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

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Editorial Letter

Dear Colleagues

This issue will appear with the 12th pan Arab Conference on psychiatry in Dubai, an occasion that we wait for; to have all the members of the Arab Federation of psychiatrists meet and develop the federation and the Journal.

Continuous efforts to improve the Journal and indexing it are going on.

Walid Sarhan

November 2012

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Concept, Diagnostic Criteria and Classification of Autistic Disorders: A Proposed New Model

Khalid A Mansour

المفهوم، الأعراض التشخيصية و التقسيمات للإضطرابات التوحدية: نموذج افتراضي جديد
خالد عبدالعظيم منصور

Abstract

Concepts of autism and autistic spectrum can be difficult for the public and untrained professionals to understand. This is reflected in difficulties in diagnosing mild autism; first recognized in adulthood, compared with severe autism; first recognized in childhood. This paper provides a new model of autistic spectrum disorders that is simple and easier to use. It is more in line with established literature about autism, clinical evidence and recent developments in neurosciences. The model has used the Triune Brain Theory to establish the neuropsychological basis for the Object Related, Emotional and Social intelligences. The mode 1 suggests that autism is a form of “Socio-Emotional Learning Disability”. Diagnostic criteria include; “core symptoms” that do exist in both most severe as well as mildest forms of autism. Other symptoms are included under “associated symptoms”, “compensatory symptoms” and “complications related symptoms”. Autistic spectrum has been classified into Central and Peripheral autism disorders and Non-autistic socio-emotional conditions. The difference between Central and Peripheral autism depends on severity of symptoms according to a particular cognitive-clinical scale based on Lezak’s stages of intelligence. In this model Narcissistic Personality Disorder, is part of the autistic spectrum. Evidence from the literature has been summarized and discussed.

Keywords: autism, autistic spectrum, asperser syndrome, high functioning autism, narcissistic personality disorder, Triune Brain Theory.

Declaration of interest: None

Concept, Diagnostic Criteria and Classification of Autistic Disorders

A Proposed New Approach

The concepts of autism and autistic spectrum disorders (ASD) can be difficult to comprehend especially for people who don’t have first-hand knowledge of autistic people. It is well known for clinicians who work in the field of developmental disorders that even experts can disagree about diagnosis of autism, especially the milder forms of it^{1,4}. Part of the problem is that the current concepts of autism and autistic spectrum are not clear enough. They seem to need further development and clarity^{4,5}. Another part of the problem is that most of the literature refers to severe autism in children as the prototype of autistic disorders. This makes it difficult to apply such literature on milder forms of autism especially the ones that are first diagnosed in adulthood.

This paper represents the author’s effort to reformulate the concepts of both autism and autistic spectrum, so as to provide clearer diagnostic criteria and an “easier to use” classification of autism. The model proposed in this paper will expand further on the main features of the autistic spectrum. This new model would try to explain autism and autistic spectrum in a more consistent and meaningful way in reference to both clinical and public use. It also aims to produce a generic model which is fit to deal with both mild and severe autism as well as autism-like conditions.

Although this model presents new formulations of autism, it is based on the literature and clinical observations. This includes both well-established theories of autism that have been widely accepted by professionals as well as the recent advances in neuropsychological studies especially Triune Brain Theory of Paul MacLean⁶.

Historically established data about autistic spectrum disorders

There have been a number of research data and theories that have been better received and accepted by clinicians all over the world for a reasonable length of time. These concepts are used here as landmarks for understanding autistic spectrum disorder (ASD). These include Kenner's concept of Infantile Autism⁷, the distinction between autism and learning disabilities⁷, the distinction between autism and childhood schizophrenia^{8,9}, the data about milder forms of autism including high Functioning Autism (HFA)¹⁰, Asperger's Syndrome (AS)^{11,12}, Broader Autism Phenotype¹³, Semantic Pragmatic Syndrome (Pragmatic Language Impairment)¹⁴, autistic spectrum disorder¹⁵, "Theory of Mind" or "empathy" in autism¹⁶, "Mirror Neurons"^{17,18}, the work about comorbidity in autism especially with Learning Disability, Attention Deficit Hyperactivity Disorder (ADHD) and epilepsy^{19,21}, the studies about forensic aspects of autistic spectrum disorders^{22,23}, the work about cognitive aspects of autism including the "savant" phenomenon^{10,24}, the genetic aspects of autism^{25,27}, its association with abnormalities in the brain^{10,28}, and the different types of social inadequacy in autism¹⁵.

Perhaps the diagnostic criteria of autistic disorders in the "Diagnostic and Statistical Manual of Mental Disorders, Fourth Edition" (DSM-IV)²⁹ and "International Statistical Classification of Diseases and Related Health Problems, 10th Revision" (ICD-10)³⁰ are the most recognized embodiment of the concept of autism. However there have been many difficulties which yet have to be dealt with in those two systems³¹.

1. The DSM-IV and ICD-10 diagnostic classifications of autistic disorders are categorical rather than dimensional classifications under the heading of Pervasive Developmental Disorders. The categories of Pervasive Developmental Disorders include syndromes such as Rett's Syndrome and

Childhood Disintegrative Disorders. These disorders are of doubtful significance from classification point of view. The use of such strict diagnostic criteria has led to inevitable overuse of the category "Pervasive Developmental Disorder Not Otherwise Specified"³². However this is expected to be corrected in DSM-V and ICD-11³³.

2. The diagnostic criteria of autism are still focused on childhood severe autism with less emphasis on milder forms of autism³⁴ that could be diagnosed for the first time in adulthood.
3. The classifications do not include important concepts such "High Functioning Autism" (HFA). This is probably partially due to the ambiguity of the difference between HFA and Asperger's Syndrome (AS)³⁵.
4. The diagnostic criteria are heavily influenced by the usual "diagnostic triads" like the one developed by Lorna Wing¹⁵ at the expense of other features of autism like the "lack of empathy" and "lack of theory of mind"^{36,37}.

The Triune Brain Theory

The Triune Brain is a model of brain functional structures based on evolutionary analysis of comparative neuroanatomy of vertebrates. The model has been proposed by the American neuroscientist Paul D. MacLean in his book "The Triune Brain in Evolution; Role in Paleocerebral Functions"⁶. According to Maclean, the human brain is made of three integrated but specialized brains;

1. The Reptilian Complex: (brain stem, cerebellum and basal ganglia), which is the main brain structure in reptiles and fish. This part of the brain is responsible for instinctual behaviors involved in exploration, feeding, dominance, aggression, territoriality, procreation and

behavioral motor routines; aiming at achieving self-preservation and procreation.

2. The Limbic System: composed mainly of the septum, amygdala, diencephalon, and hippocampus complex and cingulate cortex. When the Limbic System is added to the Reptilian Complex (as in the brains of lower mammals like rats, cats and dogs), it starts to produce functions like; bonding, nursing, parental care, separation anxiety, audio-vocal communication and playfulness; aiming at maintaining mother-offspring contact.
3. The Neocortex: a structure found uniquely in higher mammals like apes and humans, when its functions are added to the Limbic System and the Reptilian Complex, this produces new skills like social languages, abstraction, planning, and perception; aiming at preservation of ideas and transmission of culture from generation to generation.

This theory is indirectly supported by the clinically established observations about the human brain development. It is known that, phylogenetically, older

brain areas mature earlier in humans than newer ones. This means that reptilian brain in humans matures earlier than the limbic lobe and then the Neocortex. This is consistent with MacLean’s theory³⁸. The developmental milestones in humans indicate that the functions of the Reptilian Complex, Limbic System and Neocortical functions follow different lines of maturity. Babies in the first 24 months of life rely mainly on their reptilian structures to produce their main functions like homeostasis and identifying objects and producing primary sensori-motor development. From ages three to five years, children seem to develop emotional functions when the Limbic System starts to be more functional. Later social skills start to develop further in school stages and after that in a way consistence with what we know about neocortical maturity in the human brain³⁹.

It is also possible to view regression in major mental illness to be consistent with Maclean’s theory too. In major brain disease like dementia, schizophrenia or demyelinating diseases, skills attributed to the Neocortex are more likely to be lost before those of the limbic lobe and then those of the reptilian complex in some form of succession indicating the uniqueness and independence of these brain subsystems.

Table 1: Socio-emotional line of brain development and regression:

Severe brain disorder. e.g. Dementia Severe Schizophrenia		Normal development
↓	Altruism 5 year and above Facilitated mainly by Neocortex (frontal lobe)	↑
	Narcissism 2 – 5 years Facilitated mainly by Limbic system	
	Autism 0 - 2 years Facilitated mainly by Reptilian Complex	

Based on Maclean theory, it is possible to think of the human brain functioning as the final product of integration of three subsystems. One brain subsystem is more specialized in processing object related data. Another subsystem is more specialized in processing emotional data. The third subsystem is more specialized in processing social data. Subsequently, it is possible to subdivide human intelligence into three different components: Object Related Intelligence, Emotional Intelligence and Social Intelligence.

In this model, intelligence is defined as in the mainstream psychology (e.g. the one by the “Mainstream Science on Intelligence”) ⁴⁰. It is also consistent with Spearman’s G factor or general intelligence ⁴¹. This means that it is a stable skill hardly affected by age, education and or training. However, it is separated into three main domains: the object, the person and the group. The idea that there could be Emotional and Social Intelligences separate from the object related intelligences (usually represented by IQ), is not a new idea in neurosciences or psychiatry. It is widely accepted among clinicians and neuro-researchers that emotional intelligence ^{42, 44} and social intelligence ^{45, 46} could exist independently from general intelligence.

Functions of the three intelligences

The main function of intelligence is survival or effective management of the environment. While this is relatively clear regarding materialistic or Objects Related Intelligence, it needs further analysis with Emotional and Social Intelligences.

Social Intelligence is meant to involve the skills necessary to function in a group in order to achieve a shared goal even if there is no emotional attachment with members of the group. Here the group is the primary functioning unit and not the individual and the goal is larger than what could be achieved by each individual separately. It is the intelligence necessary for creating societies and civilizations. Social intelligence is usually practiced in the wider society like in the streets, public

transport, new work places, etc. In this regard, the above stages of social intelligence materializes itself in the form of social appropriateness, social cooperation and promoting group functioning.

Emotional intelligence is simply the ability to understand and manage emotional data to achieve better survival. There could be central psychological mechanisms that explain how it works.

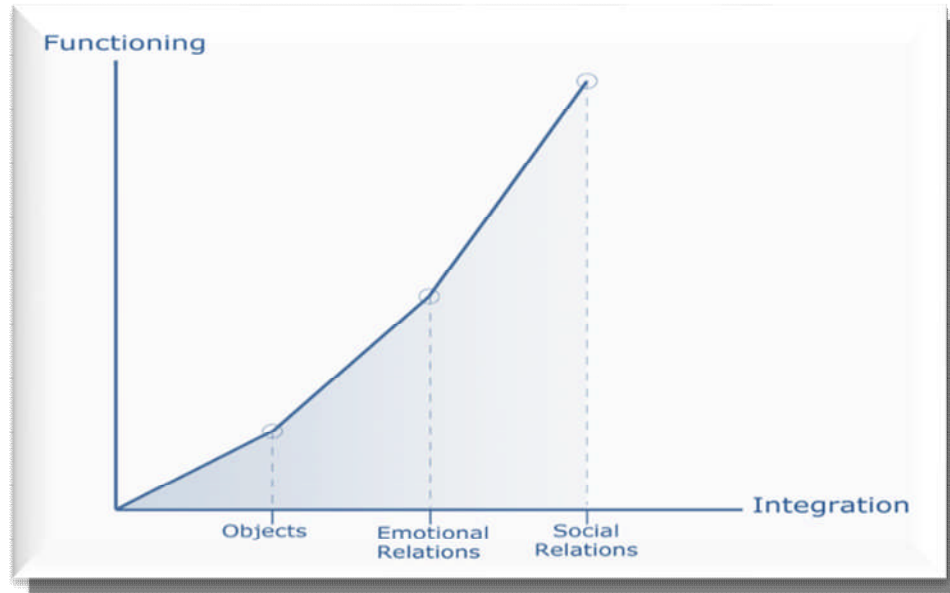
1. Theory of Mind seems to be central to emotional intelligence.
2. Theory of Mind in turn leads to empathy, when applied to others ¹⁰ and to insight when applied to one self ⁴⁷.
3. Empathy then leads to the ability to individualize people, i.e. perceiving each individual as unique and not just a member of a group. Then an emotional charge is attached to the individual. If this emotional charge is positive, the individual becomes an intimate person to like; siblings, partners, friends, relations, etc.
4. Insight can also lead to self-awareness, self-criticism, and remorse after making mistakes and joy after doing well.
5. Empathy and insight then allow the development of mutually convenient and mutually beneficial relationship with other individuals. This in turn achieves the ultimate goal of acquiring the intimate, supportive relationships most crucial for survival in humans.
6. Other components in the limbic system functioning constitute the machinery that serve the above system. They include abilities like face recognition, mirror neurons, amygdala labeling systems, hippocampus emotional memory functions, etc.

The possession of such intelligences can dramatically enhance survival skills and levels of functioning in humans. Object Related Intelligence is the simpler form

of intelligence and is shared, at one level or another, with most animals. Adding the emotional brain dimension improves the Object Related Intelligence and allows new abilities to emerge like partnerships and establishing families, which is a major advance above the previous

level. The Social Intelligences allows enhancement of Object related and Emotional Intelligences, but also adds enormous new functions including building societies and civilizations. This would be the peak of human performance that is not shared with animals.

Diagram 1: Relationship between functioning and levels of integration:



Clinical components of intelligences

In this model, the clinical concept of intelligence is further subdivided into neuro-behavioral components consistent with Lezak four classes of

intelligence/cognition⁴⁸; receptive functions, memory and learning, thinking and expressive functions. However they have been modified to suit clinical usage as explained in Table 2.

Table 2: clinical stages of intelligence or skills compared to Lezak’s classes of intelligence:

Lezak’s classes	Clinical equivalent
Receptive Functions	1- Monitoring the data (Object related, emotional or social),
Thinking	2- Understanding/analyzing the data
Expressive Functions - I	3- Formulating an increasingly appropriate response to the data
Memory and Learning	4- Memorizing the data and learning new ways to improve responses by learning from one’s own mistakes or by observing others
Expressive Functions - II	5- Generalizing the new skills and applying them in new/unfamiliar situations by the use of imagination (episodic future thinking / episodic prospection)
	6- Mastering the new skills through training so that they can be used in stressful situations without pathological coping mechanisms, such as hostile dependence, somatization or hypochondriasis.

Usefulness of tri-dimensional intelligence to explain other clinical phenomena

Building on the idea that the triune brain could possess tri-dimensional intelligence, it is possible to see the link

between this model and personality disorders as explained in the following illustrations.

Table 3: An average person should possess functional Object Related Intelligence (IQ), Emotional Intelligence and Social Intelligence:


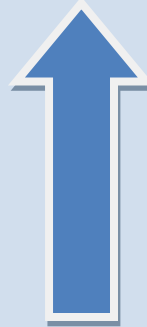

		
Object Related Intelligence	Emotional Intelligence	Social Intelligence

Table 4: A person with low Object Related Intelligence, but normal Emotional Intelligence and normal Social Intelligence would be identified as someone with learning difficulties but with good coping abilities due to his normal other intelligences:


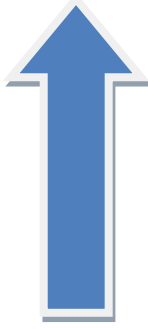
Learning Disability X		
Object Related Intelligence	Emotional Intelligence	Social Intelligence

Table 5: a person with normal Object Related Intelligence and normal Social Intelligence, but low Emotional Intelligence could suffer from antisocial personality:


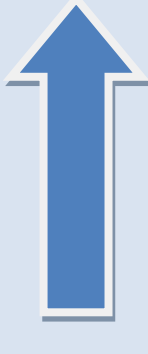
	Antisocial Personality X	
Object Related Intelligence	Emotional Intelligence	Social Intelligence

Table 6: A person with normal Object Related Intelligence and normal Emotional Intelligence, but low Social Intelligence could be having schizoid personality (high self-satisfaction) or avoidant personality (low self-satisfaction):

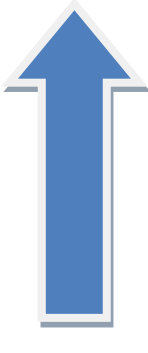
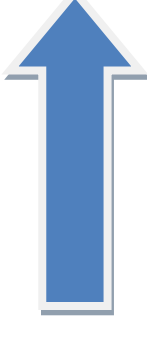
		Schizoid or Avoidant Personality X
Object Related Intelligence	Emotional Intelligence	Social Intelligence

Table 7: A person with low Object Related Intelligence and low Social Intelligence, but normal Emotional Intelligence could be seen as someone with both learning disability and social awkwardness but still able to bond with carers:



Socially awkward but emotionally warm LD (Dependent LD) X		X
Object Related Intelligence	Emotional Intelligence	Social Intelligence

Table 8: A person with low Object Related Intelligence and low Emotional Intelligence, but functional Social Intelligence could be seen as someone with both learning disability problems due to difficulties in bonding with carers:

Learning Disability with callous personality (Learning Disability with challenging behavior)		
X	X	
Object Related Intelligence	Emotional Intelligence	Social Intelligence

Autism as a socio-emotional Learning Disability

This model adopts the view that autism is primarily a socio-emotional learning disability and that the social and emotional dimensions are equally central for the

diagnosis of autism. This model suggests that autism is better seen as a biologically determined impairment in both emotional and social intelligences with subsequent; pervasive, regressive and developmental (since childhood) socio-emotional functioning.

