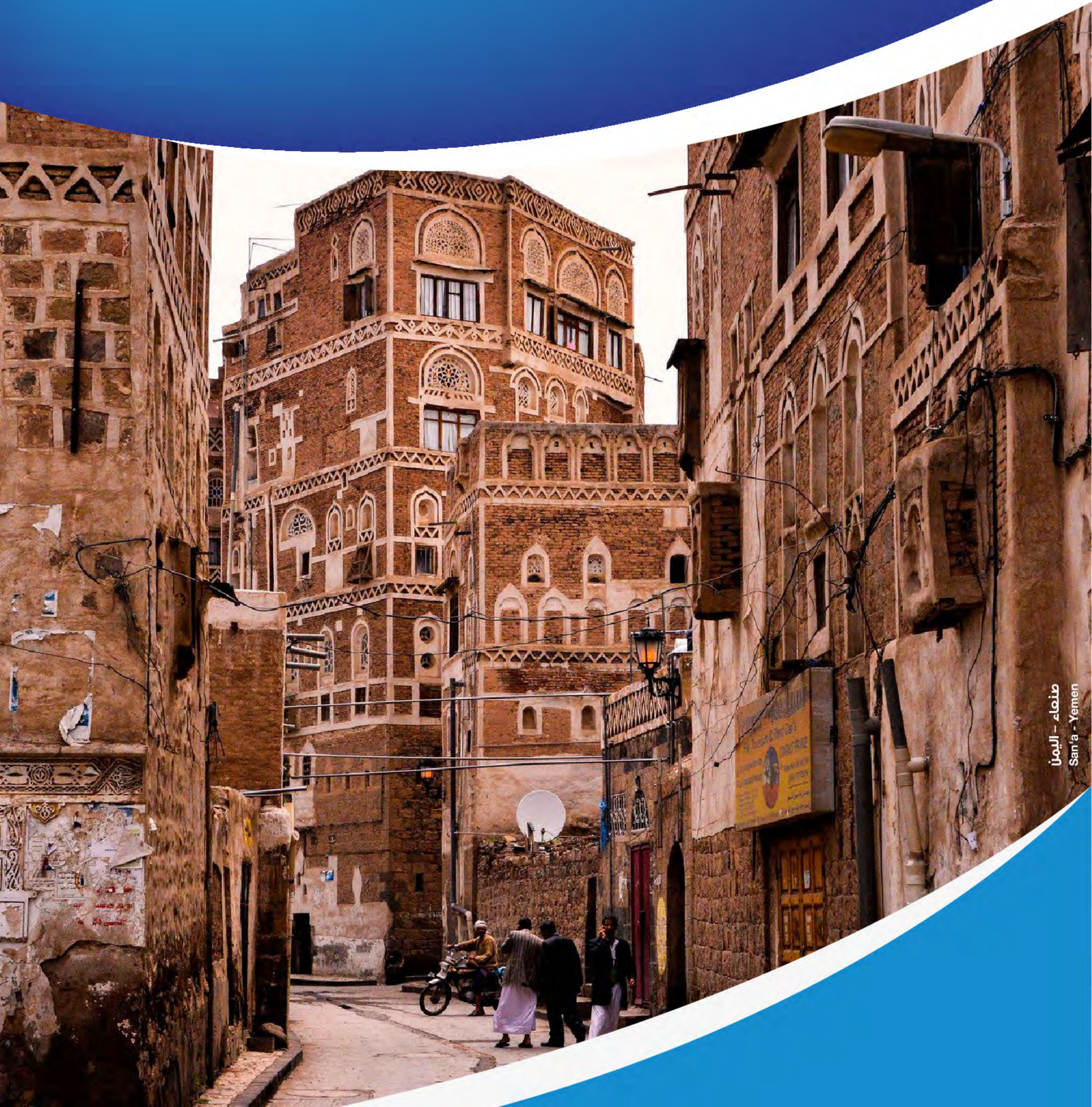

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- Mosey AC. Occupational therapy. Configuration of a profession. New York: Raven Press, 1981.

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Editorial Letter

May 2020

Dear Colleagues,

I write this to you during a global pandemic, which unites us all in the name of science and of humanity. History is already being written. There is research from colleagues in China, Italy, North America and in other parts of the world that describes the impact of Covid 19 on the mental health of people who have endured long periods of isolation, grief and loss, ongoing social distancing, lack of access to services, including mental health services; and, who must persevere, as must we all, despite the ongoing uncertainty. At the time the Arab Journal of Psychiatry has gone to press, British psychiatrists and psychologists are reporting those on the frontline of the coronavirus pandemic may develop anxiety, burnout and posttraumatic stress reactions similar to those experienced by soldiers post combat. There are also many accounts being written of positive gains; for example to the environment and to community cohesion, among other observations.

From the Arab world, there is much also that we can contribute to the growing body of Covid 19 research. Let us take this opportunity, in the coming months, to research the impact of this shared global experience on our own communities whether in Lebanon, Iraq, Jordan, Egypt, Yemen, Oman, Saudi Arabia, UAE .Kuwait, Qatar, Libya, Tunisia, Algeria, Bahrain , and elsewhere and convene with a November 2020 edition of the AJP dedicated to what you can contribute.

Sincerely,

Walid Sarhan

Amman, Jordan

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Neurodevelopmental Disorders and the Role of Pharmacotherapy: Review and Update

Aseel Al-Jadiri, Abdul-Monaf Al-Jadiry

اضطرابات النمو العصبي ودور العلاج الدوائي: مراجعة وتحديث

أسيل الجادري، عبد المناف الجادري

Abstract

Neurodevelopmental disorders (NDDs) are a heterogeneous group of chronic disorders that result from brain malfunction with onset in childhood before puberty. They are characterized by delay or disturbance in the acquisition of skills in a variety of developmental domains, including motor, social, language, and cognition. In addition, many people with such delays present with behavioral disturbances that often lead family, caregivers, or school educators to seek additional professional guidance. The lack of a curative therapy is an added clinical challenge. Non-pharmacological means offers the best available treatment approach at present. Psychopharmacological management on the other hand frequently results in drug misuse, polypharmacy, and development of serious adverse effects. The purpose of the current review is to present a brief account of NDDs and their types, describe current trends for this group of disorders, and offer an update on the psycho-pharmacological approach.

Key Words: Neurodevelopmental disorders, Pharmacotherapy, Pharmacotherapy of neurodevelopmental disorders.

Declaration of Interest: None

Introduction

In medical practice, including pediatric practice, clinicians are not infrequently challenged by clinical conditions that are chronic, incurable, and debilitating. Moreover, such conditions can cause distress, anxiety, burnout and frustration, not only to patients and their families, but to doctors involved as well. Such difficult situations inspired doctors to think of means that are symptomatically ameliorative to the ailment and attempt to offer the overwhelmed family and their children better quality of life. Examples of these conditions include congenital, genetic, developmental, cancerous and degenerative disorders. Many of these conditions have been considered incurable because of insufficient knowledge regarding their nature, underlying pathology and etiological factors. In recent decades, more attention has been given to these conditions stimulating researchers to examine closely the more obscure aspects of these conditions. Extensive research is being carried out in the field of genetics and molecular biology as well as the role of environmental factors with the hope of finding underlying causative genetic, immunological and environmental factors. Current advances in medical technology and molecular biology are facilitating these efforts. The impact may be demonstrated in earlier detection and recognition, improvement in management as reflected in the offered care and services.

The group of Neurodevelopmental Disorders (NDDs) is an example of such clinical conditions. It was in the mid-twentieth century when these disorders started to receive increasing attention and interest by several medical specialties, namely pediatricians, developmental and behavioral pediatricians, neurologists and psychiatrists, particularly child psychiatrists. In the past, and until recent years, NDDs were described as distinct disease categories. However, recent editions of disease taxonomies, such as the World Health Organization (WHO) International Classification of Diseases (ICD) and the American Psychiatric Association (APA) Diagnostic and Statistical Manual (DSM), have included them under a single group umbrella.[1, 2] Reasons for such grouping will be discussed further in the current review.

Neurodevelopmental disorders are a group of heterogeneous conditions characterized by delay or disturbance in the acquisition of skills in a variety of developmental domains, including motor, social, language, and cognition.[3] These disorders result from abnormalities that affect brain development and function during early developmental stages. Clinically, these disorders are detected at birth or in early childhood, mostly before grade school and prior to puberty. These disorders usually present with numerous motor, cognitive, communication, emotion dysregulation, behavioral, and social deficits of different grades of severity. Resulting physical disabilities and dysfunctions can cause continued suffering and stigmatization to the children and young people with the conditions as well as to their families, and care providers.

Advances in diagnosis and management for this population are well demonstrated in the teamwork, multi-disciplinary medical services and neurosciences involved in offering present domains of care and support. Recent approaches in management provide focus on education, rehabilitation, and psychosocial support in addition to medical care. The latter includes detailed clinical evaluation of individuals' physical deficits, observations and assessment of behavioral disturbances, cognitive impairment, communication difficulties and psychosocial dysfunctions. Services are individualized and tailored to respond to the patient needs. Research on psycho-pharmacotherapy, which constitutes one of the required fundamentals in the multidisciplinary approach, has progressed beyond the symptomatic relief level to a neurobiological healing role. Most modern guidelines for treatment suggest pharmacotherapy as approved by the American Food and Drug Administration (FDA) and some off-label use of medications based on evidence-based findings in clinical trials.

The objective of the current review is to highlight the role played by psycho-pharmacotherapy in the management of some prevalent NDDs. As part of the review, a brief account of NDDs and the earliest reference to them in history shall be presented. This is followed by a description of some of the underlying neurobiological mechanisms for the available psycho-pharmacological agents and the pharmacological approach to some of the common NDDs.

A General Perspective of Neurodevelopmental Disorders (NDDs)

NDDs, according to the fifth edition of the American Psychiatric Association (APA)-Diagnostic and Statistical Manual of Mental Disorders (DSM-5), are "a group of conditions with onset in the developmental period". The disorders typically manifest early in development, often before the child enters grade school, and are characterized by developmental deficits that produce impairments of personal, social, academic, or occupational functioning. The range of developmental deficits varies from very specific limitations of learning or control of executive functions to global impairments of social skills or intelligence. Neurodevelopmental disorders frequently co-occur; for example, individuals with autism spectrum disorder (ASD) often have intellectual disability (intellectual developmental disorder), and many children with attention-deficit/hyperactivity disorder (ADHD) also have a specific learning disorder. For some disorders, the clinical presentation includes symptoms of excess as well as deficits and delays in achieving expected milestones. For example, autism spectrum disorder is diagnosed only when the characteristic deficits of social communication are accompanied by excessively repetitive behaviors, restricted interests, and insistence on sameness.[4]

Advances in genomics, neuroimaging, and brain development over the last several decades have led to an increased understanding of these disorders. NDDs cannot be attributed to a specific etiological factor. Research suggests that normal brain development can be affected by multiple variables, including genetic mutations and metabolic conditions at conception, a mother's health during pregnancy, perinatal complications causing hypoxia and postnatal exposure to brain trauma, severe infection, such as meningitis, and environmental toxins, such as lead and methyl mercury.

The range of NDDs is reflected in the fact that some of those affected show specific deficits (e.g., difficulty maintaining focus) that do not prevent them from having an independent and fulfilling life. However, others will need lifelong assistance with basic living skills necessary for independent living, such as the ability to walk and feed oneself.

Data on children aged 3 to 17 years from the 1997-2008 National Health Interview Surveys, which is an ongoing nationally representative sample of households in the United States, suggests that approximately 15% of children were affected by neurodevelopmental disorders, including ADHD, learning disabilities, intellectual disability, cerebral palsy, autism, seizures, stuttering or stammering, moderate to profound hearing loss, blindness, and other developmental delays, in the years between 2006-2008.[5] Among these conditions, ADHD and learning disabilities had the greatest prevalence. Many children affected by neurodevelopmental disorders have more than one of these conditions, for example, about 4% of children in the US have both ADHD and a learning disability.[4] Some researchers have stated that the prevalence of certain NDDs, specifically autism and ADHD, has been increasing over the last four decades.[3,4,6,7] Children with neurodevelopmental disorders can have trouble with language and speech, motor skills, behavior, memory, learning, or other neurological functions. While the symptoms and behaviors of NDDs often change or evolve, as a child grows older, some disabilities are permanent. Diagnosis and treatment of these disorders can be difficult.

Treatment often involves a combination of professional therapy, psychopharmacology, and home and school-based programs.

Types of Neurodevelopmental Disorders (NDDs)

Major classificatory systems group NDDs under one umbrella. This is attributable to their typical onset in childhood, prior to puberty; their tendency to show a steady clinical course; the characteristic prominent early onset of neurocognitive deficits; that they are tend to affect boys more than girls; and the high level of overlap between them and their constituent symptoms. Although grouping is useful, it remains necessary to recognize important distinctions between different NDDs; for example, the differential effects of medication highlight that despite overlaps, NDDs are not biologically or clinically identical sets of problems. While stimulant medications and atomoxetine alleviate symptoms of ADHD and antipsychotics can reduce severity of tics, none of these medications has impact on core features of the other NDDs. Distinct diagnostic categories also provide a means for clinicians to readily communicate patients' difficulties with each other and with patients themselves. Thus, there is a clear indication to retain the practice of distinguishing these disorders as well as grouping them.

DSM-5 describes eight diverse categories of NDDs,[2] each provided with several specifiers, they include:

- Intellectual Disabilities (IDs)
- Communication Disorders (CDs)
- Autism Spectrum Disorder (ASD)
- Attention-Deficit/Hyperactivity Disorder (ADHD)
- Specific Learning Disorders (SLDs)
- Motor Disorders (MDs)
- Other Specified Neurodevelopmental Disorder (OSNDD)
- Unspecified Neurodevelopmental Disorder (USNDD)

Intellectual Disabilities (IDs)

The oldest view of ID can be found in the writings of Hippocrates in the late 5th century BC. He believed that the intellectual impairment was caused by an imbalance in the four humors in the brain. His view is considered biophysiological. Similar reference to ID is also found in the Egyptian papyrus of Thebes in 1552 BC. Ancient writings tell us that Greek and Roman Philosophers, who valued reasoning abilities, disparaged people with IDS as barely human.[8] In 1900 the words 'imbecility', 'feeble-mindedness', and 'mental deficiency' were used to describe individuals with ID. The first text to suggest that hereditary factors play an important part in intellectual disability was in a work titled *Mentally Defectives* in 1904 by William Barr. In 1907, patients with IDs in the US state of Indiana were held in institutions at which time also a law was passed imposing sterilization of all individuals with ID. Such inhumane treatment continued well into the 1970s. The language and terminology that was long used to describe people with intellectual disabilities gradually changed over time, which went some way to influence the societal outlook as well as legal frameworks. In 1959, the American Psychiatric Association introduced the term 'mental retardation' to replace 'mental deficiency'. In 1975, The Education for all Handicapped Children Act became law, which led to greater educational opportunities within the school system for all children with disabilities. Four years later, the Center on Human Policy issued The Community Imperative, which was a declaration affirming the rights of all people with disabilities to live in and be part of a community.

In 2013, DSM-5 introduced a new term and definition for 'mental retardation,' renaming the condition 'intellectual disability (ID)'.[9] ID is a common condition, affecting about 1% of the general population in the US. The DSM-5 defines intellectual disability (intellectual developmental disorder) as deficits in general mental abilities, such as reasoning, problem solving, planning, abstract thinking, judgment, academic learning, and learning from experience. The deficits result in impairments of adaptive functioning, such that the individual fails to meet standards of personal independence and social responsibility in one or more aspects of daily life, including communication, social participation, academic or occupational functioning, and personal independence at home or in community settings. DSM-5 diagnosis requires specifying ID as mild, moderate, severe, and profound. The diagnosis is used for individuals who are unable to undergo systematic assessments of intellectual functioning, including children who are too young to participate in standardized testing. DSM-5 emphasizes adaptive functioning, which are intellectual abilities in daily life, more than the DSM-IV did. These include an understanding of time and money, and the ability to interpret social cues and attend to personal needs, such as eating and dressing. The diagnostic criteria in DSM-5 changed to impairment in one or more adaptive domains, each of which includes three or more adaptive skills. DSM-5 does not require a specific IQ cutoff for the diagnosis. As a result, if a person has an IQ above 70, she could still receive an intellectual disability diagnosis if his/her adaptive skills are poor. Assessments of these skills can better delineate the relatively blurry cognitive boundaries of intellectual disability than IQ tests can.[9] 'Global developmental delay', as its name implies, is diagnosed when an individual fails to meet expected developmental milestones in several areas of intellectual functioning.

Communication Disorders (CDs)

The origin of communication disorder may be traced to the Talmud and also Bible passages, which suggest Moses was a person who stuttered, and that placing a burning coal in his mouth had caused him to be "slow and hesitant of speech" (Exodus 4, v.10).[10] Speech-language pathology has its roots in elocution (speech perfection) stemming from the 18th century in England. In the US, an emphasis on elocution continued but quickly shifted to a focus on communication disorders following the work of Samuel Potter who described several types of speech and language disorders.[11] Subsequently, the American Academy of Speech Correction was established in 1926.

Communication disorders include language disorder, speech sound disorder, social (pragmatic) communication disorder, and childhood-onset fluency disorder (stuttering). The first three disorders are characterized by deficits in the development and use of language, speech, and social communication, respectively. Childhood-onset fluency disorder is characterized by disturbances of the normal fluency and motor production of speech, including repetitive sounds or syllables, prolongation of consonants or vowel sounds, broken words, blocking, or words produced with an excess of physical tension.

Like other NDDs, communication disorders emerge early in life and may produce lifelong functional impairments.[8]

Autism Spectrum Disorder (ASD)

Eugen Bleuler, a Swiss psychiatrist, was the first to use the term 'autism' around 1911. The term referred to one group of symptoms related to schizophrenia. In the 1940s, researchers in the US began to use the word autism to describe children with emotional or social problems.[12] In 1943, the American child psychiatrist Leo Kanner published a paper describing 11 children who were highly intelligent but displayed "a powerful desire for aloneness" and "an obsessive insistence on persistent sameness".[13] Kanner later names the condition 'early infantile autism'. One year later, Hans Asperger described a milder form of autism, which has come to be known as Asperger's Syndrome.[13] The cases reported by Asperger were all boys who were highly intelligent, but had trouble with social interactions and specific obsessive interests. In 1980, 'Infantile autism' was listed in the Diagnostic and Statistical Manual of Mental Disorders (DSM) for the first time; the condition is also officially separated from childhood schizophrenia. The US Centers for Disease Control and Prevention (CDC) in 2014 estimates that 1 in 59 children have autism. The DSM-5 placed all subcategories of the condition under a single diagnosis of autism spectrum disorder (ASD). Asperger's Syndrome is no longer considered a separate condition. ASD is defined by two categories: (1) impaired social communication and/or interaction, and (2) restricted and/or repetitive behaviors.

According to DSM-5, ASD is characterized by persistent deficits in social communication and social interaction across multiple contexts, including deficits in social reciprocity, nonverbal communicative behaviors used for social interaction, and skills in developing, maintaining, and understanding relationships. In addition to the social communication deficits, the diagnosis of ASD requires the presence of restricted, repetitive patterns of behavior, interests, or activities. Because symptoms change with development and may be masked by compensatory mechanisms, the diagnostic criteria may be met based on historical information, although the current presentation must cause significant impairment. Within the diagnosis of ASD, individual clinical characteristics are noted through the use of specifiers (with or without accompanying intellectual impairment; with or without accompanying structural language impairment; associated with a known medical/genetic or environmental/acquired condition; associated with another neurodevelopmental, mental, or behavioral disorder), as well as specifiers that describe symptoms (age at first concern; with or without loss of established skills; severity).

These specifiers provide clinicians with an opportunity to individualize the diagnosis and communicate a rich clinical description of the affected individuals. For example, many individuals previously diagnosed with Asperger's disorder would now receive a diagnosis of ASD without language or intellectual impairment.

Attention Deficit Hyperactivity Disorder (ADHD)

The earliest mention of what is currently described as ADHD was by British pediatrician Sir George Still in 1902. He referred to "an abnormal defect of moral control in children." He found that some affected children could not control their behavior the way a typical child would, but they were still intelligent. In 1968, the APA formally recognized ADHD as a mental disorder in DSM-II calling it 'hyperkinetic impulse disorder' for the first time although the term was widely used prior to this. When the DSM-III cam out in 1980, the APA changed the name to Attention Deficit Disorder. In 1987, the APA released a revised version of the DSM-III and when the name was changed to Attention Deficit Hyperactivity Disorder (ADHD).

ADHD is a neurodevelopmental disorder defined by impairing levels of inattention, disorganization, and/or hyperactivity-impulsivity.[2] Inattention and disorganization entail inability to stay on task, seeming not to listen, and losing materials, at levels that are inconsistent with age or developmental level. Hyperactivity-impulsivity entails over activity, fidgeting, inability to stay seated, intruding into other people's activities, and inability to wait. These symptoms are excessive for age or for the developmental level. In childhood, ADHD frequently overlaps with disorders that are often considered to be externalizing disorders, such as oppositional defiant disorder and conduct disorder. ADHD often persists into adulthood, with resultant impairments of social, academic and occupational functioning. According to DSM-5, diagnosis requires the following specifiers:

Combined presentation, predominantly inattentive presentation, predominantly hyperactive/impulsive presentation; specify whether in partial remission; and specify severity (mild, moderate, severe).

Specific Learning Disorders (SLDs)

Dyslexia was first understood by German neurologist, Adolph Kaussmaul in 1877 who initially termed it ‘word blindness’.[14, 15] Ten years later, Rudolph Berlin, a German ophthalmologist, coined the term ‘dyslexia’.[16] The word is derived from the Greek *dys* (meaning poor or inadequate) and *lexis* (words or language). Berlin used the term as an explanation for the case of a young boy who had severe normal intellectual abilities. The first account in the US of childhood reading difficulties was published by the ophthalmologist Dr. W.E. Bruner in 1905, and in 1963, Samuel A. Kirk is documented to have used the term ‘learning disability’ at a conference in Chicago. In 1969, the US Congress passed the Children with Specific Learning Disabilities Act’, which forms part of the Education of the Handicapped Act of 1970. In 1975, federal law mandated support services for students with learning disabilities, and the Education for All Handicapped Children Act, which mandated free, appropriate public education for all students. The law was renamed IDEA in 1990.[17]

Dyslexia is common among children. In the US, it is estimated to affect 7-20% of children. The DSM-5 classifies Specific Learning Disorder (SLD), as a diagnosis when there are specific deficits in an individual's ability to perceive or process information efficiently and accurately. It first manifests during the years of formal schooling and is characterized by persistent and impairing difficulties with learning formational academic skills in reading, writing, and/or math. The individual's performance of the affected academic skills is well below average for age, or acceptable performance levels are achieved only with extraordinary effort. Specific learning disorder may occur in individuals identified as intellectually gifted and manifest only when the learning demands or assessment procedures (e.g., timed tests) pose barriers that cannot be overcome by their innate intelligence and compensatory strategies. For all individuals, specific learning disorder can produce lifelong impairment in activities dependent on the skills, including occupational performance. The use of specifiers for the neurodevelopmental disorder diagnoses enriches the clinical description of the individual's clinical course and current symptomatology. In addition to specific clinical presentation, such as age at onset or severity ratings. Neurodevelopmental disorders may include the following specifiers: known medical or genetic condition or environmental factors, impairment in reading (with word reading accuracy, rate or fluency, and reading comprehension), impairment in written expression (with spelling accuracy, grammar and punctuation accuracy, clarity or organization of written expression), impairment in mathematics (with number sense, memorization of arithmetic facts, accuracy or fluent calculation, accuracy with math reasoning) and last current severity needs to be specified as: mild, moderate, or severe.[15]

Motor Disorders

A reference was made to ‘Tourette Syndrome’ in a late 15th century work by Jacob Sprenger and Heinrich Kramer titled *Malleus Maleficarum* (Witch's Hammer), which describes a priest whose tics were "believed to be related to possession by the devil". In 1885, at the behest of his mentor Charcot, Gilles de la Tourette published a two-part article which identified a combination of multiple motor tics and involuntary vocalizations that over time increased in number and variety with the eventual appearance of eruptive cursing that he designated ‘coprolalia’.[18]

In 1900, Collier first named Developmental Coordination Disorder as 'congenital maladroitness' meaning being awkward in movement or unskilled in behavior or action. A. Jean Ayres referred to developmental coordination disorder as a disorder of sensory integration in 1972.[19,20] While in 1975, Sasson Gubbay called it the 'Clumsy Child Syndrome'.[21–23] Developmental coordination disorder has also been called 'Minimal Brain Dysfunction' although the two latter names are no longer in use. Other names include: Developmental Apraxia,[21] Disorder of Attention and Motor Perception,[21,23] Dyspraxia,[24] Developmental Dyspraxia,[21] Motor Learning Difficulties,[21,23] Percepuo-motor Dysfunction,[20,21,23] and Sensorimotor Dysfunction.[21]

DSM-5 defines Developmental Coordination Disorder as characterized by deficits in the acquisition and execution of coordinated motor skills and manifests as clumsiness and slowness or inaccuracy of performance of motor skills that cause interference with activities of daily living. Stereotypic Movement Disorder is diagnosed when an individual has repetitive, seemingly driven, and apparently purposeless motor behaviors, such as hand flapping, body rocking, head banging, self-biting, or hitting. The movements interfere with social, academic, or other activities. If the behaviors cause self-injury, this should be specified as part of the diagnostic description. Diagnosis requires specifiers (with or without self-injurious behavior, associated with a known medical or genetic condition, neurodevelopmental disorder, or environmental factor, and current severity: mild, moderate, or severe). Tic disorders are characterized by the presence of motor or vocal tics, which are sudden, rapid, recurrent, non-rhythmic, stereotyped motor movements or vocalizations. The duration, presumed etiology, and clinical presentation define the specific tic disorder that is diagnosed: Tourette's disorder, Persistent (chronic) Motor or Vocal Tic Disorder, Provisional Tic Disorder, Other Specified Tic Disorder, and Unspecified Tic Disorder. Tourette's Disorder is diagnosed when the individual has multiple motor and vocal tics that have been present for at least one year and that have a waxing-waning symptom course, need specifiers (with motor tics only or with vocal tics only).

Pharmacotherapy of Neurodevelopmental Disorders

Optimal treatment of NDDs constitutes a real clinical challenge that demands well planned strategies that are directed not only to the distinct disorder being under consideration, but should also be individualized to the needs of each patient. Management strategies should be comprehensive combining physical, behavioral, emotional, communicational, educational, and social assessment of the case. Most treatment programs for NDDS are therefore multifaceted, and the targeted child or youth requires an integrated service and a multidisciplinary team led by a clinician. Individuals with NDDs usually present with multiple abnormalities and difficulties that demand detailed and exhaustive workup. A passionate humane approach is essential and indispensable. Moreover, it is vital to remember that individuals with NDDs commonly suffer from comorbidities that require consultations with other clinical disciplines. Attention needs to be paid to the social stigma attached to individuals with such disorders with its negative impact on the person with the condition and his/her family. For the treatment program to be effective and successful detailed discussion and active involvement of families, caregivers and school is mandatory. Not uncommonly, burnout or symptoms associated with burnout can be experienced by the individual with the condition, his/her parents and, and potentially to the service team members.

Proper assessment of patients with NDDs helps accurate decision-making about the choice of services and reduces the need for drug prescription, Polypharmacy, chronic drug use, and other drug-related problems.

Polypharmacy and chronic drug use have been reported as common malpractices in clinical approach to control behavior, although evidence of effectiveness and safety in individuals with NDDs is lacking. In a study by Egberts et al (2016), out of a total of 55 patients with intellectual disability and behavioral problems, 284 medications were prescribed, in which drug-related problems were seen in 106 (34%). No indication/unclear indication was the most prevalent drug-related problems.[25]

In another study, antipsychotics are estimated to comprise 30-50% of all the psychotropic medications prescribed for persons with ID, although the prevalence of psychotic disorders is only 3% in this population. The over prescription of antipsychotics to persons with ID could be justified if their expressed behaviors, which can be perceived as aggressive, were associated with mostly psychotic disorders and if the anti-aggressive properties of the antipsychotics have been supported by basic research or reviews of clinical studies.[26] McQuire C. et al (2015) stated that psychotropic medications are frequently used to treat challenging behaviors in children with ID, despite a lack of evidence for their efficacy. The authors of this meta-analysis evaluated fourteen studies including 912 participants met inclusion criteria; antipsychotic medication reduced challenging behavior among children with ID in the short-term. However, there were significant side effects including elevated prolactin levels and weight gain. Evidence was inconclusive regarding the effectiveness of anticonvulsants and antioxidants for reducing challenging behavior. The quality of all evidence was low and there were no long term follows up studies.[27]

Concerns about the use of psychotropic drugs to manage the challenging behavior of individuals with ID have resulted in the development of legislative and procedural controls in many Westernized countries, including Australia. However, despite these legislations medicine prescription continues. A study examined information about 873 individuals (566 men, 307 women) who were the subjects of reports to the ID Review Panel in March 2000 concerning the use of chemical restraint. A high proportion of people with ID were reported to have received drugs for purposes of behavioral restraint. The range of drugs was extensive, although those from the antipsychotic class were the most frequently reported. Many individuals concurrently received more than one type of drug or more than one drug from the same drug class. More men than women and older than younger individuals were administered medication. The authors found an apparent relationship between gender and age, with younger men but older women dominating. The use of drugs to manage the behavior of people with ID may at times be warranted. However, it is important that the extent and type of drug use, as well as the characteristics of those who are medicated, be subject to ongoing scrutiny.[28]

The circumstances that make psychiatrists consider psychotropic medications for the management of challenging behavior in individuals with NDDs, according to Deb. (2016) include failure of non-medication based interventions, risk/evidence of harm to others, property and self, high frequency and severity of problem behaviors, to treat an underlying psychiatric disorder or anxiety, to help with the implementation of non-medication based interventions such as positive behavioral support (with concurrent use of medication), risk of breakdown of the individual's community placement, lack of adequate or available non-medication based interventions (although this should not be used as a rationale for using medication), good response to medication in the past, and patient/caregiver choice.[29] Deb also lists the reasons for public concern regarding the use of psychotropic medication in individuals with ID for the management of problem behavior in the absence of a diagnosed psychiatric disorder to include excessive use of medication, long term use without reviews, out of license use of psychotropic medications, use of medication without explicit patient consent which often occurs in ID, difficulty in carrying out necessary monitoring such as serum lithium level or blood tests for other adverse effects. Furthermore, Deb mentioned that despite the widespread condemnation of and lack of evidence for the use of multiple antipsychotic medications, this practice remains widespread.[30]

Neurobiology underlying pharmacotherapy of Neurodevelopmental Disorders

Brain development in NDDs has been considered to comprise a sequence of critical periods, and abnormalities that occur during early development have been considered irreversible in adulthood.[31] A study by Castran et al. in mouse models with neurodevelopmental disorders, including fragile X, Rett syndrome, Down syndrome, and neurofibromatosis type I suggest that it is possible to reverse certain neurobiological changes associated with these disorders in adults by genetic or pharmacological manipulations.[31] Studies have suggested that critical period-like plasticity can be reactivated in the adult brain by environmental manipulations or by pharmacotherapy.[32] These studies open up the possibility that pharmacological treatments with training or rehabilitation might alleviate or reverse the symptoms of neurodevelopmental changes even after the end of critical developmental periods for example the visual or auditory systems.[33] Even though translation from animal experimentation to clinical practice is challenging, these results suggest a rational basis for treatment of NDDs in adulthood.[31]

Over the past 20 years, a number of mutated genes that code for proteins concerned with brain synapse function and circuit formation have been identified in patients affected by intellectual disability.[34] These genes are involved in synapse formation and plasticity, the regulation of dendritic spine morphology, the regulation of the synaptic cytoskeleton, the synthesis and degradation of specific synapse proteins, and the control of correct balance between excitatory and inhibitory synapses. In most of the cases, even mild alterations in the physiological functions, biology or balance give rise to mild or severe IDs. These studies provided a rationale for the development of pharmacological agents that can counteract functional synaptic anomalies and potentially improve the symptoms of some of these conditions.[34]

Findings of recent translational research based on animal models of genetic NDDs, as well as pharmacological therapeutic strategies under development to address deficits of brain function for Down syndrome, fragile X syndrome, Rett syndrome, Neurofibromatosis-1, Tuberous Sclerosis, and Autism.[35] Study by Wetmore et al. (2010) suggest that although these disorders vary in underlying causes and clinical presentation, common pathways and mechanisms for dysfunction have been observed. A primary goal of translational research is to replace symptomatic and supportive drug therapies with pharmacological therapies based on a principled understanding of the causes of dysfunction.[35]

Current knowledge and pharmacological practice of common Neurodevelopmental Disorders

The first step in treatment of individuals with NDDs usually requires working closely with educators and caregivers involved with the care of the child, to adopt a behavioral approach or to make changes to the environment. When the use of a behavioral approach alone does not suffice, a pharmacological approach may be indicated. While people with ID respond to psychotropic medications, the response is often inferior when compared with the population without an ID and side effects are more frequent. Medication must be introduced slowly, and its effectiveness monitored closely (i.e., start low, go slow). Non-optimal dosing or not allowing sufficient time to observe the effects after a change in medication are among the more frequent causes of failure of psychotropic drugs. If no underlying psychiatric illness has been identified, medication will be prescribed based on the person's symptoms (e.g. agitation, aggressiveness), and should be administered in close collaboration with educators and families. Unfortunately, due to a lack of resources for this population, pharmacological intervention is increasingly used.[36]

Antipsychotics

Antipsychotics are the most commonly prescribed psychotropic medications in patients with ID, namely for psychotic symptoms and often problem behaviors, such as aggression, self-injurious behavior, severe stereotypies, hyperactivity and severe temper tantrums.[29,37,38] Risperidone and Aripiprazole are the only current antipsychotics approved for treatment of irritability associated with ASD, no other medications are approved specifically for patients with ID by the US Food and Drug Administration (FDA).[39] Overall, there appears to be good evidence to support the use of antipsychotics, particularly Risperidone, in children with ID. Two large randomized placebo controlled trials of Risperidone were conducted in children with sub-average intelligence and disruptive behavior disorders.[40,41] Aman et al (2002) reported that a separation from placebo in behavioral changes occurred as early as the first week of treatment.[41] Snyder et al (2002) noted that intelligent quotient (IQ) or sedation did not moderate the drug effects. [40] Multiple side effects were reported such as; somnolence, headaches, appetite increase, weight gain, prolactin increases, and extrapyramidal symptoms.[40,41] The longer-term efficacy and safety of Risperidone were described in subsequent open-label extension studies of these clinical trials with Initial prolactin elevation seemed to often decline, and sedation did not appear to result in decline in cognitive functioning.[42–44]

Efficacy and safety of Aripiprazole in reducing problem behaviors in children with ASD has been well supported by large randomized placebo controlled trials.[45–47] However, there are no randomized placebo controlled trials of Aripiprazole was found in patients with ID without ASD.[39]

Stimulants and stimulants-like medications

Both stimulants Methylphenidates and Amphetamines are well-recognized effective medications in the treatment of ADHD. The Multimodal Treatment of Attention Deficit Hyperactivity Disorder (MTA) study, one of the largest and longest running ADHD treatment studies of its kind, found that in 579 children with combined ADHD the efficacy of Methylphenidates alone is comparable to combination treatments (Methylphenidates and behavioral therapy) with significant improvement in ADHD symptomatology as well as longer term effects on academic performance and social functioning.[48] The Food and Drug Administration (FDA) approved minimum age for most stimulants is 6 years old, with the exception of immediate-release mixed Amphetamine salts and Dextroamphetamine, both approved to age 3 years old.[49] Despite this FDA age approval, methylphenidate was the medication treatment arm selected for use in the landmark Preschool Attention-Deficit/Hyperactivity Disorder Treatment Study, which influenced current clinical practice in preschool-aged children with ADHD.[50] Many randomized placebo controlled trials reported the efficacy of Methylphenidates for treatment of ADHD symptoms in children with ID as well.[51,52] The response rates in children with ID were lower (40-60%) than what would be expected for typically developing children (70-80%).[48,51,53,54] Children with ID are also more susceptible to adverse events, including sleep difficulties and poor appetite. Unlike previous reports, a recent larger randomized placebo controlled trial did not find IQ to affect treatment efficacy in children with ID.[51]

Atomoxetine is a selective norepinephrine (noradrenaline) reuptake inhibitor that is not classified as a stimulant, but was effective in reducing ADHD symptoms in children with ASD with/without intellectual disability in recent randomized placebo controlled trials.[55,56] Somnolence, fatigue, anorexia, nausea, and irritability were common reported adverse events.

Initially indicated for management of hypertension, the central a2-agonist medications Guanfacine and Clonidine are now formulated as extended release. These are FDA-approved for ADHD treatment in the pediatric population down to age 6 years, and efficacy has been corroborated by a recent meta-analysis.[57]

A small randomized placebo-controlled crossover (RPCCO) study showed Clonidine was effective in reducing both inattentive and hyperactive/impulsive ADHD symptoms in children with ID.[58] Drowsiness, dry mouth, and anorexia were common adverse events.

A small RPCCO of Guanfacine an alpha agonist medication in children with developmental disabilities showed benefits in improving hyperactivity and global functioning.[59] The American Academy of Pediatrics released most updated guidelines in management of children and adolescents with ADHD on December 2019.[60]

Anticonvulsants

Evidence from open-label studies suggested Valproate might be effective in improving problem behaviors and affective symptoms in patients with ID. An open-label study in boys with Fragile-X Syndrome (FXS) suggested that Valproate might be effective in reducing ADHD symptoms.[61–63] A small Randomized Placebo Controlled Trial showed that Carbamazepine was effective in reducing problem behaviors in Adults with ID.[64]

Antidepressants

Open-label studies of Fluoxetine a Selective Serotonin Reuptake Inhibitor (SSRI) for treatment of problem behaviors, including repetitive and obsessive-compulsive behaviors in patients with ID, showed mixed results. Their response rates ranged from 11–60%. Deterioration of symptoms and intolerable adverse events, such as irritability, increased aggression, and sleep difficulties commonly occurred.[65–67] SSRI treatment of pediatric depression suggests that the risks and benefits of SSRI use in should be carefully considered within the context of each patient.[68] However, published research is in accordance with the American Academy of Pediatrics and American Academy of Child and Adolescent Psychiatry regarding SSRI efficacy for pediatric depression and anxiety.[69]

Open-label studies of Paroxetine and Citalopram both (SSRIs) in patients with ID that targeted depressive symptoms reported slightly better response rates and tolerability.[70,71] However, paroxetine is disfavored in the pediatric population because of its efficacy and side-effect profile.[72] Studies in ASD populations suggested that SSRIs might be better tolerated in adults than in children.[73] However, most studies of SSRIs in patients with ID included both adults and children, and age specific data were seldom reported, therefore, we could not discern whether the tolerability might be age related in this population or not.

Glutamate Receptor Modulators

Glutamate receptor modulators RPCTs namely Piracetam and Memantine showed mixed results. Piracetam did not show efficacy in improving cognition in Down's syndrome children.[74] For Memantine, two Randomized Placebo Controlled Trials in Down's syndrome adults did not show efficacy in improving cognitive measures.[75,76]

Anxiolytics

Although anxiolytics are often used in patients with ID for treatment of anxiety symptoms and problem behaviors, evidence to support their use is sparse.[77] Benzodiazepines may worsen problem behaviors in some patients with ID, and their long-term use can increase the risk of developing tolerance and withdrawal, as well as potentially negative effects on cognition, which are often documented in elderly with cognitive decline.[78,79]

Results from uncontrolled studies of Buspirone for treatment of problem behaviors in adults with ID are mixed, some reporting improvements,[80–82] while another describing no improvement.[83]

Beta-Blockers

Open-label studies suggested that β-blockers might be effective in reducing aggression and self-injurious behavior in patients with ID.[84–86] Glutamatergic and γ-aminobutyric Acidergic Agents

Several Glutamatergic and γ-aminobutyric acidergic (GABAergic) agents have been investigated in patients with ID associated with genetic syndromes, in hopes of modulating a hypothesized excitatory-inhibitory imbalance in the brain. However, the results from Randomized Placebo Controlled Trials of these agents have been rather disappointing.[74–76, 87–101]

Cholinergic Agents

Cholinergic Agents that increase cholinergic effects, such as Acetylcholinesterase inhibitors and L-carnitine/L-acetylcarnitine,[102] have been investigated for enhancement of cognition in patients with ID, but they produced mixed results.[74–76,87–101]

Hormones

Growth hormone deficiency is common in people with, Prader–Willi Syndrome (PWS), and some Randomized Placebo Controlled Trials suggested that growth hormone therapy might improve cognitive and behavioral functions in this population.[103–108] One recently published study showed that open-label growth hormone therapy, for children up to 7 years of age who have PWS, was well tolerated, and reduced delays in adaptive skills and motor development, even though the drug effects were not detected after 1-2 years of treatment during the RPCT phase.[108]

Melatonin

In Randomized Placebo Controlled Trials, Melatonin appears to be effective in reducing sleep problems in patients with ID, ASD and other NDDs and was well tolerated.[109,110]

Thyroxin

A large RPCT in neonates with Down's syndrome suggested that Thyroxine might have improved motor and mental development;[111] however, its follow-up study at age 10.7 years did not show benefits in motor or mental development from the early treatment.[112]

Dietary Supplements

Most Randomized Placebo Controlled Trials of methylation promoting dietary supplements such as Folate and Betadine failed to show efficacy in improving cognitive, adaptive, or behavioral functions.[113–120] A recent Randomized Placebo Controlled Trial in boys with FXS reported that M was effective in improving problem behaviors associated with ADHD and anxiety.[120]

Summary

The role of pharmacological agents in treating NDDs is limited. Available agents act at a symptomatic and/or supporting level; in particular, to control agitation and aggressive or anxious responses. Currently two antipsychotics (Risperidone and Aripiprazole) are approved by the FDA for control of agitation and aggressiveness in individuals with ASD and IDs. Stimulant/Non-stimulant ADHD medications, such as Methylphenidate, Amphetamines, Atomoxetine, Guanfacine and Clonidine are proved to improve attention and reduce hyperactivity in individuals with ADHD. SSRI medication mostly address symptoms of Anxiety and Depression with some mixed results on self-injurious behaviors or repetitive stereotypic behaviors. Off-label use of medications, polypharmacy and chronic administration are common practices and carry more risk than benefit to the patients. Pressure of schools, families and caregivers, and paucity of integrated services are amongst the many reasons for the malpractice. Better integration of services, access to specialist interventions including applied behavioral analysis and understanding communication are all essential to reducing the use of medication, as is the need for reactive, personalized and skilled social care provision. Extensive translational research based on animal models of genetic NDDs, as well as pharmacological therapeutic strategies, are under development to address brain mal function underlying NDDs.

Recommendations

Safety of patients with NDDs demands detailed evaluation, team approach and integrated services. Use of pharmacotherapy ought to target specific behaviors that are responsive, follow guidelines and evidence-based findings and only after a trial of non-pharmacological approach. Polypharmacy, chronic use and risky medications must be avoided. Schools, families and caregivers should be involved in the management plan and well informed about the treatment program.

In summary, with the paucity of evidence for pharmacotherapy options for mental health problems in people with intellectual disabilities, we summarize recommendations for safe practice:[39]

1. Pharmacotherapy to be considered only as part of comprehensive multidisciplinary treatment plan.
2. Non-pharmacological interventions should be considered first.

3. Pharmacotherapy is reserved for impairing symptoms.
4. Appropriate informed consent, with discussions of the risk-benefit ratio and alternatives.
5. Target symptoms should be identified for each medication.
6. 'Start low and go slow' to minimize adverse events and increase tolerability.
7. Monitor adverse events actively and regularly.
8. Minimize polypharmacy (decrease likelihood of drug-drug interactions, adverse events, and medication noncompliance).
9. Aim for lowest effective dose. Consider lowering dose or withdrawing medication after an extended period of stability (6-12 months).

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الملخص

تمثل اضطرابات النمو العصبي مجموعة من الاضطرابات المزمنة والمتنوعة التي تحصل جراء خلل في وظائف الدماغ وتظهر في مرحلة الطفولة قبل البلوغ وتتميز بأعراض تأخر او اختلال في اكتساب المهارات في نواحي النمو المختلفة تشمل المهارات الحركية والاجتماعية والنطق واللغة والوظائف المعرفية. وتمثل هذه المجموعة من الاضطرابات تحديا اساسيا جراء عدم توفر علاج شافي لها. وتعتبر الوسائل العلاجية اللادوائية أفضل علاج متاح لها حاليا. واضافة الى الأعراض المذكورة فالكثير من المصابين بها تحصل لهم اضطرابات سلوكية تضطر الأسرة او مقدمي الرعاية او المدرسة طلب استشارة طبية ووصف ادوية تقيد نشاط المصاب وتؤدي في أكثر الأحيان الى سوء استخدام او وصف أكثر من دواء او الى آثار جانبية خطيرة. تهدف هذه المراجعة لتقديم ايجاز مع أحدث المعلومات عن هذه المجموعة من الاضطرابات مع تحديث التوجه العلاجي الدوائي.

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Doctors' Impaired Fitness to Practice: The Pivotal Role of Psychiatrists

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عدم كفاءة الأطباء لممارسة المهنة لأسباب مرضية: الدور المحوري للأطباء النفسيين

محمد طه أبو صالح

Abstract

Doctors' fitness to practice is central to good medical education and practice. Research has shown that doctors experience high rates of burnout, mental ill health, substance misuse and are at risk for suicide. These conditions affect their fitness to practice and impact the health and safety of their patients. Medical regulatory bodies in the United States and Western Europe have established rigorous procedures for the evaluation of the 'impaired physician' conducted by psychiatrists. Moreover, these countries have established specialist Physician Health Programs that provide confidential and effective treatment whether on voluntary or mandatory basis. The author makes particular reference to the UK experience and practice as medical examiner and supervisor for sick doctors under the General Medical Council fitness to practice procedures. There is a case of need for the introduction of standard procedures for fitness to practice by the medical regulatory bodies and for the provision of specialist mental health services for sick doctors in Arab countries on par with procedures and provisions in Western Europe and North America.

Key words: Fitness to practice, Fitness for duty, Impaired physician, Mental health, Substance misuse, Psychiatrists

Declaration of interest: None

Introduction

Doctors' fitness to practice or fitness for duty has been recognized as a major concern facing the medical profession and medical regulatory bodies.

The wellbeing of doctors is not a novel idea. In the late 1800s the well-known philosopher, Nietzsche wrote: 'Physician help thyself; thus, you help your patients too'.[1]

Harrison,[2] referred to the USA experience: the American Medical Association introduced the term 'impaired physician' defined as 'one unable to fulfil professional or personal responsibilities because of psychiatric illness, alcoholism or drug dependency'.[3] However this definition, dating from the 1970s, has been widened subsequently to 'any physical, mental or behavioural disorder that interferes with the ability to engage safely in professional activities' that reflects current awareness that a range of conditions may impede the safe practice of medicine irrespective of knowledge and skills'.

In the UK, for decades, the General Medical Council (GMC), the regulatory body of the medical profession has established fitness to practice procedures. A recent review for the GMC by West and Coia stated, "The wellbeing of doctors is vital because there is abundant evidence that workplace stress in healthcare organizations affects quality of care for patients as well as doctors' own health. In two studies, researchers found that doctors with high levels of burnout had between 45% and 63% higher odds of making a major medical error in the following three months, compared with those who had low levels.[4]

The aims of this article are: (1) to review the literature on the health of doctors: the prevalence of mental ill health and substance misuse and their determinants; (2) to address the treatment needs of 'sick doctors' and consider the provision of specialist services; (3) to share the experience of the author as a GMC medical examiner and supervisor of 'sick doctors' under the GMC Fitness to Practice Procedures in the UK and (4) to invite commentary from Arab psychiatrists soliciting their experiences and views on these issues.

Mental health issues in doctors

Studies have shown higher prevalence of mental health issues and substance misuse in doctors when compared with the general population.[5]

Previous research reported a tendency for doctors to self-medicate often leading to prescription medicine misuse of principally opioids and benzodiazepines,[6] depression,[7] and emotional exhaustion or burnout.[8] It has been suggested that between 10 and 20% of doctors in the United Kingdom become depressed at some point in their career and have a higher risk of suicide than the general population.[7] Untreated mental health problems in doctors may lead to inadequate patient care and it is therefore imperative to identify and treat mental health problems in doctors as quickly and as efficiently as possible.

Brooks et al.,[9] reported their findings of the demographic and clinical characteristics of 200 sick doctors accessing the Practitioner Health Programme in UK, a service set up to provide expert assessment and support to health professionals with mental and physical health problems affecting their ability to work. Most of the doctors had depression and alcohol dependence. Those with co-morbid disorders showed severe distress and impairment of functioning. They concluded "the needs of doctors are profound, with young doctors particularly vulnerable. Measures should be put in place to ensure that doctors at an early stage of their careers are aware of help available to them".

The 2018 National Training Survey showed that nearly one in four UK doctors in training, and one in five trainers were burnt out to a high or very high degree because of their work. Work periods of over eight hours per day increased risk of accidents that imperil both patients and doctors. Excessive workload affects patient safety, productivity, efficiency and mental health and wellbeing.[2]

Levels of stress, anxiety and depression are high in medical students (8%), doctors in training (39%) and consultants (36%). A Commonwealth Fund survey of GPs across 11 countries found that GPs in the UK had the highest levels of stress, with 59% reporting that their job was 'extremely stressful' or 'very stressful', compared with 18% in the Netherlands and an average of 35% across all 11 countries.[10] General practitioners were the second most likely group of respondents in a 2019 British Medical Association survey,[11] which found 4,300 doctors and medical students to have a 'high' or 'very high' risk of burnout – behind doctors in training.[2] Surgeons had high rates of depression, psychiatric distress and between 16% and 36% had high levels of traumatic stress symptoms, with 12% indicating possible posttraumatic stress disorder.

Doctors working in emergency medicine had very high rates of burnout: 69.2% of trainees and 63% of trainers reported moderate or high levels of burnout which is considerably higher than the average (49.9% of doctors in training overall and 46.8% of trainers).

Substance misuse in doctors

In an in-depth review of doctors' with addictions, their assessment and treatment reported high rates of addictions to prescription medicines mainly opioids and benzodiazepines in the context of self-medicating stress.[12] The review concluded that the occurrence of substance misuse in doctors is related to risk factors of mental health issues (anxiety and depression), personality problems, stress at work, family stress, and bereavement, an injury or accident at work and chronic pain.

Doctors are often in denial and are worried about the impact of being detected with addiction on their career and employment security.

Specialist assessment and treatment of doctors with addiction include the following components: comprehensive assessment by an addiction psychiatrist and occupational health physician; tailored treatment program for the addiction problem; assessment and treatment of any psychiatric co-morbidities; long-term follow-up and supervision; confirmation of abstinence by laboratory investigations and attendance at self-help groups (Alcoholics Anonymous, Narcotics Anonymous and British Doctors and Dentists Group) and the Royal College of Psychiatrists Helpline.[12]

The review considered early diagnosis as critical because doctors are often reluctant to seek help and colleagues reluctant to intervene. It recommended that medical schools and continuing medical education programs address addiction and substance misuse in doctors with a view to reducing the incidence of 'impaired physicians' and promoting and encouraging early treatment and rehabilitation.

Burnout in psychiatric trainees

Burnout is commonly understood as a syndrome comprised of a triad of emotional exhaustion, depersonalization and decreased personal accomplishment. It is qualitatively different from depression in that it is related to and occurs within the context of one's work environment.

A Canadian study of the attitudes of 106 psychiatry residents if mentally ill showed that 33% of respondents reported personal history of mental illness and the most popular first contact for disclosure of mental illness was family and friends. Frequent barriers to disclosure included career implications, stigma, and professional standing. Personal history of mental illness was the only factor associated with in-patient treatment choice, with those with history opting for more formal advice versus informal advice.[13]

An online survey of psychiatry trainees in India showed 72% did not feel comfortable disclosing their own personal mental health issues within the department due to concerns about stigma. Nearly half of residents rated their colleague's mental well-being as poor, whereas only around 24% rated their own mental health as poor.[14] The authors recommended that measures need to be taken to enhance trainee well-being by ensuring support from colleagues and seniors, allowing for an adequate work-life balance, introducing departmental level committees to address grievances and providing therapy and mentorship. Providing safe and non-stigmatizing spaces to seek help in the workplace promotes whole-person growth and well-being.

A cross-sectional study of burnout and its associations with learning environment and learner factors among psychiatry residents within a National Psychiatry Residency Programme in Singapore reported that overall, 54.8% of the sample met criteria for burnout. Residents with burnout had poorer perception of the learning environment, greater stress levels, were less willing to disclose/seek help and employed greater active-avoidance coping strategies. Within the burnout group, greater perceived stress was correlated with poorer perception of learning environment and greater use of active-avoidance coping versus additional use of problem-focused coping within the non-burnout group.[15]

A systematic review of burnout and its associated factors in psychiatry residents identified 22 studies: the overall prevalence of burnout among psychiatry residents was 33.7%, which was associated with certain demographics: (non-parental status), training (juniors years of training, lower priority of psychiatry as career choice, lack of clinical supervision, discontinuation from training, work (high workload, long hours, insufficient rest), and learner factors (more stressors, greater anxiety, and depressive symptoms, low self-efficacy, decreased empathic capacity, poor coping, self- medication, and use of mental health services). The authors concluded, "These findings suggest that interventions such as refining candidate selection, enforcement of work hour limits, enhancement of support and supervision, and equipping of stress coping skills may ameliorate burnout related to training, work, and learner factors respectively".[16]

Burnout in resident physicians in Syria

A recent cross-sectional study was conducted to assess the levels of burnout syndrome in 3350 resident physicians in specialties, including psychiatry in 12 different hospitals spread over eight governorates in Syria reported a very high level (94%) in at least one of the three domains (emotional exhaustion, depersonalization and reduced personal accomplishment) and (19 %) of the residents had a high level of burnout in all three domains. Significant relation was found between gender, age group and affiliated authority variables and the levels of burnout. However, no significant relation was found between burnout and the specialties or geographic variables. Men, residents in the Ministry of Defiance, and emergency medicine residents had the highest levels of burnout. These findings highlight the impact of the current and ongoing crisis in increasing workload and importantly the traumatizing effects on the Syrian residents. [17]

Mental health issues and suicide in doctors

Mental health issues, including substance misuse, in doctors is associated with higher rates of suicide than the general population. An examination of suicides in England and Wales between 2001 and 2005 showed that health professionals (not exclusively doctors) had among the highest suicide rates for both men and women. Certain medical specialties, such as psychiatry, appear to have higher rates of suicide than others do. Others, such as pediatricians, have relatively low rates.[18]

The General Medical Council (GMC) in the UK commissioned an internal audit of doctors who committed suicide while under GMC fitness to practice investigations.[19] The review showed that 28 doctors committed suicide between 2005 and 2013 whilst under fitness to practice investigations: 20 of these doctors were men, two-thirds were under 50 years old, and two were trainees. There was an equal preponderance for hospital or general practice doctors. Of the 20 doctors who had a health concern, six were reported to be a suicide risk; four did not have evidence of a documented suicide status; and the current health provision status for two of the doctors was unknown.

The GMC has learned from these incidents, reviewed its procedures and made several cogent recommendations including the establishment of a National Support Service for doctors.

A critical review of the GMC audit,[20] stated, "we also explored the relationship between the GMC and its registered doctors, concluding that the GMC does indeed have a duty of care towards its members on this important matter and that there should be procedural reform to tackle the inherent risk of suicide whilst under investigation".

The GMC fitness to practice procedures

When the GMC receives a complaint indicating that a doctor's fitness to practice may be impaired for health issues, an initial assessment is conducted to decide if the GMC needs to investigate. The complainant, the doctor and the doctor's employer(s) are notified of an investigation.[21]

Where a doctor is not managing their health adequately and it is determined that there is a risk to patient safety, the GMC will normally order an assessment of the doctor's health. This is carried out by two independent psychiatrists (known as health examiners) appointed by the GMC. Where there is an immediate concern about patient safety or public confidence in doctors, the case may be referred for a hearing by a Medical Practitioners Tribunal Service (MPTS) Interim Orders Panel. The Interim Orders Panel carries out a risk assessment based on the available information and can restrict the doctor's practice or suspend them from the register while the GMC investigates.

When the GMC completes its investigation, two decision-makers (known as case examiners) decide what should happen next. The case examiners, who work in pairs, one medical and one lay, consider the health assessment reports to determine the extent to which any health concerns may impact on the doctor's fitness to practice and whether they are safe to continue to practice with or without restrictions. The case examiners may close the case with no further action, give the doctor advice, issue a warning, agree with the doctor that restrictions are placed on their practice (called undertakings) or refer the case to a hearing of the MPTS. In most cases where action is required, the case examiners agree with the doctor that restrictions are placed on their practice. A case involving ill health would only usually be referred to a hearing if it also involved other serious concerns such as misconduct or because it has not been possible to reach agreement with a doctor about restrictions on their practice.

If the matter is referred to a hearing, the MPTS may also request a health assessment if this has not been carried out during the investigation. At the end of a hearing, the MPTS panel may close the case with no action, issue a warning to the doctor, place restrictions on the doctor's registration (when these are imposed by a panel they are called conditions), or suspend or erase the doctor from the medical register. If the concerns relate solely to the doctor's health, and not to performance or misconduct, then a panel cannot remove a doctor from the register.

Although MPTS hearings are generally held in public, matters relating to a doctor's health are considered in private session. Outcomes of hearings where doctors are found to have impaired fitness to practice are published against the doctors' names on the online medical register and any warnings remain in force for five years. However, any matters relating to a doctor's health are treated as confidential and are not published or disclosed by the GMC or the MPTS.

Once a case is concluded, the GMC monitors the progress of any doctor who is subject to GMC restrictions or has been suspended from the register. A dedicated GMC caseworker is allocated to each doctor to ensure appropriate management. As part of this process, the GMC will receive reports from a number of people working with the doctor, including a medical expert who acts as a medical supervisor for the doctor, someone in the doctor's place of work, their occupational health physician if they have one, their treating doctors, their clinical supervisor and their Responsible Officer (usually the Medical Director). If the doctor has been assigned a mentor, this relationship is a confidential source of support and there is no requirement to provide a report on matters discussed to the GMC. These progress reports help the GMC decide when the doctor may be ready to return to unrestricted practice and GMC restrictions removed. Restrictions may also be varied to reflect improvements in the doctor's health.

Where concerns relate solely to a doctor's health, the GMC will usually grant a request from a doctor to have their name removed voluntarily from the medical register (called voluntary erasure) without concluding the fitness to practice proceedings, as long as to do so would not undermine public confidence in the profession. This principle applies at any stage of the fitness to practice investigation and hearings process.

In cases involving health and other issues such as performance and/or misconduct, GMC decision-makers weigh up the seriousness of any underlying health condition, the impact on the doctor's ability to instruct legal representatives, the likelihood of recovery and the impact on public confidence in deciding whether to grant a doctor's request to have their name removed from the register without concluding the fitness to practice proceedings.

Personal experience of involvement in fitness to practice procedures

The author's first encounter with a doctor's fitness to practice was in the UAE. I was asked to treat and clinically supervise an expatriate doctor with psychotic illness. The doctor concerned did not respond to appropriate treatment. Their line manger took the view that the doctor was fit to practice under close supervision of a senior medical practitioner. It transpired that one reason for the line manager's opinion was that a judgment that the doctor is not fit to practice would result in termination of the work contract. In the UAE, there were no established procedures for dealing with doctors' fitness to practice issues.

On return to the UK, the author was invited to act as medical examiner and supervisor for the GMC.

My experience in both roles over two decades has been positive as almost invariably the doctor recovers following medical supervision albeit sometimes taking a few years in the more complex cases including doctors with dual diagnosis of mental illness and co-existing substance misuse.

A case report

I cite the case of a doctor with cocaine induced psychosis that I had examined and medically supervised for the GMC, which was published anonymously.[22]

"Paradoxically, the seriousness of my condition was helpful, for it removed any doubt in my mind about the appropriateness of the GMC referral that proved essential to my recovery. However, at that time I also feared that my medical career might be at an end. In addition, I genuinely doubted whether I could remain abstinent for long. A real lift came when I first met my GMC appointed medical supervisor. Despite my addiction being obvious and unhidden, and despite having been an inpatient on NHS wards several times, he was the first addiction specialist that I was invited to see and the first doctor to make what I felt was a comprehensive assessment. That 90-minute interview ended by him telling me that if I remained abstinent, and basically submitted to the GMC process, then in all likelihood I would return to clinical work and resumes my career as planned. It was a huge ray of hope and a boost to my fragile motivation at that time. I have been lucky in that all this went well - and continues to go well. However, a degree of that 'luck' is because of the help that my GMC appointed medical supervisor has provided, and by realizing early on not to battle against the process or become angry about it. That would always be seen by the GMC as a lack of insight. I was suspended for one year, which really was unavoidable given the seriousness of my illness. In addition, after that - and with continued proven abstinence and good health - I have returned to work under conditions that are not overly restrictive, and which are reviewed yearly.

For sure, the process has at times been testing, but if one remembers why one is going through it at all, and what the rewards are - good health and one's career back - then it is worth every struggle. In an unexpected way, my career in medicine saved me. And I will forever be grateful for the processes and the people that led to that".

Specialist provision of services for sick doctors

In the USA, physician health programs (PHP) have been established by most state licensing boards and medical societies to identify, treat and monitor impaired physicians.[23]

Psychiatric fitness for duty assessments are typically best performed by the independent (non-treating) psychiatrist with forensic training or expertise in these examinations

In 2017, the American Psychiatric Association produced a resource document on recommended best practices for PHPs, for physicians who seek help voluntarily from PHPs as well as those who are mandated participants. These suggestions are intended to help PHPs and their affiliates to align their practices and procedures with the goals of treatment and to minimize the risk of adverse outcomes, both for the public and for the physicians who participate in PHPs.[24]

In the UK, the Practitioner Health Programme (PHP) was set up as a free, confidential service for doctors and dentists living or working in the London area. The service is available to practitioners with health concerns, which may be affecting their work, including addiction problems, mental health issues and physical health problems. All patients must self-refer to the service. The PHP service consists of an integrated GP-led service and a network of external specialist preferred providers that includes specialized inpatient and outpatient care. The PHP team, who all have considerable experience in treating health professionals, offer expert assessment; advice and support; signposting to peer support and other help; onward referral to specialists; liaison with local health services and back to work support; and advice to practitioners' colleagues, families and Primary Care Trusts.[25, 26]

The article reported on the first 200 patients seen by PHP. The results showed that the prevalent conditions included depression and alcohol dependence. Patients with co-morbid disorders showed severe distress and impairment of functioning.[27]

A report on 3500 doctors, who presented to the PHP between 2008 and 2017, showed that 80% have done so with mental health problems (mainly depression, anxiety and symptoms indistinguishable from posttraumatic stress disorder). Another 15% have predominantly suffered from alcohol or drug misuse (mostly alcohol dependence) or a mix thereof; the service also has a number of doctors with personality disorder, bipolar disorder, physical health problems affecting their mental health and a small number with undiagnosed schizophrenia or psychosis. During this period, six doctors died from suicide. A further ten died from accidents where the cause of death was not given as suicide, but which could be considered part of a suicidal act or from fatal overdoses of drugs/alcohol (not classified as suicide).[28]

Discussion and conclusions

As documented, doctors are at high risk for mental ill health, substance misuse and suicide. Mental health issues impact their fitness to practice and their ability to fulfil their duties and responsibilities towards their patients. The duty of care for the doctors should be towards themselves to enable them to care for their patients. Doctors' fitness to practice (UK) or fitness for duty (US) is a core issue for medical regulatory bodies and professional medical associations.

It is imperative that procedures are introduced and established to address these issues in all countries on par with procedures adopted in Western Europe and North America.

It is the responsibility of the medical regulatory authorities and professional medical bodies to introduce these procedures with authority and means for their enforcement and implementation in fair and transparent ways.

In the UK, the GMC has developed fitness to practice procedures that are effective and transparent with the dual responsibility for caring for doctors and caring for patients.

The author's experience as a GMC medical examiner and supervisor for sick doctors has been a positive one: almost invariably, the doctors recover from their mental health issues including substance misuse with the result that all restrictions on their practice are lifted. However, there is lack of provision of specialist health services in the UK for sick doctors: at present specialist, services such the Practitioner Health Programme are concentrated in London with little provision elsewhere.

Evidence shows that Physicians Health Programs (PHP) are far more available in North America. PHPs are well established in the USA. These are linked to licensing boards and medical societies. The remit of the programs is to identify, treat and monitor impaired physicians. In addition, individual hospitals have been mandated by accreditation organizations to establish non-disciplinary processes to address physician health, including an internal physician wellness committee whose role is to investigate complaints about physicians with suspected impairment and to make appropriate referrals for evaluation and treatment.[2, 29]

Considering that the majority of health issues that impact on physicians' fitness to practice are mental health issues, it is the pivotal role of psychiatrists with appropriate training to act as medical examiners and supervisors for sick doctors.