Table 9: A person with autism essentially has low Emotional Intelligence and low Social Intelligence (with functional Object Related Intelligence in this table):


	Autistic Spectrum Disorder	
	X	X
Object Related Intelligence	Emotional Intelligence	Social Intelligence

Table 10: A person with low Object Related Intelligence, low Emotional Intelligence and low Social Intelligences. This would be autism with learning disability:

Learning Disability with Autistic Spectrum Disorder		
X	X	X
Object Related Intelligence	Emotional Intelligence	Social Intelligence

Core symptoms of autism and the emotional dimension

In this model, core symptoms of autism are those symptoms that are shared between both most severe and

mildest autism. This means that this model then excludes low IQ, severe communication disorder, marked stereotyped behavior, avoiding eye to eye contact, pica, rocking, regressive obsessive compulsive disorder, etc.

Such a model is not in total agreement with the DSM-IV and ICD-10 criteria of core autistic features. In DSM-IV and ICD-10, core features of autism do not identify the emotional dimension as an independent or major dimension separate from the social impairment.

The emotional dimension in autism has been mentioned implicitly inside the “qualitative impairment in social interaction” section in DSM-IV and ICD-10^{29, 30}. Then two vaguely worded emotional features were mentioned among four criteria; “lack of social or emotional reciprocity” and “failure to develop peer relationships”. Even then they are not crucial to make the diagnosis.

This model suggests that “qualitative impairment in emotional interactions” is as important and as influential as the “qualitative impairment in social interactions” in diagnosing of autism. The evidences in favour of a more elaborate emotional dimension are numerous⁴⁹.

1. There is now a significant level of agreement that emotional processing problems, such as lack of empathy, poor self-awareness, self-centeredness, poor reciprocation of emotion, poor ability to maintain emotional relationships, anxiety and anger outbursts are more or less central features of autism^{10, 50, 51}.
2. Social and emotional skills are largely independent neurobiological functions of the brain. While Social Intelligence is mainly centered in the Neocortex, especially the frontal lobe, emotional skills are mainly related to the limbic system.
3. There are plenty of research data indicative of a high association between autism and abnormalities in the limbic system^{52, 54} as well as studies about the mirror neurones¹⁸.
4. Neuropsychological research testing of emotional functioning, e.g. Theory of Mind, empathy, facial recognition etc., also suggests that impairment in emotional functioning is a central feature in autism^{10, 55}.
5. Emotional development seems to be primary to social development⁴⁹. Emotional functioning starts earlier in human development to social functioning both developmentally and from an evolutionary point of view. To be able to deal with social groups and maintain reasonable social functioning, we need a minimum degree of self-awareness and empathy.

Other features of autism

In this model, other features of autism have been divided into three groups of symptoms: compensatory behavioral symptoms, associated symptoms and complications.

1. Compensatory behavioral symptoms: dependence on others, restricted life style, having islets of interest, rigid routines, etc.
2. Associated symptoms: these seem to be associated disorders probably caused by the same pathology causing autism. They include learning disability, attention deficit hyperactivity disorder (ADHD), epilepsy, involuntary movement disorders, pica, rocking, obsessional symptoms, ritualistic symptoms, sensory processing disorder, etc. All these features can exist without autism. Any single associated symptoms, alone, does not justify a diagnosis of autism but can increase the likelihood of the diagnosis once the core symptoms are first identified.
3. Complications: such as Habit Disorders that can be seen as learnt pathological behavior related to coping with stress, e.g. fire setting, misuse of psychoactive substances, regressive aggression towards carers, dysfunctional sexual habits, etc.
4. In this model, communication disorder is paramount but it is divided into social and emotional communication problems. They are included into the social and emotional impairment sections.

Also repetitive and stereotyped behaviors (RSB), is not put separately as it does not exist in all forms of autism⁵⁶. RSB was put as a possible feature in “pervasive developmental disorder not otherwise specified” in the DSM-IV²⁹. According to this model, part of the stereotyped behavior would be a compensatory coping strategy, e.g. maintaining a rigid routine to avoid losing control of the environment. Another part of it is obsessional, ritualistic or involuntary motor movement and this would be included under associated symptoms⁵⁷. Differential diagnosis: Emotional and social skills can be seriously dysfunctional in many psychiatric disorders and not all autistic or biological in nature.

Acquired socio-emotional deterioration, e.g. as seen in chronic schizophrenia and dementia. In this case premorbid functioning is usually relatively high if not normal compared to developmental disorders.

Socio-emotional problems since childhood in individuals who are developmentally normal in terms of social and emotional brain centers:

1. This could include complicated cases of Learning Disability, Attention Deficit Hyperactivity Disorder (ADHD), Post Traumatic Stress Disorder (PTSD), physical disability with poor coping, severe neglect, severe isolation, severe deprivation, complicated immature personalities or complicated personality disorders etc. Complicating matters here include mental or physical traumas, mental or physical illnesses, ADHD, misuse of psychoactive substances, etc.
2. In such cases it is usually possible to see some quantitative and qualitative differences in symptoms. The socio-emotional difficulties do not exist in all areas of functioning of the affected individual e.g. symptoms are prominent at home but not in school.

Diagnostic Criteria of Autistic Spectrum Disorders

(I), (II) and (III) need to apply on the patient's presentation:

(I) A diagnosis of autistic spectrum disorder must include features of both A, B, C and possible features of D and E. The more symptoms, the severer the condition on the spectrum:

a. Impairment of the development of Emotional Intelligence with impaired emotional functioning that is pervasive, regressive and since childhood:

i. Cross-sectional (from interview and/or observation).

1. Emotional Inattention: poor monitoring of emotional data
2. Emotional Agnosia (alexithymia): poor understanding of emotional data.
3. Emotional Inadequacy/awkwardness: poor ability to formulate appropriate emotional responses.
4. Emotional Dymimia: poor ability to learn appropriate emotional responses from others.
5. Emotional Concreteness: poor ability to apply previously learnt emotional skills in new or unfamiliar situations.
6. Emotional Vulnerability: poor ability to apply newly learnt emotional skills in stressful situations. Instead exhibits emotions like the following:
 - a. Hostile dependence: hostility used as a mean to facilitate dependence in safe relationships e.g. parents or carers.
 - b. Anger outbursts: e.g. catastrophic reactions to stress
 - c. Quick superficial despair
 - d. Somatization/hypochondriasis

ii. Longitudinal (from history):

1. Self-centeredness; inappropriate to developmental level and cultural expectations.
2. Poor self-awareness, poor ability to develop remorse or learn from mistakes.
3. Poor empathy or appreciation of others feelings

4. Poor ability to reciprocate emotions.
5. Hostile dependency on safe relations.
6. Failure to develop emotional relationships appropriate to developmental level and social norms.
7. Treating people as objects or preferring objects over them.

iii. Impairment of Emotional Communication.

1. Lack of emotional communication (e.g. poor appreciation of emotional communication by others and poor ability to emotionalize his/her communication in response).
2. Immature/childish emotional communication (e.g. communication highly reflective of self-centeredness, childish hostility, arrogance, stubbornness or childish expressions).
3. Abnormal emotional communication, e.g. paranoid alienation during unexpected social interaction.

iv. Developmental or existential anxiety (not stress related) - this anxiety increases when the person is unoccupied.

b. Impairment of the development of Social Intelligence with impaired social functioning that is pervasive, regressive and since childhood:

i. Cross-sectional (from interview and/or observation).

1. Social Inattention: Poor monitoring of social data.
2. Social Agnosia: poor understanding and analyzing social data.
3. Social Inadequacy/Awkwardness: poor ability to formulate appropriate social responses.
4. Social Dysmimia: poor ability to learn appropriate social responses from others.
5. Social Concreteness: poor ability to apply newly learnt social skills in new situations.
6. Social Vulnerability: poor ability to apply newly learnt social skills under stressful situations. Instead exhibits social behavior like the following:
 - a. Hostile dependence especially on safe relationships e.g. parents or carers.

- b. Manipulation or exploitation of more vulnerable others.
- c. Avoidance of social situations.
- d. Use of psychoactive substances to be able to socialize.
- e. Proneness to exploitation.
- f. Poor problem solving skills and extremely poor coping mechanisms.

ii. Longitudinal (from history):

1. Limited social life in quantity (e.g. aloofness) or quality (preoccupation with less-functional activities (e.g. hoarding unusual material, taking photos of lamp posts, etc)
2. High dependency on others.
3. Failure to develop peer relationships appropriate to age group.
4. Poor appreciation of risks or danger.
5. Lack of social activities appropriate to age group or social norms, and if having activities they are usually dominated by:
 - a. Marked social awkwardness or bizarreness.
 - b. Marked social passivity.
 - c. The need to use external aid to allow it e.g. Alcohol or drugs.
 - d. Over-formality and stiltedness.

iii. Impairment of Social Communication.

1. Lack of social communication: e.g. lack of conversation skills and/or use of unidirectional conversation rather than social conversation.
2. Immature/childish social communication: attributing vague or exaggerated meanings to social concepts, e.g. he is against me because he is right-handed and I am left-handed.
3. Abnormal social communication: e.g. self-hitting or destructive behavior in response to an argument.

c. Compensatory behavior to cope with above impairments:

- i. Restricting environment and relations.
- ii. Adherence to routines.
- iii. Fear of losing control.
- iv. Narrowing interests with or without overdoing them.

d. Associated features:

- i. Speech disorder
- ii. Avoidance of eye to eye contact
- iii. Rocking
- iv. Involuntary movement disorder
- v. Epilepsy
- vi. Obsessional Compulsive Disorder (OCD) like symptoms.
- vii. Preoccupation with body fluids.
- viii. Hoarding behavior.
- ix. ADHD.
- x. “Savant” phenomenon.
- xi. Sensory Processing Disorder.
- xii. Pica.
- xiii. Self-hitting or self-biting.

e. Common complications:

- a. Routine disorder: exaggerated use of functional routines to the extents of disturbing general functioning, e.g. rigidity in routines, repetitiveness, catastrophic reaction in response to changes.

- b. Habit disorder – exaggerated use of non-functional routines which usually aid some kind of pathological satisfaction e.g.

- i. Drug and alcohol misuse.
- ii. Aggression towards carers.
- iii. Sexually inappropriate behavior.
- iv. Stalking behavior.
- v. Fascination with fire.
- vi. Cruelty to animals.

II- All symptoms need to be taking place in the context of development since childhood.

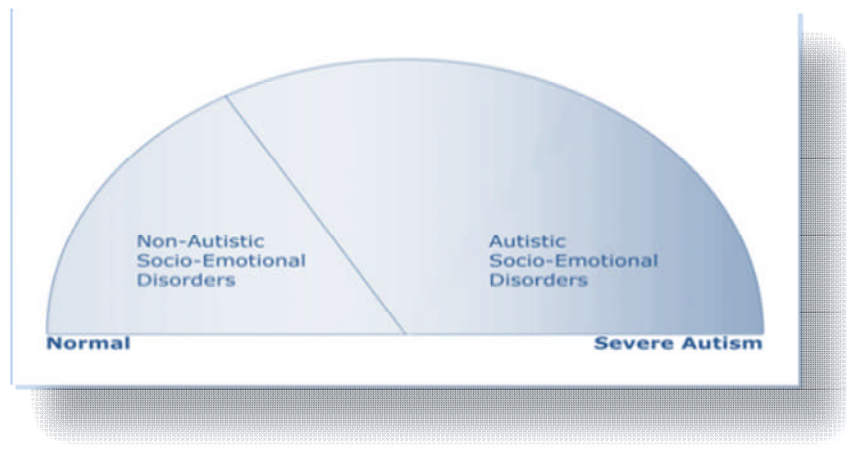
III-Symptoms are not due to immature personality or acquired disorder associated with deterioration of socio-emotional functioning, like schizophrenia, dementia or brain injury.

Autistic Spectrum

Nature and limits of the autistic spectrum:

This model adopts the view that the spectrum extends from normality to severe autism^{11, 58}. As autism is a socio-emotional disorder, the normality end of the spectrum would be followed by conditions that are socio-emotionally abnormal, but still not severe enough to warrant a diagnosis of an autistic disorder and then followed by autistic socio-emotional disorders.

Diagram 2: autistic and non-autistic parts of the socio-emotional spectrum between normality and severe autism

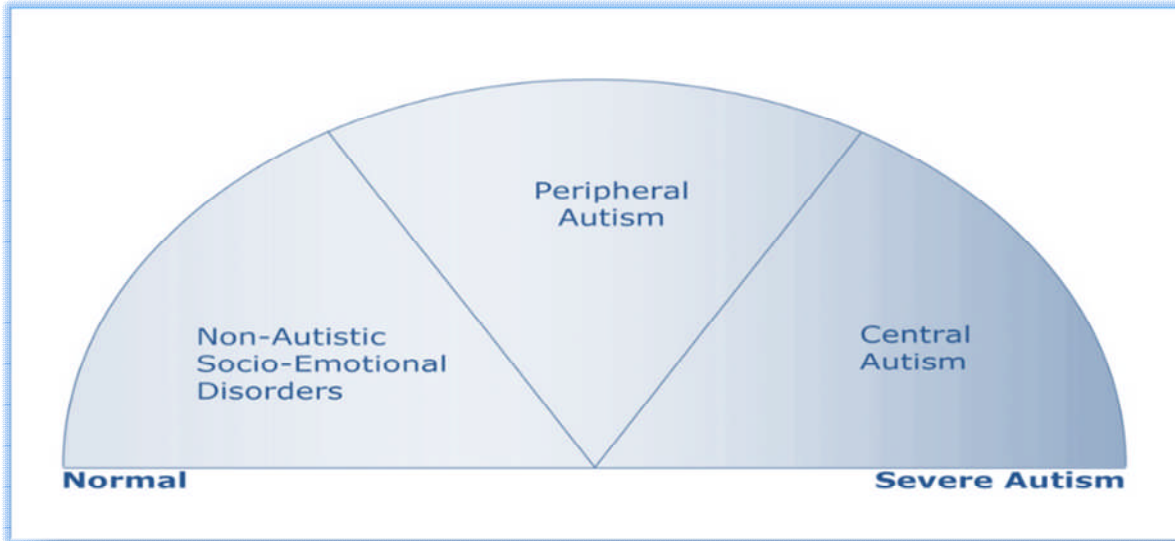


None of the autistic socio-emotional disorders (NASED) are conditions in which the individual is born with normal abilities, but fail to put them into use due to adverse biological or environmental factors in childhood, such as child abuse, severe isolation, serious physical illness (e.g. ADHD, epilepsy, Cerebral palsy, etc.) or mental disorders, e.g. Obsessive Compulsive Disorder. In this group, the affected individual presents with significant problems in his or her socio-emotional functioning despite of having normal socio-emotional basic brain structures.

In the meantime, non-autistic social-emotional problems are still clinically different from autistic socio-emotional disorders as the following:

- 1) The functioning is usually less pervasive, less regressive and more stress related.
- 2) They have better insight and better empathy than true autism.
- 3) Removal of stress, support and training can have better effect than what is usually seen in autistic disorders.

Diagram 3: autistic parts of the socio-emotional spectrum between normality and severe autism divided into central and peripheral autistic disorders



Central and Peripheral Autistic Disorders:

In this model, autistic spectrum disorders can be classified into two groups based on the neurobiological

components of intelligence as explained in Table 2 and Table 11: Peripheral Autism and Central Autism.

Table 11: applying clinical stages of intelligence (consistent with Lezak’s Classes of Intelligence) on autistic spectrum disorders:

Stages of skill/ intelligence	Low Functioning Autism	High Functioning Autism (HFA)	Asperger’s Syndrome (AS)	Narcissistic Personality Disorder (NPD)
Monitoring socio-emotional data	X	+Partially Yes	++Partially Yes	+++Partially Yes
Understand/ analyze data	X	+Partially Yes	++Partially Yes	+++Partially Yes

Concept, Diagnostic Criteria and Classification of Autistic Disorders

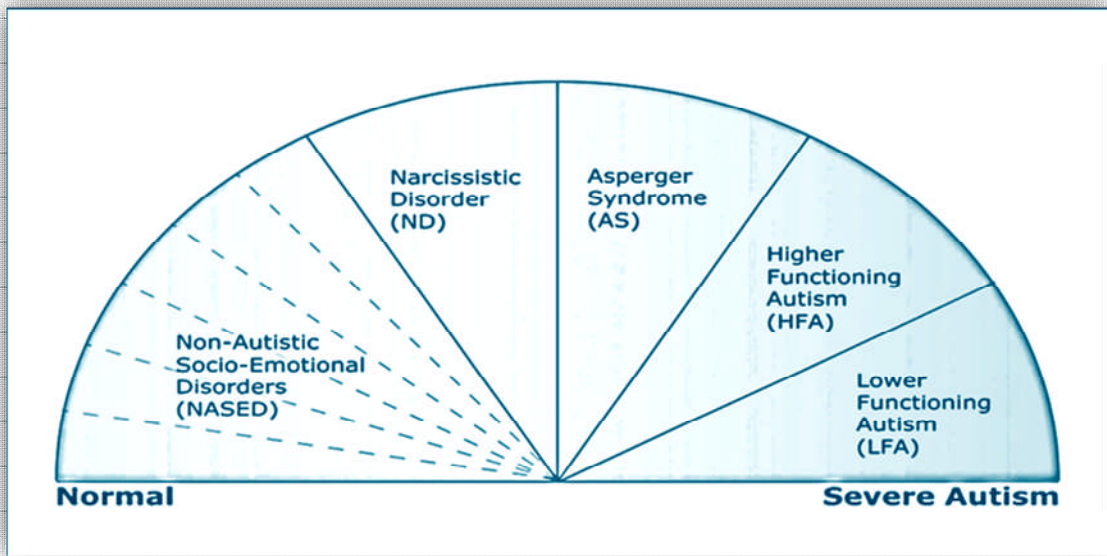
Learning responses from others	X	X	++Partially Yes	+++Partially Yes
Developing an initial appropriate response	X	X	++Partially Yes	+++Partially Yes
Mastering the skill in unfamiliar situations	X	X	X	+++Partially Yes
Mastering the skill under stress without hostile dependence or hypochondriasis	X	X	X	X

Conditions with “central” autism are those where the main impairment is in abilities to monitor, understand, respond to, or learn from others; how to respond socio-emotional data (Low and High functioning Autism).