In the UK, the Royal College of Psychiatrists issued a position statement on supporting the mental health and well-being of psychiatrists. The statement sets out the College's view on the issues that need to be considered and addressed to support the mental health and well-being of psychiatrists and makes recommendations on how the mental health and well-being of psychiatrists can be supported by those organizations that will have responsibility in this area.[30]

The author is unaware of any literature on fitness to practice issues of doctors practicing in Arab countries. It is presumed that there are procedures on fitness to practice relating to doctors' misconduct and mental ill health including substance misuse provided by medical regulatory authorities and national medical associations or syndicates. Moreover, out of necessity there would be informal arrangements to provide mental health treatment for sick doctors.

There is a dire case of need for the introduction of standard procedures for fitness to practice by the medical regulatory bodies and the provision of specialist mental health services for sick doctors on par with such procedures and provisions in Western Europe and North America.

الملخص

الكفاءة الطبية للممارسة هي مسألة محورية في التعليم والممارسة الطبية. فلقد اظهرت الابحاث العلمية ان الأطباء معرضون للاحتراق، المرض النفسي، وإساءة استعمال المواد الإدمانية وخطورة الانتحار. هذه الحالات تؤثر على كفاءة الأطباء للممارسة وتؤثر على صحة وسلامة مرضاهم. وعليه فقد وضعت الجهات الطبية المنظمة في الولايات المتحدة الأمريكية ودول غرب أوروبا إجراءات فعالة لتقييم الطبيب المصاب بما يعيقه عن العمل ويقوم بها الأطباء النفسانيون علاوة على ذلك وضعت هذه الدول برامج تخص صحة الطبيب برامج توفر العلاج الفعال مع ضمان السرية سواء على أساس طوعي او قسري.

أعن نفسك، أيها الطبيب، لتتمكن من اعانة مريضك.. ان خير مثال له من معين لذا مريض هو ان يرى بعينه أنك قادر على شفاء نفسك فيدرك تشبهه

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Schizophrenia in Muslim Cultures

M Fakhr El-Islam

الفصام في المجتمعات الإسلامية

محمد فخر الإسلام

Abstract

The cultural background beliefs, attitudes and practices against which clinical psychopathology is measured are most relevant to the diagnosis and management of schizophrenia. Unlike Western inpatient facilities, men outnumber women among psychiatric inpatients in the Arab world because the stigma of mental hospital admission is much greater for women, especially in those who are diagnosed with schizophrenia. The frequency of cousin marriage and positive family history of schizophrenia is more likely in Muslim than western cultures. It is important to distinguish first-rank symptoms of schizophrenia from culturally shared beliefs about demons/devils. These supernatural agents are believed to tempt human beings to carry out undesirable behavior or to forget to do acceptable acts with no sensory experience of the agents by vision, hearing or other sensory perceptions, which are pathological perceptual experiences.

The somatic expressions of distress by patients are reciprocated by somatically trained doctors who assess for organic etiology and induce hypochondriasis in many patients with schizophrenia. The families' social support for their members is reduced by intergenerational conflict and increases professional and traditional help-seeking for emotional and behavioral symptoms, e.g. in schizophrenia. Expressed emotions of relatives of patients with schizophrenia include warmth and positive comments. The traditional Muslim family can develop individual programs of social contacts that prevents social withdrawal and improve the outlook in schizophrenia. Projection of responsibility for wrong doing onto supernatural agents limits how comments on people with schizophrenia has been reported in western cultures.

Key words: Schizophrenia, Muslim cultures, Family management, Outcomes

Declaration of Interests: None

Introduction

It has been suggested that higher rates of schizophrenia are associated with the need for traditional cultures to contact foreign cultures and the need to change roles or life style.[1] However WHO studies of schizophrenia[2] suggested similar incidence rates of schizophrenia in developed and developing countries. The latter included the Muslim country of Iran. Far fewer women than men are seen in medical psychiatric practice in Muslim communities. However, the overrepresentation of men in psychiatric inpatient services in Muslim cultures is a general finding. Life involving extended families may make it easier for women to be supported by other women within the family if she is unable to undertake routine duties associated with looking after home and family. A woman is more likely to be kept at home until she recovers or improves with family support. Conversely, there can be greater expectation on men to continue some form of transaction outside the family to maintain financial security and, for that reason, there may be quicker referrals from mental health professionals for early help when they fall ill. Moreover, the stigma of mental illness is more serious for women than men in Muslim cultures.[3]

Most Muslim societies are pronatalist and contraception is religiously prohibited.[4] Muslims favor cousin marriage and a positive family history of schizophrenia is frequent. The course and outcome of the disorder tends to reproduce those in other family members.

Culture and recognition of schizophrenia

Islamic culture has a system of supernatural agents which are endowed with various effects on human beings. Demonic figures 'induce' the less faithful among Muslims to forget good-doing or to indulge into wrong-doings. Health adversity attributed to those supernatural agents does not include their sensory perceptions by vision, hearing, touch, etc. Therefore, these are recognized as hallucinatory or delusional experiences. Experience with the contents and limits of what is culturally shared helps to distinguish 'delusory' cultural beliefs[5] from first-rank symptoms.[6] Decisions on illness behavior are group decisions in Muslim families in cases of physical or mental ill health of a family member.[7] The family seeks the help of medical practitioners for somatic symptoms only. It seeks the help of traditional/faith healers for behavioral and emotional problems in a family member. It is customary to attribute emotional problems to weak personality or weak faith of the sufferer. Doctors who graduate from medical schools in Muslim societies have very little grounding in psychiatric medicine and tend to collude with the somatic orientation of their patients by looking for physical disease underlying somatizations. The doctors unwittingly generate iatrogenic hypochondriasis in their patients.

Although the extended family household is in decline, functional extended families thrive in Muslim cultures where frequent communication and visits are the rule between several nuclear families within an extended kinship. When compared to patients with schizophrenia living in nuclear families those from extended families tended to present earlier for medical attention and to have a lower frequency of social withdrawal during the course of disorder.[8] Because of their emotional limitations, patients with schizophrenia are less likely to marry compared with people who have other forms of mental illness. By arranging marriages, families augment the marriage rates among patients with schizophrenia. Sometimes marriage is forced upon individuals with schizoid presentations and precipitates the onset of schizophrenia.[9]

Symptomatology and outcome

Zarrouk[10] observed that Muslims in Saudi Arabia experienced visual hallucinations more frequently than those with the condition who were living in western cultures. Patients 'see' the agents who talk to them or about them and could make drawings of the devils or demons involved. Delusional extensions of culturally shared beliefs were found to be more likely to encapsulate or disappear compared with secular-content delusions.[11] Projection of badness onto supernatural agents arouses much less criticism from relatives than secular persecutory delusions. In collaboration studies of families of patients with schizophrenia,[12] individually tailored programs of family visits were found to contact less critical relatives to prevent the development of social withdrawal. However, emotional overinvolvement with patients was more likely illicit expressed emotion. Psychoeducation of relatives reduces their negative expressed emotions and promotes their positive expressed emotions in the form of warmth and positive comments. Families did not allow long protective withdrawals[13] by patients. Patients like to be by themselves now and again, but they join other family members at mealtimes and during the entertaining of guests.

According to the solidarity basic rule of the Muslim code of conduct, care for those in poor health continues until they become healthy in order to remain blessed with health. They will have a high place in heaven. Family care for those with longstanding ill health such as patients with schizophrenia may outstep its target and develop into emotional over involvement. One act of good doing to others, e.g. patients counts as ten if it is philanthropic and not an expression of grandiosity. The Muslim culture does not subscribe to the theory of psychogenesis of mental illness and renders patients unaccountable in later life for their wrong-doing misconduct during their secular life.[13]

الملخص

رغم تساوي معدل نشأة الفصام في كثير من البلاد الغربية والإسلامية، إلا أن الدراسات العالمية وجدت مآلا أفضل في البلاد الإسلامية بفضل الرعاية الأسرية التي تعتبر امتدادا للصلات الاجتماعية التي تتسلسل بين أفرادها المصابين بالفصام. وقد لوحظت زيادة الذكور داخل المستشفيات النفسية عن الإناث، الذين تزيد فيهم وصمة المرض العقلي على عكس الحال في المستشفيات النفسية في العالم الغربي.

وقد يختلط الأمر بالنسبة لعامة الناس الذين يعزون اضطراب السلوك إلى الغيبيات مثل الجن أو الشيطان. ولما كانت هذه المسالك المضطربة في الفصامي تعتبر من علامات الرتبة الأولى وجب التمييز بين المعتقد الاجتماعي الذي لا يشعر المريض بأي إدراك حسي لها كالغيبيات برؤيتها أو سماعها أو لمسها. كذلك فإن الأسرة تحتوي المريض بالفصام من أعضائها حيث يكثر معدل حدوث الفصام بين أفراد الأسر الممتدة لأن معدل الزواج بين الأقارب يزيد بين المسلمين كثيرا عنه في العالم الغربي. ولما كانت الأعراض البدنية من الأعراض البارزة لدى مرضى الفصام في المجتمعات الإسلامية فإن من الأفضل عدم الإغراق في الفحوصات البدنية لأن ذلك يؤدي إلى توهم المرض البدني بين المرضى لكثرة ما كانت نتيجة الفحوصات البدنية سلبية عندما يعتقد المرضى أن الأطباء يبحثون عن أمراض بدنية لا يجدونها.

ويظهر أفراد الأسرة الحنان للمريض بالفصام ويحيلون أذى المرض إلى عدم المبالاة من جانب المريض بسبب تسطح حالة الوجدان. كما أن التعليقات الإيجابية على كل سلوك مقبول من جانب المريض كثيرة من جانب أفراد الأسرة بدلا من النقد لكل سلوك غير مقبول من جانب الأقارب في العالم الغربي وهذا يقلل من تدهور حالة مرضى الفصام.

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International update

From Neurosciences to Clinical Implications

Ahmed Okasha

من العلوم العصبية الى التطبيقات السريرية

احمد عكاشة

The current review is based on many studies and one volume of the 2019 American Journal of Psychiatry, which was dedicated to neuroscience and psychiatry.

هذه مراجعة معتمده على مجموعه من الأبحاث الكثيره ومجموعة كاملة من المجلة الأمريكية للطب النفسي 0202 المكرسة لعلوم الأعصاب والطب النفسي.

Choroid Plexus and Psychosis

The varied roles of the cerebrospinal fluid (CSF) are that of a being fluid cushion for the brain, a stabilizer for iconic balance, and it removes nervous system waste; and, it can be sampled as biomarker for disease, and regulation of brain development and health.

The choroid plexus is a network of capillaries and specialized ependymal cells that are found in the cerebral ventricles. The choroid plexus serves two important functions in the body: it produces cerebrospinal fluid and helps to provide a barrier that protects the brain and other central nervous system tissue from toxins. The choroid plexus and the cerebrospinal fluid that it produces are necessary for proper brain development and central nervous system function.[1]

CSF helps to cushion and support the brain and spinal cord, circulate nutrients, and remove waste from the central nervous system. Underproduction of CSF can stunt brain growth while overproduction can lead to excess accumulation of CSF in brain ventricles, which is a condition known as hydrocephalus. Microglia (specialized nervous system cells) and other immune cells enter the central nervous system through the choroid plexus. These cells are important for preventing pathogens from entering the brain. In order for viruses, bacteria, fungi, and other parasites to infect the central nervous system, they must cross the blood-cerebrospinal fluid barrier. Some microbes, such as those that cause meningitis, have developed mechanisms for crossing this barrier.[1]

A study on the choroid plexus volume in patients with psychosis and their first-degree relatives with various diagnoses (i.e., bipolar disorder, schizophrenia, and schizoaffective disorder) identified a transdiagnostic increase in choroid plexus volume across patients with psychosis and an association between increased choroid plexus volume and other brain structural alterations as well as measures of cognitive and immune function.[2] The research observed such findings in relation to the role of the choroid plexus in regulating CSF production and in modulating the blood-brain barrier. In another article using structural imaging in patients with schizophrenia with varying degrees of severity and chronicity, investigations were into the alterations in cortical thickness.[3]

In addition to replicating earlier findings of schizophrenia-related cortical thinning across various regions, research has demonstrated that the magnitude of cortical thickness reduction can be related across different areas of the cortex. This suggests that what appeared to be ‘irregular’ alterations across the cortex are not simply sporadic, but rather, reflect how these regions may be connected to each other.[4] Findings are discussed in the context of other work examining brain alterations in schizophrenia; explains the methods used to explore structural connectivity; and, raises questions about the meaning of these findings and into the mechanisms underlying the reported associations in cortical thickness reductions across different cortical regions.[4]

Cortical Alterations with ADHD

Two other studies use structural imaging data: one addresses cortical alterations associated with ADHD, and another explores the utility of structural imaging metrics as a component of an algorithm to predict the development of dementia. In relation to ADHD, Hoogman et al. [5] use very large, multisite collaborative samples that incorporate children, adolescents, and adults with ADHD, as well as first-degree relatives and control subjects. With these large samples, the research observed small but significant differences in cortical surface area in frontal, cingulate, and temporal cortical regions in children with ADHD. However, this was not the case for adolescents or adults with ADHD and underscores the importance of considering developmental phase and age when conceptualizing illness-related alterations as well as the potential neural substrates underlying symptoms. Other studies emphasize the importance of using these types of data to support the view that ADHD is a legitimate neurodevelopmental condition.,[6,7]

Predictions of Developing Dementia

Another study examined the need to improve the capacity of clinicians to predict a person's likelihood of developing dementia.[7] Here, the authors ask the question as to whether structural imaging, cognitive testing, and other biological indices, such as assessment of the APOE-ε4 genotype, will improve the ability to predict the development of dementia beyond an algorithm based on standard clinical measures. Through analyses of data from a large cohort, the study concluded that the prediction of dementia over a 10-year period is significantly enhanced by additional measures that include quantitative assessment of brain structure.[8]

Based on the different pathophysiologies of specific dementias, the research underscores the need for developing selective algorithms based on state of the art, disease-specific biomarkers. Both studies use fMRI methods in severely ill patients to better understand the neural underpinnings of social deficits, negative symptoms, and the role of cerebellar circuits.[7,8]

Cerebellar Dysfunction in Schizophrenia

In patients with schizophrenia spectrum disorders, Hawco *et al.* use hierarchical clustering methods to demonstrate various patterns of neural responsively to tasks involving imitating and observing different facial expressions of emotion.[9] An fMRI data-driven approach found that, in the affected individuals studied, these different patterns of neural activity are predictive of social and neurocognitive scores. The study demonstrates the potential utility of an approach that uses fMRI to define neural heterogeneity in a meaningful way not revealed by our current diagnostic system.

That cerebellar dysfunction may be involved in the pathogenesis of schizophrenia is by no means a completely new hypothesis. Approximately 20 years ago, Andreasen *et al.*[10,11] proposed a "cognitive dysmetria" theory to explain the diversity of behavior deficits within the schizophrenia spectrum. They posited that dysfunction of cerebello-thalamo-cortical circuitry is the most fundamental neurobiological change underlying a variety of observed clinical symptoms in patients with schizophrenia. Such change further leads to difficulties in synchronizing and integrating neural computations and processing in order to generate orderly and meaningful behaviors. Almost at the same time, Schmahmann *et al.*[12] studied clinical patients with lesions confined to the cerebellum and concluded that patients with cerebellar impairments (especially in the posterior lobe) presented with cognitive, emotional, and social symptoms that highly resemble those observed in schizophrenia. Such as deficits in planning, cognitive shifting, abstract reasoning, visual and spatial memory, and verbal fluency, as well as blunting of affect, depression, and inappropriate social behaviors The "cerebellar cognitive affective syndrome" is now recognized as having extensive overlap with psychosis.[13,14]

A study of clinical high-risk subjects demonstrated cerebellar-thalamo-cortical dysconnectivity as a state-independent neural trait for prediction of psychosis. While these findings have brought new momentum to an earlier cognitive dysmetria theory, the question arises as to whether cerebellar alterations indeed reflect a primary neuropathology that participates causally in schizophrenia or rather a secondary phenomenon related to either cognitive deficits or other latent pathological changes in the disorder. In other words, does cerebellar dysfunction lead to cognitive dysmetria, compensate for cognitive dysmetria, or signify a consequence of cognitive dysmetria?[15,16]

Brady *et al*. conducted a two-part study to examine this question by combining resting-state functional MRI, state-of-the-art brain network analysis, and brain stimulation. The study considered how negative symptoms are strongly associated with cognitive impairments and are a major rate-limiting feature of long-term functional outcomes in schizophrenia.[16]

Connectivity and Negative Symptoms

A study examining the connectome-wide associations with negative symptoms in a sample of 44 patients diagnosed with schizophrenia spectrum disorders, discovered that the connectivity between dorsolateral prefrontal cortex (DLPFC) and midline posterior cerebellum showed the strongest correlation with negative symptoms across the whole brain during resting state.[17] Patients with higher negative symptoms had significantly lower cerebellar-prefrontal connectivity, suggesting that disrupted synchronization in the cerebellar-prefrontal circuitry underlies negative symptoms and possibly also cognitive dysfunction.

In the second part of the study, Brady *et* al.[16] investigated whether the altered connectivity between the cerebellum and DLPFC could be a causal mechanism for negative symptoms or rather an epiphenomenon. They performed a repetitive transcranial magnetic stimulation (rTMS) trial targeting the posterior cerebellum in an independent group of patients (N=11) to examine whether rTMS could boost the functional connectivity of the cerebellar-prefrontal circuitry and in turn ameliorate clinical symptoms. If cerebellar-prefrontal dysconnectivity causes negative symptoms, one would expect that a restoration of such connectivity would help reduce symptom severity. Intriguingly, after a five-day rTMS administration across four hours per day, most patients in the sample showed an increase in cerebellar-prefrontal connectivity, the degree of which was significantly correlated with improvement in negative symptom severity. More than 60% of total variance in symptom change could be attributed to the change in cerebellar-prefrontal connectivity, corroborating a possible causal relationship from disrupted connectivity in cerebellar-prefrontal circuitry to negative symptoms in schizophrenia.[17]

The findings from this study are notable for having updated the cognitive dysmetria hypothesis by providing direct evidence for a potential causal influence of cerebellar dysfunction in the pathogenesis of schizophrenia. One underlying mechanism that may potentially bridge the gap between cerebellar dysfunction and behavioral deficits is alterations in error processing, which depends on information transfer and integration in the cerebellar-cortical circuitry.[17]

Recent research has shown that cerebellar deep nuclei directly send outputs to the dopamine neurons in the midbrain ventral-tegmental area, which in turn regulate the entire mesocortical dopamine system, including the DLPFC. As a result, cerebellar dysfunction may change the phasic firing of the ventral-tegmental area dopamine neurons by which the prediction errors are encoded. Such changes may subsequently exert distorted weights on the predicted probabilities of outcome expectations of the interactions between the individual and the outside world, thereby generating a series of "negative" responses to social and cognitive engagements such as blunting of affect, poverty of speech, anhedonia and avolition. Such changes may also affect the downstream function of the dopamine D1 receptors located in the DLPFC, together contributing to the negative symptoms in schizophrenia.[16,17]

The study offers an excellent model for probing brain-behavior relationships in psychiatric neuroscience by combining functional neuroimaging with neuromodulation techniques. This moved the field away from purely correlational studies by establishing a causal relationship between resting-state functional connectivity and disease expression in a psychiatric illness. Such advancement could certainly not only further our understanding of the biological mechanisms underlying mental disorders, but also sheds light on potentially novel and promising intervention strategies, especially for symptoms for which effective treatments are limited.[16,18]

For example, with the knowledge that cerebellar dysfunction possibly causes negative symptoms in schizophrenia, which may be corrected by brain stimulation of the cerebellum, investigators in future clinical trials would be encouraged to test the efficacy of cerebellar rTMS in the treatment of negative symptoms in large populations. In so doing, schizophrenia research may benefit from a bench-to-bed translation from mechanism-oriented neuroscience studies to evidence-guided clinical therapies.

The study also raises some questions for future consideration.

First, it is unclear whether the observed symptoms were indeed directly triggered by dysfunction in the cerebellar-prefrontal circuitry. One may argue that rTMS may indirectly influence the functions of other networks in the brain, and these secondary modulations could more directly contribute to alleviation of negative symptoms.

Second, in view of the small sample size in the study, it is unclear whether rTMS intervention could differentially benefit specific subgroups of patients stratified by, for example, gender, and duration of illness, baseline symptom severity, comorbidity, and so forth.

Given the fact that some of the patients in the studied sample did not respond to rTMS, the mechanisms determining whether a patient is a responder or non-responder are equally interesting and worthy of investigation in future studies.

Notwithstanding these limitations, the results of the study encourage cerebellar dysfunction as a promising neural target that may potentially help advance the understanding and treatment of this complex mental disorder.[18]

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Screening for Somatic Symptom Disorder and its Co-morbidity with Depressive and Anxiety Disorders in Sudan

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تحري مدى انتشار مرض اضطراب الأعراض الجسدية ومدى ارتباطه باضطرابي الاكتئاب والقلق في عينة من مترددي مركز الرعاية الصحية الأولية في مدينة كريمة بشمال السودان

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Abstract

Background: It is well established that a substantial proportion of primary care patients experience common psychiatric disorders with somatic symptoms. There is limited research on the psychiatric profile of patients presenting to the primary care facilities in Sudan. **Aim:** The current study assessed the prevalence of somatic symptom disorder in primary care patients to understand its correlation with generalized anxiety, depressive disorders and socio-demographic factors. **Method:** A prospective cohort study was conducted in a primary health center in Karima in Northern State, Sudan. From March-April 2018, N=400 attendees were assessed. Participants completed the Patient Health Questionnaire (PHQ-SADs), which embeds three scales. A socio-demographic questionnaire was also completed. A cut-off point ≥ 10 was considered acceptable for caseness. **Results:** From N=400 participants, 53% described having a psychiatric disorder. Of those reporting psychiatric disorder, 45.3% were diagnosed with somatic symptom disorder (SSD), 24.1% with depressive disorder and 30.6% with anxiety disorder. Women outnumbered men by a 3:2 ratio; 61.5% were aged between 18 and 40 years; 63.8% were married and nearly half lived in rural areas. Of those reporting psychiatric disorders, the majority (74.1%) experienced two or three co-morbid conditions with 25.9% having no co-morbidity; 15.6% reported having all three disorders. Somatic symptoms and depressive disorder co-occurred in 20.3%; somatic symptom and anxiety disorder co-occurred in 19.5%; and, 18.8% had depressive and anxiety disorders. SSD was more prevalent in women, widowed and divorced. **Conclusion:** There was high prevalence of psychiatric morbidity among patients, namely somatic symptom disorder, depression and anxiety disorders. There was also a high prevalence of co-morbidity between these disorders. Results corroborated regional and international research findings and highlight the need for integrated care with more interaction and co-ordination between psychiatric and primary care providers.

Key words: Psychiatric disorders, Somatic Symptom Disorder, SSD, Co-morbidity

Declaration of interest: None

Introduction

Somatic Symptom Disorder is a subcategory of the diagnostic category Somatic Symptoms and Related Disorders in the Diagnostic and Statistical Manual of Mental Disorders (DSM-5), which replaces the previous category of somatoform disorders.[1] The change occurred in order to better define these disorders and make them more relevant to the primary care setting.[2] The somatic symptoms and related disorders category includes five diagnoses: somatic symptom disorder (SSD), illness anxiety disorder, conversion disorder, psychological factors affecting other medical conditions, and factitious disorder. All share a common feature - the prominence of somatic symptoms with significant distress and impairment.[1] SSD deemphasizes the centrality of medically unexplained symptoms and defines the disorder on the basis of persistent somatic symptoms associated with disproportionate thoughts, feelings, and behaviours related to these symptoms. People with multiple persistent physical symptoms that seem to have no apparent biologic basis are common in those presenting to primary care and are more prone to iatrogenic harm from unnecessary investigations and treatments.[2,3]

The prevalence of SSD in the general population is estimated to be 5% to 7% making this one of the most common categories of patients in the primary care setting.[4] The disorder can begin in childhood, adolescence, or adulthood and women tend to present with somatic symptom disorder more often than men.[5,6] The aetiology of SSD is unclear. However, studies have determined that risk factors for chronic and severe somatic symptoms include childhood neglect, sexual abuse, chaotic lifestyle, a history of alcohol and substance abuse and personality disorders.[7] Psychosocial stressors and culture affect patients' presentation. Studies in primary care settings found significantly higher rates of unemployment and impaired occupational functioning in somatizing patients compared with non-summarizing patients.[5] Patients may also present with physical symptoms when psychiatric symptoms are stigmatized, as in some cultures, including Sudanese and Arab cultures.[8,9]

Mental and behavioural disorders are common among patients attending primary healthcare settings. A cross-cultural study conducted by the World Health Organization (WHO), at 14 sites in different continents and countries, reported high levels of psychiatric morbidity among patients attending primary health care facilities. The prevalence of mental disorders across the sites varied considerably, from 14% to 34%, and these results clearly demonstrate that a substantial proportion of patients have a mental disorder.[10] It has been estimated that one out of every three primary care patients suffer from one or another kind of mental illness.[11] Moreover, as many as half of the patients presenting with medically unexplained physical symptoms, suffer from psychiatric rather than medical illness.[12]

Regional research in Arab countries reported high psychiatric morbidity at primary health care (PHC) level. A Kuwaiti study found a high morbidity of psychiatric disorders among primary health care attendees (42.7%), including depression (22.9%), anxiety (17.7%), and somatization (33.4%), with high co-morbidity between disorders.[13] Becker et al. reported a somatization rate of 19.5% and a depression rate of 20% in PHC Saudi patients.[14] Another Saudi study in the Aseer region found a prevalence of 60.8% for somatoform disorder.[15]

The prevalence of psychiatric illness in the PHC has been the focus of research worldwide. There is a scarcity of such studies in Sudan. We decided to screen for psychiatric morbidity among the primary clinic attendees in Northern State, Sudan.

The aim of this study was to determine the prevalence of, and identify the possible risk factors for, common psychiatric disorders at the primary care level.

Methods

This is a prospective health center-based cohort study conducted in the Karima Primary Health Centre (PHC). Karima is the second largest city in the North State of Sudan with a population of 833,793. It is one of the main trading centers on the Nile River. The Karima PHC is the only facility in the city that provides PHC services under the supervision of insurance services and second level referral services for 20 centers in nearby villages. The service is provided by four medical practitioners with specialist referral to the city hospital when indicated.

The current sample size was calculated according to Dihru *et al*.[16] to be not less than 385. The study was conducted over a four-week period from March to April 2018. The inclusion criteria included patients aged 18 and above. Patients with learning disabilities or severe medical illnesses were excluded from the start. During the study period, 480 patients were screened. Fifteen questionnaires were missing and 65 were excluded due to incomplete data and hence 400 questionnaires were included in the final analysis.

Participants were screened using the Patient Health Questionnaire (PHQ-SADs), which has three subscales. A cut-off point ≥ 10 was considered as indicative of coarseness for all three subscales. The PHQ-SADs is a self-administered, brief diagnostic assessment screen widely used to measure rates of psychiatric morbidity in the primary care settings.[17] The items in the PHQ-SADs measuring somatization, depression and anxiety disorders were extracted by the author of the questionnaire from the DSM-IV diagnostic criteria for the three disorders.

The PHQ-SADs measures five groups of disorders, including depressive, anxiety, somatoform, alcohol, and eating disorders. To screen for somatic, anxiety and depressive symptoms, the Arabic version was administered. This questionnaire was validated in multiple studies in Saudi Arabia using formal Arabic.[14,15,18] The Arabic version used in the current study was validated by Al-Hadi et al.[19] Three scales are embedded in the PHQ-SADs: the 15-item Patient Health Questionnaire (PHQ-15), the 7-item Generalized Anxiety Disorder scale (GAD-7) and the 9-item Patient Health Questionnaire (PHQ-9) which measure somatic symptoms, anxiety and depressive symptoms respectively. Scores of 5, 10, and 15 represent cut-off points for low, medium and high symptom severity respectively for all three scales and likewise a score of ≥10 represent 'clinically significant symptoms'.

Data were analyzed using IBM SSPS Statistics 23 and descriptive statistics including mean, SD, frequencies and percentages were used to describe the data. Categorical variables were compared using chi-square test. A multiple logistic regression analysis was used to find significantly associated factors with mental disorders. Somatic, anxiety and depression symptoms were separately used as dependent variables and socio-demographic variables as independent variables and a p value of ≤ 0.05 was considered as the level of statistical significance.

Ethical consideration

The current study was reviewed by the Sudan Medical Specialization Board, and ethical clearance was obtained from the Ministry of Health, North State, Sudan.Verbal consent was obtained from the participants were assured of confidentiality and reminded of the voluntary nature of their involvement.

Results

Participants' socio-demographic characteristics are shown in Table 1. Almost two thirds (61.5%) were aged between 18 to 40 years with women representing 59%.

Those with a university degree and high school education represented 71.2% of the sample.

Table 2 shows that more than half (53%) of participants reported psychiatric morbidity. Co-morbidity of the three disorders at a cut-off point ≥ 10 on the GHQ-SADs was 15.6%. It is evident that the participants presented more commonly with somatic symptoms rather than depressive or anxiety related symptoms.

Table 3 shows the prevalence of low, medium and high somatic symptom severity at the cut-off points 5, 10 and 15 on the PHQ-15 respectively.

Results for the cut-off points 5, 10, 15 and 20 on the PHQ-9 representing mild, moderate, moderately severe and severe depressive symptoms respectively, are shown in Table 4. Taking a cut-off point ≥10 on the PHQ-9, the number of patients with depressive disorder were 24.8% (n=99) and this included patients with moderate, moderately severe, and severe depressive symptoms.

At the cut-off points 5, 10 and 15 on the GAD-7 representing mild, moderate and severe anxiety respectively, the results are shown on Table 5. At cut-off point of ≥10, 26% had moderate and severe anxiety symptoms.

Table 6 shows the co-morbidity of SSD with depressive disorder. At a cut-off point ≥10 on the PHQ-SADs for the two disorders, it is evident that an increase in the severity of somatic symptoms is significantly associated with an increase in depressive symptoms severity (p=0.00). Among the participants with high somatic symptom severity, almost two-thirds had depressive symptoms, and all participants with severe depressive symptoms had SSD.

Table 7 shows the co-morbidity of SSD with Generalized Anxiety Disorder. At the cut-off points ≥10 on the PHQ for the two disorders, it is also evident that an increase in severity of somatic symptoms is associated with an increase in anxiety symptoms (p=0.00).

The co-morbidity of depressive disorder with generalized anxiety disorder is shown in Table 8. It is evident that an increase in depressive symptom severity is significantly associated with an increase in anxiety symptom severity (p=0.00).

Table 9 shows the significant contributory socio-demographic risk factors. For brevity, non-significant factors were omitted from the Table. According to gender, SSD was found insignificantly more in women compared to men (p=0.003). There was no significant difference between men and women regarding prevalence of both depressive and anxiety disorders. Age, residence, occupation and educational level were not significantly associated with psychiatric morbidity in the current sample. As to marital status, SSD was significantly reported higher symptom levels reported by those who had divorced or been widowed when compared with married and singles (p=0.003). The difference was also significant for both depression and anxiety between the widowed and the divorced compared to the married and singles (p=0.00, 0.005 respectively).