The “peripheral” autistic disorders are those where

central functions can be partially done, but the main impairment is in the ability to use the central skills in unfamiliar settings or in stressful settings (Asperger’s Syndrome (AS) and Narcissistic Personality Disorder (NPD)).

Diagram 4: subdivisions of central and peripheral autistic disorders:



Low Functioning Autism (LFA) (infantile autism/severe autism), is usually associated with lower IQ. The “central autistic” features are fully manifested in the form of impairment of attention, monitoring or understanding of social and emotional data. In High Functioning Autism (HFA) such problems are partially mitigated due to the fact that people with HFA have higher IQ and can compensate to some extent for their deficiencies. For

example, a person with HFA can appreciate the significance of a relation (e.g. a mother) but in an emotionally distant or mechanical way (e.g. mum is the provider of necessities like food and money). However, people with HFA continue to have two other central autistic features, e.g. impairment of their abilities to formulate their own socio-emotional responses or learning appropriate responses from others.

People with Asperger's Syndrome (AS) can better monitor the data, better understand them, partially produce appropriate responses and partially learn from others how to develop appropriate responses. However, they still exhibit peripheral autistic feature, e.g. not being able to generalize what they learn from one setting (familiar) to another (unfamiliar). This is probably due to impairment of imagination (episodic future thinking/episodic prospection). Here, imagination means the mental ability that equips the individual to envisage future scenarios that are unfamiliar and/or stressful and then be prepared to function well using past and present skills^{59,62}. Such brain faculty also helps knowing one's own potential and serves the purpose of ventilation and self-assurance where the scenarios are self-fulfilling.

Despite the fact that people with Asperger's syndrome have more skills than LFA and HFA, a characteristic lack of imagination (foresight or future thinking) can still render them disabled⁶³.

Narcissistic Personality Disorder (NPD)

There is much disagreement about the various aspects of NPD, including its validity as a clinical diagnosis. The ICD-10 classification has not included NPD in the classification of personality disorders³⁰. However NPD as a clinical concept seems to be widely accepted by clinicians and researchers as a valid and useful diagnostic subtype of personality disorders.

Part of the problem is that many do not realize that there are two types of NPD: Grandiose and Vulnerable. While classification systems like the DSM²⁹ highlight the grandiose type, most of the NPD cases seen in clinical settings are of the vulnerable type. This is simply due to the fact that people with the grandiose type are more functional and successful in life than the vulnerable type⁶⁴.

In the clinical setting, it is noticeable that people with NPD do not show a major degree of functioning problems in a stress free environment or when they are

supported (except that they are perceived as "not pleasant characters" to deal with). However, under stress and without support, they can become quite dysfunctional in a way not far from what we usually see in Asperger's Syndrome.

People with NPD have marked problems with self-esteem, sensitivity to stress⁶⁵ and "paying undue attention to sources of praise and criticism"⁶⁶. This situation manifests itself usually in the form of Hostile Dependence (or tendency to exploit others)^{29, 67} and Somatization and/or Hypochondriasis⁶⁸.

Such observations suggest that NPD could possibly be part of the autistic spectrum, probably on the milder side of Asperger's Syndrome. NPD seems to share with autistic disorders some key features²⁹ e.g.:

1. Inadequate emotional skills (self-centeredness, Lack of empathy, arrogant attitude, often envious of others, etc.)
2. Inadequate social skills (grandiose sense of entitlement, rarely acknowledge mistakes, requires excessive admiration, interpersonally exploitative, etc.).
3. It usually starts in childhood like other personality disorders (ICD-10)³⁰.

Applying the above neuropsychological model, people with NPD seem to do better in the functions lacking in both LFA, HFA and AS. However, they still exhibit one peripheral autistic feature, e.g. not being able to generalize what they learn from one setting (stress-less) to another (stressful). In this regard, people with NPD seem to be more sensitive to stress and less prone to benefit from training or repeated exposure than average people. This is probably due to their marked insecurity that makes them regress quickly under stressful conditions to more primitive forms of coping.

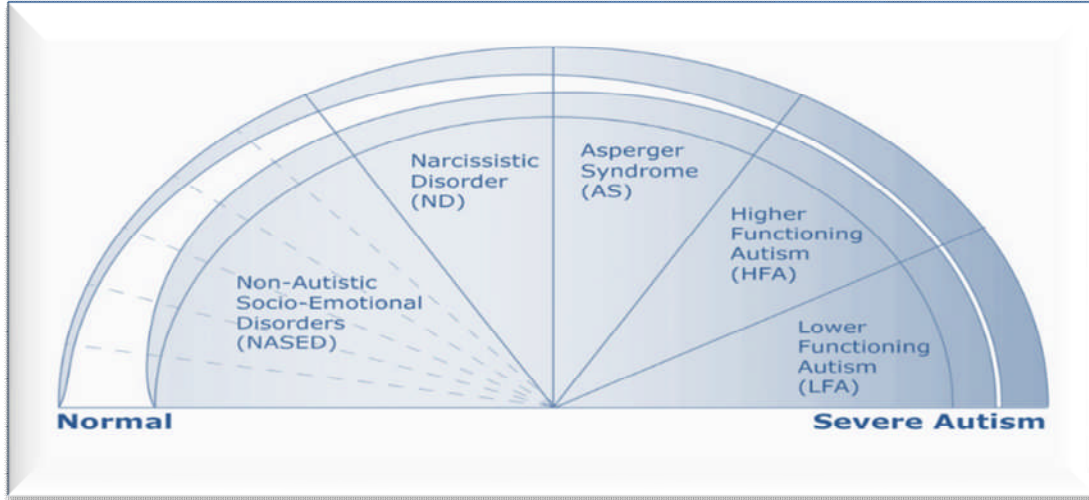
Central Clear Area of Functioning (CCAF)

Central Clear Area of Functioning (CCAF) is an aspect of the life of people on the spectrum when they function

well with no or few socio-emotional problems. Even severe autism sufferers have CCAF, though a quite narrow one. This would probably be when they are with more objects not people, e.g. playing with inanimate

objects. Following the autistic spectrum, the CCAF will increase in width while moving from severe autism to mild autism to Non-autistic Socio-emotional Conditions.

Diagram 5: Central Clear Area of Functioning in different disorders on autistic spectrum



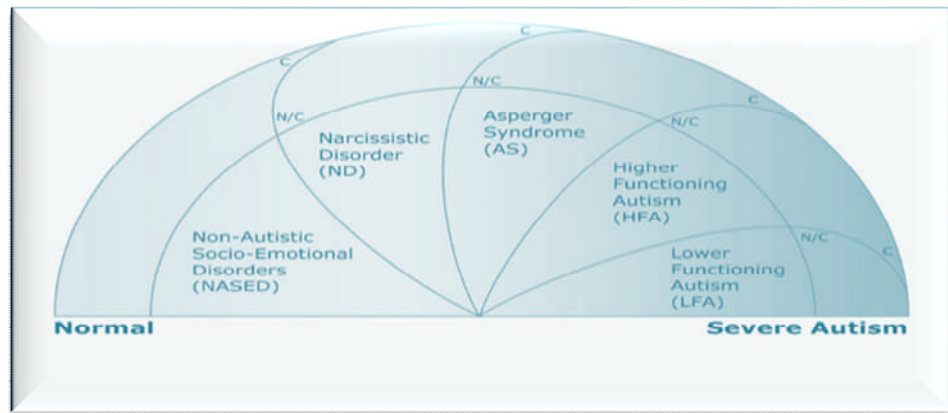
Relative severity of autistic conditions on the spectrum

The general roles of severity as explained above can be altered due to the complications and/or level of support associated with each part of the spectrum.

This means that a complicated Asperger’s Syndrome with poor support can be worse than less complicated and well supported HFA.

Complication here can include conditions such as low IQ, communication impairment, neurological disorder, (e.g. cerebral palsy, epilepsy, involuntary movement disorder), OCD, routine disorder, habit disorder (e.g. pedophilia, pyromania, hoarding behavior), ADHD, “Pseudologia Fantastica” learnt aggression, child abuse, severe isolation, neglect, etc.

Diagram 6: Relative Severity of Autistic Conditions on the Spectrum. (C= complicated, N/C. not-complicated).



Classification of disorders on the autistic spectrum:

1. The spectrum expands from normality to severe (central) autism.
2. Spectrum is divided into non-autistic socio-emotional disorders (NASED) and Autistic socio-emotional disorders.

- a. NASED sufferers are born with normal socio-emotional brain centers but were subjected to biological and/or environmental adverse factors, in their childhood, that have disturbed their socio-emotional functioning.
 - b. These adverse factors might include conditions like severe neglect, isolation, major physical illness (e.g. ADHD, epilepsy, Cerebral Palsy) or mental disorders, e.g. OCD.
 - c. Functioning in NASED is usually less pervasive, less regressive and more stress related.
 - d. People with NASED have better insight and better empathy than true autism.
 - e. They usually have relatively wider Central Clear Area of Functioning (CCAF) than in true autism.
3. The Autistic Socio-Emotional Disorders are divided into Central Autistic Disorders (CAD) and Peripheral Autistic Disorders (PAD).
- a. People with CAD are unable to monitor or analyze socio-emotional data and/or they are unable to appropriately respond to these data.
 - b. People with PAD can partially monitor and analyze these data and produce initial responses. They can also learn from others how to initiate or improve responses. However they cannot generalize their socio-emotional skills or intelligences to unfamiliar and/or stressful situations.
4. Central autistic disorders are divided into Low functioning Autism (LFA) and High Functioning Autism (HFA):
- Both conditions are severe forms of autism, but unlike LFA, people with HFA have relatively high general intelligence which allows them to bridge some gaps in their abilities, though in cold and /or mechanical way.
5. Peripheral Autistic Disorders are divided into Asperger's Syndrome (AS) and Narcissistic Personality Disorder (NPD):
- a. People with AS lack of imagination (episodic future thinking/episodic prospection) impair their ability to generalize their skills to unfamiliar or stressful settings.
 - b. People with NPD have major problems with self-security. This impairs their ability to generalize their skills in stressful situations
6. Complication and level of support can make level of severity relative different on the scale, e.g. complicated milder condition on the spectrum with poor support can be clinically more challenging than the next severer condition if it is not complicated and well supported.

Diagnostic criteria and classification of autistic spectrum disorders in DSM-V

The Diagnostic and Statistical Manual of Mental Disorders - Fifth Edition (DSM-V) interim report on autism spectrum disorder was published in 2010 and invited comments that are going to be taken into account before publishing the final draft in May 2013 (www.dsmv.com). The proposed changes include eliminating the categorical classificatory system, including the concept of "pervasive developmental disorder" and replace it by the dimensional classificatory system under the heading of autism spectrum disorder. Also, the various subtypes that were previously described, including Asperger's Disorder, were eliminated. The diagnostic criteria have also changed from the old triad of impairment (impairment in social interaction, impairments in communication and stereotyped patterns of behavior) into dual impairment by adding the social impairment together with the communication impairment in one part.

The published draft of DSM-V has attracted a lot of criticism. While adopting dimensional diagnosis has met expected approval, the DSM-V seems to fail again to catch up with other recent developments as well as wide clinical agreement in both diagnosis and classification of autistic spectrum disorders. The most disappointing observation has been the elimination of Asperger Syndrome^{33, 69}.

Here there could be a strategic mistake in the APA thinking whether in autism or in other diagnostic groups. DSM-V is still Kraepelinian in approach⁷⁰ perhaps because it relies heavily on behavioral patterns for making a diagnosis and classifying psychiatric disorders. In the meantime, new advances in neuropsychological sciences seem to push hard for diagnosis based on both patterns of behavior as well as known neurophysiological data. We can afford this at this stage of development of science. This would be the next step forward since Kraepelin's time. The following step forward will be to create diagnostic criteria and classification criteria based on behavioral patterns, neurophysiology and neuropathology.

Conclusion and clinical implications

The model used in this paper portrays autism as a Socio-Emotional Learning Disability. The model is based on the well-established data about autism in the literature, recent developments in neurosciences, clinical observations and particular neuropsychological theories like the Triune Brain Theory of Paul MacLean⁶. The Triune Brain Theory has been used to explain a possible neuropsychological basis of "tri-dimensional intelligence"; Object Related, Emotional and Social Intelligence. The model uses "core symptoms" that are applicable to both "very severe" and "very mild" forms of autism. The other symptoms known to be related to autism have been included under Compensatory Behavior, Associated Features and Complications. The spectrum is then divided into central (LFA and HFA) and

peripheral (AS and NPD) forms of autism following Lezak's four stages of intelligence⁴⁸. In this model, the inclusion of NPD in the spectrum is advocated as a "milder than AS" form of autism. The model also incorporates socio-emotional conditions that are clinically significant, but still not autistic in nature to fill in the gap between mild autism and normality on the spectrum.

It is hoped that this model can be tested empirically in future research to establish its clinical validity. It is a simpler concept close to the concept of Learning Disability. It should be easier to use by clinicians and the general public. It offers the potential for developing new psychometric tools to cover the three intelligences that would be clinically more informative than the traditional IQ. The model expands the horizon of autistic spectrum to allow better identification of milder autism like NPD and Non-autistic Socio-emotional Conditions. Lezak's classification of intelligence stages can help better assessment as well as differentiation of levels of intellectual functioning. It is hoped that this model can help better recognition of the different autistic disorders and subsequently better services.

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الملخص

إن مفاهيم مرض التوحد وطيفاً لأمراض التوحدية يمكن أن يكون صعباً للمهنيين غيرمدربين وللعمامة. هذا ينعكس في صعوبة تشخيص التوحد الخفيف والذي يشخص في الكبار بالمقارنة بمرض التوحد الشديد والذي يشخص في الطفولة. هذه المقالة تحاول ان تقدم نموذج جديد لطيف الاضطرابات التوحدية يتسم بالبساطة وسهولة الإستعمال. هذا النموذج هو أكثر إتساقاً مع البحث العلمي المتفق عليه، الدليل الإكلينيكي والتطور العلمي في مجال علوم الأعصاب. النموذج المطروح إستخدم نظرية "المخ الثلاثي" لتوضيح الأساس النفس-عصبي لفكرة الذكاء الثلاثي: الذكاء المادي، الذكاء العاطفي والذكاء الاجتماعي. النموذج الذي تم تبنيه في هذه المقالة هو أن مرض التوحد هو نوع من التخلف العقلي في ما يخص الذكاء العاطفي والذكاء الاجتماعي. الأعراض التشخيصية هنا تشمل أعراض مركزية تتواجد في كلاً من التوحد الشديد جداً كما هو الحال في التوحد الخفيف جداً. الأعراض الأخرى تندرج تحت أعراض مقترنة، أعراض تعويضية، وأعراض متعلقة بالمضاعفات. طيف الاضطرابات التوحدية تم تقسيمه إلى توحّد مركزي، توحّد طرفي و "اضطرابات إجتماعية – وجدانية غير توحدية". الفوارق المطروحة بين التوحد المركزي والطرفي هي في حدة الأعراض المرضية حسب مقياس إكلينيكي- إدراكي مبني على مراحل "الذكاء" للذكاء. في هذا النموذج، اضطراب الشخصية النرجسية هو جزء من طيف الاضطرابات التوحدية. تم تلخيص ومناقشة الأدلة المؤيدة للنموذج من البحث العلمي المنشور خلال المقال .

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Prenatal and perinatal risk factors in autistic disorders

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عوامل الخطورة لإضطرابات التوحد الناشئة عن مضاعفات الحمل والولادة
ألهم خطاب الجماس، ربيع محمد ياسين الدبوني

Abstract

B **ackground:** Recent evidence suggests higher prevalence of autistic disorder in association with certain prenatal and perinatal factors or adversities. **Objectives:** 1) to investigate the relationship between autistic disorders and certain prenatal and perinatal conditions, and 2) to identify possible risk factors which could be preventable. **Patients and Method:** A case-control study of fifty autistic children and fifty non-autistic children, who presented with speech delay to the Psychiatric Research unit at Mosul Medical College and to pediatric outpatient clinic during the period between 10th May 2011 to 10th April 2012. Detailed prenatal and perinatal history was taken from the parents of each patient and control group. Statistical tests were used to calculate Odd ratio, 95% Confidence interval, and p-value. **Results:** The autistic group was predominantly male. M: F ratio 3.5:1. Urban people accounted for 96% of the sample. Six prenatal and perinatal risk factors were identified. These were: advanced maternal age (p=0.000), advanced paternal age (p=0.004), delivery by cesarean section (p=0.02), neonatal asphyxia (p=0.000), neonatal convulsions (p=0.03), and history of previous admission to neonatal intensive care unit (p=0.001). **Conclusion and recommendations:** The study confirms the presences of some prenatal and perinatal risk factors are associated with autistic disorders. The investigators hope that a better ante-natal, obstetric, and neonatal care may play an important role in protection from this disorder in a significant number of children.

Key words: autism, prenatal, perinatal, risk, Mosul

Declaration of interest: None.

Introduction

Autism spectrum disorders are a group of pervasive developmental disorders characterized by impaired communication and social interactions as well as restricted and repetitive interests and behavior. Included are infantile autism, Asperger disorder, Rett disorder, childhood disintegrative disorder and pervasive developmental disorders not otherwise specified^{1,2}.

Prevalence of these disorders has increased markedly during the past years from approximately 5 in 10,000 children to about 10 fold this number. This massive increase is likely to reflect several factors: improved recognition and detection; changes in study methodology; an increase in available diagnostic services; increased awareness among professionals and parents; growing acceptance that autism can coexist with

a range of other conditions; and a widening of the diagnostic criteria^{2,3,4}.

Affected children are usually detected after one year of age because of speech delay. Abnormal language concerns may include loss of babbling and gesture by 12 months, absent single word by 18 months, absent two words purposeful phrases by 24 months, and loss of language skills at any age.

However; children with autism are distinct from other children with expressive language delay in that the latter do not show the remarkable lack of communication intent or drive that characterize autistic children; autistic children lack the use of even available language to them⁵. The etiology of these disorders is unknown, but it seems to be multifactorial although the estimated concordance rate in monozygotic twins is (60%-92%) when compared with (0%-10%) in dizygotic twins. The incomplete

concordance rate in monozygotic twins suggests a role for non-inheritable prenatal and perinatal risk factors^{1,2}.

Different studies have shown increased risk of autistic disorders in association with maternal exposure to drugs, alcohol, and rubella. Other studies showed positive association between autism and prematurity, low birth weight, low Apgar score, caesarian section, and congenital malformations¹. Both advanced paternal and maternal ages were blamed in other studies^{6,7}.

The aim of this study is to investigate the relationship between autistic disorders and certain prenatal and perinatal conditions, and to identify risk factors relevant to the etiology of autistic disorders which may allow for prevention.

Patients and Methods

A case – control study has been conducted using children with and without autistic disorders, who presented with the complaint of delayed speech.

Fifty children with autism, who were diagnosed according to the (DSM-IV-TR Diagnostic Criteria for Autistic Disorders) at the Unit of Psychiatric Researches in Mosul Medical College, were studied between 10th of May 2011 and 10th of April 2012.

We obtained data from the parents of each child including age, sex, residence, paternal and maternal age at delivery, marriage of close relatives, duration of pregnancy, and maternal exposure to infections, X-rays and/or drugs during pregnancy, gestational history for pre-eclampsia and hypertension, mode of delivery and neonatal complications like asphyxia neonatorum, severe neonatal jaundice, neonatal convulsions, and admission to neonatal intensive care unit (NICU).

Comparable data was also obtained from fifty children without autism who were presented to the pediatric out clinic during the same period because they suffer from delayed speech development. Thorough interview for the control group was negative for psychiatric disorders.

Informed consent from the parents of the cases and controls was obtained.

Statistical analysis

Odd's ratio (OR) and 95% confidence interval (95 % CI) were calculated according to (Confidence interval analysis software program). X2-test was used to calculate (p -Value) between categorized variables using (Minitab version 13). p- value of ≤ 0.05 is considered statistically significant.

Results

The general characteristics of patients and control groups are summarized in Table 1, while Table 2 shows the type of autistic disorder in the study group.

Table 1: The general characteristics of the study group and control group.

General characteristics	Cases (No.50)	Control (No.50)
Age yr. (mean)	1.5-7 (3.4)	1.5-5 (2.8)
Sex (%)	M 39 (78)	28 (56)
	F 11 (22)	22 (44)
Residence urban (%)	48 (96)	38 (76)
Rural (%)	2 (4)	12 (24)

Table 2: Type of autistic disorder in studied children.

Autistic disorder	No. of patients (%) (50)
Autism	47(94%)
Asperger disorder	1(2%)
Rett syndrome	2(4%)

The mean age at presentation for the cases and controls were (3.4) and (2.8) years respectively. Children with autism showed male predominance (M: F ratio is 3.5:1), and the majorities were urban (96%). Associated problems were detected in 35 patients (70%) as shown in Table 3.

Table 3: Associated psychiatric symptoms in the study group.

Associated symptoms	No. of patients (35)*
Anxiety	10 (20%)
Hyperactivity	25 (50%)
Epilepsy	9(18%)
Mental retardation	25(50%)

*some patients have more than one symptom.

Regarding the relationship between prenatal and perinatal complications with autistic disorders it is found that the risk is increased four times if the father age at time of delivery exceeded 35 years, and it was 11 folds when maternal age exceeded 35 years (Table 4).

Table 4: The association between certain prenatal conditions and the development of autistic disorders.

Prenatal Risk factors	Cases=50 n (%)	Control=50 n (%)	OR	95%CI	p
Paternal age >35Y	21(42)	8(16)	3.8	1.4-9.7	0.004*
Maternal age>35Y	30(60)	6 (12)	11	3.9-30	0.000*
Consanguinity	30(60)	22(24)	1.9	0.9-4.2	0.12
Prematurity	5 (10)	7 (14)	0.68	0.2-2.3	0.54
Maternal infections	38(76)	43(86)	0.5	0.2-1.4	0.2
PET ^c and hypertension	12(24)	16(32)	0.67	0.2-1.6	0.37
X –radiation	3 (6)	0 (0)			
Maternal drugs	16 (32)	24(48)	0.5	0.2-1.1	0.1

€: pre-eclampsia

*: statistically significant

Consanguinity between parents, premature delivery, febrile maternal illnesses (with or without rash), pre-eclampsia, and maternal hypertension were not associated with increased risk of autistic disorders. This

was also true for maternal exposure to radiation and drugs (excluding tonics).

On the other hand, delivery by cesarean section (but not vaginal breech delivery) represented a significant risk for the development of autistic features (Table 5).

Table 5: Association between certain perinatal and neonatal adversities and the development of autistic disorders.

Perinatal and neonatal risk factors	Cases=50 n (%)	Control=50 n(%)	OR	95%CI	P
Cesarean section	14(28)	5(10)	3.5	1.1-10.6	0.02*
Breech delivery	3 (6)	2 (4)	1.5	0.25-9.5	0.6
Asphyxia	16(32)	2 (4)	11.2	2.4-52.3	0.000*
Severe NNJ [¶]	9 (18)	6 (12)	1.6	0.5-4.9	0.4
Neonatal convulsions	9 (18)	2 (24)	5.2	1.0-25.7	0.03*
Admission to NICU [¥]	18(36)	4 (8)	6.4	2-21	0.001*

¶: Neonatal jaundice

¥: Neonatal intensive care unit

*: Statistically significant

Neonatal asphyxia (delay in initiation of spontaneous respiration) was the leading risk factor regarding neonatal complications followed by history of admission to neonatal intensive care unit (NICU), and neonatal convulsions; whereas neonatal jaundice was not significantly associated with autistic disorders.

Discussion

In this study, the association between certain prenatal and perinatal risk factors and the development of autistic disorders was tested. There was predominance of males in the group with autism, a finding which was also confirmed by other studies^{8,9}. The high representation of urban patients in the study group (96%) is probably due to lack of awareness about the disorder in rural areas. Professional paternal careers and higher educational level of parents, which is reported in some studies to be associated with autism,¹⁰ coupled with easier access to specialized medical centers for people residing inside cities may also account for this difference. Associated psychiatric problems in our patients are also similar to those reported by (Hussein 2011) in Egyptian and Saudi autistic children¹⁰.

In this case-control study, six risk factors were significantly associated with autism were found. Advanced maternal age and advanced paternal age (OR: 11 and 3.8) were found. This was supported by the previous work of Croen (2007), Shelton (2010), and Durkin (2008), and El- Baz (2011)^{11,12,13,14} who found that, advanced maternal and paternal ages increase the chance of autistic disorders in their offspring, which may be the result of chromosomal abnormalities in offspring leading to gestational brain damage in the fetus.

Another risk factor for autistic disorders which has been defined in our patients is cesarean section. Although indications for cesarean section may differ widely among pregnant women and can include causes such as fetal distress, abnormal fetal position, hypertensive emergencies in the mother, and/or bad obstetric history, and many of these disorders may contribute to development of autistic disorders; the difference between the study group and the control group is significant ($p < 0.02$, OR: 3.8) and confirms the association, which is also consistent with the findings of El-Baz, Hultman and Brimacombe^{14,15,16}.

Three of the risk factors identified in this study concern neonatal complications; these are asphyxia neonatorum,

neonatal seizures, and history of admission to neonatal care unit.

Asphyxia neonatorum (hypoxic-ischemic encephalopathy) and neonatal convulsions were identified as risk factors for the development of autistic disorders. Neonatal seizures occur frequently as a sequel of anoxic brain injury. However; several metabolic complications like hypoglycemia and congenital abnormalities affecting the brain may also present as convulsions.

Larsson and Hultman had also reported significant association of autistic disorders with conditions leading to fetal distress and low Apgar score^{1, 15}.

Intrauterine conditions probably in combination with external environmental exposures or specific genotypes, may lead to developmental or growth disturbances. Another possibility is that persons with autism may react differently to the intrauterine environment, leading to fetal distress during the last part of pregnancy and during delivery¹.

Our finding of significant association between previous admission to NICU and the development of autism can be also explained on the same basis taking into consideration that a major indication of admission is hypoxic-ischemic encephalopathy, which is a common cause of neonatal seizures. On the other hand, fetal distress (which results in brain anoxia) is also a major indication for delivery by cesarean section which was found as a risk factor as well.

On the other hand, hyperbilirubinemia (which may result brain damage as well), was not associated with increased risk of autism in our patients.

Our finding is consistent with that of Croen (2005),¹⁷ where no differences were observed for maximal bilirubin levels of $> \text{ or } = 15 \text{ mg/dL}$ (10.1% vs 12.1%), $> \text{ or } = 20 \text{ mg/dL}$ (2.1% vs 2.5%), or $> \text{ or } = 25 \text{ mg/dL}$ (0.3% vs 0.2%). Rikke et al. conducted a population-based matched case-control study of 473 children with autism and 473 matched controls. They found an almost fourfold risk for infantile autism in infants who had

hyperbilirubinemia after birth (OR 3.7 [95%CI1.3, 10.5])¹⁸. Their findings suggest that hyperbilirubinemia in the neonatal period is an important factor to consider when studying causes of infantile autism. However, Lisa et al.¹⁹ reported that neonatal hyperbilirubinemia is not a risk factor for Autism Spectrum Disorders. Maimburg et al (2008) reported that hyperbilirubinemia could be a risk factor only in term neonate²⁰.

In addition to hyperbilirubinemia we found seven other prenatal and perinatal variables that were not significantly associated with autistic features.

While Al-Salehi and colleagues reported 14 subjects with autism (28.57%) and a history of consanguinity²¹, we did not see such association in our patients ($p=0.12$). Consanguineous marriage is a well-known factor that predispose to the appearance of inherited diseases in the offspring. Consanguinity is more evident in Saudi culture. The consanguinity rate is in excess of 50% and is a practice that remains strongly embedded within Saudi culture¹⁰. Therefore; the Saudi study probably suggests that certain families in Arab countries have high incidence of autism rather than the presence of a direct link between autism and consanguinity.

Pre-eclampsia and hypertension may potentially diminish placental blood supply to the developing fetus through hypoxia and intrauterine growth retardation. However; we did not find a significant association between pre-eclampsia and autism ($p=0.37$), a result that is supported by the comprehensive meta-analysis of Garden et al (2009)²², although Mann and his colleagues had confirmed a positive association in their study²³.

Maternal infections manifested as febrile illnesses (with or without rash) were not a significant risk factor in our work ($p=0.2$). A similar result was also obtained by Zhang et al²⁴.

Several large studies had confirmed the positive association of prematurity and breech delivery with autism^{1,15}. The lack of such finding in this study is probably due to the small number of patients. Similarly, the number of mothers who had received X-radiation

was small and did not allow us to test its significance. Regarding maternal exposure to drugs during pregnancy (apart from tonics), these drugs were the commonly used antibiotics, analgesics, and antihypertensive, and their use was not associated with increased risk of autistic disorders in our patients.

Conclusion and recommendations

There are several prenatal and perinatal factors that are associated with autistic disorders. We hope that a better ante-natal, obstetric, and neonatal care may reduce this disastrous disorder in a significant number of children.

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المخلص

الأوليات: تشير الدلائل الحديثة إلى وجود ترابط بين أعراض التوحد من جهة و حدوث عدد من المضاعفات المصاحبة للحمل والولادة من جهة أخرى. **الهدف:** دراسة بعض عوامل الخطورة المصاحبة للحمل والولادة وعلاقتها بإضطراب التوحد. **العينة وطريقة البحث:** اعتمدت طريقة العينة والشاهد في الدراسة، حيث تم دراسة مضاعفات الحمل والولادة لخمسين طفلاً مصاباً بأعراض التوحد ممن تم تشخيصهم ومتابعتهم في وحدة البحوث النفسية – كلية طب الموصل في الفترة بين 10 أيار 2011 – 10 نيسان 2012 وتم مقارنة المعلومات بما يمثّلها لخمسين طفلاً آخر ممن كانوا يعانون من صعوبة الكلام والنطق دون أن تكون لديهم أعراض توحيده، من المراجعين للعيادة الخارجية للأطفال واستخدمت الطرق الإحصائية لبيان قوة الترابط. **النتائج:** كان هناك سيادة في عدد الذكور، حيث بلغت نسبة الذكور إلى الإناث 3,5 : 1. كما كانت نسبة المصابين من سكان المدينة (96%) أكثر من سكنة الأرياف. أظهرت الدراسة وجود ستة عوامل خطورة متصلة بمضاعفات الحمل والولادة، وهي: تقدم سن الأم ($p=0.000$) ، ثم تقدم سن الأب ($p=0.004$) الولادة بعملية قيصرية ($p=0.02$) ، الإختناق الولادي ($p=0.000$) الإختلاجات الولادية ($p=0.03$) ، وإدخال الطفل إلى وحدة العناية المركزة للطفل الوليد ($p=0.001$). **الاستنتاجات والتوصيات:** تؤكد هذه الدراسة وجود ترابط وثيق بين التوحد وعدد من مضاعفات الحمل والولادة ، وعليه فإننا نأمل بأن العناية الأفضل بالأم الحامل والطفل حديث الولادة قد تنجح في تقليل عدد المصابين بشكل ملموس.

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Antipsychotic polypharmacy among Arab patients with schizophrenia

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مضادات الذهان المتعددة في المرضى العرب المصابين بالفصام

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Abstract

Introduction: Little is known about the qualitative and quantitative differences in the use of antipsychotics in Arab countries. **Aim:** This study is aimed to assess and compare the prevalence of antipsychotic polypharmacy in two different Arab settings and specifically determine the factors influencing it. **Materials and Methods:** This cross-sectional study was conducted in Jordan (National Center for Mental Health Hospital, Amman) and Egypt (Mansoura University Hospital, Mansoura) and included 162 inpatients with schizophrenia during the years 2008-2009. Patients were surveyed using a standardized protocol to collect information about demographic and clinical characteristics of users of different antipsychotics. Characteristics of antipsychotics users from the two centers were compared. **Results:** There were no significant differences between Egyptians and Jordanians with respect to: demographic, anthropometric, polypharmacy or mean/maximum dose of antipsychotics. Jordanians had significantly lower number of hospitalizations and relapses than Egyptian patients. Atypical than typical first antipsychotics were prescribed more to Jordanians compared to Egyptian patients. Antipsychotic polypharmacy was seen in 37.6% of Egyptians and 24.7% of Jordanians. Irrespective of the patients' nationalities, the mean number of hospitalizations and relapse were predictors of polypharmacy. **Conclusions:** The prevalence of antipsychotic polypharmacy differs between the Egyptians and Jordanian patients with schizophrenia. Also, the number of relapses and hospitalizations were found to be significant positive predictors for antipsychotic polypharmacy in Arab patients with schizophrenia. Educational strategies should be tailored properly and implemented to minimize antipsychotic polytherapy.

Keywords: Schizophrenia, antipsychotics, polytherapy, Arab

Declaration of interest: None

Introduction

Schizophrenia is a chronic, severe, impairing disorder, characterized by early onset, frequent relapse, and subsequently life-long disability. It is considered the most common chronic psychosis in Arab countries and accounts for the majority of in-patients in mental hospitals.¹ Prescribing of antipsychotic drugs varies among geographical regions and with time.² A review of literature on psychotropic drug utilization in schizophrenia demonstrated that there are great discrepancies in dose, type and number of prescribed antipsychotics across Europe³, America⁴ and Asia⁵. Underutilization of second generation antipsychotic drugs was generally found although it differed among different countries and regions. Studies have also revealed that antipsychotic combinations treatment, i.e. antipsychotic polypharmacy, has been utilized frequently in clinical practice.⁶ Reports of the prevalence of antipsychotic polypharmacy in the United States vary from 13% to 60%.^{7, 8, 9}

In a survey of the prescription patterns in Italy in 2012, antipsychotic polypharmacy was prescribed to 32.5% of patients, the most common patterns being a first-generation and a second-generation antipsychotic

(17.6%) or of two first-generation antipsychotics (7.8%). this practice was encountered in 46%–73% of antipsychotic-treated inpatients diagnosed with schizophrenia¹⁰. In Asia, Ito Yoshio¹¹ (2012) reported that the prescription rate for second generation antipsychotics in Japan exceeded 80%, overtaking that of first generation antipsychotics. However, a study in Australia¹² found a somewhat lower rate of antipsychotic polytherapy (13%). Most of the researches on clinical use of antipsychotic agents have been carried out in Europe, North America and Asia. Less is known about practice pertaining to Arab patients with schizophrenia and no previous studies have assessed the predictors of the antipsychotic polypharmacy. This study is aimed to assess and compare the prevalence and the factors affecting antipsychotic polypharmacy in two different Arab settings Egypt (Mansoura University Hospital, Mansoura) and Jordan (National Center for Mental Health Hospital, Amman).