Table 1. Sociodemographic characteristics for N=400

Sociodemographics	N	%
Gender		
Men	164	41.0
Women	236	59.0
Age group		
18-30yrs	130	32.5
31-40yrs	116	29.0
41-50yrs	88	22.0
51-60yrs	40	10.0
>60yrs	26	6.5
Residential area		
Rural	177	44.3
Urban	223	55.7
Social status		
Single	99	24.8
Married	255	63.7
Divorced	29	7.2
Widowed	17	4.3
Educational level		
University	155	38.7
Secondary school	130	32.5
Primary school	63	15.7
Khalwa	17	4.3
Adult literacy	15	3.8
Illiterate	20	5.0
Occupation		
Employee	129	32.2
Retired	34	8.5
Laborer	64	16
Student	45	11.3
Housewife	112	28
Not-working	16	4.0
Total	400	100%

Table 2. Psychiatric morbidity and co-morbidity

Diagnoses	N	%
No mental disorder	188	47
Any one of the three disorders	212	53
Somatic symptom disorder alone	96	45.3
Depressive disorder alone	51	24.1
Generalized anxiety disorder alone	65	30.6
Co-morbidity of two and three disorders	157	74.1%
Co-morbidity of three disorders: somatic symptom disorder, depressive disorder, generalized and anxiety disorder	33	15.6
Co-morbidity of somatic symptom disorder with depressive disorder	43	20.3
Co-morbidity of somatic symptom disorder with generalized anxiety disorder	41	19.5
Co-morbidity of depressive disorder with generalized anxiety disorder	40	18.8
No co-morbidity	55	25.9

Table 3. Frequency and severity of SSD, according to 3 cut-off points on PHQ-15

Somatic symptom level	N	%
Non-somatic symptoms	105	26.3
Low somatic symptom severity	114	28.5
Medium somatic symptom severity	113	28.2
High somatic symptom severity	68	17.0

Table 4. Frequency and severity of depressive symptoms, according to 4 cut-off points on PHQ-9

Depression symptom level	N	%
No depression	202	50.5
Mild depression	99	24.8
Moderate depression	56	14.0
Moderately severe depression	36	9.0
Severe depression	7	1.8

Table 5. Frequency and severity of anxiety symptoms, according to 3 cut-off points on GAD-7

Anxiety symptom level	N	%
No anxiety	199	49.8
Mild anxiety	97	24.3
Moderate anxiety	70	17.5
Severe anxiety	34	8.5

Table 6. Co-morbidity of SSD with depression

			Depression					**Total**
			No depression	**Mild depression**	**Moderate depression**	**Moderately severe depression**	**Severe depression**	
Somatic symptoms (PHQ-15)	Non-Somatic symptoms	Count	161	40	8	3	0	212
		% of Total	75.9%	18.9%	0.04%	0.02%	0.0%	100%
	Low Somatic symptoms	Count	63	36	7	8	0	114
		% of Total	15.8%	9.0%	1.8%	2.0%	0.0%	28.5%
	Medium somatic symptoms	Count	39	38	21	14	1	113
		% of Total	9.8%	9.5%	5.3%	3.5%	0.3%	28.2%
	High somatic symptoms severity	Count	8	15	26	13	6	68
		% of Total	2.0%	3.8%	6.5%	3.3%	1.5%	17.0%
Total		Count	202	99	56	36	7	212
		% of Total	50.5%	24.8%	14.0%	9.0%	1.8%	100.%

Chi-Square=158.079, *p*=0.000

Table 7. Co-morbidity of SSD with generalized anxiety disorder

Crosstab							
			Generalized anxiety disorder				Total
			No anxiety	**Mild anxiety**	**Moderate anxiety**	**Severe anxiety**	
Somatic symptoms (PHQ-15)	Non-somatic symptoms	Count	89.0	12.0	3.0	1.0	105.0
		% of Total	22.3%	3.0%	0.8%	0.3%	26.3%
	Low somatic symptoms	Count	61.0	31.0	16.0	6.0	114.0
		% of Total	15.3%	7.8%	4.0%	1.5%	28.5%
	Medium somatic symptoms	Count	40.0	36.0	24.0	13.0	113.0
		% of Total	10.0%	9.0%	6.0%	3.3%	28.2%
	High somatic symptoms severity	Count	9.0	18.0	27.0	14.0	68.0
		% of Total	2.3%	4.5%	6.8%	3.5%	17.0%
Total		Count	199.0	97.0	70.0	34.0	400.0
		% of Total	49.8%	24.3%	17.5%	8.5%	100%

Chi-Square=114.501, *p*=0.00

Table 8. Co-morbidity of depressive with generalized anxiety disorders

Crosstab							
			Generalized anxiety disorder				Total
			No anxiety	**Mild anxiety**	**Moderate anxiety**	**Severe anxiety**	
Depression	No depression	Count	131	29	6	2.0	161
		% of Total	81.7%	13.7%	2.8%	0.9%	50.5%
	Mild depression	Count	31.0	47.0	16.0	5.0	99.0
		% of Total	7.8%	11.8%	4.0%	1.3%	24.8%
	Moderate depression	Count	3.0	19.0	25.0	9.0	56.0
		% of Total	0.8%	4.8%	6.3%	2.3%	14.0%
	Moderately severe depression	Count	0.0	2.0	21.0	13.0	36.0
		% of Total	0.0%	0.5%	5.3%	3.3%	9.0%
	severe depression	Count	0.0	0.0	2.0	5.0	7.0
		% of Total	0.0%	0.0%	0.5%	1.3%	1.8%
Total		Count	199.0	97.0	70.0	34.0	400.0
		% of Total	49.8%	24.3%	17.5%	8.5%	100.0%

Chi-Square=297.268, *p*=0.00

Table 9. Significant socio-demographic risk factors for psychiatric morbidity

	Total		Mental Disorders					
			SSD		**Depression**		**Anxiety**	
	N	**%**	**N**	**%**	**N**	**%**	**N**	**%**
	100	212	96	45.3	51	24.1	65	30.6
Gender								
Men	86	40.7	30	14.0	19	8.9	22	10.5
Women	126	59.3	66	31.3	32	15.2	43	20.1
p-value			0.003		0.43		0.06	
Chi-square			14.299		3.82		7.43	
Social Status								
Single	53	24.8	24	11.5	14	6.5	17	7.8
Married	135	63.7	56	26.3	25	11.9	36	16.8
Divorced	15	7.2	9	4.5	8	3.6	8	3.9
Widowed	9	4.3	6	3.0	4	2.1	4	2.1
P-value			0.003		0.00		0.005	
Chi-square			24.825		43.961		23.36	

Discussion

A 53% prevalence rate of psychiatric disorders in the current study is relatively higher than that reported by three large epidemiological studies using the PHQ. The point prevalence of psychiatric morbidity in primary health clinics was found to be 26% in the USA, 42.5% in Belgium and 30.3% in Spain.[12,20,21] Those studies included substance misuse, eating disorder and posttraumatic stress disorders, which were not included in the current study. In Kuwait, Alkhadhari et al.[22] investigated all three disorders and reported a psychiatric morbidity of 42.7%, which is less than the rate of our study. However, it does not differ from the WHO's trans-cultural study in 14 countries using the Composite International Diagnostic Inventory (CIDI). The study estimated the prevalence of psychiatric morbidity to vary between 7.3% in Shanghai (China) to 52.5% in Santiago de Chile, with an overall rate around 24%.[10] It is noteworthy to mention that the WHO's study also included substance misuse, eating disorders and posttraumatic stress disorders.

This high prevalence of psychiatric morbidity in our sample is consistent with worldwide research, albeit there is no published local research for comparison. Kessler and Stafford stated that when patients have psychological or behavioural problems they will turn almost exclusively to the primary care facility, not to psychiatric or substance abuse services for care.[23] They concluded that primary care is the de facto mental health system. It has been demonstrated that 43% to 60% of patients with psychological problems are solely treated in primary care, while only 17% to 20% are treated in the specialty mental health system.[24] In Sudan, there are no psychiatric services at the primary care level and this may explain the high morbidity rate. Reported barriers that limit mental health service accessibility in Sudan include geographic distance, financial constraints and fear of stigma.[25] Another explanation for this high rate is that in Arab and Muslim countries, mental illness is regarded as a bad omen indicative of possession by evil spirits and hence patients tend to express their psychological distress in physical terms.[26]

The frequency of participants who screened positive for SSD on the PHQ-15 was high (45.3%). This high rate of somatic symptom presentation is consistent with research that found approximately half of all primary care visits are for somatic complaints.[27] Another study estimated about 80% of people presenting to primary care for psychological problems reported physical symptoms as their chief complaint.[28] The multiplicity of definitions of SSD and diverging research methods has led to wide variations in the prevalence of somatization disorder. The prevalence rate was reported to be 33.4% in Kuwait,[22] 60.8% in KSA[14] and 57.5% in Nigeria.[29] These regional findings are not dissimilar from ours.

Another study found many somatising patients were suffering from depressive and anxiety disorders.[27] The current findings support evidence that depression and anxiety are closely associated with somatic symptom disorder. Psychosocial stressors are known to trigger somatic symptom presentation. In the current study, SSD was significantly reported more by those who had been divorced or widowed.

Taking a cut-off point 10 on the PHQ-9 for a depressive disorder diagnosis would include patients with moderate, moderately severe, and severe depressive symptomatology. Accordingly, the number of patients with a depressive disorder constituted 24.1% (*n*=51) of the current sample. Croicu et al. estimated that up to 20% of people presenting for a primary care visit reported significant depressive symptoms with 5% to 10% meeting diagnostic criteria for major depression.[9] In the current study, at a cut-off point of 15 on the PHQ-9,which included moderately severe and severe depressive disorder, the rate was 10.8%. Two large epidemiological studies in KSA and Kuwait reported higher rates of depression in primary care; 49.9% and 37.1% respectively.[20,2] However, these rates included 'sub threshold' cases while our study population included those with moderate and severe degrees of disorders. Had we included participants with mild depression, the rate would be 49.6%, which is comparable to regional rates.

At cut-off point 10 on the GAD-7, 30.6% of our participants screened positive for anxiety disorder. Though designed primarily as a screening and severity measure for generalized anxiety disorder, the GAD-7 also has moderately good operating characteristics for three other common anxiety disorders: panic disorder, social anxiety disorder, and posttraumatic stress disorder. When screening for anxiety disorders, a recommended cut-off point for further assessment is a score of 10 or more. In clinical practice, it is recommended that the screening should be followed by clinical interview to establish the type of anxiety disorder and the screening is used to indicate possible diagnosis.

The 30.6% rate is comparable to research that suggested approximately one-third of primary care patients have significant anxiety symptoms.[30] It is reported that depression and anxiety co-occurs in up to 50% of all primary care patients.[22] In the current study, 72.1% patients with anxiety disorder also screened positive for a depressive disorder. These results reflect the challenge that clinicians face when dealing with patients who report anxiety symptoms because anxiety disorders can be symptomatic of another psychiatric or general medical disorder. Sometimes, the physical manifestations of anxiety can lead to multiple diagnostic invasive procedures and iatrogenic complications.

In the current sample, more than half of patients had SSD comorbid with almost equal rates of depression and anxiety (20.3% vs 19.5% respectively), suggesting a correlation between the three disorders. This is supported by research that found primary care patients commonly, but not exclusively somatise their emotional distress. Since a sizable proportion of SSD patients in the current study had no depression or anxiety co-morbidity (46.4%), it is important not to overemphasize the explanation of somatization in the realm of affective and anxiety disorders, but to think of SSD as a separate diagnosable entity.

The current findings indicate that most participants, who had depressive or anxiety disorders. suffer from somatic symptoms disorder (81.8% and 75% respectively). The findings are consistent with a number of previous studies which indicate that Eastern populations have a tendency to express emotional distress in somatic terms.[14,26] This association is not confined to specific cultures, however cultural factors may influence the meaning attached to symptoms.[4]

There were no significant differences between participants with and without psychiatric disorders in age, residential area, educational attainment or occupational status with regards to all three disorders. However, regarding gender, women were more likely to have SSD than men, but there were no significant differences regarding depressive and anxiety disorders. Such findings differ are from other studies. Across cultures, women are more likely than men to report somatoform disorders, depression, and anxiety.[4] Toft.T and Fink *et al*. in Denmark reported that women had higher prevalence of somatization disorder and overall mental disorders than men.[31] This difference in the current study may be explained partially due to findings that suggested men had a high percentage for both depressive and anxiety disorders, which is higher than has been reported in other studies. Another explanation can be understood in the way Sudanese women and men seem similar in that they express their emotional distress in physical rather than psychological terms. However, the current findings are consistent with those reported in a study from Qatar, which estimated the prevalence of somatization, anxiety, depression and stress in a primary care population. The study found the specific gender prevalence of these four psychological disorders was similar in men and women.[32]

Regarding marital status, the widowed and divorced appear more likely to suffer from all three disorders than people who are married or single. This is consistent with regional research. A Nigerian study reported high prevalence of mental disorders in the widows presenting to the primary care.[28] Further, a study in Qatar reported a significant difference regarding marital status for depression and anxiety[32]. Two Saudi studies also reported high prevalence of somatization and depression in the divorced and the widowed.[14,15]

In the current study, there is equal distribution of mental disorders between different age groups. Although past research reported greater prevalence among the elderly, large systematic reviews comparing prevalence of somatoform disorders between young and old age groups were inconclusive.[33,34] Likewise, there was no significant difference in psychiatric morbidity according to educational attainment and occupational status, which differs from what has been reported in the regional research. This may be partially explained by the low representation of people from farming backgrounds or people with low literacy rates in the current sample.

Limitations

The current study had several limitations. It was conducted in one PHC and for a period of four weeks only. A second stage research may have strengthened the design, which may have ensured greater generalizability. Structured clinical interview, which is gold-standard, may have been useful for identifying false positives, which are not uncommon for questionnaire-based studies.

Significant association should have been presented as confidence intervals in addition to *p* values.

Further, the study did not screen for substance use, eating disorders or posttraumatic stress which would have been useful for comparative purposes.

And finally, the PHQ having been developed in the English language before being translated into other languages, will have diminished validity and reliability when utilized in different cultures.

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الملخص

الخلفية: من المتعارف عليه أن نسبة كبيرة من مترددي مراكز الرعاية الصحية الأولية يعانون من اضطرابات نفسية وغالبا ما تكون شكواهم أعراض جسدية. أكثر هؤلاء لا يتم اكتشافهم ولا تتم معالجتهم بصورة فعالة وبالرغم من هذا فلم يتم أجراء بحوث علمية تتعلق بهذا الشأن كما أنه لا تتوفر بالسودان خدمات الطب النفسي على مستوى الرعاية الصحية الأولية. **الأهداف:** تحري مدي انتشار المرضية بين اضطراب الأعراض الجسدية و مدي ارتباطه باضطرابي الاكتئاب والقلق في عينة من مترددي مراكز الرعاية الصحية الأولية في مدينة كريمة بشمال السودان **الطريقة:** أجريت هذه الدراسة المقطعية بمركز الرعاية الصحية الأولية بمدينة كريمة خلال شهر مارس 0202 لفترة 4 أسابيع وشملت كل مترددي مركز الرعاية الأولية خلال تلك الفترة والبالغ عددهم 422 مريض واللذين بلغت أعمارهم 02 عاما فأكثر وتم تطبيق استبيانات صحة المريض للأعراض الجسدية والقلق والاكتئاب (PHQ-SADs)ووجدت الاستبيانات القابلة للتحليل من العينة عدد 422 استبيان فقط تم حساب النتائج بواسطة نظام (SPSS) وأعتبار أن الدرجة 02 أو أكثر تمثل الحالات الموجبة لكل الاستبيانات. **النتائج:** وجدت الدراسة أن 35%)000(من المشاركين يعانون من اضطراب نفسي وأن 43.5%)69(منهم يعانون من اضطراب الأعراض الجسدية، و04.0 %)30(يعانون من اضطراب الاكتئابي و52.9%)93(من اضطراب القلق. وأظهرت الدراسة أن 92%)042(من جميع المترددين من الإناث، وأن 90.3%)049(منهم تراوحت أعمارهم بين 02 -42 عاما كما وجدت الدراسة أن 95.2)033(من مجموع المشاركين متزوجين. وأظهرت الدراسة أن 14.0%)031(من اللذين يعانون من اضطرابات نفسية لديهم اشتراك اعتلالي لنوعين أو ثلاثة من الاضطرابات المشار إليها وأن 03.6%)33(يعانون من أحد الاضطرابات فقط، وأن 03.9%)55(يعانون من كل الاضطرابات مجتمعة و 02.5%)45(من اضطرابي الأعراض الجسدية والاكتئاب معا و 06.3%)40(من اضطرابي الأعراض الجسدية والقلق معا و02.2%)42(من اضطرابي الاكتئاب والقلق معا.

كما وجدت الدراسة أن الإناث، المطلقين، والأرامل هم أكثر الفئات عرضة للإصابة بهذه الاضطرابات.

الخاتمة: عضدت نتائج هذه الدراسة الفهم المسبق عن مدى انتشار الاضطرابات النفسية في المرضى المترددين على عيادات مراكز الرعاية الصحية الأولية، وتتماثل مع نتائج الدراسات الإقليمية والعالمية، وعلى الأخص النسبة العالية للمرضى الذين يعانون من اضطراب الأعراض الجسدية والقلق والاكتئاب ومدى ارتباط هذه الاضطرابات فيما بينها. **التوصيات:** نوصي بمزيد من الدراسات في هذا الشأن على مستوى الرعاية الصحية الأولية وعلى مستوى المجتمع ككل. كما ينبغي تأسيس سبل التعاون بين القطاعين على خدمات الطب النفسي والرعاية الصحية الأولية، وأيضا توفير التدريب اللازم للأطباء العاملين في مجال الرعاية الصحية الأولية حتى يتسنى لهم المعرفة اللازمة عن كيفية التعامل مع هؤلاء المرضى وكيفية العلاج الأولي لهم.

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Perspectives of Sudanese Psychiatrists and Trainees Towards Traditional Healers in Khartoum

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وجهات نظر الأطباء النفسيين السودانيين عن العمل مع المعالجين التقليديين في ولاية الخرطوم السودان

محمد إبراهيم حسن، عبد العزيز أحمد عمر

Abstract

Background: Traditional healing for people with mental illness is popular in many parts of the world, including Sudan. The role of traditional healers in Sudan cannot be ignored. According to the WHO, 80% of people with mental health difficulties seek help from traditional healers before going to health services. Psychiatrists are reticent to collaborate with traditional healers, which has not been thoroughly and widely investigated in Sudan. **Objectives:** The current study explored the opinions and attitudes of psychiatrists and psychiatry trainees in Sudan towards traditional healers to understand their willingness to work with traditional healers and assess what factors might influence such collaboration. **Methods:** N=108 psychiatrists and psychiatric trainees were recruited to this descriptive cross-sectional study. Data were collected using a self-administered questionnaire. **Results:** Psychiatric trainees (n=70) and qualified psychiatrists (n=38) participated. Overall, 51% supported the idea of collaboration between psychiatric doctors and traditional healers; 57% wanted to learn more about traditional practice, 51% expressed willingness to engage in discussion and workshops with traditional healers; 72% stated they would not refer patients to traditional healers. **Conclusion:** Half of participants in Khartoum supported collaboration with traditional healers. There is no significant association between participants' experiences of traditional healers and their opinions on the integration between psychiatry and traditional healing. Most participants agreed there may be a role for traditional healing methods in the treatment of anxiety, but not for the treatment of psychotic, mood, and personality disorders.

Key words: Perspectives, Traditional healers, Psychiatrists

Declaration of interest: None

Introduction

Traditional healers are common across the world and have been instrumental in the delivery of mental and physical health care for large proportions of the global population for centuries. While their practice can be variable and possibly harmful, it is also likely that traditional methods used can be helpful to individuals, families, and communities. Rather than seeking to diminish traditional healing, it is more productive to seek opportunities to better understand the practices used and.

In Sudan, there are two categories of traditional healers who support people with mental health difficulties. The first is that of religious healers who have been influenced by Arab and Islamic culture over many centuries. This group of healers may be classified into Koranic healers and Sufi healers. The second category is comprised of non-religious healers influenced by indigenous culture, such as that of the Kogour in South Sudan and Zar who came to Sudan from Ethiopia.[1]

According to the World Health Organization (WHO), traditional healing can be defined as "the total of knowledge, skills, and practices based on the theories, beliefs, and experiences indigenous to different cultures that are used to maintain health, as well as to prevent, diagnose, improve, or treat physical and mental illnesses".[2]

Since the early 1970s, the WHO has advocated for the recognition of Traditional Health Practitioners (THPs) as a part of Primary Healthcare (PHC), and also for the integration of traditional medicine in national health systems.[3] It can be argued that psychiatry, more than any other branch of medicine, has provided strong advocacy for the integration of traditional healing with modern medicine because mental illness, for many, can seem rather enigmatic. Collaboration between traditional healers and health practitioners is now being accepted by many African countries, especially in the Sub-Saharan region.[3]

The potential to integrate traditional healing practices with the psychiatric care in Sudan was recognized by many pioneering Sudanese psychiatrists in the past, but such degrees of openness and curiosity have given way to more complex systems that are, rightly, concerned with clinical management and safety. Expanding on these earlier efforts through research offers one way of

understanding the utility, effectiveness, and risks of traditional healing in the context of mainstream mental health delivery.[1]

Statistics from the WHO highlight that more than 80% of African populations attend traditional healers for health reasons; approximately half will have some kind of mental disorder.[4] Without mentoring and monitoring, some traditional healers may have harmful methods of practice, such as isolating patients in an unhealthy, non-hygienic environment, depriving patients of nutritional food, beating patients, misdiagnosis and mismanagement. Collaboration with traditional healers can include educating them about the benefits and effectiveness of modern psychiatric medications to their patients, under a psychiatrist's supervision while continuing the beneficial traditional methods of treatment that do not cause harm to the patient.[5] There are advantages to ensuring that such education is multi-directional for traditional healers, psychiatrists and other mental health professionals.

Traditional healing has obvious popularity in Sudan's local community. However, despite it being a common preference for treatment of mental illnesses, there is sparse research on the attitudes and opinions of Sudanese psychiatric doctors about collaboration and integration with traditional healers.

The purpose of the current study is, therefore, to examine the views of psychiatric doctors towards traditional healers, and to determine the extent to which some variables might predict the likelihood of working with traditional healers. Our aim is to help the people who make key decisions about mental health delivery in Sudan gain more insight as to the potential for collaboration between traditional healers and mainstream mental health service providers.

Objectives

The perspectives of Sudanese psychiatric doctors towards traditional healers in Khartoum, Sudan are explored in the current study. Demographic characteristics of psychiatrists and trainees working in Khartoum were assessed and a survey-based questionnaire was used to understand their opinions about integrating traditional healing practices within mainstream mental health services.

A further aim was to determine the relationship between the work experience of psychiatric doctors and their attitude towards collaboration with the traditional healers. Finally, to identify the participant's view about the role of traditional healing methods in treating some psychiatric conditions.

Methods

The current study used a survey-based method to understand the attitudes and opinions of psychiatrists and trainee psychiatrists working in Sudan's capital city Khartoum. A total of 62 psychiatrists and 78 trainee psychiatrists worked there at the time of the study (from January to June 2018). [6] All were contacted and invited to participate.

Data were derived from a self-administered questionnaire, which was reviewed and validated by five experienced Consultant Psychiatrists. Participants were asked about their demographic information in addition to their opinion and attitude towards traditional healers. The questions were based on a similar study from South Africa.[7] A variety of statements were used in the questionnaire with most being ratable via the Likert scale while others involved dichotomous choices; according to the nature of the information needed.

A pilot was conducted to ensure the validity of the questionnaire. Data analysis was via SPSS and Microsoft Excel. Ethical review was from the ethical committee of the Sudan Medical Specialization Board. Participants provided written consent prior to taking part in the study and understood their right to withdraw at any time. All were informed as to the purpose of the research and were aware their data would be anonymized.

Results

A total N=108 Sudanese psychiatric doctors participated in the study with *n*=70 (65%) being trainees and *n*=38 being qualified Psychiatrists. This reflected a response rate was 78% of the estimated total psychiatrists and trainee psychiatrists working in Khartoum at the time of the study.

Participant characteristics

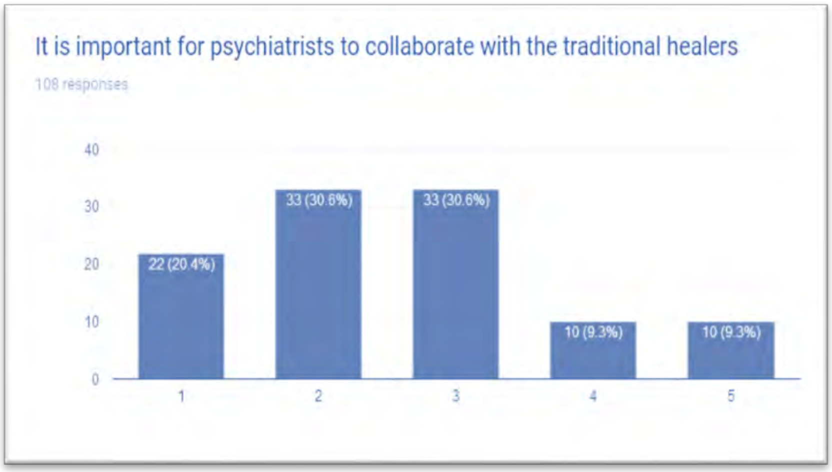
Among the participants, *n*=58 participants (54%) were women and *n*=50 (46%) were men with more than the half (53%) being 25-36 years of age. Consultant psychiatrists ranged in ages from 56-65 years (see Table 1).

Table 1. Age and experience

Age	**Experience**			**Total**
	Consultant	Trainee	Specialist	
25 years or less	0	3	0	3
26 - 35 years	0	53	4	57
36 - 45 years	5	13	7	25
46 - 55 years	2	0	2	4
56 - 65 years	12	1	1	14
66 - 75 years	4	0	0	4
75 Years or more	1	0	0	1
Total	**24**	**70**	**14**	**108**

Perspectives on the importance of collaboration

Participants were asked to rate their responses to the statement: ‘It is important for psychiatrists to collaborate with the traditional healers’ on a 5-point Likert scale with 1=strongly agree and 5=strongly disagree. From the 108 participants, we found that 22 participants strongly agreed, 33 agreed, 10 disagreed and 10 strongly disagreed (see Figure 1).

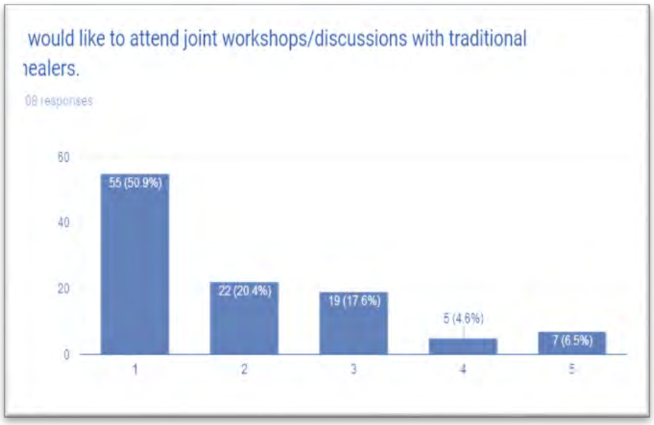


*1= strongly agree, 5= strongly disagree

Figure 1. Participant ratings on collaborating with traditional healers

Willingness to learn more about traditional healing

Participants were asked to rate how they felt about attending joint workshops or discussions with traditional healers based on a 5-point Likert scale with 1=absolutely and 5=not at all. In total, *n*=77 (73%) wanted to learn more about traditional healing; *n*=19 (17.6%) held more neutral views; and, *n*=12 (11.1%) did not want to engage in workshops or discussions about the practice (see Figure 2).



1= absolutely, 5= not at all

Figure 2. Participant ratings on willingness to attend workshops/discussions

Attitudes toward traditional healing of mental health

Participants were asked to give either a 'yes' or 'no' response to their views on the roles of traditional healers in four areas of mental health: psychotic disorders, mood disorders, anxiety disorders and personality disorders.

In this study, 58% of the participants have the willingness to support the integration between the traditional healers and psychiatrists.

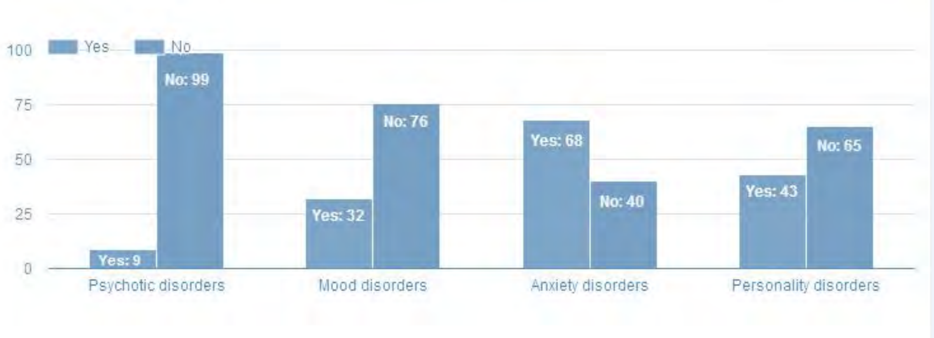


Figure 3. Participant's opinion about the role of the traditional heading in some psychiatric conditions

Participant level of experience and opinion on collaboration with traditional healers

Pearson Chi-Square test showed that there is no significant association between the experience of participants and their opinion about collaboration with traditional healers.

Figure 4 suggests that the more senior the psychiatrist is, the more likely they are to endorse collaboration with traditional healers. Indeed, there was greater reluctance among trainee psychiatrists compared with the specialists and consultants.

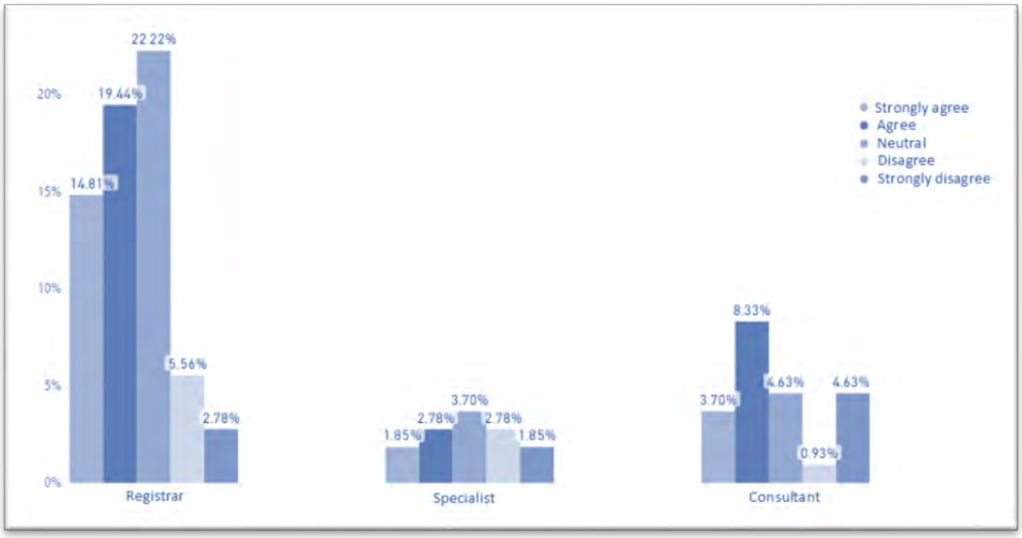


Figure 4. Participant’s position and the agreement to collaborate with the traditional healers

In relation to methods used by the traditional healers which include restriction of patient’s diet and lashing the patients by traditional healer and treating patients by Rogia "exorcism"), we found that most participants held positive view about the treatment by Rogia more than for the other methods (24 participants agreed using Rogia, 23 strongly agreed 9 disagreed and 10 strongly disagreed), while nobody agreed using diet restriction and by lashing people was an acceptable method.

Discussion

Traditional healing methods for people with mental illness is popular in many parts of the world, including Sudan. Their role in the country cannot be ignored. Local estimates suggest there is high take up of such support, which is highlighted in one study that found 84% of patients with a history of mental health difficulties sought treatment from traditional healers.[8] The WHO has long advocated for the integration of traditional healing into mainstream health care systems to help alleviate the problems that primary health care services encounter.[9] The possibility of doing so would likely receive better support from psychiatry and other mental health professionals were there proper evaluations as to the utility, effectiveness and safety of traditional healing methods. Such rigor allows for greater understanding as to any risks associated with these methods and has the potential to identify where good practice can be integrated into more mainstream provision.

Patients use traditional healing for many reasons. It may be less stigmatizing and is therefore more readily sought; and/or it may be regarded as more affordable.

One way to mitigate against potential risks or harm caused to people who seek support from traditional healers is to integrate their practice within psychiatric services. This may also bring more people in to the mental health care system. However, more needs to be understood about the views of psychiatrists and other mental health professionals toward working with traditional healers in Sudan.

Of the 108 consultant psychiatrists, specialists and trainee psychiatrists who participated in the current study, the majority were trainees (*n*=70 or 65%) and it is at this level in the psychiatry profession where a reluctance to engage with traditional healers becomes most apparent. It will likely require the influence and leadership of specialist and consultant psychiatrists - who expressed a greater willingness to collaborate with traditional healers – before any substantial shift in the professional outlook toward alternative approaches can happen. Without evaluation and positive inquiry into the advantages and disadvantages of these methods, how will the risks be understood? It would be important to consider these risks further in the context of a global shortage of psychiatrists. To that end, and given the popularity of traditional healing methods, the need to collaborate with traditional healers is possibly greater than ever.[11]

Findings from the current study indicate that about half of all qualified psychiatrists and psychiatric trainees working in Khartoum agreed that it would be important to collaborate with traditional healers (30% agree and 20% strongly agree). However, the findings also suggest a divide between those who disagreed with the idea of collaboration (18.6%) and those who lacked a clear opinion on the matter (30.4%). Consider this in relation to a study from South Africa that found 57.7% of health care practitioners regarded traditional healing as a viable complimentary approach to use within the primary health care system, with 53.3% endorsing traditional healing as a safe practice.[12]

Regarding the willingness to support the integration of traditional healers and psychiatrists for some aspects of patient-related practice, 58% of participants expressed willingness to do to so. A similar outlook was highlighted in a focus group study, which was conducted to investigate the perceptions of various stakeholders on integration of traditional and mainstream mental health delivery in South Africa.[13] In that study, the researchers included psychiatrists, medical doctors, psychologists, traditional healers and service users. According to the study, most focus group participants preferred formal cooperation between traditional healers and mental health care providers.[13]

In relation to participant attitudes toward the role of the traditional healers for psychotic disorders, anxiety disorders, mood disorders and personality disorders, most agreed there may be a role for them in the treatment of anxiety, but not in the other areas. Traditional healing is not based on evidence-based practice; however, its utility is supported in one study conducted in Sudan.[14] The study found a reduction in common psychological symptoms for people with psychotic who attended traditional healing centers.[14] Although, the study had a number of methodological flaws, it offers some indication that traditional healing may be effective as a low-intensity intervention.