Material and Methods

Settings

The study was conducted in psychiatric department of Mansoura university hospital in Mansoura, eastern Nile delta, Egypt, which assists patients from this city and

other towns of the Dakhalia, Sharkia and Damietta governorates and the National Center for Mental Health Hospital, Amman which received patients from all over Jordan.

Study population

The present study enrolled 162 inpatients with schizophrenia who were consecutively admitted to the wards of the Mansoura University Hospital, Mansoura, Egypt (N=85) and the National Center for Mental Health Hospital, Amman, Jordan (N=77) during the years 2008-2009 and who satisfied Diagnostic and Statistical Manual of Mental Disorders (DSM-IV-TR) diagnostic criteria for schizophrenia through a clinical interview¹³ (67.9% paranoid subtypes, 32.1% non-paranoid subtype). Diagnosis of cases was confirmed independently by two psychiatrists who reviewed the medical records and examined all subjects. All subjects were aged 18-65 years with no major chronic physical illness, organic brain syndrome or history of substance abuse. All patients had provided informed consent in advance of assessment and the study was approved by an institutional review board at the hospitals in the two countries. Socio-demographic (age, gender, working status, marital status: unmarried/married'), and educational status, anthropometric measures including height and weight with calculation of the body mass index (BMI) ($BMI = \text{weight in Kg} / \text{height in meters}^2$), and clinical data including the age of onset and number of hospitalizations were also obtained from medical records of the subjects. Relapse was defined in this study on a 3-year period, according to hospitalization due to worsening of psychotic symptoms or a reemergence of florid psychotic symptoms such as delusions, hallucinations, bizarre behavior.

Drug exposure

Antipsychotics were divided into typical (first-generation) antipsychotics and atypical (second-generation) antipsychotics according to their pharmacological properties.¹⁴ Typical oral antipsychotics in Egypt and Jordan include haloperidol and trifluoperazine; typical depot injective preparations include haloperidol decanoate, fluphenazine decanoate and flupenthixol decanoate. Atypical oral antipsychotics in both countries include clozapine, risperidone, olanzapine, quetiapine, amisulpride. Details of current prescriptions, including all drugs, and antipsychotic doses were averaged across hospital days for each

subject. Depot intramuscular injection of antipsychotic medications within 30 days of admission was also taken into account in this calculation. Daily doses of antipsychotics including depot antipsychotics were converted to approximate chlorpromazine-equivalents (CPZ, mg/day)¹³ and percentage maximum dose method in which the dose is expressed as a percentage of licensed maximum.¹⁵ Doses were determined by reference to each patient's medication chart and to standard reference texts for dose (British National Formulary and Monthly Index of Medical Specialties respectively).

Statistical analysis

Data analysis was carried out using a statistical software SPSS version 15.0 (SPSS Inc. Chicago Ill, US). For continuous variables median, mean and standard deviation were used for data reporting and statistical tests used for comparison were t-test and Mann Whitney when indicated. Frequency and percent were used to express qualitative data; concerning categorical variables, chi-square test, Fisher exact and Z test for proportions were used for comparison whenever appropriate. Multivariate logistic regression analysis was generated between polypharmacy (dependent variable) and patient's demographic and clinical characteristics (independent variables).

Results

A total of 162 inpatients with schizophrenia from the two hospitals were included: 85 (44.3%) were from Egypt and 77 (55.7%) from Jordan. The mean age of the sample was 33.4 ± 3.4 while the mean age of onset was 23 ± 6.7 . Most of the sample were cases of non-paranoid type schizophrenia (67.9%), males (63%), had secondary school or above education (61.1%), unmarried (59.2%), non-working (75.3%) and non-compliant (075.9%). There were non-significant differences in the demographic characteristics (age, gender, education, marital and working status), anthropometric measurements (weight, height and body mass index) and disease characteristics (age of onset, schizophrenia type, number of hospitalizations, length of hospital stay and history of non-compliance), among both groups. The Jordanians had significant lower number of relapses than Egyptians ($P=0.002$). The concomitant psychotropic medications were included anticholinergics (28.4%), mood stabilizers (20.9%), anxiolytics (27.2%) and antidepressant (6.2%) (Table 1).

Table 1 Demographic and clinical Characteristics of patients with schizophrenia included in the study (N= 162)

Variables	Egypt (N=85)	Jordan (N=77)	P value
- Age (years): Mean \pm SD	33.2 \pm 3.4	33.7 \pm 4.1	0.397 ^a
- Gender:			
Males	52(61.2)	50(64.9)	0.620 ^b
Females	33(38.8)	27(35.1)	
- Education:			
below Secondary school	36(42.4)	27(35.1)	0.341 ^b
Secondary school or above	49(57.6)	50(64.9)	
- Working:			
Yes	25(29.4)	25(32.5)	0.674 ^b
- Marital status:			
Married	34(40.0)	32(41.6)	
Unmarried	51(60.0)	45(58.4)	0.840 ^b
Anthropometry			
- Weight (in Kg): Mean \pm SD	75.4 \pm 6.7	75.1 \pm 7.2	0.881 ^c
- Height (in Cm): Mean \pm SD	168.2 \pm 11.3	167.8 \pm 9.9	0.831 ^c
- Body mass index (BMI): Mean \pm SD	26.2 \pm 3.6	26.7 \pm 4.1	0.554 ^c
Disease characteristics			
Age at onset (years): Mean \pm SD	23.9 \pm 6.8	24.1 \pm 8.2	0.868 ^c
Schizophrenia type:			
Paranoid	64(75.3)	46(59.7)	0.865 ^a
Non-Paranoid	21(24.7)	31(40.3)	
Number of hospitalizations:			
Once			
2 to 5 times	11(12.9)	17(22.0)	
> 5 times	42(49.5)	34(44.2)	0.307 ^a
Number of relapses:	32(37.6)	26(33.8)	
One			
2 to 5	13(15.3)	18(23.4)	
> 5	38(44.7)	47(61.0)	
Length of hospital stay (days): Median (mean \pm SD)	34(40.0)	12(15.6)	0.002 ^a
History of non-compliance	22.0(26.5 \pm 5.1)	21.5(25.5 \pm 5.2)	0.288 ^c
Concomitant Psychotropic medications *:	65(76.5)	58(75.3)	0.989 ^d
Anticholinergics			
Mood stabilizers	22(25.9%)	24(31.2%)	0.568 ^d
Anxiolytics	20 (23.5%)	14(18.2%)	0.521 ^d
Antidepressants	23(27.1%)	21(27.3%)	0.883 ^d
	6(7.1%)	4(5.2%)	0.868 ^d

^a t-test for independent samples, ^b Chi-square test, ^c Mann Whitney test, ^d Z test for proportions. SD= Standard deviation ***Not mutually exclusive**

Table 2 showed that there were no significant differences between Egyptians and Jordanians with respect to the frequency of polypharmacy (the concurrent prescription of two antipsychotics) ((37.6%, 24.7% respectively), or prescribed antipsychotic drug above maximum ((7.1%,

6.5% respectively). Moreover, there were no significant differences in doses prescribed as assessed by percentage maximum dose of the first, second total antipsychotic doses (P= 0.730, 0.873, 0.913) and its counterpart CPZ equivalents (P=0).

Table 2 Antipsychotic drugs prescription pattern per country

Variables	Schizophrenic patients: No. (%)		P value
	Egypt (N=85)	Jordan (N=77)	
Polypharmacy	32(37.6)	19(24.7)	0.108^a
Above maximum dosage	6(7.1)	5(6.5)	0.865^b
Percentage maximum dose			
First antipsychotic drug dose (% maximum)	72.8	69.1	0.730^c
Second antipsychotic drug dose (% maximum)	9.3	11.3	0.873^c
Total dose (% maximum)	82.3	80.4	0.913^c
Drug dose (as chlorpromazine equivalents)			
First antipsychotic drug dose	347.8	312.5	N/A
Second antipsychotic drug dose	111.4	93.6	N/A
Total dose	459.2	416.1	N/A

^a Chi Square test, ^b Fisher Exact, ^c Z test for proportions. **N/A non-applicable**

Table 3 displayed the detailed antipsychotic drug types. Regarding the first antipsychotic drug, the atypical antipsychotic drugs were administrated more in Jordan than Egypt (P=0.001). In Jordan, Risperidone was the most frequent used drug (22/77), followed by olanzapine (16/77) and quetiapine (11/77) whereas, in Egypt Risperidone and clozapine were frequently used (8/85 and 7/85 respectively). On the contrary, typical antipsychotic drugs were used more in Egypt than Jordan (P=0.001). In Egypt, the oral preparations

(Haloperidol (32/85) and Trifluoperazine (13/85)) and the depot preparations (Fluophenazine (20/85) and Haloperidol (13/85)). Regarding the second antipsychotic drug, there was no significant difference in the use of typical or atypical drugs among the Egyptians or Jordanians. But in Jordan clozapine and depot preparations were introduced in this phase. The number of relapse and hospitalizations were significant positive predictors of antipsychotic polypharmacy on multivariate logistic regression analysis (Table 4).

Table 3: Detailed antipsychotic drugs types

Drug types	Egypt (N=85) No. (%)	Jordan (N=77) No. (%)	P value*
First antipsychotic			
Total	20(23.5)	49(63.6)	0.001
Atypical	8	22	
Risperidone	3	16	
Olanzapine	2	11	
Quetiapine	7	-	
Clozapine			
Total Typical	65(76.4)	28(36.4)	0.001
Typical (oral preparation)	45(52.9)	28(36.4)	0.050
Haloperidol	32	15	
Trifluoperazine	13	13	
Typical (depot preparation)	20(23.5)	--	
Fluophenazine decanoate	13	--	
Second antipsychotic			
Atypical (oral preparation)	12(14.1)	8(10.4)	0.630
Risperidone	5	1	
Olanzapine	1	4	
Quetiapine	1	-	--
Clozapine	5	3	-
			-
Total typical	15(17.6)	10(12.9)	0.547
Typical (oral preparation)	4(4.7)	7(9.1)	
Haloperidol	3	5	0.426
Trifluoperazine	1	2	
Typical (depot formulation)	11(12.9)	3(3.9)	
Fluophenazine decanoate	6	0	
Haloperidol decanoate	5	3	0.077
Third antipsychotic	2(2.4)	0	
Atypical (oral preparation)			
Clozapine			

* Z test for proportions.

Table 4: Multivariate logistic regression model of the possible independent socio-demographics and clinical variables on the dependent variable (polypharmacy)

Independent variables	Multivariable regression analysis		
	β	Odds ratio (95% Confidence intervals)	P value
- Country:			
Egypt	.139	1.14(0.68-1.91)	0.334
Jordan		Reference	
- Age in years:	.071	1.07(0.67-1.70)	0.488
- Educational status:			
\geq Secondary	-.088	0.81(0.52-1.23)	0.126
< Secondary		Reference	
- Occupational status:			
- Working	.044	1.04(0.71-1.52)	0.229
- None		Reference	
- Schizophrenia type:			
Paranoid	.079	1.15(1.01-1.30)	0.121
Others		Reference	
- Mean Hospitalizations	.185	1.83(1.13-2.95)	0.+
- Mean relapses	.193	1.89(1.32-2.71)	0.001
- Non-compliance	.041	0.91(0.57-1.44)	0.381

Multiple model Chi-square of 41.88, percent predicted 78.6, P value = 0.001.

Country (Egypt=1, Jordan=0), working (1=yes, 0 = no); education (0 = < secondary, 1 = secondary or more); Schizophrenia type: (1= paranoid, 0=none).

Discussion

The study demonstrated that there was no significant difference in dose or polypharmacy in both Egypt and Jordan. However, the typical first antipsychotics including the depot preparations were prescribed more in Egypt than Jordan while the reverse occurs for atypical drugs except Clozapine. In addition, Clozapine was prescribed more in Egypt than Jordan as a first and second antipsychotic drug.

Among factors that affect prescribing behavior, the availability of such drugs in each country is the most important.¹⁶ For example, Clozapine was introduced in Egypt in 1969 and psychiatrists being experienced with the drug often prescribed it for the inpatients with schizophrenia even after the immediate withdrawal of the drug from clinical service worldwide in 1975. The decision followed the report of agraulocytosis that occurred in ¹⁷ (0.7%) of 2,260 Finnish patients treated with Clozapine. In Jordan, the drug was available only after Clozapine was reintroduced in North America following the landmark trial by Kane and others¹⁷ in 1988 comparing Clozapine with Chlorpromazine in treatment-refractory schizophrenia. Apart from availability of drugs, administrative actions could have the greatest impact in influencing prescribing behavior of a psychiatrist or physician. Economic condition is another factor worth mentioning in the utilization of a

drug. Although Egypt and Jordan are classified by the World Bank, amongst the lower middle income countries with a per capita income of \$1,949 and \$3,257 respectively, the total health expenditure at purchasing power parity (PPP) per capita in international dollars of about 261 and 490 in Egypt and Jordan respectively¹⁸ that represent about 4.8% and 9.4% of the gross domestic product (GDP). Finally, in Egypt, the higher ratio of use of depot injections may be partly attributed to cultural factors which may shape the attitudes of the patients, their families and the prescribing traditions towards the use of depot injections¹⁹ patients with schizophrenia found it as an acceptable mode of treatment (low cost, so the patient can afford) and showed a positive attitude towards it²⁰. Among Asians, a preference for injection may be given due to the belief that mode of administration acts more quickly and can be more potent.²¹⁰

Antipsychotic polypharmacy is not uncommon in the treatment of schizophrenia²² despite consistent recommendations of antipsychotic monotherapy²³. In the present study, a lower rate of antipsychotic polypharmacy was noted in Egypt and Jordan (37.6 % and 24.7% respectively). The findings were consistent with other reports from China, Hong Kong and Korea, but lower than the reports in Japan. A Japanese national cross-sectional survey of 9,325 inpatients with

schizophrenia revealed that 67% –70% were treated with more than one antipsychotic, and 75.6% of those treated with an atypical antipsychotic were also treated with another antipsychotic.²⁴

Prior research has identified multiple factors that predict antipsychotic polypharmacy use. Antipsychotic polypharmacy has been associated with greater illness severity, longer illness duration, comorbid depression, more prior admissions and treatment with typical antipsychotics, as well as the use of certain atypical antipsychotics.^{25, 26}

In this study, we found that the number of relapse and hospitalizations were significant positive predictors of antipsychotic polypharmacy in patients with schizophrenia.

With regard to study limitations, the design was observational and conducted in only two medical centers and at one time, so that our sample may not represent all patients with schizophrenia in Egypt, Jordan and in other Arab countries or being a predictor of the trend and change of antipsychotic polytherapy in the aforementioned regions. In addition, the study had been conducted in public hospitals and findings at the private health care setup may vary in those private sector facilities where available resources are plenty. Moreover, information regarding illness severity, comorbidity, medication combinations was lacking. As for the strengths of this study, there are limited data on the antipsychotic utilization pattern in Arab region.

In conclusion, this study highlights that there was no significant difference in dose, high dose or polypharmacy in two Arab countries namely Egypt and Jordan. However, the typical first antipsychotics including the depot preparations were prescribed more in Egypt than Jordan while the reverse occurs for atypical drugs except clozapine, in addition the mean number hospitalizations and relapse were associated with the polypharmacy in Arab patients with schizophrenia. Educational strategies should be tailored properly and implemented to minimize antipsychotic polytherapy.

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المخلص

المقدمة وغرض البحث: لا يعرف سوى القليل عن الاختلافات النوعية والكمية في وصف مضادات الذهان في الدول العربية. لذلك تهدف تلك الدراسة إلى فحص أنتشار مضادات الذهان المتعددة في مصر والأردن و تحديد العوامل المؤثرة عليها. **الأدوات والطرق:** وقد أجريت هذه الدراسة المستعرضة في الأردن (المركز الوطني لمستشفى الصحة النفسية، عمان) ومصر (مستشفى المنصورة جامعة المنصورة). وشملت الدراسة 162 مريضاً بالفصام باستخدام بروتوكول موحد لجمع البيانات الديموغرافية والسريرية للمرضى. **النتائج:** لم تكن هناك اختلافات كبيرة بين المصريين والأردنيين المصابين بالفصام فيما يتعلق بالعلاج بمضادات ذهان متعددة أو استخدام الجرعة القصوى من مضادات الذهان، ولكن الأردنيين لديهم نسبة أقل في التنويم والانتكاسات من المصريين. كان وصف مضادات الذهان الأولى الغير نمطية في الأردن أكثر من مصر وسجل العلاج بمضادات ذهان متعددة بنسبة 37.6% و 24.7% في المرضى المصريين والأردنيين . ووجد أن عدد الإنتكاسات ومعدل التنويم يمثل عوامل منبئة إيجابية للعلاج بمضادات ذهان متعددة. **الإستنتاجات:** معدل وصف مضادات الذهان المتعددة يختلف في المرضى المصريين والأردنيين المصابين بالفصام ووجد أن عدد الإنتكاسات ومعدل التنويم يمثل عوامل منبئة إيجابية للعلاج بمضادات ذهان متعددة . ونحتاج في المرحلة التالية إلى سياسات تعليمية تعد باتقان وتعمل لتقليل العلاج بمضادات الذهان المتعدد.

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Quality of life for people with schizophrenia: A literature review

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جودة حياة مرضى الفصام: مراجعة لدراسات ذات صلة

أميرة الشوكان، جانيت كيرتيز، ايفون وايت

Abstract

Objective: In recent years, there has been a growing interest in the study and evaluation of the quality of life for people with schizophrenia. The aim of this paper is to provide a comprehensive literature review on the quality of life for people with schizophrenia who are living in the community. **Method:** An integrative literature review was undertaken to review literature in the field of medical/mental health in relevant databases. **Results:** A total of 21 studies were reviewed and categorised according to three themes identified from the literature: the quality of life and socio-demographic characteristics of people with schizophrenia; the quality of life of people with schizophrenia internationally; and the quality of life of people with schizophrenia in cross-cultural studies. **Conclusion:** Quality of life for people with schizophrenia depends on many factors, including cultural and economic factors, homogeneity of the society, traditional role of the family, social support, and availability of the mental health services. Recommendations for further studies, particularly in the Arab world, are made.

Keywords: schizophrenia, quality of life, literature review

Declaration of interest: None.

Introduction

Schizophrenia is a devastating disorder which fits under the broader heading, psychosis, which is characterized by a loss of contact with reality. The disorder manifests in a variety of ways, including false beliefs (delusions), false perceptions (hallucinations), and irrational thinking and behaviour.¹ Worldwide, schizophrenia affects approximately 0.5% to 1.5% of the population, and the annual incidence rate averages between 0.5 and 5.0 per 10,000 people. The most typical age for the onset of schizophrenia is the late teens and early 20s; however, cases of onset at age 5 or 6 have also been reported.²

There is no gender difference in this disorder and both men and women with the disorder are equally affected; however, individuals with an early age of onset (18–25 years old), are most often men who have more signs of structural brain abnormalities and more prominent negative symptoms. (These symptoms are characteristics of psychiatric illness expressed as withdrawn behavior, expressionlessness, a lack of initiative and interest, slow and/or little speech, and slow thoughts and movements.) In contrast, individuals with a later age of onset (25–35 years) are more likely to be women who have less evidence of structural brain abnormalities and generally have better outcomes.²

Quality of life (QoL) is a new view of health from a bio-psycho-social perspective that emerged from a perceived need to balance and supplement the successes of modern medicine to improve QoL in cases of serious, chronic, and debilitating or fatal diseases.³ Social scientists detailed this broad concept by conducting population-

based QoL research that contributed significantly to understandings of social indicators such as family and social relationships.⁴ Generally, QoL has encompassed several domains related to health, although the concept initially also included many other non-health-related issues such as work, family, wealth, religion, and environment.⁴

While evidence in the literature supports the concept of QoL; so far, no single unanimously accepted definition of QoL has emerged.⁵ Basu³ focused on the historical evolution of the concept and called it “one of those words like ‘happiness,’ ‘love,’ or ‘peace’ that everybody grasps intuitively, but problems arise the moment one tries to formally define them.” According to Awad and Voruganti,⁴ many working definitions may be needed, depending on the population under study, the stage of the illness and its treatment, and societal expectations at a particular point in time. Over the past 30 years, several definitions of QoL have been provided, most based on particular theoretical orientations ranging from a focus on psychology (e.g., feelings of well-being and satisfaction) to standards of living (e.g., perceived health, housing, finances, and employment).⁴

Although there is no consensus definition of QoL, considerable agreement has developed on some central characteristics. First, QoL is subjective in nature and oriented toward the individual experience; moreover, the final authority or assessor of QoL is the individual who lives that life.³ Second, QoL is a multidimensional concept that has physical, psychological, and societal facets that vary according to the conceptual, pragmatic,

and empirical purposes of the particular group developing the assessment instrument.³ Third, QoL is a dynamic concept that can change from day to day and is characterized by its individuality; each person perceives his or her QoL as different from that of others.⁴

Method

An integrative literature review was undertaken to review literature related to this study because it is more flexible and inclusive compared to other types of literature review methods (e.g., systematic and meta-analysis reviews). This method consists of five steps: (1) recognize the problem associated with the research questions, (2) conduct a systematic literature search, (3) appraise the quality of the selected relevant articles, (4) review the articles to identify themes, and (5) organize the themes and critically analyze them.⁶

The following English terms were used as keywords: “quality of life” and “schizophr*.” The literature review was conducted using the MEDLINE, CINAHL, Proquest, and ScienceDirect databases. The literature publication years were limited to 1990 to 2010. The literature search identified 3,327 relevant articles (1,672 from MEDLINE, 104 from CINAHL, 921 from Proquest, and 630 from ScienceDirect).

However, to narrow the scope of the review, a number of inclusion criteria were applied to select the relevant literature:

- Articles identified as primary sources and peer-reviewed.
- Articles that initially validated or used a previously validated measure of QoL (e.g., QoLI, LQoLP-EU).

- Studies conducted solely on patients diagnosed with schizophrenia, schizoaffective disorder, or schizophreniform disorder.
- Studies that measured the QoL for people with schizophrenia who were outpatients or living in the community.
- Studies on QoL and schizophrenia published in English or Arabic.

Literature exclusion criteria were also employed such as abstracts, proceeding papers, editorials, commentary papers, letters, articles focusing on patients with other mental illnesses, studies on the QoL for inpatients with schizophrenia, and studies on QoL that used relatives or proxies.

Results

After the integrative review of the literature, a total of 21 articles were extensively reviewed to identify themes related to QoL for people with schizophrenia. The identified articles were found to investigate the QoL for people with schizophrenia based on their socio-demographic characteristics mainly (e.g. age, marital status), country system (availability of mental health services, family structure), or to compare the QoL for people with schizophrenia between two or more countries (e.g. QoL for people with schizophrenia in Canada, Cuba and the United States). Consequently, three themes were identified: (1) the quality of life and socio-demographic characteristics for people with schizophrenia; (2) the quality of life for people with schizophrenia internationally; and (3) the quality of life for people with schizophrenia in cross-cultural studies. The full details regarding the 21 selected articles are presented in Table 1.

Table 1: Studies of socio-demographic and clinical variables and QoL for people with schizophrenia

Author (year)	Country	Denominator	Instrument(s) used	Outcome measure/s	Outcome
Xiang et al. ⁷	China	251 men 254 women	WHOQoL	Gender and QoL	No significant difference between the two genders in the psychological, social, and environmental aspects, but women reported lower scores on the physical aspects of QoL.
Narvaez et al. ⁸	U.S.A.	88 outpatients	QoLI	Predictors of QoL.	Female, older, and less educated participants reported lower QoL.
Cardoso et al. ⁹	Brazil	123 outpatients	QLS	Socio-demographic characteristics and QoL	Male gender, single marital status, low income, and low schooling associated with low QoL.
Caron et al. ¹⁰	France	143 patients	SLD, LES, SAM, SPS, PANSS	Socio-demographic characteristics, stressors, social support, and QoL	Social support related to better QoL. However, high level of education, lengths of hospitalization and severity of hassles associated with poor QoL
Hansson et al. ¹¹	Norway	418 patients	LQoLP, BPRS, Interview Schedule for Social Interaction, CAN	Relation between QoL, living situation, and social network	Independent housing and living with family associated with better QoL
Bryson, Lysaker and Bell ¹²	U.S.A.	97 patients	QLS, QoLI	Paid work and QoL	Work activities associated with better QoL
Salokangas et al. ¹³	Finland	1750 men 1506 women	GAS	Gender, marital status, and QoL	Female gender and marriage associated with better QoL
Adewuya and Makanjuola ¹⁴	Nigeria	99 patients	BPRS, GAF, PSE, DAI-10, WHOQoL	Study of the QoL for people with schizophrenia in Nigeria.	Unemployment and poor social support related to poor QoL.
Dimitriou, Anthony and Dyson ¹⁵	Greece	101 patients	Subjective Quality of Life Profile	Study of the QoL for people with schizophrenia in Greece	Gender, age, education, and marital status not related to QoL.
Caron et al. ¹⁶	Canada	181 patients	CaW-QLI	Study of the QoL for people with schizophrenia in Canada	Female, age 40-49, high education, and employment associated with better QoL.
Chan and Yu ¹⁷	Hong Kong	172 patients	WHOQoL, BPRS	Study of the QoL for people with schizophrenia in Hon Kong	Female, unemployment, higher levels of mental health problems, and high numbers of previous hospitalizations associated with poor QoL
Mubarak et al. ¹⁸	Malaysia	174 patients	QoLI	Study of the QoL for people with schizophrenia in Penang, Malaysia	People with schizophrenia reported problems with living condition, work, finances, housing, social relations, and general health.
De Souza and Coutinho ¹⁹	Brazil	136 patients	LQoLP, BPRS, CDSS	Study of the QoL for people with schizophrenia in Brazil	Female and older patients associated with better QoL. High education associated with poor QoL.
Duno et al. ²⁰	Spain	44 outpatients	QoLI	Study of the QoL for people with schizophrenia in Catalan, Spain	Male, older, and employed participants reported high QoL
Bengtsson-Tops and Hansson ²¹	Sweden	120 outpatient	LQoLP, BPRS, GAF	Study of the QoL for people with schizophrenia in Sweden	No relationship between socio-demographic characteristics and QoL
Browne et al. ²²	Ireland	64 outpatients	QLS	Study of the QoL for people with schizophrenia in Ireland	Patients who lived independently or with their family were more satisfied with their QoL than those residing in hostels or group homes.
Heider et al. ²³	France, U.K., and Germany	288 French patients 618 German patients 302 British patients	QoLI	Study of the QoL for people with schizophrenia in three countries over time	Participants from the U.K. reported significantly lower QoL than those from other countries.
Daradkeh and Al Habeeb ²⁴	Jordan and Saudi Arabia	162 Jordanian patients 49 Saudi Arabian patients	SQLS, SRQ-24	Study of the QoL for people with schizophrenia in Jordan and Saudi Arabia	No difference in the QoL for patients in Jordan and Saudi Arabia
Priebe et al. ²⁵	U.S., Germany, and Switzerland	24 American outpatients 24 German outpatients 24 Swiss outpatients	LQoLP, BPRS	Work and QoL in three countries	Generally, employment associated with better QoL in Western nations
Vandiver ²⁶	Canada, Cuba, and U.S.	102 outpatient men and women	QoLI	Gender and QoL in three countries	Canadian women reported a higher QoL for social relationships than men and the opposite in Cuba. No gender difference found in the U.S. sample
Warner et al. ²⁷	U.S. and Italy	100 American patients 70 Italian patients	LQoLP, BPRS, Camerwell Needs Measure	To compare the QoL for people with schizophrenia in the U.S. and Italy.	Participants from the U.S. reported significantly lower QoL than those from Italy

Schizophrenia Quality of Life Scale (SQLS), Self-Reporting Questionnaire (SRQ-24), Satisfaction with Life Domains Scale (SLDS), Life Experience Survey (LES), Stress Appraisal Measure (SAM), Social Provisions Scale (SPS), Positive and Negative Syndrome Scale (PANSS), Heinrichs Quality of Life Scale (QLS), Life Skills Profile (LSP), Brief Psychiatric Rating Scale (BPRS), Calgary Depression Scale for Schizophrenia, (CDSS), Drug-Induced Extrapyramidal Symptoms Scale (DIEPSS), Global Assessment of Functioning (GAF), Present Status Examination (PSE), Lancashire Quality of Life Profile-European Version (LQoLP-EU), World Health Organization Quality of Life (WHOQoL), Canadian version of the Wisconsin Quality of Life Index (CaW-QLI), Lehman Quality of Life Interview (QoLI), Occupational Value with pre-defined items (Oval-pd), Satisfaction with Daily Occupations (SDO), Manchester Short Assessment of Quality of Life (MANSA), Past History and Sociodemographic Description Schedule (PHSD), Involvement Evaluation Questionnaire (IEQ), Verona Service Satisfaction Scale (VSSS-EU).

Theme 1: the quality of life and socio-demographic characteristics for people with schizophrenia

Based on the systematic literature review, only seven studies were found that focused mainly on socio-

demographic characteristics (e.g., gender, age, marital status, employment, and education) related to the QoL for people with schizophrenia (Table 2.)

Table 2 : Studies of the quality of life and socio-demographic characteristics for people with schizophrenia

Author/s (year)	Outcomes/measures	Socio-demographic variables
Xiang et al. ⁷	Gender and QoL	Women reported low QoL in physical aspects (e.g. pain, fatigue)
Narvaez et al. ⁸	Clinical, functional, and cognitive predictors of subjective and objective QoL	Female, older, and less educated participants reported lower QoL
Cardoso et al. ⁹	Socio-demographic and clinical factors related to low QoL	Single male participants with low levels of schooling and income reported low QoL
Caron et al. ¹⁰	Socio-demographics, clinical characteristics, stressors, coping strategies, social support, and QoL	Patients with higher levels of education reported low QoL.
Hansson et al. ¹¹	Relationships between the living situation in the community and QoL	Individuals with independent housing showed better QoL
Bryson, Lysaker and Bell ¹²	Paid work and QoL	Paid work improved QoL
Salokangas et al. ¹³	Gender, marital status, and QoL	Single men reported poor QoL

Xiang et al.⁷ studied the association between gender and QoL in 251 male and 254 female patients with schizophrenia using the World Health Organization Quality of Life (WHOQoL) questionnaire in Hong Kong and Beijing, China. They found no significant difference between the genders in their perceived QoL; however, women reported lower scores on the physical health items of the WHOQoL (e.g., fatigue, pain, and discomfort) with respect to QoL. The authors reported that the lower QoL for women may be due to the relatively more severe discrimination against women with schizophrenia in Chinese society.

In the United States, Narvaez et al.⁸ examined the predictors of QoL in 88 outpatients with schizophrenia or schizoaffective disorder. They used the Lehman Quality of Life Interview (QoLI) to measure the QoL for people with schizophrenia. The results showed that women, older, and less educated participants reported lower QoL. However, the authors failed to investigate the relationship between employment, marital status, and quality of life due to the small number of employed (n=5) and married individuals (n=9).

Cardoso et al.⁹ studied the socio-demographic characteristics related to the low QoL for people with schizophrenia among 123 outpatients with schizophrenia in Brazil. The patients were interviewed using the Quality of Life Scale—Brazilian version (QLS-BR scale). The results revealed that the socio-demographic

characteristics associated with low QoL included male gender, single marital status, and low levels of schooling and income.

In France, Caron et al.¹⁰ studied the relationships between socio-demographic characteristics, stressors, coping strategies, social support, and QoL in a cross-sectional design with repeated measures on the same participants after a 6-month interval. In their study, 143 outpatients with schizophrenia or schizoaffective disorder were included, and their QoL was measured using the Satisfaction with Life Domains Scale (SLDS). The study revealed that, in regard to socio-demographic characteristics, participants with higher levels of education scored lower on QoL both times. Overall, the authors of the study suggested that the availability of close personal relationships would enhance emotional integration and have a positive effect on satisfaction with QoL.

The relationships between the living situation in the community and QoL, as well as the social network among community-based individuals with schizophrenia, were studied by Hansson et al.¹¹ in Sweden. A total of 418 outpatients with schizophrenia were interviewed through the use of the Lancashire Quality of Life Profile (LQoLP) to measure their QoL. They found that 70% of the participants were living in a public or privately owned apartment or house; only 26% were living in a sheltered or supported residential setting, and 19% lived

with their families. Overall, individuals with independent housing showed better QoL and were more satisfied with their privacy and autonomy.

Bryson, Lysaker, and Bell¹² investigated the relationships between paid work and QoL measures in a sample of 97 outpatients with schizophrenia or schizoaffective disorders through the use of the QLS and QoLI in the United States of America. The study revealed that paid work improved the QoL for people with schizophrenia. In addition, the results indicated that an increased number of working weeks was related to high total QLS scores.

The association between gender, marital status, and the QoL for people with schizophrenia was examined by Salokangas et al.¹³ In Finland. In the study, interviews were conducted with 1,750 male and 1,506 female outpatients with schizophrenia using the Global Assessment Scale (GAS). The authors found that the female participants tended to be married, older in age, with a long duration of illness, and moved after

discharge from the hospital to live alone or with their spouses more often than did men. The results revealed that single men had a poorer QoL than others in almost all areas of measurement, including work life, daily functioning, housing condition, number of confidants, and psychosocial stability. Generally, women were found to be more unaffected by their marital status, were more satisfied with their own lives, had closer interpersonal relationships, and had done useful work more often than men.

Theme 2: The quality of life for people with schizophrenia internationally

The systematic literature review identified nine studies that explored the QoL for people with schizophrenia in different countries and related to their cultural context. These studies were undertaken in Western and non-Western nations including Canada, Greece, Sweden, Ireland, Spain, Brazil, Hong Kong, Malaysia, and Nigeria (Table 3.)

Table 3: Studies of the quality of life for people with schizophrenia internationally

Author/s (year)	Country	QoL for people with schizophrenia in relation to the country system.
Adeyuya and Makanjuola ¹⁴	Nigeria	Patients reported poor QoL due to poor rehabilitation facilities for people with mental illness in Nigeria
Dimitriou, Anthony and Dyson ¹⁵	Greece	No relationship was found between QoL and socio-demographic characteristics. This can be rationalized by the homogeneity of Greek culture and the high stigmatization of people with schizophrenia
Caron et al. ¹⁶	Canada	Women enjoyed a better QoL in the area of living activities than men due to traditional and cultural factors that require women to be more involved in household activities and shopping
Chan and Yu ¹⁷	Hong Kong	Due to cultural factors, women had poor QoL in Hong Kong because women have to take care of children and the elderly
Mubarak et al. ¹⁸	Malaysia	People with schizophrenia in Malaysia have problems with housing, social functioning, finances, and work due to a lack of community rehabilitation facilities in Malaysia
De Souza and Coutinho ¹⁹	Brazil	Because the majority of the people live with their families in Brazil, the participants were highly satisfied with their family relationships
Duno et al. ²⁰	Spain	Patients were satisfied with their family relationships due to the strong role of the traditional family structure in Spain
Bengtsson-Tops and Hansson ²¹	Sweden	Patients were dissatisfied with their finances due to changes in the state and local community allowance system in Sweden with regard to housing and the costs of medicine
Browne et al. ²²	Ireland	Patients rated their QoL at less than 50% of the maximum score on the Quality of Life Scale due to the cultural norms in Ireland

In a Nigerian study, Adeyuya and Makanjuola examined the relationship between socio-demographic characteristics and subjective QoL among 99 outpatients with schizophrenia using the WHOQoL questionnaire. The study showed that poor subjective QoL was associated with unemployment and poor social support. The same study revealed that Nigerian people with schizophrenia perceived their QoL to be lower than QoLs reported in other world regions. The authors

reported that this result could be due to the poor facilities and amenities available for the treatment and rehabilitation of people with mental illness in Nigeria. In Greece, Dimitriou, Anthony, and Dyson¹⁵ used the Subjective Quality of Life Profile (SQLP) and QoLI to explore the QoL for 101 outpatients with schizophrenia. They found that age, gender, and marital status were not related to QoL for people with schizophrenia. They explained the homogeneity of the Greek population and

the high stigmatization of people with mental illness such that people with schizophrenia have difficulty obtaining employment and finding partners. However, only the level of education was associated with QoL; participants with high levels of education reported better QoL. The authors reported that this result can be explained by the fact that participants with higher educational levels had better expectations of change after receiving medical treatment.