A further notable outcome from the present study are the opinions held about methods used by traditional healers when treating psychiatric patients. In total, *n*=57 participants (43%) agreed with the practice of exorcism, or Rogia. The practice of diet restriction and physically lashing as methods of treatment for such patients was not endorsed by any of the participants. Rogia is a widely held practice for traditional healers in Sudan. There remains a belief within the culture that exorcism can alleviate certain mental health conditions although how successful Rogia is will depend upon the skills of the healer and degree of the conviction of the patient and his belief.[14] This skill may not be dissimilar to that of a psychologist or counsellor having the ability to establish a good therapeutic alliance and there is also the possibility that following someone's belief system in a more credulous way can provide some relief from neurotic-type symptoms.

Conclusion

- Half of the Sudanese psychiatrists and trainees working in Khartoum agreed it is important to collaborate with traditional healers.
- There is no significant association between the experience (regarding seniority level) of a participant and his/her opinion of the integration between psychiatric and traditional healing.
- Most participants agreed there may be a role for traditional healing in the treatment of anxiety disorders. However, none to its use in the treatment of psychotic, mood, and personality disorders.

Recommendations

- Health authorities must consider the potential for partnership with the traditional healers.
- Establishing workshops with traditional healers for mutual learning and mitigation against harmful practice could support more referrals for mental health care resulting in better outcomes for people.

- Channels of collaboration between traditional healing and mainstream healthcare professionals must be considered.
- Further research is needed to evaluate the possibility of services integrating with the traditional healers.
- Awareness raising among psychiatric doctors about the potential benefits of the traditional healer is needed.

Limitation

The current study sought the opinions of psychiatrists and trainee psychiatrists only. Doctors from other specialties were not enrolled.

- This was a quantitative study and as such it did not examine the reasons for exactly why participants' attitudes differed.

Acknowledgement

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الملخص

معلومات عامة: العلاج التقليدي للأشخاص الذين يعانون من أمراض نفسية شائع في أجزاء كثيرة من العالم بما في ذلك السودان. إن دور المعالجين التقليديين في السودان لا يمكن تجاهله حيث أن منظمة الصحة العالمية أوضحت بأن 02% من سكان إفريقيا يسعون إلى الحصول على مساعدة الصحة النفسية من المعالجين التقليديين في البداية قبل الذهاب إلى الخدمات الصحية. بالرغم من ذلك فإن رغبة الأطباء النفسيين في العمل مع المعالجين التقليديين لم تتم دراستها على نطاق واسع في السودان. **الأهداف:** هدفت هذه الدراسة إلى استكشاف آراء الأطباء العاملين في مجال الطب النفسي في السودان عن المعالجين التقليديين لاكتشاف ما إذا كانوا على استعداد للعمل بالتعاون مع المعالجين التقليديين أم لا. **الطرق:** أجريت دراسة وصفية مستعرضة مقطعية شملت 820 طبيب نفسي تم جمع البيانات باستخدام الورق في استبيان يعبأ ذاتيا تم جمع البيانات باستخدام الاستبيان المعبأ ذاتيا. وتم تحليل البيانات باستخدام برامج الكمبيوتر التحليلية وتم الحصول على تصريح أخلاقي من اللجنة المسؤولة في المجلس القومي السوداني للتخصصات الطبية. **النتائج:** شارك في هذه الدراسة 02 طبيب متدرب في الطب النفسي و80 اختصاصي واستشاري طب نفسي. وافق 18 % من المشاركين على أنه من المهم قيام تعاون بين الأطباء النفسيين والمعالجين التقليديين. 10% من المشاركين يريدون معرفة المزيد عن العلاج التقليدي. 18 % من المشاركين على استعداد للمناقشة والمشاركة في حلقات وورش عمل مع المعالجين التقليديين. قال 00% من المشاركين أنهم لن يقوموا أبداً إحالة المرضى إلى العلاج مع المعالجين التقليديين. لم تكشف الدراسة عن وجود ارتباط وثيق بين خبرة المشارك في العمل ورؤيته حول المعالجين التقليديين. **الخلاصة:** أظهرت هذه الدراسة أن حوالي نصف الأطباء النفسيين والمتدربين السودانيين العاملين في الخرطوم وافقوا على أهمية التعاون مع المعالج التقليدي. لا توجد علاقة ذات دلالة إحصائية بين خبرة المشارك ورأيه في التكامل بين العلاج النفسي والتداوي التقليدي. يتفق معظم المشاركين على أنهم يعتقدون أن هناك دور للعلاج التقليدي في علاج اضطراب القلق، لكنهم لا يوافقون على أنهم يعتقدون أن هناك دور في علاج حالات الاضطرابات الذهانية والمزاجية واضطرابات الشخصية.

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Appendix

The questionnaire

We invite you to participate in this study. Participation in this study is highly valued and much appreciated as it adds to the knowledge pool for the integration between the traditional healers and psychiatrists. The current study utilizes a questionnaire to collect data. Participation is voluntary. The data that will be collected will remain anonymous. Participants can withdraw from the study if and when they feel uncomfortable to continue. The questionnaire is divided into three parts and participants are kindly asked to complete all three parts. It takes about five minutes.

PART 1: Demographic data

1. Age: ☐ < 25 years ☐ 26 - 35 years ☐ 36 - 45 years ☐ 46 - 55 years ☐ 56 - 65 years ☐ 66 - 75 years ☐ >75 years
2. Gender: ☐ male ☐ female
3. Position: ☐ Consultant ☐ Specialist ☐ Registrar
4. Current workplace: ☐ Inside Khartoum state ☐ Outside Khartoum state
5. Your practice is in: ☐ Only public hospital ☐ Only private Clinic ☐ Public hospital and private Clinic

Where did you received your training of psychiatry ☐ In Sudan ☐Abroad

Part 2: This section asks about your attitude toward traditional healing. Please tick ONE box only

No.	Question	1 Absolutely	2 Maybe	3 Unsure	4 Not likely	5 Not at all
1	I would like to attend joint workshops/discussions with traditional healers					
2	I will refer some patients to be treated by traditional healers.					
3	I have the potential to visit some centers of traditional healing to treat patients there.					
4	I would like to support the integration of traditional healers and psychiatrists					

PART 3. This section asks about your opinions about traditional healing. Please tick ONE box only.

NO.	**Question**	**1 Strongly agree**	**2 Agree**	**3 Not sure**	**4 Disagree**	**5 Strongly disagree**
1	It is important to collaborate with the traditional healers.					
2	Traditional healers should be licensed to be a part of the treating team.					
3	Traditional healers must be trained to know when to refer patients to psychiatrists.					
4	Using Rogia رقية is useful.					
5	Using Mihaia محاية is useful.					
6	Using Bakhra بخرة is useful.					
7	Restraint patients by traditional healer is useful.					

8	Restriction of patient's diet by traditional healers is useful.					
9	Lashing patients by traditional healers is useful.					
10	I want to learn more about traditional healing.					

In my opinion, there may be a role for traditional healers in the following conditions:

i. Psychotic disorders ☐ yes ☐ no

ii. Mood disorders ☐ yes ☐ no

iii. Anxiety disorders ☐ yes ☐ no

iv. Personality disorders ☐ yes ☐ no

v. Other such as ……………………………………………………………

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Burnout Syndrome in Caregivers of Children with ADHD

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الإحتراق النفسي لدى مقدمي الرعاية للأطفال ذوي اضطراب فرط الحركة وتشتت الانتباه

شيماء عرفة ومحمد لملوم

Abstract

Background: Parental burnout is a serious condition experienced by caregivers of children with developmental delays and disabilities, including ADHD children. It has consequences for the work domain and parenting domain because of risks associated with child neglect, parental violence, suicidality and running away. **Aim:** The current study is a comparative cross-sectional study that compares burnout among caregivers of children with ADHD to that among caregivers of children without ADHD; asses sociodemographic factors associated with this burnout and to explore coping strategies among the caregivers of children with ADHD. **Method:** N=50 caregivers of children with ADHD and N=50 caregivers of children without ADHD were compared in three dimensions of burnout. **Results:** Burnout syndrome was more common among caregivers of children with ADHD and was experienced more intensely by mothers, women of young age, caregivers of low socio-economic status or caring for a boy or a child with more severe forms of ADHD. **Conclusion:** Concentration on the problem was the most common coping strategy and self-blame was the least common. Training sessions for caregivers of children with ADHD are recommended, including group therapy sessions.

Key words: Burnout syndrome, Caregivers, ADHD, Coping strategy

Declaration of interest: None

Introduction

Parenting refers to the complex process of raising a child and not merely a biological relationship. It is the process of promoting and supporting the physical, social, emotional and intellectual development of a child from birth to adulthood.[1] The purpose of parenting and caregiving is to support children to be safe and healthy[2] and ensure a stable, protective and emotionally supportive environment to promote the child's good health and learning.[3]

Moreover, although parenting can be wonderful, it also can be stressful. Parents may develop burnout when they lack the resources needed to handle stressors related to their parenting responsibilities. Parental burnout is the condition in which parents suffer from severe exhaustion related to their parenting role in a way that risks them becoming emotionally distant from their children and having a sense of parental ineffectiveness.[4] Parental burnout is a prolonged response to overwhelming chronic stress[5] rather than an ordinary parental stress.[6] Parental burnout is a serious condition with consequences in the work domain as well as in the parenting domain. Work domain consequences include impaired mental and physical health of employees, decreased job performance and increased turnover.[4] In the parenting domain, consequences include addictive behaviors, sleep disorders, depressive symptoms and couple conflicts.[7] It was found to be associated with child neglect, parental violence and ideas of committing suicide or running away.[8]

Parents who are at the greatest risk for burnout are those who aim to be perfect parents;[7] have poor child rearing practices; lack support from the co-parent[9] or from the social network;[10] or, have children with special needs that impact on family life.[11]

Childhood developmental disorders and disabilities create a significant global burden, which is predicted to increase with the continually rising population of children.[3] ADHD (Attention deficit hyperactivity disorder) is a disorder, which interferes with development or functioning.[12] Its main symptoms include inattention, hyperactivity and impulsivity.[13] The median age of onset for children with current ADHD is six years[14] and about one-third of children diagnosed with ADHD retain the diagnosis into adulthood.[15] The pooled worldwide prevalence of ADHD in children under 18 is about 7.2%.[16] The problem with families of children with ADHD is that they can require a lot of support to cope due to the difficulties their children face with emotion regulation and impulsivity, which can also interfere with personal relationships. They may also have difficulties following social rules, controlling their emotions, or saying the appropriate thing. Finally, many aspects of their home life are quite difficult owing to problems with self-organization, planning and focusing on what is being said to them.[13]

The experience of raising a child with ADHD can differ from traditional child rearing.[17] ADHD was found to affect the activities and emotions of caregivers, especially those caring for children aged 6-11 years of age.[18] Normal household routines and rules might become almost impossible; and, parents may need to adopt different approaches to cope with the behaviors of a child with ADHD in order to make life easier.[17]

The current study aims to compare burnout among caregivers of children with ADHD to that of caregivers whose children do not have ADHD; to asses sociodemographic factors associated with parental burnout and to explore coping strategies in caregivers of children and adolescents with ADHD. For this purpose, and along with assessing the socio-demographic characteristics of the studied group, answers to the following questions were sought:

1. Is burnout syndrome more common among caregivers of children with ADHD?
2. What are the main coping strategies used by caregivers of children with ADHD?
3. Do levels of burnout in caregivers of children with ADHD change based on their socio-demographic characteristics?
4. Do levels of burnout in caregivers of children with ADHD change based on their child's socio-demographic characteristics?
5. Do levels of burnout in caregivers of children with ADHD change based on their child's type or severity of ADHD?

Materials and Methods

Study design and time frame

This study was a comparative cross-sectional study carried out on caregivers of children and adolescents with ADHD and caregivers of a matched group without ADHD. The study was conducted from the beginning of February to the end of July 2019.

Study population

Fifty caregivers aged 18-60 years caring for children or adolescents with ADHD (Group A) and fifty caregivers of a matched group without ADHD (Group B), fulfilling inclusion and exclusion criteria were included in the current study. Caregivers of children or adolescents with ADHD were recruited from psychiatry outpatient clinics in Al-Zahraa University Hospital/Al_Azhar University following diagnosis for having disruptive behavior disorder. Diagnosis was based upon clinical assessment by senior staff followed by psychometric assessment using the child behavior checklist, mini-international neuropsychiatric interview for children and adolescents and the Conners rating scale. Control group caregivers were recruited from relatives of Group A.

Inclusion criteria: caregivers aged 20-60 years old caring for children aged 7-16 years old.

Exclusion criteria: caregivers with chronic medical or neurological disease, past history or family history of psychiatric disease, those caring for children with chronic medical illness and anyone scoring >85 on the standardized IQ test used.

Study tools

Children of caregivers in Group A were subjected to complete history taking, IQ test, mini-international neuropsychiatric interview and Conners rating scale. History was taken using semi-structured psychiatric interview, which is routinely used in the Psychiatric Department of Al-Zahraa University Hospital. It includes data about age, gender, birth order, school achievement and social relations. Meanwhile, presence of disorders in children in Group B was excluded through full history taking and clinical examination.

IQ tests were performed to screen out children and adolescents with intellectual disability using the Stanford-Binet Intelligence Scale - Fifth Edition. The Stanford-Binet Intelligence Scale is one of the most widely used intelligence tests. It has been standardized to measure intelligence and cognitive abilities in children, from the age of two to adulthood. The test takes about 45 to 90 minutes to complete and measures four factors: verbal reasoning, abstract/visual reasoning, quantitative reasoning and short-term memory. Scores in these areas add up to form the composite score, which represents a global estimate of a person's intellectual functioning.[19]

The Arabic version of Mini-International Neuropsychiatric Interview for children and adolescents (MINI kid) was used to confirm the diagnosis of disruptive disorder. The MINI is a short, structured interview, with an administration time of about 15 minutes. It is used to diagnose DSM-IV and ICD-10 psychiatric disorders.[20]

The Arabic version of the Conners rating scale was used to assess the severity of ADHD. The Conners rating scale is a comprehensive behavior rating scale, which is used to assess certain social, behavioral and academic issues in children aged 6-18 years as well as to help in the diagnosis of ADHD. The scale is designed to measure many behavioral markers, including hyperactivity, aggressive behavior, potential for violence, compulsive behaviors, perfectionism, difficulty in class or with language, separation anxiety, social issues and emotional distress.[21]

Caregivers in both groups were subjected to full history taking and the Maslach Burnout Inventory. The Coping Strategies rating scale was used only with Group A caregivers.

Full history taking of caregivers included personal and socio-demographic data (age, gender, marital status, residence, educational level, work, number of siblings, relation to the child), complete medical and neurological history and examination, family history of psychiatric disease and interviewing to complete the psychiatric sheet routinely used in the Psychiatric Department of Al-Zahraa University Hospital.

The Arabic version of the Maslach Burnout Inventory (MBI) was used for assessment of burnout. MBI is an introspective psychological inventory that is used to measure the hypothesized aspects of burnout.[22] The MBI is designed to assess the three components of burnout syndrome namely: emotional exhaustion, depersonalization and reduced personal accomplishment. It is self-administered and takes about 10-15 minutes to complete. Questions are written in the form of personal feelings for which the answers represent the frequency with which the respondent experiences these feelings on a 7-point scale (from zero=never to 6=everyday). Scores are given based on a scoring key and three scores are computed for each respondent, corresponding to the three assessed components.[23] Caregivers were classified according to their scores in the first section (emotional exhaustion) into low (score 17 or less), moderate (score between 18 and 29 inclusive) and high (score 30 or above) burn-out. They were classified according to their scores in the second section (depersonalization) into low (score 5 or less), moderate (score between 6 and 11 inclusive) and high (score 12 or above) burn-out. And, they were classified according to their scores in the third section (personal achievement) into high (score 33 or less), moderate (score between 34 and 39 inclusive) and low (score 40 or above) burn-out.

The Arabic version of the Coping Strategies Scale was used only with Group A. It consists of 41 items, which help to identify thoughts and actions used by family members of children with intellectual disability to cope with a specific stressor. Answers indicate responses to stressors and are given on a 3-point scale (never used, sometimes used, always used). Scores are given to responses and total scores are summated.[24]

Ethical review

Ethical review was by the Ethical Committee/Al Azhar University prior to data collection. Participants were assured of confidentiality and verbal consent was obtained from all who agreed to participate.

Statistical analysis

Data were collected, revised, coded, tabulated and analyzed using the Statistical Package for Social Science (IBM SPSS) version 23. Quantitative data were presented as mean, standard deviations and ranges, independent t-test was used for comparison between two groups and One-Way ANOVA test was used for comparison between more than two groups in this case. Meanwhile, qualitative variables were presented as number and percentages, Chi-square test was used for comparison between groups of qualitative variables and Fisher's Exact Test was used when the expected count in any cell was found to be less than 5. The confidence interval was 95% and the margin of error accepted was 5%. So, the p value was considered significant at the level of <0.05, highly significant at the level of < 0.01 and very highly significant at the level of < 0.001.

Results

The current study involved 100 participants classified into two groups: Group A (caregivers of children and young people with ADHD) and Group B (caregivers of children and young people without ADHD). There were no significant statistical differences between both groups as regards age, gender, residence, marital status, relation to child, educational level, socioeconomic status, number of off springs and work. Most caregivers in both groups were mothers (Table 1).

Table 1. Socio-demographic characteristics of caregivers in two groups

Socio-demographic characters		Group A	Group B	Test value	*p* value
		***n*=50**	***n*=50**		
Age (Years)	Mean ± SD	37.10 ± 9.18	36.60 ± 8.48	-0.283•	0.778
	Range	28 – 59	23 – 56		
Gender	Female	47 (94.0%)	48 (96.0%)	0.211*	0.646
	Male	3 (6.0%)	2 (4.0%)		
Residence	Rural	13 (26.0%)	14 (28.0%)	0.051*	0.822
	Urban	37 (74.0%)	36 (72.0%)		
Marital status	Divorced	3 (6.0%)	4 (8.0%)	0.254*	0.881
	Married	42 (84.0%)	42 (84.0%)		
	Widow	5 (10.0%)	4 (8.0%)		
Relation to child	Grand mother	5 (10.0%)	4 (8.0%)	0.358*	0.836
	Mother	42 (84.0%)	44 (88.0%)		
	Father	3 (6.0%)	2 (4.0%)		
Educational level	Illiterate	7 (14.0%)	4 (8.0%)	1.196*	0.754
	Basic	5 (10.0%)	4 (8.0%)		
	Secondary	28 (56.0%)	32 (64.0%)		
	High education	10 (20.0%)	10 (20.0%)		
Socio economic status	Low	30 (60.0%)	32 (64.0%)	0.198*	0.906
	Average	16 (32.0%)	14 (28.0%)		
	More than average	4 (8.0%)	4 (8.0%)		
Number of children	Mean ± SD	3.46 ± 1.03	3.12 ± 1.08	-1.607•	0.111
	Range	2 – 6	1 – 6		
Work	Housewife	27 (54.0%)	32 (64.0%)	1.033*	0.309
	Employee	23 (46.0%)	18 (36.0%)		

*Chi-square test; •Independent t-test

The mean age of children in Group A was 9.68 ± 2.10 years; 80% were boys and 20% were girls; their birth order was first-born in 34% of cases, the second in 40% of cases, the third in 16% of cases and the forth in 10% of cases (Table 2).

Table 2. Socio-demographic characteristics of Group A children

Socio-demographic characteristics		Children
		***n*=50**
Age (years)	Mean ±SD	9.68 ± 2.10
	Range	7 – 16
Gender	Boy	10 (20.0%)
	Girl	40 (80.0%)
Birth order	1st	17 (34.0%)
	2nd	20 (40.0%)
	3rd	8 (16.0%)
	4th	5 (10.0%)
School achievement	Less than average	26 (52.0%)
	Average	24 (48.0%)
	More than average	0 (0.0%)
Social relation	Not affected	9 (18.0%)
	Affected	41 (82.0%)

Assessment via the MINI kid for children in Group A found 60% with mixed ADHD; 22% with inattention type of ADHD; and, 18% with hyperactive ADHD. When the Conners Rating Scale was used, the severity of ADHD was found to be moderate in 42% of cases; severe in 40%; and, mild in 18% (Table 3).

Table 3. Type and severity of ADHD in group A children

	Group A children
	***n*=50**
Type of ADHD via MINI kid	
Inattention type	11 (22.0%)
Mixed	30 (60.0%)
Hyperactive	9 (18.0%)
Severity of ADHD via Conners rating scale	
Mild	9 (18.0%)
Moderate	21 (42.0%)
Severe	20 (40.0%)

Assessment via MBI to determine the level of burnout in caregivers found highly statistically significant differences (*p*=0.000) between caregivers of children with ADHD and caregivers of children without ADHD as regards scores and grades of the three dimensions of burnout: emotional exhaustion, depersonalization and personal achievement as caregivers of children with ADHD had higher burnout scores in the three dimensions (Table 4).

Table 4. Caregivers' burnout using MBI

		Group A	Group B	Test value	*p* value
		***n*=50**	***n*=50**		
Emotional (score)	Mean ± SD	34.56 ± 11.88	19.92 ± 8.10	-7.201•	0.000
	Range	15 – 50	13 – 45		
Emotional exhaustion	Low	8 (16.0%)	36 (72.0%)	41.725*	0.000
	Moderate	8 (16.0%)	10 (20.0%)		
	High	34 (68.0%)	4 (8.0%)		
Emotional (score)	< 28	12 (24.0%)	42 (84.0%)	36.232*	0.000
	> 28	38 (76.0%)	8 (16.0%)		
Depersonalization score	Mean ± SD	12.44 ± 5.47	6.04 ± 3.50	-6.962	0.000
	Range	5 – 23	4 – 20		
Depersonalization	Low	10 (20.0%)	42 (84.0%)	43.142*	0.000
	Moderate	15 (30.0%)	6 (12.0%)		
	High	25 (50.0%)	2 (4.0%)		
Depersonalization score	< 5	0 (0.0%)	12 (24.0%)	13.636*	0.000
	> 5	50 (100.0%)	38 (76.0%)		
Personal achievement score	Mean ± SD	32.22 ± 7.12	38.96 ± 5.22	5.397•	0.000
	Range	18 – 44	20 – 46		
Personal achievement	Low	13 (26.0%)	40 (80.0%)	41.807*	0.000
	Moderate	9 (18.0%)	10 (20.0%)		
	High	28 (56.0%)	0 (0.0%)		
Personal achievement score	> 38	15 (30.0%)	38 (76.0%)	21.236*	0.000
	< 38	35 (70.0%)	12 (24.0%)		

* Chi-square test; • Independent t-test

The current study revealed that the more commonly used coping strategy for caregivers of children with ADHD was concentration on the problem whereas self-blame was the least common (Table 5).

Table 5. Coping strategies used by caregivers in Group A

Coping strategies		Group A
		***n*=50**
Concentration on the problem	Mean ± SD	21.86 ± 3.90
	Range	11 – 29
Optimistic thinking	Mean ± SD	11.26 ± 2.13
	Range	6 – 14
Searching for support	Mean ± SD	10.14 ± 2.70
	Range	2 – 13
Escape from the problem	Median (IQR)	8 (5 - 11)
	Range	1 – 19
Self-blame	Median (IQR)	0 (0 - 4)
	Range	0 – 6

The current study revealed that all levels of emotional exhaustion in caregivers of children with ADHD were more common among caregivers who were women and there was a highly statistically significant difference (*p*=0.000) between men and women. All levels of emotional exhaustion were also found to be more common among mothers with a highly statistically significant difference (*p*=0.001) when compared to grandmothers and fathers. Meanwhile, low level emotional exhaustion was significantly more common among caregivers of average socio-economic status whereas moderate level and high-level emotional exhaustion were significantly more common among caregivers of low socio-economic status (*p*=0.048). The current study revealed also that low and high levels of emotional exhaustion were significantly more common (*p*=0.048) among caregivers of boys and that low level emotional exhaustion was significantly more common among caregivers of children who were third in the birth order, moderate level emotional exhaustion was significantly more common among caregivers of children who were second in the birth order and high levels of emotional exhaustion was significantly more common among caregivers of whose first-born children (*p*=0.040) had the condition. Furthermore, low level emotional exhaustion was significantly more common among caregivers of children with mild ADHD, moderate level emotional exhaustion was significantly more common among caregivers of children with moderate ADHD and high level emotional exhaustion was significantly more common among caregivers of children with severe ADHD (*p*=0.019). Meanwhile, levels of emotional exhaustion did not show statistically significant changes with changing age, residence, marital status, and educational level, number of children or work of caregivers or with changing age, school achievement, and social relations of children with ADHD or type of ADHD (Table 6).

Table 6. Relation between socio-demographic characteristics of caregivers and children, type and severity of ADHD and first dimension of burnout (emotional exhaustion)

		Emotional exhaustion			Test value	*p* value
		Low	**Moderate**	**High**		
		***n*=8**	***n*=8**	***n*=34**		
Socio-demographic characteristics of caregivers						
Age	Mean ± SD	35.63 ± 3.62	44.00 ± 10.06	35.82 ± 9.34	2.900•	0.065
	Range	33 – 40	32 – 57	28 – 59		
Gender	Girl	5 (62.5%)	8 (100.0%)	34 (100.0%)	16.755*	0.000
	Boy	3 (37.5%)	0 (0.0%)	0 (0.0%)		
Residence	Rural	0 (0.0%)	2 (25.0%)	11 (32.4%)	3.528*	0.171
	Urban	8 (100.0%)	6 (75.0%)	23 (67.6%)		
Marital status	Divorced	0 (0.0%)	0 (0.0%)	3 (8.8%)	4.482*	0.345
	Married	8 (100.0%)	8 (100.0%)	26 (76.5%)		
	Widow	0 (0.0%)	0 (0.0%)	5 (14.7%)		
Relation to child	Grand mother	0 (0.0%)	2 (25.0%)	3 (8.8%)	19.123*	0.001
	Mother	5 (62.5%)	6 (75.0%)	31 (91.2%)		
	Father	3 (37.5%)	0 (0.0%)	0 (0.0%)		
Educational level	Illiterate	0 (0.0%)	2 (25.0%)	5 (14.7%)	5.095*	0.532
	Basic	0 (0.0%)	0 (0.0%)	5 (14.7%)		
	Secondary	6 (75.0%)	4 (50.0%)	18 (52.9%)		
	High education	2 (25.0%)	2 (25.0%)	6 (17.6%)		
Socio economic status	Low	3 (37.5%)	6 (75.0%)	21 (61.8%)	9.600*	0.048
	Average	5 (62.5%)	0 (0.0%)	11 (32.4%)		
	More than average	0 (0.0%)	2 (25.0%)	2 (5.9%)		
Number of children	Mean ± SD	3.50 ± 1.31	3.25 ± 0.46	3.50 ± 1.08	0.190•	0.828
	Range	2 – 5	3 – 4	2 – 6		
Work	Housewife	2 (25.0%	6 (75.0%	19 (55.9%)	4.177*	0.124
	Employee	6 (75.0%	2 (25.0%	15 (44.1%)		
Sociodemographic characteristics of children						
Age	Mean ± SD	9.94 ± 2.04	10.44 ± 2.32	9.44 ± 2.08	0.791•	0.459
	Range	8 – 13	7 – 13	7 – 16		
Gender	Female	2 (25.0%)	4 (50.0%)	4 (11.8%)	6.066*	0.048
	Male	6 (75.0%)	4 (50.0%)	30 (88.2%)		
Birth order	1st	1 (12.5%)	1 (12.5%)	15 (44.1%)	13.223*	0.040
	2nd	2 (25.0%)	4 (50.0%)	14 (41.2%)		
	3rd	4 (50.0%)	1 (12.5%)	3 (8.8%)		

	4th	1 (12.5%)	2 (25.0%)	2 (5.9%)		
School achievement	Less than average	2 (25.0%)	4 (50.0%)	20 (58.8%)	2.984*	0.225
	Average	6 (75.0%)	4 (50.0%)	14 (41.2%)		
	More than average	0 (0.0%)	0 (0.0%)	0 (0.0%)		
Social relation	Not affected	2 (25.0%)	2 (25.0%)	5 (14.7%)	0.781*	0.677
	Affected	6 (75.0%)	6 (75.0%)	29 (85.3%)		
Type and severity of ADHD						
Type of ADHD	Inattention type	3 (37.5%)	3 (37.5%)	5 (14.7%)	4.064*	0.397
	Mixed	4 (50.0%)	3 (37.5%)	23 (67.6%)		
	Hyperactive	1 (12.5%)	2 (25.0%)	6 (17.6%)		
Severity of ADHD	Mild	5 (62.5%)	3 (37.5%)	1 (2.9%)	15.124*	0.019
	Moderate	3 (37.5%)	4 (50.0%)	14 (41.2%)		
	Severe	0(25.0%)	1(2.5%)	19 (55.9%)		

* Chi-square test; • One Way ANOVA test

Caregivers of children with ADHD with high-grade depersonalization were the youngest and the difference in mean age among grades of depersonalization was highly statistically significant (p=0.002). All grades of depersonalization in caregivers of children with ADHD were more common among caregivers who were women and this revealed a highly statistically significant difference (p=0.002) between men and women. All levels of depersonalization were also found to be more common among mothers with a highly statistically significant difference (p=0.001) when compared to grandmothers and fathers as well as among caregivers with secondary education with a statistically significant difference (p=0.044) when compared to other educational levels. Moderate level and high-level depersonalization were significantly more common (p=0.015) among caregivers of low socio-economic status. Furthermore, low level depersonalization was significantly more common among caregivers of children with mild ADHD, moderate level depersonalization was significantly more common among caregivers of children with moderate ADHD and high level depersonalization was significantly more common among caregivers of children with severe ADHD (p=0.011). Meanwhile, levels of depersonalization did not show statistically significant changes with changing residence, marital status, number of children or work of caregivers or with changing age, gender, birth order, school achievement, social relations of children with ADHD or type of ADHD (Table 7).