In Canada, Caron et al.¹⁶ used the Canadian version of the Wisconsin Quality of Life Index (CaW-QLI) to examine the relationships between socio-demographic characteristics and the QoL for 181 outpatients with schizophrenia. They found that women enjoyed a better QoL in the area of living activities (e.g., living arrangements and working status) than men. This could be due to traditional and cultural factors that require women to be more involved in household activities and shopping, which, in turn, allow them to develop abilities in this area that are superior to those of men. However, in the area of education, tertiary-educated participants reported higher psychological well-being than those with only a primary education. In the work domain, employed individuals were found to have greater QoL in the areas of social support, relationships, physical health, and global QoL score.

In a Hong Kong study conducted by Chan and Yu,¹⁷ the QoL was investigated in 172 outpatients with schizophrenia. The participants were interviewed using the Hong Kong Chinese version of the WHOQoL. The study revealed that the unemployed participants were less satisfied with their QoL than others. Women reported lower QoL than men in the domains of life enjoyment, leisure, and personal safety. The authors explained the difference in QoL between men and women by cultural factors; traditionally, women in Hong Kong must take care of their children as well as older family members, and women still occupy a social position that is substandard compared to that of men. Therefore, women are more susceptible to crimes such as domestic violence, rape, and assault.

In Malaysia, Mubarak et al.¹⁸ measured the QoL for 174 outpatients with schizophrenia in Penang, Malaysia. The participants were interviewed using the QoLI. The study showed that Malaysian people with chronic schizophrenia who were living in the community faced many challenges in their day-to-day lives in the domains of housing, daily activities, social relations, finance, work, and general health. The authors argued for the creation of community-based rehabilitation facilities, which are crucial for implementing community-based treatment of people with schizophrenia in Malaysia.

In Brazil, using the LQoLP, De Souza and Coutinho¹⁹ examined the QoL for 136 Brazilian outpatients with schizophrenia. Most of the participants reported that religion was a source of leisure and social support; this was evident in the participants' high level of satisfaction with the religious domain. In addition, participants were very satisfied with their family relations; satisfaction with family relations was the second-highest score after religion. This was explained by the fact that, in Brazil, a great proportion of people with schizophrenia live with their families, which certainly represent a source of informal care for these patients. However, higher levels of education were associated with lower subjective QoL scores, and this could be due to frustration with the ability to achieve goals that are compatible with their educational level.

In Spain, Duno et al.²⁰ assessed the subjective QoL for 44 outpatients with schizophrenia living in Catalonia using the QoLI. The results showed that male, older, and employed participants reported a high QoL. The authors found that participants were more satisfied with the areas of housing and family relations compared with respondents in other studies. The authors argued that the high level of satisfaction with the housing and family domains occurred for several reasons: firstly, in Spain, there are no community-based mental health and social services; secondly, the Spanish National Health Service's resources for people with mental illness who live in the community are limited to outpatient clinic visits for medication control; thirdly, as a result of the traditional family structure in Spanish society, the majority of patients live with their original families, who serve as their main support system. In addition, the authors reported that due to very low social adversity and Catalanian persecution, the participants reported higher levels of satisfaction with personal safety than those in some American cities.

In Sweden, Bengtsson-Tops and Hansson²¹ assessed the QoL for 120 outpatients with schizophrenia using the LQoLP. The results of the study showed that the participants were mostly satisfied with religion and mostly dissatisfied with finances and work. The high dissatisfaction with the financial domain may be due to the fact that people with schizophrenia in Sweden have problems handling their personal finances; for others, the high dissatisfaction reflects worries about the future and feelings of dependency, which may be a result of changes in the state and local community allowance system with regard to housing and the costs of medicine. There were no relationships between socio-demographic variables such as age, gender, employment, marital status, social and family relationships, and QoL.

In Ireland, Browne et al.²² measured the QoL for 64 outpatients with schizophrenia who were attending a rehabilitation center to examine the relationships between socio-demographic characteristics and QoL using the Quality of Life Scale (QLS). The results revealed that the participants rated their QoL at less than 50% of the maximum score of the QLS, which may be due to the local norms of the catchment area, as each item of the QLS is scored relative to local norms.²¹ However, the authors did not provide an explanation of those local norms that affected the QoL for people with schizophrenia in Ireland. No relationships were found between QoL and gender. Patients who lived

independently or with their families were more satisfied with their QoL than those residing in hostels or group homes.

Theme 3: The quality of life for people with schizophrenia in cross-cultural studies

As described in Table 4, five studies investigated the QoL for people with schizophrenia cross-nationally. Those studies compared the QoL for people with schizophrenia in general or with respect to specific socio-demographic factors between two or more countries.

Table 4: Cross-cultural studies of the quality of life for people with schizophrenia

Author/s	Cultures	Results
Heider et al. ²³	France, U.K., and Germany	Participants from the U.K. reported lower QoL than those from the other two countries
Daradkeh and Al Habeeb ²⁴	Jordan and Saudi Arabia	No difference was found
Priebe et al. ²⁵	United States, Germany, and Switzerland	Employment was associated with better QoL
Vandiver ²⁶	Canada, Cuba, and United States	Canadian women reported a higher QoL for social relationships than men, and the opposite was found in Cuba
Warner et al. ²⁷	United States and Italy	Participants from the U.S. reported lower QoL than those from Italy

Heider et al.²³ investigated factors influencing the subjective QoL for outpatients with schizophrenia in a longitudinal study in three countries: France, the United Kingdom, and Germany. The study sample consisted of 288 French, 302 British, and 618 German patients. Between 1998 and 2002, the patients were interviewed at 6-month intervals for a total of 2 years. The patients' QoLs were measured using the QoLI. The study revealed that participants from the United Kingdom reported significantly lower QoL in housing, daily activities and functioning, family, legal and safety issues, and health in comparison with those from Germany and France.

Daradkeh and Al Habeeb²⁴ studied the QoL for 211 outpatients with schizophrenia from two outpatient clinics in Irbid, Jordan, and Riyadh, Saudi Arabia. The participants were asked to fill out the modified version of the schizophrenia QLS in which the same authors checked its validity and reliability to the Arab people in a previous study.²⁵ They found that nearly a quarter of the patients viewed their general health as excellent or good; 30% met their expectations, and their high rating of QoL was explained by the psychosocial support they obtained

from relatives. In addition, gender and marital status were found to be unrelated to QoL, while employment and higher education levels were strongly related to better QoL.

Priebe et al.²⁶ examined and compared the attitudes toward work, work incentives, and the impact of work on the QoL for a total of 72 outpatients with schizophrenia, each cohort comprising 12 employed and 12 unemployed participants, from the USA, Germany, and Switzerland using the LQoLP. The results confirmed that employed people with schizophrenia showed remarkable advantages regarding their financial situation, personal safety, and satisfaction with work, leisure, and finances. In addition, in the Western industrialized countries, the association between employment and QoL seemed to be similar.

Vandiver²⁷ examined the QoL for 102 outpatient men and women with schizophrenia in Canada, Cuba, and the USA using the QoLI. They found no difference between men and women in the combined sample. However, differences were found between men and women in Canada and Cuba in the social relationship domain. In

Canada, women reported higher QoL for social relationships because they were able to take advantage of the availability of the Canadian healthcare system which allowed interact with others. In contrast, Cuban women reported lower QoL for social relationships, apparently because the social relationships of the Cuban women were constrained by the multiple roles of caregiver, housewife, and worker.

Warner et al.²⁸ used the LQoLP to compare the QoL for 100 outpatients with schizophrenia from Boulder, Colorado, in the USA and 70 people with schizophrenia from Bologna, Italy. They hypothesized that the dissimilar culture and mental health services in the two countries would lead to differences in the QoL for people with schizophrenia. The results showed that the QoL for people with schizophrenia in Bologna was better than that of the people in Boulder. Several QoL differences favored Bologna over Boulder: higher rates of marriage and partnership, greater length of employment, higher wage rates, greater total earnings, fewer financial obstacles, and more residential stability. Most importantly, more patients in Bologna were living with family, and family living was associated with such advantages as meeting the individual's basic needs for accommodation, food, home care and budgeting.

Discussion

The literature review identified three main themes: studies of socio-demographic characteristics associated with QoL; studies of QoL in certain countries, and comparisons of the QoL for people with schizophrenia in two or more countries. Based on the literature review of socio-demographic characteristics associated with QoL, it is clear that there have been inconsistencies in the results regarding the association between gender, educational level, and the QoL for people with schizophrenia who live in the community. While women reported low total scores for perceived QoL⁸ and low QoL in the physical domain,⁷ Cardoso et al.⁹ found that being a man is a predictive factor associated with low QoL among people with schizophrenia. The difference in the QoL between men and women was rationalized by cultural factors. For example, in China, women with schizophrenia experience high levels of discrimination, which negatively affects the QoL of Chinese women.⁷ However; Cardoso et al.⁹ rationalized the low QoL found for men by rationalizing that most women are involved in household activities, unlike men, who tend to stay at home without any responsibilities due to their mental illness. Therefore, it is clear that social and cultural factors play a strong role in the perception of QoL for men and women with schizophrenia.

Regarding the association between the level of education and QoL, Narvaez et al.⁸ and Cardoso et al.⁹ found that less educated people tended to report a low QoL. In contrast, Caron et al.¹⁰ and De Souza and Coutinho¹⁹ indicated that people with high levels of education reported a poor QoL. However, in all of the studies the authors agreed that being employed, having a high income, having social support, living with family, and being married were related to better QoL.

Studies measuring the QoL for people with schizophrenia in specific countries have revealed that the QoL for people with schizophrenia depends on specific factors related to the geographical area (e.g., the availability of mental health facilities and services),^{14,18} the homogeneity of the community,¹⁵ traditional and cultural factors,^{16,17,19,20} traditional family roles,^{17,19,20} local norms,²² and lifestyle.²¹ However, several studies fail to give clear explanations and examples of local norms and factors affecting the QoL for people with schizophrenia.²² Based on a review of the studies of the QoL for people with schizophrenia, factors that most affect their QoL include: (1) traditional and cultural factors and (2) traditional family roles. All of these factors must be considered when conducting a study investigating QoL. Each culture, city, or county can be regarded as having a unique lifestyle and traditional culture; thus, the results must be interpreted with caution with respect to generalizability.

Cross-cultural studies of the QoL for people with schizophrenia should measure QoL using the same inclusion criteria and the same measurement scale. Each country has different cultural, traditional, and economic features; backgrounds; community compositions; healthcare systems; and social support network availability. All of these factors were found to influence the QoL for people with schizophrenia living in such surroundings.^{23, 27} It can thus be concluded that mental health services and programs must be tailored in accordance with the local culture, lifestyle, community homogeneity, and current availability of mental health services to improve the QoL for people with schizophrenia.

Furthermore, the review of the literature on the QoL for people with schizophrenia identified a limitation in the methodology of the previous studies. The previous studies focused only on socio-demographic factors and did not try to investigate other factors associated with QoL. The limitation of the study's methodology of the QoL was firstly and only identified by Bengtsson-Tops and Hansson,²¹ who studied the QoL for 120 patients with schizophrenia in Sweden through the use of a well-established QoL instrument (Lancashire Quality of Life

Profile). The authors reported a very important limitation of their study that must be investigated in future studies; by using quantitative data only, they were unable to identify other information that would provide a holistic picture of the QoL for people with schizophrenia. Therefore, Bengtsson-Tops and Hansson²¹ recommended combining quantitative and qualitative data to obtain a comprehensive view of the QoL for people with mental illness.

The use of quantitative and qualitative data will help to view people with mental illness from a holistic standpoint as whole persons involved in daily life. Therefore, while the quantitative studies provide information about how satisfied people with schizophrenia are with their QoL, and about the relationship of their socio-demographic characteristics to their QoL, the qualitative studies show how people with schizophrenia perceive their QoL and thereby add a richness to the quantitative data. The combinations of quantitative and qualitative findings provide a more comprehensive understanding about the QoL for people with schizophrenia rather than the use of either qualitative or quantitative findings alone would have allowed.^{21,29} An extensive literature search showed that no published articles combine quantitative and qualitative data to investigate the QoL for people with schizophrenia. Therefore, based on this literature review mixed-methods studies that investigate the QoL for people with schizophrenia are needed. Further studies that study the QoL for people with schizophrenia through the use of quantitative and qualitative data are needed to fill in the gaps identified in previous studies and to provide a comprehensive view of the QoL for people with schizophrenia who live in the community.

Conclusion

This paper provides a comprehensive picture of the research literature on the QoL for people with schizophrenia. Based on the literature review of studies investigating the socio-demographic characteristics associated with QoL, the results were inconsistent regarding the association between gender, educational level, and the QoL for people with schizophrenia. However, all the studies agreed that being employed, having a high income, having social support, living with family, and being married were related to better QoL. Studies measuring the QoL for people with schizophrenia internationally have revealed that QoL depends on specific factors related to the geographical area such as the availability of mental health facilities and services and traditional and cultural factors. The literature review identified the fact that all the studies

used only quantitative methods to measure the QoL for people with schizophrenia. Therefore, these studies reported quantity as opposed to including a qualitative view, which may have allowed individuals to expand on concepts from a subjective viewpoint. This represents a major limitation in the methodology reported in the literature. In addition, it was found that only one study has been undertaken in the Arab world and given the estimated number of individuals (and their families) who are affected by this disorder, it is imperative that further research in this area is conducted.

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المخلص

مقدمة: في السنوات الأخيرة كان هناك اهتمام متزايد في دراسة و تقييم نوعية الحياة للأشخاص الذين يعانون من مرض الفصام. **الأهداف:** الهدف من هذه الدراسة هو تقديم استعراض شامل للأبحاث المتعلقة بجودة حياة مرضى الفصام الذين يعيشون في المجتمع. **الطريقة:** تم إتباع طريقة تكاملية لمراجعة الدراسات المدرجة في مجال الصحة الطبية/ النفسية ضمن قاعدة البيانات ذات الصلة. **النتائج:** تمت مراجعة 21 دراسة ضمن ثلاث فئات مصنفة وفقاً لمواضيعها. ومواضيع هذه الفئات تضمنت: جودة الحياة والخصائص الاجتماعية والديموغرافية لدى مرضى الفصام، جودة حياة مرضى الفصام على الصعيد الدولي، و جودة حياة مرضى الفصام المتحدرين من خلفيات قومية مختلفة. وقد تم تحديد الفئات الثلاث أعلاه من خلال مراجعة الدراسات ذات الصلة. **الخلاصة:** تعتمد جودة حياة مرضى الفصام على عوامل كثيرة تتضمن الثقافية منها والاقتصادية وتجانسية المجتمع والدور التقليدي للأسرة والدعم الاجتماعي ومدى توفر خدمات الصحة النفسية. وقد تمت صياغة توصيات لدراسات مستقبلية في هذا المجال.

كلمات البحث: الفصام، جودة الحياة، مراجعة الأدبيات

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Psychiatric aspects of polygamy in Jordan

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الجوانب النفسية لتعدد الزوجات في الأردن
وليد سرحان

Abstract

Polygamy in the form of polygyny is practiced in Arab and Islamic countries including Jordan. The attitude towards polygamy in these countries varies between men and women, and sometimes from one country to another according to cultural believes, in a survey that included 200 men and 200 women in Jordan over 18 years of age, the difference in the attitude of both sexes was clear. The effect of polygamy on psychiatric morbidity was discussed, and the clinical experience in psychiatric consultation presented. Men, senior wives and junior wives reasons for consultations are discussed. With the conclusion that polygamy is a very complicated social phenomenon that needs to be taken in consideration by the mental health professional, as it could be a contributing factor in psychiatric morbidity.

Key words: Jordan, polygamy, psychiatry, attitude.

Declaration of interests: None.

Introduction

Polygamy exists in three specific forms: polygyny - wherein a man has multiple simultaneous wives, polyandry - wherein a woman has multiple simultaneous husbands; or group marriage - wherein the family unit consists of multiple husbands and multiple wives.¹ Historically, all three practices have been found, but polygyny is by far the most common², Confusion arises when the broad term "polygamy" is used when a specific form of polygamy is being referred to. Additionally, different countries may or may not include all forms in their Polygamy laws, the first form of polygyny wherein man is allowed up to four wives is the case in Jordan like most of the Arab and Islamic countries. In Islam, polygyny is allowed, with the specific limitation that a man can have up to four wives at any one time. The Qur'an clearly states that men who choose this route must deal with their wives justly. If the husband fears that he cannot deal with his wives justly, then he should marry only one.