Table 7. Relation between sociodemographic characteristics of caregivers and children, type and severity of ADHD and the second dimension of burnout (depersonalization)

		Depersonalization			Test value	*p* value
		Low	**Moderate**	**High**		
		***n*=10**	***n*=15**	***n*=25**		
Socio-demographic characters of caregivers						
Age	Mean ± SD	39.90 ± 9.56	42.47 ± 10.60	32.76 ± 5.61	7.323•	0.002
	Range	33 – 57	30 – 59	28 – 46		
Gender	Girl	7 (70.0%)	15 (100.0%)	25 (100.0%)	12.766*	0.002
	Boy	3 (30.0%)	0 (0.0%)	0 (0.0%)		
Residence	Rural	2 (20.0%)	2 (13.3%)	9 (36.0%)	2.737*	0.254
	Urban	8 (80.0%)	13 (86.7%)	16 (64.0%)		
Marital status	Divorced	0 (0.0%)	0 (0.0%)	3 (12.0%)	5.981*	0.201
	Married	10 (100.0%)	12 (80.0%)	20 (80.0%)		
	Widow	0 (0.0%)	3 (20.0%)	2 (8.0%)		
Relation to child	Grand mother	2 (20.0%)	3 (20.0%)	0 (0.0%)	19.167*	0.001
	Mother	5 (50.0%)	12 (80.0%)	25 (100.0%)		
	Father	3 (30.0%)	0 (0.0%)	0 (0.0%)		
Educational level	Illiterate	2 (20.0%)	0 (0.0%)	5 (20.0%)	12.943*	0.044
	Basic	0 (0.0%)	0 (0.0%)	5 (20.0%)		
	Secondary	6 (60.0%)	9 (60.0%)	13 (52.0%)		
	High education	2 (20.0%)	6 (40.0%)	2 (8.0%)		
Socio economic status	Low	5 (50.0%)	9 (60.0%)	16 (64.0%)	12.338*	0.015

	Average	5 (50.0%)	2 (13.3%)	9 (36.0%)		
	More than average	0 (0.0%)	4 (26.7%)	0 (0.0%)		
Number of children	Mean ± SD	3.40 ± 1.17	3.60 ± 0.51	3.40 ± 1.22	0.190•	0.828
	Range	2 – 5	3 – 4	2 – 6		
Work	Housewife	4 (40.0%)	7 (46.7%)	16 (64.0%)	2.120*	0.346
	Employee	6 (60.0%)	8 (53.3%)	9 (36.0%)		
Socio-demographic characters of children						
Age	Mean ± SD	9.95 ± 1.80	9.90 ± 2.24	9.44 ± 2.19	0.318•	0.729
	Range	8 – 13	7 – 13	7 – 16		
Gender	Female	4 (40.0%)	4 (26.7%)	2 (8.0%)	5.167*	0.076
	Male	6 (60.0%)	11 (73.3%)	23 (92.0%)		
Birth order	1st	1 (10.0%)	8 (53.3%)	8 (32.0%)	9.373*	0.154
	2nd	4 (40.0%)	4 (26.7%)	12 (48.0%)		
	3rd	4 (40.0%)	1 (6.7%)	3 (12.0%)		
	4th	1 (10.0%)	2 (13.3%)	2 (8.0%)		
School achievement	Less than average	4 (40.0%)	7 (46.7%)	15 (60.0%)	1.389*	0.499
	Average	6 (60.0%)	8 (53.3%)	10 (40.0%)		
	More than average	0 (0.0%)	0 (0.0%)	0 (0.0%)		
Social relation	Not affected	4 (40.0%)	2 (13.3%)	3 (12.0%)	4.110*	0.128
	Affected	6 (60.0%)	13 (86.7%)	22 (88.0%)		
Type and severity of ADHD						
Type of ADHD	Inattention type	5 (50.0%)	1 (6.7%)	5 (20.0%)	7.094*	0.131
	Mixed	4 (40.0%)	10 (66.7%)	16 (64.0%)		
	Hyperactive	1 (10.0%)	4 (26.7%)	4 (16.0%)		
Severity of ADHD	Mild	5 (50.0%)	1 (6.7%)	3 (12.0%)	12.961*	0.011
	Moderate	1 (10.0%)	10 (66.7%)	10 (40.0%)		
	Severe	4 (40.0%)	4 (26.7%)	12 (48.0%)		

* Chi-square test; • One Way ANOVA test

Caregivers of children with ADHD with high levels of reduced personal accomplishment were the youngest and the difference in mean age among levels of reduced personal accomplishment was highly statistically significant (*p*=0.000). Moderate and high levels of reduced personal accomplishment were also found to be more common among mothers with a highly statistically significant difference (*p*=0.000) when compared to grandmothers and fathers. Low and high levels of reduced personal accomplishment were more common among employee caregivers whereas moderate levels of reduced personal accomplishment was more common among housewives and the difference in levels of reduced personal accomplishment with changing work of caregivers was highly statistically significant (*p*=0.008). All levels of reduced personal accomplishment were significantly more common (*p*=0.011) among women who were caregivers when compared to men who were caregivers. Low and high levels of reduced personal accomplishment were more common among caregivers of boys and of children with less than average school achievement whereas moderate levels of reduced personal accomplishment were more common among caregivers of girls and of children with average school achievement. The differences were highly statistically significant (*p*=0.002) in the case of gender of children and statistically significant (*p*=0.025) in the case of school achievement. All levels of reduced personal accomplishment were more common among caregivers of children with affected social relationships and the differences were highly statistically significant (*p*=0.004). Low and high levels of reduced personal accomplishment were more common among caregivers of children with mixed ADHD whereas moderate levels of reduced personal accomplishment were more common among caregivers of children with hyperactive ADHD and the differences were highly statistically significant (*p*=0.008). Furthermore, low levels of reduced personal accomplishment was more common among caregivers of children with mild ADHD, moderate levels of reduced personal accomplishment were more common among caregivers of children with moderate ADHD and high levels of reduced personal accomplishment were more common among caregivers of children with severe ADHD and the differences were very highly statistically significant (*p*=0.000). Conversely, levels of reduced personal accomplishment did not show statistically significant changes with changing residence, marital status, educational level, and socio-economic status, number of children or work of caregivers or with changing age or birth order of children with ADHD (Table 8).

Table 8. Relation between socio-demographic characteristics of caregivers and children, type and severity of ADHD and the third dimension of burnout (reduced personal accomplishment)

		Reduced personal accomplishment			Test value	*p* value
		Low	**Moderate**	**High**		
		***n*=13**	***n*=9**	***n*=28**		
Socio-demographic characters of caregivers						
Age	Mean ± SD	45.23 ± 11.01	37.22 ± 7.48	33.29 ± 5.97	10.397•	0.000
	Range	33 – 59	28 – 48	28 – 46		
Gender	Female	10 (76.9%)	9 (100.0%)	28 (100.0%)	9.083*	0.011
	Male	3 (23.1%)	0 (0.0%)	0 (0.0%)		
Residence	Rural	2 (15.4%)	3 (33.3%)	8 (28.6%)	1.109*	0.574
	Urban	11 (84.6%)	6 (66.7%)	20 (71.4%)		
Marital status	Divorced	0 (0.0%)	0 (0.0%)	3 (10.7%)	6.072*	0.194
	Married	10 (76.9%)	9 (100.0%)	23 (82.1%)		
	Widow	3 (23.1%)	0 (0.0%)	2 (7.1%)		
Relation to child	Grandmother	5 (38.5%)	0 (0.0%)	0 (0.0%)	27.106*	0.000
	Mother	5 (38.5%)	9 (100.0%)	28 (100.0%)		
	Father	3 (23.1%)	0 (0.0%)	0 (0.0%)		
Educational level	Illiterate	2 (15.4%)	0 (0.0%)	5 (17.9%)	8.844*	0.183
	Basic	0 (0.0%)	3 (33.3%)	2 (7.1%)		
	Secondary	9 (69.2%)	4 (44.4%)	15 (53.6%)		
	High education	2 (15.4%)	2 (22.2%)	6 (21.4%)		
Socio economic status	Low	10 (76.9%)	2 (22.2%)	18 (64.3%)	8.175*	0.085
	Average	3 (23.1%)	5 (55.6%)	8 (28.6%)		
	More than average	0 (0.0%)	2 (22.2%)	2 (7.1%)		
Number of children	Mean ± SD	3.69 ± 0.85	3.56 ± 1.88	3.32 ± 0.72	0.608•	0.549
	Range	3 – 5	2 – 6	2 – 4		
Work	Housewife	5 (38.5%)	9 (100.0%)	13 (46.4%)	9.576*	0.008
	Employee	8 (61.5%)	0 (0.0%)	15 (53.6%)		
Sociodemographic characters of children						
Age	Mean ± SD	9.88 ± 1.78	10.112.19	9.45 ± 2.25	0.413•	0.664
	Range	7 – 13	8 – 13	7 – 16		
Gender	Female	4 (30.8%)	5 (55.6%)	1 (3.6%)	12.777*	0.002
	Male	9 (69.2%)	4 (44.4%)	27 (96.4%)		
Birth order	1st	3 (23.1%)	4 (44.4%)	10 (35.7%)	11.884*	0.065
	2nd	6 (46.2%)	1 (11.1%)	13 (46.4%)		
	3rd	4 (30.8%)	1 (11.1%)	3 (10.7%)		
	4th	0 (0.0%)	3 (33.3%)	2 (7.1%)		
School achievement	Less than average	8 (61.5%)	1 (11.1%)	17 (60.7%)	7.354*	0.025
	Average	5 (38.5%)	8 (88.9%)	11 (39.3%)		
	More than average	0 (0.0%)	0 (0.0%)	0 (0.0%)		
Social relationships	Not affected	6 (46.2%)	2 (22.2%)	1 (3.6%)	11.039*	0.004
	Affected	7 (53.8%)	7 (77.8%)	27 (96.4%)		
Type and severity of ADHD						
Type of ADHD	Inattention type	5 (38.5%)	1 (11.1%)	5 (17.9%)	13.772*	0.008

	Mixed	6 (46.2%)	3 (33.3%)	21 (75.0%)		
	Hyperactive	2 (15.4%)	5 (55.6%)	2 (7.1%)		
Severity of ADHD	Mild	9 (69.2%)	0 (0.0%)	0 (0.0%)	33.582*	0.000
	Moderate	3 (23.1%)	6 (66.7%)	12 (42.9%)		
	Severe	1 (7.7%)	3 (33.3%)	16 (57.1%)		

* Chi-square test; • One Way ANOVA test

Discussion

The current study found that there were no significant statistical differences between caregivers of children with ADHD and caregivers of children without ADHD as regards sociodemographic characteristics including age, gender, residence, marital status, relation to child, educational level, socioeconomic status, number of children and work. This balance in the baseline characteristics provides the basis for comparison between the two groups that were assessed as it helps to minimize bias.[25] The majority of caregivers in the current study were mothers. This can be explained by the social rule given to mothers in Eastern communities especially when speaking about childcare and the raising of children. It is in line with other studies[24,26,27] in that most caregivers were mothers; and, also with the finding that caregiving roles are highly gendered, with women providing most of the care for family members with disabilities.[28]

The study revealed that the mean age of children with ADHD was 9.68 ± 2.10 years; 80% were boys and this is supported in findings that boys had a higher prevalence of ADHD in previous studies.[12,29] This gender difference might be due to referral bias since boys are more likely to present with externalizing symptoms, such as hyperactivity or impulsivity and physical aggression; whereas girls are more likely to present with internalizing symptoms, such as being withdrawn, or experiencing anxiety and low self-esteem.[30] Another explanation of this gender difference was either a difference in susceptibility or that girls with ADHD are less likely to be diagnosed than boys.[31]

In the current study, the birth order of children with ADHD was: first-born in 34% of cases, second-born in 40% of cases, third-born in 16% of cases and fourth-born in 10% of cases. Birth order is known to be an important environmental factor in child development as it can affect the child's cognitive abilities and behavioral traits.[32]

The current study also revealed that assessment using the MINI Kid identified 60% of children with ADHD to have mixed ADHD; 22% had inattention type of ADHD; and, 18% were found to have hyperactive ADHD. In addition, when the Conners rating scale was used, the severity of ADHD was found to be moderate in 42%, severe in 40%, and mild in 18%. This higher proportion of children with mixed ADHD supports other studies in which the combined type was the commonest.[29]

Caregivers of children with ADHD in the current study were found to have significantly higher burnout scores in the three dimensions of burnout when compared to caregivers of apparently healthy children. This can be explained by the fact that parental burnout results from enduring exposure to chronic parenting stress[33] and that parents and caregivers of children with behavioral disorders often experience significant burden associated with care of the child.[34] Behavioral and developmental disability were found to be associated with higher parenting stress when compared to medical disability[35] and ADHD can adversely affect the daily lives of parents or caregivers and other family members by causing difficulties at home and putting strain on relationships.[36] Higher burnout in caregivers of ADHD was similarly reported in other studies.[11,24]

The current study revealed that the commonest coping strategy by caregivers of children with ADHD was concentration on the problem whereas the least common was self-blame. This pattern of coping means that parents have a realistic look at their child's situation and that acceptance of the situation had helped them to cope.[37] This finding is similar to findings from other studies,[24] but differs in that the main coping style was active emotional coping.[37] This difference can be explained by variances of culture, sociodemographic characteristics of participants as well as the different types of disabilities encountered in both studies.

The current study revealed that all levels of emotional exhaustion, depersonalization and reduced personal accomplishment in caregivers of children with ADHD were significantly more common among women who were caregivers and among mothers, which is similar in studies where mothers reported higher burnout symptoms.[38] It is also the case that women may experience higher distress and burnout.[39,40]

Moreover, the current study revealed that caregivers who were of a younger age experienced significantly higher degrees of depersonalization and reduced personal accomplishment. These finding support studies reporting that younger caregivers experience more stress.[24,41]

Low socioeconomic status of caregivers in the study was found to be associated with higher degrees of emotional exhaustion and depersonalization aspects of burnout. This might be explained by the fact that socioeconomic status is a main predictor of physical as well as psychological health and that poverty is associated with multiple physical and psychosocial stressors.[42] This finding is supported in other studies.[24,43] The current study revealed also that caregivers working as employees experienced significantly more reduced personal accomplishment, which may be attributed to the greater difficulty these caregivers face when trying to find enough time to care for their children. Another possible explanation is that this reduced personal accomplishment might be partially related to their work. Similarly, other studies found that working part-time was associated with higher levels of burnout when compared with being unemployed.[9]

On the other hand, the current study revealed that changes in residence, marital status, number of children of caregivers were not associated with significant statistical differences in any aspects of burnout, which is supported also in other studies.[24]

Regards the relation between caregivers' burnout and sociodemographic characters of their children, the current study revealed that significantly higher degrees of burnout were experienced by caregivers of boys. This might be attributed to the higher preference for boys in the Egyptian community with subsequent higher stress in parents if a son becomes ill. The current study also revealed that higher degrees of burnout were significantly experienced by caregivers of children with more severe ADHD and this finding is aligned with findings of other studies in which ADHD directly and indirectly affected parental stress.[44]

Conclusion

Burnout syndrome is more common among caregivers of children with ADHD when compared to caregivers of apparently healthy children. Potential risk factors identified in the current study include parents of a young age, gender, being a mother, low socioeconomic status, caring for boys and severity of ADHD. Caregivers of children with ADHD experience some coping strategies of which concentration on the problem is the most used and self-blame is the least used.

Recommendations

The caregivers of children with ADHD may benefit from specialist support owing to the high degree of burnout they experience. It is recommended they receive training sessions to foster better communication and engagement with their children; deal with their children's challenging behavior; and, acquire better daily living skills and caregiver coping strategies. Such sessions could include group therapy sessions, which would allow space for them to share their experiences with other caregivers. Future studies are recommended to study other factors not included in this study.

Limitations

The current findings are considered alongside several limitations. First, fathers were underrepresented in the sample size having comprised 5% of the total number of participants. Gender differences in parental burnout are an important consideration for future study. A second limitation is the reliance on self-report questionnaires, given these are subjective. A third limitation is participant recruitment from outpatient clinics as it may have introduced selection bias. A fourth limitation was the small sample size, which decreases statistical power and limits the generalizability of the findings. Finally, the study was limited to children and young people with an IQ >85. The nature of ADHD is such that a person's working memory is often compromized and so their true cognitive ability may not be reflected. As such, the current study does not capture a possibly large cohort of parents and caregivers whose experiences could contribute to our understanding of parental burnout.

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الملخص

إن متلازمة الإحتراق النفسي هي مشكلة خطيرة يتعرض لها مقدمي الرعاية للأطفال الذين يعانون من تأخر النمو والإعاقات بما في ذلك اضطراب فرط الحركة وتشتت الإنتباه، ولهذه المشكلة تبعات على مستوى العمل وكذلك على مستوى الأبوة حيث تكون مصحوبة بإهمال الطفل والعنف الأبوي وأفكار الإنتحار أو الهروب. وهذه الدراسة هي دراسة مقطعية مقارنة تهدف إلى مقارنة الإحتراق النفسي لدى مقدمي الرعاية للأطفال المصابين باضطراب فرط الحركة وتشتت الإنتباه بالاحتراق النفسي لدى مقدمي الرعاية للأطفال الأصحاء مع تقييم العوامل الإجتماعية والديموغرافية المصاحبة لهذا الإحتراق النفسي وإستكشاف إستراتيجيات التأقلم لدى مقدمي الرعاية للأطفال المصابين باضطراب فرط الحركة وتشتت الإنتباه. وقد تضمنت الدراسة 05 من مقدمي الرعاية لأطفال مصابين باضطراب فرط الحركة وتشتت الإنتباه و05 من مقدمي الرعاية لأطفال أصحاء ظاهريًا وتم إجراء مقارنة بين المجموعتين من حيث الأبعاد الثلاثة للإحتراق النفسي. وتبين أن الإحتراق النفسي أكثر شيوعًا بين مقدمي الرعاية للأطفال المصابين باضطراب فرط الحركة وتشتت الإنتباه كما كان أكثر شيوعًا بين صغار السن والإناث والأمهات ومقدمي الخدمة ذوي المستوى الإجتماعي والمادي المنخفض أو مقدمي الرعاية للأطفال الذكور وكذلك مقدمي الرعاية لذوي الحالات الشديدة من اضطراب فرط الحركة وتشتت الإنتباه. وكان التركيز على المشكلة هو أكثر إستراتيجيات التأقلم إستخدامًا بينما كان لوم الذات هو أقلها إستخدامًا. وكانت التوصية بأن يحصل مقدمي الرعاية للأطفال المصابين باضطراب فرط الحركة وتشتت الإنتباه على جلسات تدريبية بما في ذلك جلسات العلاج الجماعي.

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The Relationship between Parenting Styles and Young Adults' Coping Strategies

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العلاقة بين أساليب المعاملة الوالدية وآليات المواجهة لدى الشباب البالغين

ريبوار غريب حمه

Abstract

Objectives: The present study aimed to understand the correlation between parenting styles and the coping mechanisms of their children. Further aims were: (1) to determine which were the more common and (2) knowing the difference between the parenting styles perceived to be used by the study sample in comparison with what have been found in the literature in the globe. **Method:** A convenience sample of campus-based students attending Koya University in Kurdistan resulted in recruitment of N=411 (*n*=191 men; n=220 women). Parenting styles were assessed using the Parental Authority Questionnaire. The Coping Mechanism Scale (unpublished) assessed different approaches to coping. Data were analysed using frequency percentage, t-test and Pearson correlation techniques in Statistical Package for Social Sciences (SPSS) version 18.0. **Results:** Results showed a significant correlation between parenting styles and coping mechanisms; passivity coping mechanism was found to be positively correlated with the style of authoritative and permissive mothers and positively correlated with the authoritative parenting styles in fathers. In terms of coping, significant differences between boys and girls in terms of spiritual connection and passivity with boys reporting higher scores on both. There were no significant gender differences in terms of parenting styles. An authoritarian parenting style was endorsed as the most common form of parenting in mothers and fathers. The most common coping mechanism among students was passivity. **Conclusion:** Passive coping mechanisms were the more commonly used approaches reported by student participants, and the most common parenting style appraised by the study sample was authoritarian parenting style.

Keywords: Parenting styles, Coping mechanisms

Declaration of interest: None

Introduction

The parent-child relationship and its inevitable impact on the social and emotional development of children has been widely researched. A great body of work on the subject, confirms the strong correlation between parenting styles and life outcomes for adults, including subjective well-being, self-esteem, risk behavior, health and academic attainment.[1]

The behavior of parents towards children does not only have the potential to affect them in childhood, it affects them as adults in ways that can be her/him across their lives, as, for example, one study has shown that parents educational level when their children was eight years old, significantly predicted educational and occupational success for the child 40 years later.[2] Maternal warmth is positively associated with having a good quality of life in adulthood, especially in the psychological and social domain.[3]

University can be a significant time in a young person's life. It is a transition period in many aspects when young people transition from adolescence to early adulthood. here are many changes associated with university, such as living away from home, having to become largely self-sufficient, being more independent, managing finance, developing a romantic relationship, all of which can be stressful for the young adult. It is the time when coping mechanisms that have been learned earlier in life can be helpfully enacted. The current study aims to address the relationship between students' approach to coping with stress and the way they have been parented.

The current study had one main aim with several specific aims. The specific aims of the study were to:

1. Establish what perceived parenting style was commonly reported by parents.

2. Establish what coping mechanism was commonly reported by university students when relating to their parents.
3. Establish if any gender differences exist in relation to parenting styles and the coping mechanisms of students when relating to their parents.

The general aim of the study:

To understand the correlation between perceived parenting styles and the coping mechanisms used by university students when relating to their parents.

Methodology

Research design

The current study examined the correlation between perceived parenting styles and the coping mechanisms used by their university age children, to understand the most common coping mechanism and parenting style by the study sample. The study used a quantitative method and involved the use of self-report questionnaires.

Sample

Students from Koya University were recruited to the study. Inclusion criteria were:

1. Participants should have been raised by their parents as children.
2. Participants should be students of Koya University who lived on campus.
3. Participants had to be willing to be in the study.

The Directory of Registration at Koya University indicated there were 3076 students enrolled. Based on the Krejcie and Morgan table, the sample size for the current stud is (341 participants, which were selected purposely and according to the inclusion criteria of the study.[4]

Recruitment involved the distribution of 450 questionnaires. In total, 411 questionnaires were returned (*n*=191 men; *n*=220 women). The others were either returned blank or did not meet the study criteria.

Ethics

The study was reviewed by the Research Ethics Committee of Koya University. Consent was obtained from all participants. The purpose of the study was explained; and, participants were assured their involvement was voluntary with the right to withdraw from the study at any point. Participants' confidentiality was assured.

Data collection and data analysis

Koya University has four buildings used as student dormitories in the campus with two being for women and two for men. The researcher went to the dormitories and met with the participants. An introduction to the study and its objectives was provided. After the data collection process, all the data have been keyed into and analyzed by SPSS version 18.0.

Instruments

To answer the study questions, two different questionnaires were used:

1. Coping Mechanism Scale

The Coping Mechanism Scale (CMS) was designed and developed by Azad Ali Ismael PhD of Koya University, Iraq to find out how people from the Muslim faith cope with problems. Although it has not been validated, the scale was trialed with a sample of Kurdish Muslims all of whom were university students and were Kurdish.

The CSM is a 44-item questionnaire on a 5-point Likert scale (always, most of the time, sometimes, rarely and never), factor analysis showed six factors: Spiritual Connection, Passivity, Positive Attitude, Avoidance, Seeking Social Support and Mixed Factors.[5]

2. Parental Authority Questionnaire (PAQ)

The Parental Authority Questionnaire (PAQ) was developed by Buri (1991) to examine Baumrind's (1971) parenting authority prototypes, authoritative, authoritarian and permissive. It consists of 30 items for mothers and 30 items for fathers' parental authority appraisal by their children.[6]

The statements are the same for both mothers and fathers and rated along a 5-point Likert scale (strongly disagree, disagree, neutral, agree and strongly agree). It has been translated and back-translated from English with comparison between the two English versions. For cultural reliability, the Kurdish version was reviewed by four professionals from varied backgrounds.

Cronbach's Alpha was used

Sample characteristics

It was conducted with a subsample of the first 41 participants, with both genders (women and men) in a very similar frequency (women 48.8%, N= 20 and men 51.2%, N= 21). The analysis of its internal consistency was based on Cronbach's alpha which has been run on each item to gain total correlation. This internal consistency analysis using the unstandardized alpha's value for coping mechanisms was (0.763) also alpha's value for mothers' parenting styles was (0.849) whereas for the perceived fathers' parenting styles was (0.913) which means that the both scales are reliable and ready to be used (see Table 3.1).

Table A. Reliability of scales

Scales		Cronbach's Alpha	N of Items
Coping strategies		0.763	24
Parenting styles	Mother	0.849	26
	Father	0.913	26

Results

Final study sample characteristics

Table 1. Sample characteristics of the final study

Gender	Frequency	Percent
Female	220	53.6
Male	191	46.4
Total	411	100

Most common parenting styles

Table 2. Most common parenting styles

Parenting Styles		Mean	Std. Deviation
Mother	Authoritarian	29.9051	6.43074
	Permissive	29.1436	5.29577
	Authoritative	29.1241	5.88977
Father	Authoritarian	29.7810	7.30558
	Permissive	29.1484	6.28780
	Authoritative	28.0949	5.83457

Most common coping mechanism

Table 3. Most common coping mechanism used by students

Coping Mechanisms	Mean	Std. Deviation
Passivity	18.9538	3.83505
Positive attitude	11.7372	3.80360
Avoidance	9.4453	2.86165
Spiritual connection	8.7494	3.69680
Seeking social support	8.2579	2.48147
Mixed efforts	7.5353	2.40134

Gender Differences in coping mechanisms and parenting styles

Table 4. Gender differences in coping mechanisms

Coping mechanisms	Gender	Mean	Std. Deviation	T	Sig. (2-Tailed)
Spiritual connection	Female	Female	8.2136	-3.200	.001*
	Male	Male	9.3737		
Passivity	Female	Female	17.4864	-9.144	.000**
	Male	Male	20.6579		
Positive attitude	Female	Female	11.8591	.757	.449
	Male	Male	11.5737		
Avoidance	Female	Female	9.2000	-1.898	.058
	Male	Male	9.7368		
Seeking social support	Female	Female	8.2818	.204	.839
	Male	Male	8.2316		
Mixed efforts	Female	Female	7.3818	-1.279	.202
	Male	Male	7.6842		

* Significant at .005

** Significant at .001

Table 5. Gender differences in perceived parenting styles

		Gender	Mean	Std. Deviation	T	Sig. (2-Tailed)
Mother	Permissive	Female	29.1364	5.40586	-.001	.999
		Male	29.1368	5.18975		
	Authoritarian	Female	29.2182	6.79764	-2.354	.019
		Male	30.7105	5.91164		
	Authoritative	Female	29.6045	6.33631	1.846	.066
		Male	28.5316	5.27814		
Father	Permissive	Female	29.2045	6.78293	.218	.827
		Male	29.0684	5.69234		
	Authoritarian	Female	29.3500	7.79534	-1.276	.203
		Male	30.2737	6.70062		
	Authoritative	Female	28.5864	6.08740	1.926	.055
		Male	27.4789	5.46146		

* Significant at .005

** Significant at .001

Correlation between Perceived Parenting Styles and Coping Mechanisms

Table 6. The correlation between perceived parenting styles and coping strategies

Coping Strategies	**Parenting styles**					
	Mother			**Father**		
	Authoritative	**Authoritarian**	**Permissive**	**Authoritative**	**Authoritarian**	**Permissive**
Spiritual connection	-.240**	-.111*	-.025	-.165**	.082	-.067
Spiritual connection	.112*	.038	.115*	.135**	.020	.067
Positive attitude	-.151**	-.010	-.073	-.186**	.057	-.073
Avoidance	.078	-.014	-.039	.035	.009	.006
Seeking social support	.046	-.012	.029	.046	.046	.046
mixed efforts	-.039	.055	.035	.003	-.014	-.027

**Correlation is significant at the 0.01 level (2-tailed)

*Correlation is significant at the 0.05 level (2-tailed)

Discussion

Results of the present study suggest the authoritarian parenting style is perceived to be the most widely used approach taken by mothers and fathers alike. This finding is similar to that found in other Arab countries and in Malaysia.[7,8,9] Parenting in the west appears to differ in that the more common approach to parenting is authoritative;[10] and, when comparing Asian Americans to their Caucasian counterparts, Asian Americans were found to be more authoritarian.[11] This could be due to the overall authoritarian atmosphere that is so characteristic of many Arab and eastern countries. War and instability in Iraq and Kurdistan, for example, have left people feeling insecure and uncertain, particularly in relation to safety. This has led parents to over monitor and protect their children. Indeed, it can be argued that for many the main goal is to protect their children from harm, even if doing means that they control their children and deprive them of their freedom. Over time, a governmental system that follows an authoritarian model will likely lead to the shaping of authoritarian attitudes in individuals within that system.

University students are a useful barometer for understanding changes in attitudes among generations. Their approaches to coping with authoritarian parenting are also important to understand. We asked Koya University students to describe how they perceive their parents' style of raising them and how they learned to cope with the approach. When comparing this result with other studies there are clear differences; for example, in a study by Ismail (2009), the most common coping mechanism was spiritual connection, although the same coping scale has been administered with a sample that has similar features, both samples were university students and were Kurdish.[5] This could be due to the effects of globalization and the advance of technology into modern life, especially since the establishment of Kurdistan as an autonomous region because people are becoming more familiar with internet. Indeed, nearly every house has at least some internet coverage now. The internet has created fundamental changes to the lifestyle of many people who, in the past, managed to occupy themselves with praying, going to mosques, and reciting Qur'an in their free time, which now competes with Facebook and other social websites for people's time and attention. Because of this, social connection differs now. Research regularly shows us how globalization and technology play a great role in the modern life. The norms and culture of the Muslim world, the way people dress, interact socially and how they spend their everyday lives are rapidly changing.[12, 13, 14, 15, 16]

In the current study, there were no significant gender differences in terms of parenting styles. This finding differs from that of Dwairy[8] who found that men were more likely to report having parents who were more authoritarian compared with women. This point is explored in a study that highlighted how authoritative parenting is more often the approach taken with daughters whereas authoritarian parenting is more often the approach parents take with their sons.[17]

One explanation for this could be that the role of women, in the past two decades, has noticeably transformed in a way that has been empowering for them. Women are taking up more political positions, including as members of Parliament. In addition, there have been some changes in the roles and regulations regarding women's right in Kurdistan.

The current study examined the coping mechanisms described by university students in response to parenting styles. Significant difference between women and men in terms of spiritual connection and passivity were found, with men reporting greater differences on both. The findings were not supported in Ismail's work, where women reported higher ratings in both spiritual connection and passivity.[5] This could be due to the changes in the political status in the Kurdistan region that affected young adults mostly, with the protests and the political violence and the instability that the region was going through in the last couple of years. Indeed, research has shown that political instability and violence affects people's well-being in general.[18, 19, 20, 21]

There was significant correlation between parenting styles and coping mechanisms, passivity coping mechanism was found to be positively correlated to the authoritative and permissive mothers' parenting styles and positively correlated with the authoritative fathers' parenting style. This differs from what the literature suggests. An authoritative parenting style is known to be associated with better outcomes for children in general and, also with better coping mechanisms and capacity.[22, 23,24]

Finally, coping mechanisms that foster positive attitudes in young people were found to be correlated with authoritative parenting styles in fathers and mothers. Spiritual connection was found to be correlated with authoritative fathers' parenting style and authoritarian fathers and mothers' parenting styles.

Conclusion

The current study examined the correlation between perceived parenting styles and coping mechanisms among young adults. Findings suggest a tendency in young people for using passivity as a coping mechanism when dealing with their parents and that the most common perceived parenting style was an authoritarian one.

Men rated higher on scales that assessed spiritual connection and passivity as forms of coping. There were no gender differences in terms of perceived parenting styles. Significant correlation was found between some parenting styles and some coping mechanisms, namely passivity as a coping mechanism in young people. This was also found to correlate with authoritative styles in both parents while permissive styles and positive attitudes as perceived by mothers was correlated with authoritative fathers and mothers parenting styles.

Limitations

1- Scales for rating parenting styles have yet to be normed for the Kurdish population. In the absence of such scales, the Parental Authority Questionnaire (PAQ) was administered. It is widely used although was developed for western society. An English language version was translated into Kurdish although has yet to be formally validated.
2- Bias may be present in participants' responses to the questionnaires given they were being asked to recall how they were raised in early childhood.
3- There is limited research into parenting styles and coping mechanisms in the eastern world.
4- The study was conducted during a time when final exams were taking place, which is a potentially stressful time for students. This may have impacted on the researchers' efforts to engage participants.

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الملخص

الهدف: الهدف الرئيسي لهذا البحث هو معرفة العلاقة بين أساليب التربية الوالدية وآليات التلاؤم بين البالغين الشباب، كما وأن هناك بعض أهداف أخرى مثل أساليب المعاملة الوالدية الأكثر شيوعاً، آليات التكيف الأكثر شيوعاً، الاختلاف بين أساليب التربية الوالدية المحسوسة من قبل عينة البحث وأيضاً معرفة الاختلاف بين الجنسين في أساليب التربية الوالدية المحسوسة وآليات التلاؤم. **الطريقة:** تتألف عينة البحث من 144 طالباً من جامعة كويه. لمعرفة آليات التلاؤم تم استخدام استبانة التلاؤم المعدة من قبل د. أزاد علي إسماعيل، ولمعرفة الأساليب المعاملة الوالدية المحسوسة من قبل عينة البحث تم استخدام استبانة السلطة الوالدية. لغرض تحليل المعلومات تم استخدام اختبار (ت)، النسبة المئوية، علاقة بيرسون والتردد. **النتائج:** أشارت النتائج إلى وجود علاقة ذو دلالة إحصائية بين أساليب المعاملة الوالدية وآليات التلاؤم. توجد علاقة إيجابية بين أساليب المعاملة الوالدية (للأمهات) الديمقراطية والتساهلية وأسلوب المعاملة الوالدية الديمقراطية للآباء مع آلية التكيف السلبية. أما عن آليات التكيف فإن هناك اختلاف ذو دلالة إحصائية بين الإناث والذكور في الترابط الروحاني وآلية التلاؤم السلبية، حيث أنها أكثر استخداماً لدى الذكور. فيما يخص أساليب المعاملة الوالدية فلم تكشف النتائج عن أي اختلاف بين الجنسين. أكثر الأساليب الوالدية المحسوسة من قبل العينة هي الأسلوب الدكتاتوري (التسلطي) وأكثر آليات التلاؤم المستخدمة هي الآلية السلبية. **الاستنتاج:** أشارت نتائج الدراسة إلى ان أكثر آليات المواجهة استخداماً من قبل عينة الدراسة كانت هي المواجهة السلبية، وأسلوب الأبوة والأمومة الأكثر شيوعاً التي قيمها عينة الدراسة كان أسلوب الأبوة والأمومة الدكتاتوري (التسلطي).

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Istanbul Protocol, the UN Guidelines for Effective Investigation and Documentation of Torture: The Role of Psychiatrists

Mohammed T Abou-Saleh

بروتوكول اسطنبول، المبادئ التوجيهية للأمم المتحدة للتحقيق الفعال وتوثيق التعذيب: دور الأطباء النفسيين

محمد طموح أبوصالح

> Torture is senseless violence, born in fear... torture costs human lives but does not save them. We would almost be too lucky if these crimes were the work of savages: the truth is that torture makes torturers.
>
> Jean-Paul Sartre

Abstract

The Manual on Effective Investigation and Documentation of Torture and Other Cruel, Inhuman or Degrading Treatment or Punishment, commonly known as the Istanbul Protocol (IP), is an interdisciplinary standard supported by the United Nations, the World Medical Association, the World Psychiatric Association and adopted by most countries and NGOs concerned with human rights.

Its main purpose is to provide guidance for health professionals for conducting competent and comprehensive assessment and investigation of the physical and psychological/psychiatric consequences of torture and other forms of cruel, inhuman, degrading treatments. Moreover, an overall goal of the psychological/psychiatric evaluation is to assess the degree of consistency between an individual's account of torture and the psychological /psychiatric findings observed during the course of the evaluation. Hence the pivotal role of psychiatrists in conducting assessments for diagnosis of psychiatric disorders (ICD-10 and DSM), common depressive disorders and PTSD. Further, psychiatrists could recommend appropriate treatment interventions for torture victims with psychiatric disorders. Finally, psychiatric evidence of torture is crucial for the protection of torture victims and prosecution of perpetrators in national and international courts in collaboration with legal professionals concerned with the service of justice.

The article aims to inform and guide psychiatrists about their pivotal role in applying the Istanbul Protocol and critically discusses issues and challenges of competent psychiatric interviews of survivors of alleged torture in clinical and medico-legal contexts.

Key words: Clinical credibility, Documentation, Istanbul Protocol, Medico-legal, Psychiatrists, Psychological assessment, Torture, United Nations

Declaration of interest: None

Introduction

Torture is defined in the words of the United Nations Convention against Torture and Other Cruel, Inhuman or Degrading Treatment or Punishment (1984).

Torture means any act by which severe pain or suffering, whether physical or mental, is intentionally inflicted on a person for such purposes as obtaining from him or a third person information or a confession, punishing him for an act he or a third person, has committed or is suspected of having committed, or intimidating or coercing him or a third person, or for any reason based on discrimination of any kind, when such pain or suffering is inflicted by or at the instigation of or with the consent or acquiescence of a public official or other person acting in an official capacity. It does not include pain or suffering arising only from, inherent in or incidental to lawful sanctions.[1]

Torture is a profound concern for all humanity as it violates the essence of being human, their integrity and agency. As stated in the introduction of the Istanbul Protocol (IP), "its purpose is to destroy deliberately not only the physical and emotional well-being of individuals but also, in some instances, the dignity and will of entire communities. It concerns all members of the human family because it impugns the very meaning of our existence and our hopes for a brighter future".[1]

International human rights and humanitarian law have consistently prohibited torture under any circumstance. However, torture and ill-treatment continue to be practiced in many countries.[2]

The IP "manual was developed to enable States to address one of the most fundamental concerns in protecting individuals from torture - effective documentation which brings evidence of torture and ill-treatment to light so that perpetrators may be held accountable for their actions and the interests of justice may be served. The documentation methods contained in this manual are also applicable to other contexts, including human rights investigations and monitoring, political asylum evaluations, the defense of individuals who "confess" to crimes during torture and needs assessments for the care of torture victims, among others. In the case of health professionals who are coerced into neglect, misrepresentation or falsification of evidence of torture, this manual also provides an international point of reference for health professionals and adjudicators alike.[1]

The manual includes principles for the effective investigation and documentation of torture, and other cruel, inhuman or degrading treatment or punishment outlining minimum standards for States in order to ensure the effective documentation of torture. The manual and principles are the result of three years of analysis, research and drafting, undertaken by more than 75 experts in law, health and human rights, representing 40 organizations or institutions from 15 countries.

The conceptualization and preparation of this manual was a collaborative effort between forensic scientists, physicians, psychologists, human-rights monitors and lawyers working in many countries including the occupied Palestinian territories. The IP guide has been translated to other languages, including Arabic.

The IP has been adopted by national and international professional health care associations, including the World Medical Association, the World Psychiatric Association and Non-Governmental Organizations (NGO) concerned with human rights.

In 2009, International Rehabilitation Council for Torture Victims (IRCT) produced three practical guides to complement the IP: Psychological Evaluation of Torture: A practical guide for psychologists,[3] Medical Physical Examination of Alleged Torture Victims: A practical guide for medical doctors[4] and Action Against Torture: A practical guide for lawyers.[5]

The article aims to inform and guide psychiatrists about their pivotal role in applying the Istanbul Protocol for the effective investigation and documentation of torture and other cruel, inhuman or degrading treatment or punishment and critically discusses issues and challenges of conducting competent psychiatric interviews of survivors of alleged torture in clinical and medico-legal contexts.

The provisions of the Istanbul Protocol

The Istanbul Protocol is comprised of six chapters and annexes. The chapters cover the following domains: relevant international legal standards; relevant ethical codes; legal investigation of torture; general considerations for interviews; physical evidence of torture and psychological evidence of torture. The annexes include a standard pro-forma for providing medico-legal, including psychiatric reports and tools including a summary and a map to document physical injuries.

Chapter IV is on general considerations for interviews: the purpose of enquiry, examination and documentation; procedural safeguards in respect to the detainees; official visits to detention centres; techniques of questioning; documenting the background (psychosocial history and the arrest, summary of detention and abuse, circumstances of detention, place and conditions of detention, methods of torture and ill-treatment); assessment of the background; review of torture methods; risk of free, transition of the interviewee; use of interpreters; gender issues; indications for referral and interpretations of findings and conclusions.

Chapter V is on physical evidence of torture and covers: the interview structure, medical history (acute symptoms, chronic symptoms, summary of an interview); a physical examination of all systems to document physical evidence followed by examination and evaluation following specific forms of torture: beatings and other forms of blunt trauma; fractures; head trauma; chest and abdominal trauma; beatings to the feet (falanga); suspension; other positional torture; electric shocks torture; dental torture;

asphyxiation; sexual torture including rape (review of symptoms, examination following a recent assault, examination after the immediate phase, genital examination of women, genital examination of men, examination of the anal region and specialised diagnostic tests.

Chapter VI is on psychological evidence of torture covering general considerations (central role of the psychological evaluation, context of the psychological evaluation); psychological consequences of torture, cautionary remarks, common psychological responses of re-experiencing the trauma, avoidance and emotional numbing, symptoms of depression, damaged self-concept and foreshortened future, dissociation, depersonalization and atypical behaviour, somatic complaints, sexual dysfunction, psychosis, substance abuse, neuropsychological impairment, diagnostic classifications (International classification of diseases ICD-10 and diagnostic and statistical manual of mental disorders (DSM-IV), depressive disorders, posttraumatic stress disorder, enduring personality change, substance abuse and other diagnosis); psychological/psychiatric evaluation (ethical and clinical considerations, the interview process, the importance of the psychological/psychiatric evaluation (history of torture and ill-treatment, current psychological complaints, post-torture history, pre-torture history, medical history, psychiatric history, substance use and abuse history, mental state examination, assessment of social function, psychological testing and use of checklists and questionnaires, clinical impression, recommendations); neuropsychological assessment, limitations of neuropsychological assessment, indications of neuropsychological assessment, posttraumatic stress disorder, children and torture, developmental considerations, clinical considerations and role of the family.

Psychological torture

Psychological methods of torture have been recognized: sleep deprivation, threats of violence particularly sexual violence, watching a relative being tortured, faked executions and other methods. There is no mention of psychological torture the IP. The notion that it is important to consider it separately from physical torture has been challenged by Patel[6] who stated: First, it seems that the drafters of the UN Convention against Torture (United Nations, 1984) demonstrated insight and foresight in focusing the international definition of torture on the severe physical and psychological pain and suffering experienced by survivors rather than on the nature of the different acts that can inflict such suffering. This approach achieved three crucial objectives: (a) it placed the survivor and their experience of what they endured at the centre of understanding of what is torture; (b) it explicitly acknowledged the severity of their pain and suffering; and (c) it provided longevity to the definition of torture in a world where methods of torture frequently change, multiply, mutate and evolve, while recognizing that whatever those methods, or however they are named or euphemistically described or defended by states, one of the key elements in defining torture is the severe physical and psychological impact on survivors. Second, the entire premise of the IP is that torture can only be effectively documented if lawyers, doctors and mental health professionals work together; and if forensic medical examinations always evaluate physical and psychological signs of torture, regardless of the type of allegations that are being evaluated. Despite the clarity provided by the IP, many states still document and investigate allegations of beatings, executions or use of stress positions, for example, by exclusively examining physical symptoms - and not engage or heed mental health/psychological expertise at all.[6]

Challenges of Istanbul Protocol implementation

The use, application and implementation of IP by countries' governments, professional associations and importantly by NGOs concerned with human rights have faced major challenges for ending the often widespread and systematic torture and ill-treatment practices.

An early application of IP was in Sri Lanka in 2004, a country that is widely known in international human rights forums for the prevalence of torture and its endemicity since the 1970s. The Sri Lankan experience signified that unless and until a political commitment is shown by the government to internalize IP into legal and medico-legal systems locally, the expected outcome of effective documentation would not be evident.[7]

A comparative study of the use of the IP amongst civil society organizations in low-income countries (Nepal, Kenya and Bangladesh) concluded that "the creation of precise and standardized forms of evidence is not necessarily the most effective form of documentation for redress or accountability. In the absence of legal systems willing and able to respond effectively to allegations of torture and ill-treatment, there are severe limitations on the practical effectiveness of detailed and technical forms of documentation”.[8]

A global online stakeholder survey was conducted on the application of IP (past experiences, current practices and additional norm setting) involving 177 individuals and 250 organizational representatives.[9] The respondents came from a variety of clinical, legal, academic, and advocacy disciplines from around the world. The respondents indicated that they use the IP for a wide range of anti-torture activities: investigation and documentation, advocacy, training and capacity building, policy reform, prevention, and treatment and rehabilitation of torture survivors. The vast majority (94% of individual respondents and 84% of organizations) reported that the IP is important to their anti-torture work. A majority of individual (60%) and organizational (59%) respondents reported that updating or adding clarifications to the IP would help to address the challenges they face and provided specific suggestions. However, 41% of individuals and 21% of organizational respondents also reported concerns that additional IP norm setting could have risks and negative consequences of undermining the legal standing of the IP in the current political climate. The authors concluded that “the IP Survey (IPS) provides critical guidance for a wide range of torture prevention, accountability, and redress activities and can be enhanced through the development of additional updates and clarifications to respond to the current needs of torture survivors and stakeholders.

On May 11, 2018, former UN High Commissioner for Human Rights Zeid Ra’ad Al Hussein endorsed the project saying:

“I would like to express my support to the IPS Project, in particular because it is being set in motion at a time when there is a growing need for strengthening international norms and preventive tools in the face of the pervasive use of torture across the globe. It is without a doubt that efforts, such as yours, to prevent occurrence of acts of torture and ill-treatment, to identify and effectively investigate such acts and to assist the victims of torture and ill-treatment are essential.”

In countries emerging from authoritarian rule, a major challenge is ending often widespread and systematic torture and ill-treatment practices.[10] Between 2011 and 2019, Physicians for Human Rights (PHR), in collaboration with the Open Society Foundation (OSF), the Open Society Justice Initiative (OSJI) and regional and local partners, worked to establish effective torture investigation and documentation practices in the Central Asian countries of Kyrgyzstan, Tajikistan, and Kazakhstan. Their approach consisted of activities in three sequential phases - assessment, capacity building, and policy reform.

Use of IP in the examination and documentation of refugees and asylum seekers in Europe

Allegations of torture by state actors or government are rare in Europe. However, in the United States, there has been controversy over the use of waterboarding and other ‘enhanced interrogation’ techniques for investigation of allegations of terrorism. It was established in the Hoffman Report that concluded, “We therefore cannot conclude that the collusion between American Psychological Association (APA) officials and Department of Defense (DoD) officials was done with the actual intent “to support torture.” A more accurate description is that the collusion was done to support the implementation by DoD of the interrogation techniques DoD wanted to implement, without substantial constraints from APA; with knowledge that there likely had been abusive interrogation techniques used and that there remained a substantial risk that without strict constraints, such abusive interrogation techniques would continue; and with substantial indifference to the actual facts regarding the potential for ongoing abusive interrogation techniques”.[11]

The main use and application of IP in Europe has been for the investigation of allegations of torture in migrants and asylum seekers from countries where torture is widespread and endemic particularly in war torn and conflict zones.

The aims of the documentation of torture in asylum seekers and refugees were clearly documented:[12]

- Preservation of evidence: Medical or psychological assessment can be difficult, impossible or dangerous for both the victim and the medical expert in many countries where torture is common. Preservation of evidence in advanced models of documentation is therefore of special importance in host countries. It can be essential for the criminal and civil legal case.
- Instigation of an investigation: This step can be difficult, as long as no fair process can be expected in the country where torture took place. Newly established tools such as universal jurisdiction might change this situation.
- Monitoring by international bodies: Again, monitoring and reporting of human rights violations can be difficult or impossible in countries with ongoing civilian rights violations,

though international bodies such as the UN committee on torture require reliable data.

- Acknowledgement of suffering: A correct and respectful interview can help the survivor to experience attention to and respect for the suffering encountered.
- Protection: Survivors need and are entitled to special protection, including against detention and against refoulement.
- Preparation and needs assessment for comprehensive rehabilitation: A comprehensive report based on the IP can also identify treatment needs, and offer early intervention and secondary prevention.

Numerous studies have shown the high prevalence of depression, PTSD and other psychiatric disorders and their outcomes in asylum seekers and refugees particularly those who were survivors of torture and among populations exposed to mass conflict and displacement.[13,14] Studies have highlighted the dire needs of refugees and torture survivors for the provision of interventions for their mental health treatment and rehabilitation.[15]

Wenzel *et al.*[16] highlighted the issue of assessment of sequelae of torture for refugees in host nations, which has been largely neglected, and the need to apply the IP. They stated that IP serves several important purposes. First, asylum procedures need to address security of torture as evidence and respect trauma-related distress, but impairment in concentration and memory during interview is due to factors such as posttraumatic spectrum disorders should also be taken into account. Second, justice in national or international courts, international monitoring, and interventions against human rights abuse requires solid evidence that usually is not currently available in countries with civil war or widespread repression. Finally, adequate early recognition, support, protection, and treatment of survivors of torture and similar atrocities does provide relief, but these are also some of the first indispensable steps for successful recovery and, where feasible, integration.

A British study showed that asylum seekers had endured a range of pre- and post-migratory stressors and had high scores on measures of anxiety, depression, and PTSD. Post-migratory factors comprising isolation, restrictive policies, and stressors associated with having an insecure immigration status, were significantly associated with PTSD scores. Being refused asylum was the strongest predictor of depression and anxiety. Those refused asylum scored higher on a factor associated with barriers to accessing services and thus indicating the need for community orientated interventions to support displaced people to cope with the various stressors endured in exile.[17]

In Denmark, IP was used for performing medico-legal assessment and documentation of torture survivors in the context of a rehabilitation centre delineating six ways of using medico-legal documentation in torture prevention: National legal proceedings; international legal proceedings; asylum cases; research, lobbying and advocacy activities.[18] Evaluation of the mental status of rejected asylum seekers in two Danish asylum centres showed that the prevalence rates of psychopathology in Iraqi asylum seekers in Denmark were alarmingly high and recommended that systematic screening of all detained asylum seekers in Denmark is introduced. Given the degree of mental health problems, it is also recommended that procedures be changed and that treatment should be offered to asylum seekers who are detained in Danish asylum centres.[19]

A study in Italy reported that forensic assessment seems to have a significant and interesting correlation with the final assessment given by the Commission for the International Protection: the higher the level of consistency, according to the IP, the more frequently protection is granted. Moreover, the findings of assessments informed the rehabilitation as well as the treatment of psychiatric disorders in refugees and asylum seekers who have undergone torture, rape, and other severe forms of psychological, physical, or sexual violence.[20]

In the Netherlands, medico-legal reports on traumatised asylum seekers evaluated the impact of trauma-related and other variables on experts' judgments of the consistency of symptoms and story.[21] Positive asylum decisions were predicted by expert judgments about the presence of physical signs and symptoms of torture, and ill-treatment and their consistency with the refugee's story, but not psychological symptoms.

In Germany, a study of mental health of failed asylum seekers as compared with pending and temporarily accepted asylum seekers, showed high rates of psychopathology, including PTSD.[22] It was noted that PTSD impacts memory functions, and as asylum applications rely on personal accounts, those with PTSD are at more risk of being rejected. The authors concluded that “given the great vulnerability of these individuals, long and unsettling asylum processes as practised in Western host countries seem problematic, as does the withdrawal of health and social welfare benefits. Finally, high rates of psychopathology amongst failed asylum seekers indicate that refugee and humanitarian decision-making procedures may be failing to identify those most in need of protection".

IP: The psychological/psychiatric interview

Chapter IV of the IP is devoted to the generation of psychological evidence for torture highlighting the central role of the psychological and psychiatric evaluation of torture survivors.

It stipulates the following general considerations: (1) that torture is an extraordinary life experience capable of causing a wide range of physical and psychological suffering; that the extreme nature of the torture event is powerful enough on its own to produce mental and emotional consequences, regardless of the individual's pre-torture psychological status; (2) that it is important to recognize that not everyone who has been tortured develops a diagnosable mental illness (commonly depression and PTSD) and (3) the unique cultural, social and political implications that torture has for each individual influence his or her ability to describe and speak about it. These are important factors that contribute to the impact that torture inflicts psychologically and socially and that must be considered when performing an evaluation of an individual from another culture.

The IP has adopted ICD-10 and DSM-IV for psychiatric diagnoses. The introduction of DSM-5 provides major advances, challenges and opportunities for psychiatric diagnosis, e.g. changes regarding specific trauma- and stressor-related disorders and in transcultural factors that appear to be of substantial importance for the assessment of survivors of torture.[23]

The author had worked from 2014 to 2016 as Consultant Psychiatrist conducting psychiatric assessments of refugees and asylum seekers with alleged experience of torture at the Helen Bamber Foundation (HBF), a pioneering Human Rights Charity supporting refugees and asylum seekers who are the survivors of extreme human cruelty based in London, UK. The methodology used at the HBF applies the same components though not in precisely the same form as in the Istanbul Protocol (Appendix).

The psychiatric assessment could be informed by validated tools. For a comprehensive psychiatric evaluation, the author has used the following tools:

- The Mini International Neuropsychiatric Interview (M.I.N.I.).[24]
- "Mini-mental state". A practical method for grading the cognitive state of patients for the clinician.[25]
- Impact of Events Scale: a measure of subjective stress.[26]
- Clinical Outcomes in Routine Evaluation (CORE) System.[27]
- Montogomery-Asberg Depression Scale.[28]

In an informative article review, Pope addressed psychological assessment of torture survivors: Essential steps, avoidable errors, and helpful resources.[29] This article provides ideas, information, and resources that may be helpful in conducting psychological evaluations of people who have been tortured. The first section discusses essential steps, including achieving competence; clarifying the purpose; selecting methods appropriate to the individual, the purpose, and the situation; addressing issues of culture and language; maintaining awareness of ways in which the presence of third parties and recording can affect the assessment; attending carefully to similarities, echoes, and triggers; and actively searching for ways to transcend our own limited experiences and misleading expectations.

The second section discusses avoiding five common errors that undermine these evaluations: mismatched validity; confirmation bias; confusing retrospective and prospective accuracy (switching conditional probabilities); ignoring the effects of low base rates; and misinterpreting dual high base rates.

The third section identifies resources on the web (e.g., major centers, legal services, online courses, information about asylum and refuge, networks of torture survivors, human rights organizations providing information and services, guides to assessment) that people working with torture survivors, refugees, and asylum-seekers may find helpful.[29]

In relation to assessments of torture survivors conducted by psychologists, Huminuik[30] identified special competencies for the production of high-quality psychological evidence that can help to substantiate allegations of torture, thereby increasing the likelihood of success in civil, administrative, and criminal proceedings.

The author cautions that assessors must also have the ability to guard against re-traumatization and protect survivors as well as their family and community members still facing the threat of violence. It is advocated that a flexible approach is taken to establishing the facts of a case, including the submission of psychological evidence; and using standardized measurement tools for complex trauma that need to be adapted for specific languages and cultures.

Clinical credibility of the torture survivor's allegations

Chapter VI (paragraphs 287 to 290) of IP addresses the issue of the credibility of psychological evidence of torture.

In summary, the IP provides guidance on examination and evaluation following specific forms of torture. For each lesion and for the overall pattern of lesions, the physician should indicate the degree of consistency between it and the attribution given by the patient. The following terms are generally used:

A. Not consistent: the lesion could not have been caused by the trauma described;
B. Consistent with: the lesion could have been caused by the trauma described, but it is non-specific and there are many other possible causes;
C. Highly consistent: the lesion could have been caused by the trauma described, and there are few other possible causes;
D. Typical of: this is an appearance that is usually found with this type of trauma, but there are other possible causes;
E. Diagnostic of: this appearance could not have been caused in any way other than that described.

Ultimately, it is the overall evaluation of all lesions and not the consistency of each lesion with a particular form of torture that is important in assessing the torture story.

After eliciting a detailed narrative account of events, it is advisable to review other possible torture methods. It is essential to learn about regional practices of torture and modify local guidelines accordingly. Questioning about specific forms of torture is helpful when:

A. Psychological symptoms cloud recollections;
B. The trauma was associated with impaired sensory capabilities;
C. There is a case of possible organic brain damage;
D. There are mitigating educational and cultural factors.

The distinction between physical and psychological methods is artificial. For example, sexual torture generally causes both physical and psychological symptoms, even when there has been no physical assault. Whilst physical evidence may be visible and could be examined, psychological consequences are no less disabling, are 'invisible' and long standing: psychiatric symptoms are based on the torture survivor's subjective experience.

An overall goal of the psychological evaluation is to assess the degree of consistency between an individual's account of torture and the psychological findings observed during the course of the evaluation. To this end, the evaluation should provide a detailed description of the individual's history, a mental status examination; an assessment of social functioning and the formulation of clinical impressions (see IP chapters III, sect. C, and IV, sect. E). A psychiatric diagnosis should be made, if appropriate. Because psychological symptoms are so prevalent among survivors of torture, it is highly advisable for any evaluation of torture to include a psychological assessment.

The clinical assessor needs to provide their opinion on this credibility issue: factors that support credibility include the consistency of their self-report report and the psychological issues with a specific psychiatric diagnosis such as PTSD, consistency with their accounts to other mental health professionals assessments, the demeanour of the client during the assessment, e.g. if they become visibly distressed whilst describing their traumatic experiences.

The other issue is attribution of the psychiatric symptoms to the torture experience versus other stresses that the survivor has experienced as an asylum seeker.

Case report: clinical credibility

In a recent psychiatric report, the author of this article provided to the court in the UK for an asylum seeker and under clinical credibility, it was stated "I am required by paragraphs 105(f), 287(vi), and 290 of the Istanbul Protocol to consider the possibility of a 'false allegation of torture.' I have therefore considered whether Mr X might be feigning or exaggerating his psychological symptoms. To assess this, I asked open questions to obtain his spontaneous descriptions of his symptoms. I avoided asking him closed questions, as much as possible, thus avoiding prompting answers from him during the interview. Concerning the plausibility of Mr X's account of his history and distressing experiences, the account he provided to me and my observations of his present mental state were sufficiently informative to fulfil the diagnostic criteria of a moderate depressive episode with somatic syndrome and is in keeping with the account he provided to his GP as documented in their letters and the assessment of his mental condition by specialist mental health services. I am aware of the guidance of the Upper Tribunal in JL (medical reports-credibility) and note that it is not for me as a clinician to come to any conclusions regarding Mr X's credibility. However, I note that it is expected that I perform 'a critical and objective analysis of the injuries and/or symptoms displayed.' (headnote 3, JL (medical reports-credibility). I confirm that I have done so".

Peer-reviewing of physical aspects of torture based on a qualitative /semi-quantitative /quantitative multi-step analysis leads to robust assessments of credibility.[31] A procedure is needed on how to merge the credibility assessments of the psychological and the physical data into an overall conclusion. The authors suggested that the highest level of the two evaluations should constitute the overall credibility assessment.

A study was conducted on the credibility of allegations of torture in a sample of 45 Basque people held in short-term incommunicado detention between 1980 and 2012, using a modified version of the Standard Evaluation Form for Credibility Assessment (SEC), a new tool to assess credibility based on the IP.[32] The study showed that: (a) evidence that allegations of ill-treatment and torture in the Basque Country are consistent and credible, being ascertained beyond reasonable doubt and aside from any political debate; (b) the wider use of the IP as a tool to assess credibility of allegations of ill-treatment and torture; and, (c) the usefulness of the SEC as a tool. The authors opined that the SEC can help as a tool for documenting torture in contexts where there are political differences and figures are distorted as a result of polarized political debates, and where legal documentation is needed for judicial purposes. Forensic science can help by providing an objective assessment of the credibility of allegations.

Finally, it is important to refer to the notion that torture survivors with mental health problems, particularly PTSD, may experience particular difficulty in dealing with direct interviewing, especially in contexts which seem to them adversarial. The research evidence suggests that such difficulties should not be seen as evidence of reduced credibility.[33, 34]

Training in application of the IP

ARTIP: Awareness Raising and Training Measures for the Istanbul Protocol in Europe, is a project that has been established and coordinated by Thomas Wenzel (Medical University of Vienna, Austria).[35] The overall objective of ARTIP is to enable medical, legal and social professionals to address one of the most fundamental concerns in protecting individuals from torture: effective documentation, that brings evidence of torture and ill-treatment to light so that perpetrators may be held accountable for their actions and the interests of justice may be served. ARTIP, in collaboration with the Syrian Association for Mental Health (SAMH), have obtained funding from the World Psychiatric Association for the provision of training of mental health and legal professionals in the application if IP and its evaluation of the training for documentation and diagnosis of mental health impact of torture and extreme violence with an interdisciplinary approach, including trained legal professionals.

This project builds on the principles of SAMH's Code of Ethics for Mental Health Professionals.[36]

Conclusions

Torture and other forms of cruel or degrading treatment or punishment are widespread, particularly in settings of conflict and mass displacement of refugees and asylum seekers.

The Manual on Effective Investigation and Documentation of Torture and Other Cruel, Inhuman or Degrading Treatment or Punishment, commonly known as the Istanbul Protocol (IP), is an interdisciplinary standard supported by the United Nations, the World Medical Association, the World Psychiatric Association and adopted by most countries and NGOs concerned with human rights.

A main purpose of IP is to provide guidance for health professionals for conducting competent and comprehensive assessment and investigation of the physical and psychological/psychiatric consequences of torture and other forms of cruel, inhuman, degrading treatments. Moreover, an overall goal of the psychological/psychiatric evaluation is to assess the degree of consistency between an individual's account of torture and the psychological/psychiatric findings observed during the course of the evaluation. Hence the pivotal role of psychiatrists in conducting assessments for diagnosis of psychiatric disorders (ICD-10 and DSM), commonly depressive disorders and PTSD. Further, psychiatrists could recommend appropriate treatment interventions for torture survivors with psychiatric disorders. Finally, psychiatric evidence of torture is crucial for the protection of torture victims and prosecution of perpetrators in national and international courts in collaboration with legal professionals concerned with the service of justice.

Appendix: Methodologies used by the Helen Bamber Foundation for the psychological/psychiatric interview in accordance with Istanbul Protocol.

All references below are to the Istanbul Protocol.

Paragraphs 275 to 291 of the Istanbul Protocol set out the "Components of the psychological/psychiatric evaluation." The overall purpose of the evaluation is "to form an impression of the degree to which torture has contributed to psychological problems." (Paragraph 280). "The mental state examination begins the moment the clinician meets the subject." (Paragraph 284). As is normal in any medical interview, enquiries commence by means of open-ended, non-directive questions to establish details of current mental health problems, if any. "Avoid leading questions. Structure inquiries to elicit an open-ended, chronological account of events ..." (Paragraph 168) "... [O]pen-ended interviewing methods require that patients should disclose these experiences in their own words using free recall." (Paragraph 169).

Each of these details is then explored, seeking to understand whether and how answers to specific related questions provide a coherent and consistent indication suggesting particular conclusions. This is well established routine clinical practice in reaching a diagnosis, i.e. the identification of the nature of an illness or other problem by examination of the symptoms. Such questions can include, for example, the onset, nature and duration of symptoms, precipitating and relieving factors, and other features relating to them.

As the subject receives the question (directly or via the interpreter) and responds, it is important also to observe whether the enquiry has produced a change in presentation (for example facial expression, posture, speed or hesitancy of speech), or general demeanour, behaviour, mood and affect.

A format for written documentation is presented below; greater flexibility is clearly required during the actual interview. The subject's own words are important. However, when drafting the medico-legal report a third person narrative style is adopted. Quotation can therefore be used for emotional responses and the words of the subject and others as context requires. For example, 'Suddenly "out of nowhere" people appeared.' 'They said "we'll take you downstairs to get more details."' 'It was not a bad experience to begin with but later on "I felt I went into a Hell."'

- Demographic information
- Presenting complaint(s) and main current symptoms and associated distress/disability "It is important to inquire about current sources of stress, such as separation or loss of loved ones, flight from the home country and life in exile." (Paragraph 278).
- History of the presenting complaint illness "It is useful (particularly in people whose insight may be limited) to obtain a collateral account from any available family, friends or other sources. Previous GP or hospital notes should also be sought, reviewed and summarised".
- Previous psychiatric history "Inquiries should be made about a history of mental or psychological disturbances, the nature of the problem and whether they received treatment or required psychiatric hospitalization. The inquiry should also cover prior therapeutic use of psychotropic medication." (Paragraph 282).
- Past medical/surgical and medication history
- Family history of mental illness
- Personal history "…the examiner should inquire into the person's daily life, relations with friends and family, work or school, occupation, interests, future plans and use of alcohol and drugs. Information should be elicited regarding the person's post-detention psychosocial history." Paragraph 136 and "[As] relevant describe the victim's childhood, adolescence, early adulthood, his or her family background, family illnesses and family composition. There should also be a description of the victim's educational and occupational history. Describe any history of past trauma, such as childhood abuse, war trauma or domestic violence, as well as the victim's cultural and religious background." (Paragraph 279).
- Early life and development
- Educational history: Include educational milestones (literacy, certificates, years of education completed/repeated) and school-year friendships/bullying.
- Occupational history
- Social and Relationship history
- This component of the psychological evaluation seeks information about current life circumstances. It is important to inquire about current sources of stress, such as separation or loss of loved ones, flight from the home country and life in exile. The interviewer should also inquire about the individual's ability to be productive, earn a living, and care for his or her family and the availability of social supports. (Paragraph 278).
- Alcohol and Substance use (Paragraph 283).
- Forensic history (in country of origin and since coming to UK) "Describe any history of past trauma, such as childhood abuse, war trauma or domestic violence." (Paragraph 279).
- Premorbid personality "…compare the current mental health status with that of the individual

before torture" via "data about the individual's previous mental health and psychosocial functioning to form an impression of the degree to which torture has contributed to psychological problems." (Paragraph 280).

- Mental state (Paragraph 284): Appearance and behaviour; Motor activity; Speech and use of language; Mood and affect; Thought form; Thought content; Perception; Cognition (orientation, long term memory, intermediate recall and immediate recall and Insight.

"[A]n assessment of current psychological functioning constitutes the core of the evaluation. Affective cognitive and behavioural symptoms should be described in detail, and the frequency, as well as examples, of nightmares, hallucinations and startle response should be stated." Paragraph 285 adds that "The clinician should assess the individual's current level of functioning by inquiring about daily activities, social role (as housewife, student, and worker), social and recreational activities and perception of health status." (Paragraph 277).

"Clinicians should comment on the consistency of psychological findings and the extent to which these findings correlate with the alleged abuse. The emotional state and expression of the person during the interview, his or her symptoms, the history of detention and torture and the personal history prior to torture should be described. Factors such as the onset of specific symptoms related to the trauma, the specificity of any particular psychological findings and patterns of psychological functioning should be noted. Additional factors should be considered, such as forced migration, resettlement, difficulty of acculturation, language problems, unemployment, and loss of home, family and social status. The relationship and consistency between events and symptoms should be evaluated and described. Physical conditions, such as head trauma or brain injury, may require further evaluation. Neurological or neuropsychological assessment may be recommended." (Paragraph 288).

"If the survivor has symptom levels consistent with a DSM-IV or ICD-10 psychiatric diagnosis, the diagnosis should be stated. More than one diagnosis may be applicable. Again, it must be stressed that even though a diagnosis of a trauma-related mental disorder supports the claim of torture, not meeting criteria for a psychiatric diagnosis does not mean the person was not tortured. A survivor of torture may not have the level of symptoms required to meet diagnostic criteria for a DSM-IV or ICD-10 diagnosis fully. In these cases, as with all others, the symptoms that the survivor has and the torture story that he or she claims to have experienced should be considered as a whole. The degree of consistency between the torture story and the symptoms that the individual reports should be evaluated and described in the report." (Paragraph 289).

"It is important to recognize that some people falsely allege torture for a range of reasons and that others may exaggerate a relatively minor experience for personal or political reasons. The investigator must always be aware of these possibilities and try to identify potential reasons for exaggeration or fabrication. The clinician should keep in mind, however, that such fabrication requires detailed knowledge about trauma-related symptoms that individuals rarely possess. Inconsistencies in testimony can occur for a number of valid reasons, such as memory impairment due to brain injury, confusion, dissociation, cultural differences in perception of time or fragmentation and repression of traumatic memories.

Effective documentation of psychological evidence of torture requires clinicians to have a capacity to evaluate consistencies and inconsistencies in the report. If the interviewer suspects fabrication, additional interviews should be scheduled to clarify inconsistencies in the report. Family or friends may be able to corroborate details of the story. If the clinician conducts additional examinations and still suspects fabrication, the clinician should refer the individual to another clinician and ask for the colleague’s opinion. The suspicion of fabrication should be documented with the opinion of two clinicians." (Paragraph 290).

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الملخص

إن دليل التحقيق والتوثيق الفعالين بشأن التعذيب وغيره من ضروب المعاملة أو العقوبة القاسية أو اللاإنسانية أو المهينة، والمعروف باسم بروتوكول اسطنبول، هو معيار متعدد التخصصات تدعمه الأمم المتحدة، والرابطة الطبية العالمية، والرابطة العالمية للطب النفسي واعتمدته معظم الدول والمنظمات غير الحكومية المعنية بحقوق الإنسان.

والغرض الرئيسي من بروتوكول اسطنبول هو توفير الإرشادات للمهنيين الصحيين لإجراء تقييم وتقصي كفؤ وشامل للعواقب الجسدية والنفسية للتعذيب وغيره من أشكال المعاملة القاسية واللاإنسانية والمهينة. علاوة على ذلك فإن الهدف العام للتقييم النفسي هو تقييم درجة الاتساق بين رواية الفرد عن التعذيب والنتائج النفسية التي تمت ملاحظتها أثناء التقييم. ومن هنا يأتي الدور المحوري للأطباء النفسيين في إجراء تقييمات لتشخيص الاضطرابات النفسية من الاكتئاب واضطراب ما بعد الصدمة. يمكن أن يوصي الأطباء النفسيين بالتدخلات العلاجية المناسبة لضحايا التعذيب الذين يعانون من اضطرابات نفسية. وأخيرا تعتبر الأدلة النفسية المتعلقة بالتعذيب حاسمة لحماية ضحايا التعذيب ومقاضاة الجناة في المحاكم الوطنية والدولية بالتعاون مع المهنيين القانونيين المعنيين بخدمة العدالة.

تهدف المقالة إلى إرشاد وتوجيه الأطباء النفسيين حول دورهم المحوري في تطبيق بروتوكول اسطنبول، وتناقش بشكل نقدي قضايا وتحديات المقابلات النفسية المتخصصة للناجين من التعذيب المزعوم في السياقات السورية والطبية القانونية.

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Professor Abdel Aziz Mousa Thabet

Tribute to a Pioneer of Child Trauma Research

Of all the articles, I had the privilege to co-author with this great man, this is the one I hoped I would never have to write. Yet, his huge influence on the field makes it a little bit easier. How does one summarize 25 years of memories and immense productivity in a few lines? Particularly when it is so difficult to disentangle between the scientist, clinician, collaborator and friend.

These days we take for granted the substantive knowledge on how war-inflicted and other types of complex trauma impact on children's mental health. A large body of evidence has led to the development of interventions and services across different disciplines, settings and contexts across the world; and has equipped professionals with skills how to recognise and treat posttraumatic stress disorders and associated needs. This was almost impossible to foresee when Professor Abdel Aziz, as I have always called him, first approached me to work together on his PhD research. Our understanding at the time relied more on theory than research, case studies from the general population, and adult-based reports. Professor Abdel Aziz went several steps ahead of his time in delving into a war-torn area of extreme poverty, addressing new and inter-linked concepts and, crucially seeking evidence from children themselves. I vividly recall reading in disbelief and distress the first children's reports on their direct and indirect exposure to atrocities in what was to be his classic publication (Thabet & Vostanis, 1999). I will be referring to all this extraordinary volume of research as Professor Abdel Aziz's sole contribution, because I had the mere fortune and privilege in assisting him to share it with the global academic and clinical community.

What followed is difficult to comprehend even now. Over the subsequent three decades, Professor Abdel Aziz tackled the field with challenging research questions, validation of measures, cross-sectional and longitudinal designs, and intervention trials with different groups of children. He did not shy away from challenges such as capturing acute and long-term impact of conflict (Thabet et al., 2002), the collective impact of trauma on parents and communities (Thabet et al., 2014a), and its underpinning complex mechanisms (Thabet et al., 2004). The latter was another major break in demonstrating different pathways through which past (usually war-inflicted) trauma resulted in PTSD, whilst current adversities (such as poverty of impaired parenting capacity) were associated with depression. These findings have since deeply influenced practice with vulnerable groups such as refugee children in endorsing multi-modal interventions and service models.

Professor Abdel Aziz's outlook was always child-centred. He wanted to make a difference in children's lives by demonstrating the needs of disadvantaged groups such as maltreated children (Thabet et al., 2004), in labour (Thabet et al., 2010), or living in orphanages (Thabet et al., 2007). Ultimately, this high calibre psychiatrist epidemiologist was not afraid of investigating protective factors such as coping strategies (Thabet et al., 2014b) and parental support amidst despair (Thabet et al., 2009), thus instilling hope to communities and professionals with the evaluation of interventions (Lange-Nielsen et al., 2012) and child-driven policy (Thabet et al., 2008).

Deservedly so, the influence of Professor Abdel Aziz's research goes well beyond what he may have anticipated himself at the outset. All major international organizations have quoted his work over the years in their efforts to improve children's rights, living conditions and mental wellbeing (e.g. Freedom Fund, 2015; Migration Policy Institute, 2015; United Nations, 2019; United Nations Office on Drugs and Crime, 2015). As the world is trying to come to terms with a different type of trauma during the COVID-19 crisis and beyond, his research remains more topical than ever. For example, in a study with healthcare professionals in the Gaza Strip, their reported high prevalence rates of psychiatric disorders were predicted by their personal experiences of loss and trauma, rather than by their professional exposure (Shamia et al., 2015). These findings inform the need for supporting mental health and other care professionals in the aftermath of the global lockdown (Vostanis & Bell, 2020).

This extraordinary contribution reflects Professor Abdel Aziz's personal attributes, i.e. his generosity, unique energy and creative mind. He could have easily taken up a tenure at any University in the world, yet he always opted to stay in his beloved Gaza and suffer with his people. Numerous policy makers, academics and professionals quoted his work in major international forums, although few had actually met him. Professor Abdel Aziz could not often accept prestigious invitations, as he could not easily travel from the Palestinian Territories. This irony never escaped me on someone who exerted such influence on human rights. Yet he never complained, instead was always positive, faithful and strong. I learnt so much about human resilience from him. As fate would have it, we met in Jordan (photo) just before his final trip to Canada. Looking at the Dead Sea, he was so excited to show me his new statistical programme that would help him integrate all his datasets to estimate secular trends in trauma exposure and child mental problems over his lifelong research. On behalf of millions of children who have benefited from your work, rest in peace my dear friend.

Panos Vostanis

Professor of Child Mental Health

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Evidence-based Treatment of Generalized Anxiety Disorder

Adib Essali

العلاج المبني بالبرهان لاضْطِرابُ القَلَقِ المُعَمَّم

أديب العسالي

Abstract

Generalized anxiety disorder (GAD) is a common anxiety disorder that affects about 5% of adults in primary care. The essential feature of this condition is chronic anxiety and worry that is out of proportion with life stressors. It follows a chronic course with exacerbations at times of stress. Drug treatment of GAD is based on evidence derived from randomized controlled trials of selective serotonin inhibitors (SSRIs), selective serotonin and noradrenaline inhibitors (SNRIs), the calcium channel modulator drug Pregablin and the Azapirone Buspirone. Among the SSRIs, the strongest evidence for the treatment of GAD is for Escitalopram, sertraline and paroxetine. The SNRIs venlafaxine and duloxetine are effective in treating GAD. There is also evidence for the efficacy of the antihistamine hydroxyzine, but excessive sedation limits its use. Other drugs having evidence for efficacy include the antipsychotic quetiapine and several benzodiazepine derivatives. Because of the chronic nature of GAD, the use of benzodiazepine derivatives raises issues of tolerance, dependence and withdrawal reactions.

Practically, it is advisable to start with an antidepressant and to continue the treatment for 18 months if there was a response. Otherwise, Pregablin, Buspirone or quetiapine may be added as augmentation, or prescribed as monotherapy. Drug treatment of GAD usually involves considering psychological therapies. Counselling or supportive psychotherapy should always be provided. There is a sound evidence-basee for the use of cognitive behavioural therapy (CBT) in the treatment of GAD. CBT remains effective if provided through the internet. The choice between drugs and psychotherapy depends on patient preference and treatment availability. Drugs and psychotherapy may be used in combination.

مقدمة

تعتبر الاضطرابات القلقية أشيع أشكال الاضطرابات النفسية حدوثاً حيث يصاب بها سنوياً حوالي واحد من كل خمسة أشخاص[1]. وتترافق بإعاقة وتكاليف شبيهة بتلك التي تسببه حالات طبية شائعة أخرى مثل السكري والتهاب المفاصل وفرط التوتر الشرياني، حيث يعاني المصابون بالاضطرابات القلقية من خلل بالأداء الجسدي وأداء الواجبات، ومن تكرار الغياب عن العمل بسبب المرض ومن تدهور الأداء المهني وتواتر استخدام الخدمات الصحي[5-0]، لذلك ليس غريباً أن تتزايد إجراء البحوث الهادفة لفهم طبيعة الاضطرابات القلقية والتي جعلت ممكناً التفريق بين أنماط متنوعة من هذه الاضطرابات وتطوير معالجات دوائية ونفسية لكل منها.

اضْطِرابُ القَلَقِ المُعَمَّم

يعتمد تصنيف الاضطرابات القلقية أساساً على ما إذا كان القلق معمماً أو نوعياً أو نوعياً لمكان أو شيء ما، ويعتبر اضطراب القلق المعمم أكثر الاضطرابات القلقية شيوعاً حيث يشخص عن 5% من مراجعي الرعاية الصحية الأولية[6]، وهو أكثر شيوعاً عند النساء (55-62%) منه عند الرجال (02-05%)، ويبدأ عادةً في العشرينات أو الثلاثينات من العمر، وقد يستمر لسنوات عدة بأعراض مزمنة تتموج شدتها، ويبلغ احتمال هجوع هذا الاضطراب خلال خمس سنوات 83%، ويبلغ احتمال النكس 02% خلال السنوات الثلاث التالية للهجوع[2].

يتميز اضْطرابُ القَلَق المُعَمَّم بمخاوف مفرطة أو غير واقعية بخصوص بعض ظروف الحياة التي قد يعاني منها أي إنسان (مثلاً: الظروف المادية أو الزوجية أو الوظيفية)[3] تبدو هذه المخاوف مفتقدة للتبرير لغير المريض، لكنها تبدو للمريض عسيرة المنال وتترافق بفرط التنبه واليقظة وصعوبة النوم والتركيز، وبأعراض عصبية حركية وودية. وتتألف الأعراض الحركية من الشعور بالارتعاش، وتوتر العضلات المؤلم والتململ وسرعة التعب، وتتألف الأعراض الودية من الخفقان، والتعرق، وجفاف الفم، والدوخة أو خفة الرأس، والغثيان والإسهال، والهبات الباردة أو الساخنة، والبوال وصعوبة البلع.

تتعدد أسباب القَلَق المُعَمَّم، حيث يعتبره التحليل النفسي مظهراً لصراع داخلي خفي لا واعٍ، وتبين الدراسات السريرية أن بعض الأشخاص مؤهبون للإصابة بالقلق، كما تبين البحوث الأسرية أن القلق يترافق بفرط فعالية الجهاز العصبي المستقل، وباضطراب فعالية مراكز النورادرينالين في قشرة المخ وفي الجهاز اللمبي. كما قد يكون هناك خلل في مستقبلات GABA التي تحتوي على بروتين نشطٍ للخلايا له موضع لارتباط مشتقات البنزوديازيبين المضادة للقلق.

معالجة اضْطِرابُ القَلَقِ المُعَمَّم

تختلف شدة وفترة أعراض القلق المعمم من حالة لأخرى، حيث قد تتحسن هذه الأعراض بدون معالجة نوعية إذا كانت حديثة البدء ومرافقة لحوادث حياتية مكربة وغير مترافقة بإعاقة، ولكن تلزم معالجة الحالات المزمنة والمسببة لإعاقة والمحققة للمعايير التشخيصية لاضطراب القلق المعمم حسب الدليل التشخيصي والإحصائي DSM-5 أو التصنيف العالمي للأمراض ICD-10.

تستخدم في معالجة اضْطرابُ القَلَق المُعَمم طرق علاجية متنوعة فقد تم تطوير أدوية فعالة، ولكن لا تكتمل معالجة هذه الاضطرابات دون اعتبار المعالجات النفسية التي تتنوع بين المشاورة البسيطة (العلاج النفسي الداعم) وبين تقنيات متقدمة مثل العلاج السلوكي المعرفي، وقد تشكل هذه المعالجات بديلاً للأدوية كخيار علاجي أول. ويعتمد الاختيار بين الأدوية وبين العلاج النفسي على توفر العلاج ورغبة المريض واستجابته للعلاج سابقاً وقدرته على متابعة العلاج الموصوف. وهناك مجال فائدة في كثير من الحالات لمشاركة العلاج الدوائي مع العلاج النفسي، على الأقل عن طريق تشكيل "علاقة علاجية" فتعاطف ودعم الطبيب وقناعته بفعالية الدواء يزيد من احتمال التزام المريض بالدواء الموصوف ومن تطلعه إلى التحسن مقارنةً بطبيب متحفظ ومتردد بخصوص فعالية الأدوية النفسية، ويوضح أثر الغفل placebo effect أهمية علاقة الطبيب بالمريض في تحقيق فعالية الدواء الموصوف.

من البديهي أنه لا فائدة من استخدام أي علاج إذا لم يكن ذلك العلاج نافعاً؛ إذ يصبح استخدامه مجرد إضاعة للوقت والجهد والمال، بل ربما سبب للمريض ضرراً شديداً، وينطبق ذلك على كافة التداخلات الطبية والنفسية والاجتماعية وتداخلات ما يسمى "الطب البديل"؛ فحتى النصيحة غير المجربة قد تكون قاتلةً[9]، كما أن حوالي ثلث المراجعين بسبب اضطرابات نفسية قد يتحسنون على أي تداخل يقدم لهم بفعل أثر الغفل. لذلك فإن تبرير تحمل المعالج والمريض عناء تطبيق علاج ما بما يتضمن ذلك من جهد وتكاليف وتحمل للأعراض الجانبية، يوجب إظهار أن لذلك التداخل تأثيراً أفضل من تأثير الغفل عن طريق المقارنة بينهما بتجربة مُعَشَّاة randomized trial.

هناك الكثير من التجارب المعشاة المصممة لدراسة فعالية العلاجات المستخدمة في تدبير اضطراب القلق المعمم، وتلخص المراجعة المنهجية systematic review لكافة التجارب المعشاة ذات الصلة أفضل البراهين المتوفرة حول علاج ما، وتعتبر مراجعات كوكران المنهجية مصدراً مهماً للبراهين لأنها تُحَدَّث دورياً.

المعالجة الدوائية المسندة بالبراهين لاضْطِرابُ القَلَقِ المُعَمَّم

1. الأدوية المضادة للاكتئاب

تعتبر الأدوية المضادة للاكتئاب الخط العلاجي الأول لاضطراب القلق المعمم[12] فقد تمت دراسة فعاليتها بعديد من التجارب المعشاة والمراجعات المنهجية لتلك التجارب المعشاة. هناك براهين على فعالية كل من مثبطات قبط السيروتونين النوعية، وخصوصاً إسيتالوبرام، سيرترالين، وباروكسيتين. كما تتوفر براهين على فعالية كل من مثبطي قبط السيروتونين والنورأدرينالين فينلافاكسين ودولوكسيتين، وعلى فعالية ترازودون وثلاثي الحلقة ايميبرامين.

يجب عند استخدام أي من مضادات الاكتئاب مناقشة ومناطرة التأثيرات الجانبية المحتملة ومخاطر الإيقاف المفاجئ لباروكسيتين وفينلافاكسين. ويتوجب أيضاً توضيح أن تأثير مضادات الاكتئاب بطيء وأنه ينصح بمتابعة تناولها لفترة 10 أسابيع قبل تقييم فعاليتها. فإذا ثبت فشلها، يتوجب التفكير باستخدام معالجة أخرى مسندة بالبراهين.

2. مشتقات البنزوديازيبين

من الثابت تاريخياً أن مشتقات البنزوديازيبين فعالة في معالجة اضطراب القلق المعمم حيث أنها تخفف القلق سريعاً وتحسن النوم والأعراض الجسمية. لذلك يحب المرضى تناولها، ولكن الطبيعة المزمنة لاضطراب القلق المعمم توجب الحذر عند استخدامها وموازنة فوائدها مع مخاطر الاستخدام المديد واحتمال الاعتياد وتفاعلات السحب[11].

3. بوسبيرون وبقية الآزابيرونات Azapirones

الآزابيرونات وأشهرها البوسبيرون هي مجموعة أدوية تعمل على مستقبل السيروتونين 5HT1A وتستخدم في معالجة اضطراب القلق المعمم. وقد تم تقييم فعاليتها في مراجعة منهجية لست وثلاثين تجربة معشاة استمر كل منها لفترة تراوحت بين 0 و10 أسابيع وتناولت ما مجموعه 5923 شخصاً تبين أن تحملها جيد وأعراضها الجانبية خفيفة، وأنها أفضل من الغفل (العدد اللازم للعلاج 0.0 مجال الثقة 95% 0.16 إلى 15.0) ولكنها أقل فعالية وتحملاً من مشتقات البنزوديازيبين، لذلك فقد تكون علاجاً مفيداً بشكل خاص لمن لم يسبق له استخدام مشتقات البنزوديازيبين[10].

يختلف التركيب الكيماوي للبوسبيرون عن حالات القلق الأخرى وقد كان أول دواء غير بنزوديازيبيني يظهر فعالية في اضطراب القلق المعمم بينما مازالت آلية تأثيره غير مفهومة تماماً فإنه مؤازر جزئي لمستقبلات 5HT1A يقوم مع الوقت بحل القلق دون تسبيب نعاس غير محتمل.

يعتبر البوسبيرون بشكل عام أقل فعالية وأبطأ تأثيراً من مشتقات البنزوديازيبين فقد يستغرق ظهور تأثيره الحال للقلق حوالي أسبوعين أو أكثر، وهو لا يحسن النوم، ولا يفيد في متلازمة سحب البنزوديازيبينات، ولكن يعطى أفضلية لأنه لا يسبب اعتياداً ولا تفاعل سحب، كما أنه لا يتداخل مع الكحول. وهو أقل فعالية في المرضى المعالجين سابقاً بمشتقات البنزوديازيبين لذلك ربما كان من الأفضل تركه للمرضى الذين لم يسبق لهم استخدام مشتقات البنزوديازيبين .

4. بريجابالين Pregablin

بريجابالين هو دواء منظم لأقنية الكالسيوم، وبرغم اسمه فإنه ليس له أي تأثير على الناقل العصبي غابا.

هناك عدة تجارب سريرية معشاة تدعم فعالية بريجابالين في اضطراب القلق المعمم[18]، وهي واحدة عند المرضى.

مازالت تفاصيل آلية عمل بريجابالين غير مفهومة، وإن كان يعتقد بأنه يعمل عبر نظام الغلوتامات، وهو يعمل بشكل أبطأ من مشتقات البنزوديازيبين ولكن أسرع من مثبطات قبط السيروتونين النوعية، وأكثر تأثيراته الجانبية حدوثاً هي الدوخة والنعاس.

يمكن مشاركة بريجابالين في معالجة اضطراب القلق المعمم مع مثبطات قبط السيروتونين النوعية أو مثبطات قبط السيروتونين والنورأدرينالين، ويسمح باستخدامه مرافقاً لقصر تناول البنزوديازيبين.

5. مضاد الهيستامين هيدروكسيزين Hydroxyzine

يستخدم هيدروكسيزين أحياناً في معالجة اضطراب القلق المعمم، وقد أجريت مراجعة منهجية خمس تجارب سريرية معشاة على 330 شخصاً بغية تحري فعالية وتقبل هيدروكسيزين قارنت بالغفل أو بأدوية أخرى بينت هذه المراجعة المنهجية أن هيدروكسيزين أقوى فعالية من الغفل، ومعادلاً من حيث الفعالية والتقبل لمشتقات البنزوديازيبين والبوسبيرون، ولكنه أكثر تسبيباً للنعاس والنوم مما يحد من استعماله[10].

6. أدوية الجيل الثاني من مضادات الذهان

تستعصي بعض حالات اضطراب القلق المعمم على العلاجات شائعة الاستخدام، مما يدفع إلى تجريب خيارات معالجة دوائية جديدة مثل استخدام أدوية الجيل الثاني من مضادات الذهان كعلاج منفرد أو بالمشاركة مع أدوية أخرى، وقد بينت مراجعة منهجية لنتائج أربع تجارب معشاة على 0065 شخصاً أن كويتيابين أفضل من الغفل، ومعادل لمضادات الاكتئاب، في معالجة اضطراب القلق المعمم ولكن يصعب تحمله بسبب أعراضه الجانبية لا سيما زيادة الوزن والنعاس والأعراض خارج الهرمية. وقد اشتملت تلك المراجعة المنهجية أيضاً على تجارب صغيرة الحجم بينت أنه لا فائدة لأولانزابين ولا للريسبيريدون في علاج اضطراب القلق المعمم[15].

المعالجات النفسية المسندة بالبراهين لاضطراب القلق المعمم

للمعالجات النفسية دور هام في معالجة اضطراب القلق المعمم، كعلاج خط أول منفرد أو بالمشاركة مع العلاج الدوائي. وللمعالجات النفسية أشكال عدة تبدأ بالعلاج النفسي الداعم وتمتد لتشمل علاجات أكثر تعقيداً.

لا بد في كل الحالات من تقديم معالجة نفسية داعمة تتمثل في مناقشة الأعراض مع المريض وتوضيح طبيعتها، إضافة إلى تفهم المريض وطمأنته ومناقشة فوائد ومخاطر كل معالجة نوعية. ويتم اختيار طريقة المعالجة النوعية حسب المظاهر السريرية واحتياجات المريض وتفضيلاته والمعالجات المتوفرة محلياً.

أجريت مراجعة منهجية لدراسة فعالية وتقبل مختلف أشكال المعالجات النفسية مصنفة في الفئات التالية: معالجة سلوكية معرفية، معالجة نفسية دينامية، ومعالجة داعمة. وقد اشتملت تلك المراجعة على 05 تجربة معشاة شارك فيها 1825 شخصاً وقدمت نتائج مبرهنة على فعالية العلاج السلوكي المعرفي في معالجة اضطراب القلق المعمم، ولكن كانت تجارب المقارنة مع أشكال العلاج الأخرى صغيرة وضعيفة النوعية فلم تسمح بالتوصل إلى استنتاجات موثوقة[16].

رغم توفر براهين على فعالية العلاج السلوكي المعرفي في علاج اضطرابات القلق بشكل عام فإن الوصول إلى هذا العلاج قد يتعذر لأسباب مختلفة. لذلك حاول بعض الباحثين تخفيف العوائق عن طريق تقديم هذا العلاج عبر الإنترنت، وقد تبين من نتائج مراجعة منهجية اشتملت على 812 مشاركاً في خمس تجارب معشاة قارنت بين معالجة اضطراب القلق المعمم من قبل معالج يقدم العلاج وجهاً لوجه أو عبر الإنترنت أنه لا فرق بين هاتين الطريقتين. لذلك فإن العلاج السلوكي الاستعرافي المدعوم من قبل معالج عبر الإنترنت هو معالجة مسندة بالبراهين لكن هناك حاجة لمزيد من الدراسات لتأكيد فوائدها وتحديد سلامة استخدامها[12].

طرق علاجية أخرى لاضطراب القلق المعمم

تستخدم في مختلف أرجاء العالم تداخلات علاجية مشتقة من الثقافات والتقاليد المحلية، وتعرف هذه التداخلات أحياناً على أنها "علاجات بديلة" ولكن مثل هذه التسمية لا تعني إعفاء هذه التداخلات من الخضوع لفحص عادل لفعاليتها وسلامة استخدامها، وهناك أمثلة عديدة على إمكانية دراسة هذه التداخلات بتجارب معشاة، فمثلاً، اعتمد شوما موريتا على فلسفة آسيوية في طرح "علاج موريتا" المستخدم لعلاج الاضطرابات القلقية في اليابان والصين. ويتبين من مراجعة منهجية توفر سبع تجارب معشاة صممت لدراسة فعالية وسلامة هذا العلاج، صممت واحدة منها لدراسة فعاليته في علاج اضطراب القلق المعمم عند 62 شخصاً. أجريت كل تلك التجارب في الصين وكانت صغيرة الحجم حيث بلغ مجمل عدد المشاركين في التجارب السبع فقط 009 مشاركاً. أضف إلى ذلك أن نوعية تلك التجارب كانت سيئة من حيث طرق التعمية والتعشية وتسجيل النتائج، مما جعل التوصل إلى استنتاج موثوق غير ممكناً[13].

تنطبق هذه الملاحظة على معظم دراسات العلاجات البديلة بما فيها العلاجات العشبية كنبات الناردين (أو حشيشة القط Valerian) وهو أحد النباتات المعروفة بتأثيرها المهدئ وقد استخدم في الحرب العالمية الأولى لتخفيف التأثر بالقصف المدفعي. ورغم ذلك فإن المراجعة المنهجية لفعالية وسلامة نبات الناردين في معالجة القلق لم تحصل إلا على تجربة وحيدة على 86 مريضاً استمرت لمدة 0 أسابيع ولم تتمكن من التوصل إلى أي استنتاج أكثر من القول بضرورة إجراء تجارب جيدة التصميم والتنفيذ في التوصل إلى قرار نهائي حول فعالية وسلامة استخدام نبات الناردين في علاج الاضطرابات القلقية[19].

وهذا الاستنتاج ليس حكراً على نبات الناردين بل ينطبق على الكثير من الأعشاب التي يشيع استخدامها عالمياً لمعالجة القلق، مثل زهرة الآلام passionflower فقد كشفت المراجعة المنهجية وجود تجربتين لمستحضر زهرة الآلام (Passiflora) في علاج القلق ولكن لم يمكن التوصل إلى استنتاج موثوق حول فعالية وسلامة استخدام هذا المستحضر في علاج القلق بسبب قلة عدد المشاركين بل نصح الباحثون بإجراء دراسات للمقارنة مع الغفل ومع أدوية أخرى مثل مضادات الاكتئاب [02].

مناقشة

تتوفر عدة طرق علاجية مسندة بالبراهين لاضطراب القلق المعمم تمتاز المعالجة بمضادات الاكتئاب بتأخر الاستجابة العلاجية، ولكن هذا التأخر هو أكثر تحملاً في اضطراب القلق المعمم منه في حالات القلق الظرفي الحاد. لذلك فإن المقاربة العقلانية هي البدء بمضادات الإكتئاب (مثبطات قبط السيروتونين النوعية أو فينلافاكسين) لمدة 6-3 أسابيع، مع زيادة الجرعة تدريجياً خلال 0-8 أسابيع لتخفيف التأثيرات الجانبية، ومع توعية المريض

لكي لا يتم تفويت فائدة مرئية فإذا لم يحدث تحسن، يمكن تضخيم الاستجابة عن طريق إضافة دواء آخر.

لم تتم دراسة جدوى مشاركة أدوية معالجة القلق المعمم إلا في حالات قليلة، لذلك ينصح عادةً عند الضرورة بمشاركة علاجات ثبتت براهين على فعالية كل منها فردياً ولا يوجد مضاد استطباب لمشاركتها فيمكن مثلاً دعم الدواء المضاد للاكتئاب بإضافة بريجابالين أو بوسبيرون أو كويتيابين. كما يمكن وصف أحد هذه الأدوية فردياً كبديل لمضاد الاكتئاب. وقد يلزم اللجوء إلى مشتقات البنزوديازيبين لاسيما عند المرضى المعتادين على استخدامها، ويمكن في هذه الحالات استخدام أحد مشتقات البنزوديازيبين كعلاج وحيد على فرض توفر إشراف كاف ومحاولات منتظمة لتخفيف الجرعة.

أما فترة العلاج فتختلف من حالة إلى أخرى، ويغلب أن يتطلب اضطراب القلق المعمم علاجاً لفترة 13 شهراً إذا استجاب للأدوية المذكورة أعلاه خلال 10 أسابيع، ويتم في نهاية فترة العلاج سحب الدواء تدريجياً.

أما عندما تكون الأعراض معاودة، أي تحدث فقط عند التعرض لظروف مثيرة للقلق فيمكن التفكير في استخدام أحد مشتقات البنزوديازيبين بشكل متقطع عند الحاجة.

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الخلاصة

اضْطرابُ القَلَق المُعَمَّم هو اضطراب قلق شائع يصيب حوالي 5% من الناس في الرعاية الصحية الأولية ويتظاهر بشكل أساسي بقلق مزمن ومخاوف غير مبررة ويتبع سيراً متموجاً ومزمناً.

في الكبار تبين شواهد قوية من تجارب سريرية معشاة تناولت معالجة اضْطرابُ القَلَق المُعَمَّم دوائياً باستخدام حاصرات قبط السيروتونين النوعية وحاصرات قبط السيروتونين والنورأدرينالين النوعية ونظائر الكابا وبريجابالين ومشتق الآزابيرون بوسبيرون. من بين حاصرات قبط السيروتونين النوعية تتوفر أقوى البراهين لإسيتالوبرام وسيرترالين وباروكسيتين. وتتوفر براهين على فعالية كل من حاصرَيْ قبط السيروتونين والنورادرينالين النوعيين فينلافاكسين ودولوكسيتين.

يتوفر أيضاً برهان على فعالية مضاد الهيستامين هيدروكسيزين ولكن استخدامه محدود بسبب تسببه بالنعاس الشديد. ومن الأدوية الأخرى المدعومة ببراهين على فعاليتها مضاد الذهان كويتيابين ومشتقات البنزوديازيبين، ولكن الطبيعة المزمنة لاضطراب القلق المتعمم توجب الحذر عند استخدام مشتقات البنزوديازيبين بسبب مشاكل التحمل والإدمان وتفاعل السحب.

عملياً، ينصح بالبدء بأحد مضادات الاكتئاب وباستمرار العلاج لمدة 13 شهراً إذا حدثت استجابة، أما في الحالات التي لا تستجيب فيمكن إضافة بريجابالين أو بوسبيرون أو كويتيابين لتضخيم التأثير، أو يستخدم أحد هذه الأدوية كعلاج منفرد .

تتطلب معالجة اضطراب القلق المتعمم أخذ المعالجات النفسية بعين الاعتبار، حيث تقدم نظامياً المشورة أو العلاج النفسي الداعم، وفي الكبار تبين فعالية العلاج السلوكي المعرفي الذي يبقى فعالاً عند تقديمه عبر الإنترنت. ويعتمد الاختيار بين الأدوية والعلاج النفسي على رأي المريض وعلى توفر العلاج، ويمكن مشاركة الدواء مع العلاج النفسي.

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