Patterns of occurrence worldwide

According to the Ethnographic Atlas Codebook, of 1,231 societies noted, 186 were monogamous, 453 had occasional polygyny, 588 had more frequent polygyny, and 4 had polyandry³ at the same time, even within societies which allow polygyny, the actual practice of polygyny occurs relatively rarely. There are exceptions: in Senegal, for example, nearly 47 percent of marriages are multiple.⁴ To take on more than one wife often requires considerable resources: this may put polygamy beyond the means of the vast majority of people within those societies. Such appears the case in many traditional

Islamic societies, and in Imperial China. Within polygynous societies, multiple wives often become a status symbol denoting wealth and power^{5,6}.

Polygamous marriage is common in the Middle East, Africa, Asia, and the Pacific Islands, but is also known to occur in Europe, North America, and other Western societies⁷.

Accurate and current statistics on the prevalence of polygamy around the world are not available. In African countries, estimates range from 20% to 50% of all marriages, with higher rates reported among less educated husbands and wives, among Muslims, and among rural residents; however, in recent years, there has been an observed increase in the rates of polygamy among highly educated men who can afford a second wife^{8,9}. Chamie¹⁰ estimated that in Muslim countries, 2%–12% of all married men have more than one wife.

Regional attitude toward polygamy

Gallup's recent poll of nine predominantly Islamic countries included an extra battery of questions regarding social values in four of the countries: Saudi Arabia, Kuwait, Jordan and Lebanon¹¹. Among these questions were several relating to the institution of marriage: How do the residents of these four countries view the practices of polygamy and arranged marriage? To what extent do the perspectives of men and women in these societies differ? What differences exist between the perceptions of the Muslim majority in Lebanon and those of the Christian minority, for whom polygamy is forbidden?

The practice of polygamy remains the exception rather than the rule, even within the Arabian Peninsula itself

(Kuwait and Saudi Arabia). In none of the four countries does a majority of adults express personal agreement with polygamy. Nevertheless, there are dramatic differences in the views of men and women hold on this issue, particularly within Saudi Arabia and Kuwait.

Over half of all men in Kuwait (58%) say they personally agree with polygamy, as does a plurality of men in Saudi Arabia (47% agree, 38% disagree). In stark contrast, however, a majority of Kuwait's women (55%) say they disagree with the practice, as do nearly three fourths (72%) of women in Saudi Arabia. (Table 1)

Table 1-Attitudes toward Polygamy

		Agree	Disagree	Don't Know
Kuwait	Men	58%	30%	12%
	Women	37%	55%	8%
Saudi Arabia	Men	47%	38%	15%
	Women	14%	72%	14%
Jordan	Men	32%	61%	7%
	Women	12%	80%	8%
Lebanon	Men	17%	80%	3%
	Women	7%	91%	2%

The high level of Saudi women's disagreement with polygamy is especially noteworthy, given that the country is the spiritual heart of Islam and a society in which the role and conduct of women remains very strictly prescribed. In Saudi Arabia, moral strictures require that all respondents in face-to-face, in-home interviews be polled by interviewers of the same gender. Ironically, this may have increased the willingness of women and perhaps men as well to candidly express their own feelings on this issue.

In Jordan and Lebanon, strong majorities of both men and women disagree with polygamy, with approval rising only as high as one in three among Jordanian men. Lebanon is unique among these four societies in that it is not an overwhelmingly Muslim country; its makeup (and the Gallup sample) is 57% Muslim and 43% Christian. But Muslims and Christians within Lebanon both overwhelmingly disapprove of polygamy: 93% of Christians disagree with the practice, as do 80% of Muslims (see Table 2).

Table 2-Attitude toward Polygamy

	Agree	Disagree	Don't Know
Lebanese Muslims	17%	80%	3%
Lebanese Christians	5%	93%	2%

Polygamy in Jordan

Jordan is a country with a population of nearly six million. Some 98 percent are Arabs, with a few small communities of Circassians, Armenians, and Kurds; each of which has adapted to the Arab culture; about 96 percent of the population is Muslim. Approximately 70

percent of Jordan's population is urban; less than six percent of the rural population is nomadic or semi-nomadic.

Seven per cent of marriages in Jordan are polygamous marriages. Recent amendments require the first wife to

be informed of subsequent marriages, but this can happen after the marriage has already taken place ⁷ and two wives is the commonest type, the two wives may live in the same house or two different houses nearby or far apart from each other.

The attitude towards polygamy in a pilot survey we conducted in Jordan recently¹² on 200 men and 200 women over 18 years old, 95% of them were Muslims and 5% Christians, more than 60% of the sample reached

the education level more the secondary school and more than 50% were married, the survey revealed that 67% of women and 42% of men rejected polygamy, 71% of women and 42% of men think that polygamy has negative effect, 69% of women and 48% of men think that man cannot be fair as Islam demands, 68% of women and 48% of men support adding certain conditions to polygamy in sharia law (see Table 3).

Table 3-Attitude toward Polygamy in Jordan survey

	Women		Men	
	No.	%	No.	%
Age				
18 – 30	98	49%	100	50%
31 – 50	65	32.5%	77	38.5%
51 – 70	37	18.5%	23	11.5%
Sex				
	200	100%	200	100%
Religions				
Muslims	184	92%	197	98.5%
Christian	16	8%	3	1.5%
Education				
Less than secondary school	14	7%	18	9%
Secondary school	58	29%	40	20%
Diploma	22	11%	21	10.5%
First university degree	97	48.5%	110	55%
post graduate	9	4.5 %	11	5.5%
Social status				
Single	77	35.5%	89	44.5%
Married	113	56.5 %	108	54%
Divorced	9	4.5%	3	1.5%
Widower	7	3.5%.	0	0
What do you think of polygamy?				
I prefer it	9	4.5%	19	9.5%
I reject it	134	67%	84	42%
I accept it as it is legal in Islam	56	28%	80	40%
Excellent	1	0.5%	17	8.5%
Do you know families with polygamy?				
Yes	154	77%	177	88.5%

No	46	23%	23	11.5%
What is the effect of polygamy?				
Usually negative	143	71.5%	85	42.5%
Could be positive	32	16%	93	46.5%
I don't Know	25	12.5%	22	11%
Do you think man can be fair between his wives as Islam demanded?				
Yes	13	6.5%	55	27.5%
No	138	69%	96	48%
Not sure	49	24.5%	49	24.5%
Do you support adding conditions to the law allowing polygamy?				
Yes	136	68%	95	47.5%
No	35	17.5%	83	41.5%
Not sure	29	14.5%	11	5.5%

Psychiatric disorders in polygamous marriage

The literature from the region reveals that the difference between senior wives in polygamous marriages and wives in monogamous marriages with regard to family functioning, marital satisfaction, self-esteem and life satisfaction¹³. In primary health care in Palestinian Bedouin–Arab women from polygamous marriages who were being seen in primary health care centers, in this study senior wives reported lower self-esteem as compared to junior wives, and the senior wives reported poorer relationship with their husbands compared to their junior counterparts¹⁴, and in another study on Bedouin Arab women¹⁵. There was a greater prevalence of various symptoms among polygamous respondents' especially low self-esteem and loneliness. In another study in Syria on low-income women, the prevalence of psychiatric disorders was 55.6% and the predictors of women's mental health were: physical abuse, women's education, polygamy, residence, age and age of marriage, but women's illiteracy, polygamy and physical abuse were the strongest determinants of mental distress leading to worse outcome,¹⁶ and in Dubai the community psychiatric survey revealed high association of psychiatric morbidity in divorced, widowed and separated women, Polygamously married women and single parents¹⁷.

In contrast to the study from Saudi Arabia, that showed no difference in the prevalence of mental illness among

monogamous or the polygamous marriages¹⁸. Most probably the cultural acceptance of polygamy is more in Saudi Arabia than other societies in the region.

In Jordan, a study on the barriers to the diagnosis and treatment of depression in Jordan: A nationwide qualitative study, mentions Polygamy frequently as a cause of family strife leading to depression.¹⁹

A new comparison study of Psychological, Family Function Marital and Life Satisfaction of Polygamous and Monogamous Women in Jordan²⁰ revealed women from polygamous families experienced more problems in family functioning as well as more problems in their marital relations. Moreover, women from polygamous families reported low self-esteem and less satisfaction with life. In addition, women from polygamous families experienced more somatization, interpersonal sensitivity, depression, anxiety, hostility, paranoid ideation, psychoticism and their general severity index was higher, and also shows that Family structure was found to be a major predictor of family functioning, marital relationship, mental health symptomatology and low self-esteem. Specifically, it was demonstrated that women from polygamous families experienced more problems in family functioning and more marital problems compared to their monogamous counterparts. This has some support from the Egyptian study²¹, which claimed that the first wife in polygamous marriage is

affected psychologically and these women are also more likely to visit mental health practitioners.

Polygamy in clinical psychiatric practice in Jordan

There is no literature available on the exact prevalence of psychiatric disorders in polygamous families as compared to monogamous families, but the impression in clinical practice comes from different ways in which polygamy comes up in psychiatric practice.

In my clinical practice I see polygamy in different presentations:

Men

Men consult me on getting married to a second wife and discuss their views and wishes as well as worries. If they are planning a second marriage they are afraid of the reaction of the first wife and the children, and their fear that they may not be fair as Quran requested men to be. These men are either already under my care or consulting me for at the same time for this issue.

Men seek help after their second marriage because of various problems that have surfaced following this second marriage. They usually present with symptoms of depression and anxiety. Many report having regrets about the second marriage. It is also not uncommon to have sexual disorders such as lack of sexual desire or erectile dysfunction with both wives or just with the junior wife.

Senior wives

Women present with agitation and sometimes severe anger, including symptoms of anxiety and depression following the second marriage of the husband. Usually the woman tends to blame herself and reports very low self-esteem as this marriage represents her failure. She may become hostile towards the new wife or sometimes years after that succumb to depression and feelings of rejection and loneliness. Rarely the first wife would be the one to take the initiative to get her husband a second wife as she is infertile, but later on she starts feeling jealous as the husband is getting busy with his junior wife and her children, realizing the fact that although she was pushing for this marriage, but expecting herself to remain the favorable one and to take care of the new wife and the children, which is not always the case.

Junior wives:

Some women seek advice on getting married as a second wife, expressing their apprehension and hesitation, as

they feel it is not like being the only wife, but she is in love with this man and she never had the chance of marriage anyway. Sometimes the woman is worried that she will be damaging to the family of her beloved husband, or immediately after marriage when they feel uncomfortable with the husband coming to the house every other night and the problems created by the first wife and her children that could result in threats. Rarely have I seen the junior wife happily taking care of a senior wife with schizophrenia.

Discussion

The relationship between polygamy and psychiatric disorders is not well researched and it seems that the acceptance or rejection of polygamy by a certain culture is the determining factor rather than its legality. The survey of attitude and clinical practice supports the poor acceptance of polygamy even among the most conservative societies. From clinical experience, the attitude seems to be understandable, and even the differences between the Saudi study and the Gallop survey demonstrate differences in attitude and no difference in psychiatric morbidity, which is likely related to the changing societies within the region as a whole.

Conclusion

Polygamy is a very complicated social phenomenon in Jordan and Arab and Muslim countries that needs to be taken in consideration by the mental health professionals as it could be a contributing factor in psychiatric morbidity and may affect the prognosis of the psychiatric disorders. Also consultations related to polygamy are not rare and to be able to deal with such matters the professionals need to demonstrate more evidence-based practice.

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المخلص

تعدد الزواج وتحديداً تعدد الزوجات ممارسه متبعه في الدول العربية والاسلامية بما فيها الأردن، أما إتجاهات الناس نحو تعدد الزوجات في مختلف الدول فهي متفاوتة بين الرجال والنساء وكذلك من بلد لآخر، إعتماًداً على المعتقدات الثقافية في كل مجتمع. وفي مسح لمائتين من الرجال ومائتين من النساء فوق سن الثامنة عشر في الأردن ، كان هناك اختلاف واضح في المواقف بين الجنسين . تناقش الورقة أثر تعدد الزوجات النفسي، والخبرة السريرييه في هذا المجال، وتناقش موقف الرجل والزوجة الأولى و الثانية وأسباب الإستشارات و يتم مناقشتها، وبالخلاصة فإن تعدد الزوجات موضوع إجتماعي معقد لا بد من اخذه في الإعتبار من قبل العاملين في الصحة النفسية كونه قد يساهم في حدوث الإصابات النفسية .

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The prevalence of mental health symptoms among outpatients in the United Arab Emirates

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انتشار أعراض الصحة العقلية بين المرضى الخارجيين في دولة الإمارات العربية المتحدة
جاين لاونتون، صابرينا شولتي

Abstract

Objectives: Mental health research remains limited in the Arab world, leaving our understanding of the nature and extent of psychological problems inadequate. Further information is required to address treatment needs most effectively. Therefore, the purpose of this study was to assess the nature and extent of mental health symptoms such as depression, anxiety, PTSD, self-esteem, stress, alcohol use and eating attitudes as well as the level of social support in a sample of outpatients in the United Arab Emirates. **Methods:** Questionnaires were completed by 49 participants attending mental health services in Dubai. In addition to demographic data, standardized screens were used to measure anxiety, depression, PTSD, self-esteem, social support, perceived stress, alcohol use and eating attitudes. **Results:** Results suggested elevated levels of anxiety, depression, perceived stress, low self-esteem and PTSD symptoms. PTSD levels in particular were higher than expected. Anxiety and depression were correlated with higher PTSD and poor self-esteem. Lower self-esteem was linked to high perceived stress. Regression analysis revealed perceived stress was a significant predictor of PTSD. **Conclusions:** This study provides information on the psychological needs of a Dubai-based sample. Findings indicate potentially high levels of undiagnosed PTSD or a vulnerability to PTSD in a mental health non-trauma specific population. The research is limited by the small sample size and further large scale studies are required in mental health outpatient samples.

Key words: Arab, mental health, PTSD, UAE

Declaration of interest: None

Introduction

Until now, mental health research in the United Arab Emirates (UAE) has been limited with little known about the nature, extent and treatment of mental health in this part of the world¹. As a result, service providers remain uncertain about the scope of mental illnesses in the UAE, locally adopted best-practice models and characteristics of high-risk groups. This lack of research is not limited to the UAE and three recent reviews reported a shortage of published research in the Arab world in general^{2,3,4}. Closer examination of existing studies in the UAE reveals that most studies have explored non-clinical populations such as students^{5,6} or the general community^{7,8}. Studies examining clinical samples have tended to recruit from primary health care rather than mental health settings, possibly due to the primary health

care sector within the UAE historically handling mental health also^{9,10}. A systematic review of studies in the Arab region utilizing clinical or non-clinical samples reported a rate of 10% for overall anxiety¹¹. The focus of this study is a clinical sample within the UAE and a detailed literature search by the current authors revealed only three other UAE studies in which clients attending psychiatric services have been investigated^{12,13,14}. In all three studies, UAE nationals and non-nationals were recruited from mental health in- or outpatient clinics in Abu Dhabi. In the earliest study by El-Rufaie, 96 clients were assessed for the presence of any psychiatric disorder¹². Affective disorders were found to be the most common diagnoses with 38% suffering from neurotic depression, 21% indicating anxiety-depression states and 10% anxiety states only. In the second study,

Daradkeh reported psychiatric diagnoses of 312 hospital patients¹⁴. Here again, mood disorders were the most frequently counted diagnostic category with 20% of the sample suffering from unipolar depression and 9% from bipolar disorder. Fourteen years later, results from the third UAE study show a similar clinical picture: Salem et al.¹³ assessed 106 psychiatric outpatients and reported that two-thirds (65%) suffered from affective disorders compared to 23% who were classified with psychotic disorders. Overall, the studies' results reflect international figures that identify affective disorders as one of the most commonly experienced mental illnesses globally. A similar pattern was shown in other UAE samples drawn from primary health care settings, where anxiety and depression consistently represented the largest disorder groups^{e.g. 15, 16}.

The above findings provide a first insight into the profile of mental illness in the UAE. However, the number of available studies is very small ($N = 3$) and samples were recruited from one emirate only. It is vital to address this lack of research in the UAE in order to gain a better understanding of mental health problems in this multicultural and rapidly developing environment^{4, 8}. Therefore, the objectives of the current study are to investigate the prevalence of mental health symptoms in a Dubai-based outpatient sample. Moreover, the study intends to provide practitioners and other professionals in the field with locally derived data that is vital for the evaluation and further development of mental health treatment options.

Methods

The study was cross-sectional in design and recruited adult (≥ 18 years old) clients from an outpatient mental health centre and an outreach community counselor located in Dubai. Those who agreed to participate completed a set of validated questionnaires covering a range of mental health related aspects. All questionnaires were made available in Arabic and English. Scales not previously accessible in Arabic were translated into Arabic and then back to English by native Arabic

speakers. Participants recruited by the community counselor completed questionnaires via online software, and paper copies were completed within the mental health service. Ethical approval was obtained from the American University of Sharjah ethics committee.

Procedure

Staff (a mixture of psychologists, counselors and psychiatrists) working at the mental health centre circulated questionnaires to clients between November 2010 and June 2011. Clients were recruited by the clinician they had seen at the clinic or by the outreach counselor who contacted clients online. All questionnaires were completed and returned anonymously. A total of 117 questionnaires were distributed with 102 of these via the mental health centre and 15 via the community counselor. 49 (42%) completed questionnaires were returned with a response rate of 42% ($n = 43$) for the mental health center and 40% ($n = 6$) for online recruitment.

Measures

Demographic data was collected from participants along with a set of standardized measures. The primary selection criteria for scales concerned appropriate standardization and psychometric robustness (e.g. $\alpha > 0.7$) for both English and Arabic versions, and cultural appropriateness.

The Hospital Anxiety and Depression Scale (HADS)¹⁷ is a 14-item questionnaire measuring levels of anxiety and depression. Participants rate each item 0-3 depending on how frequently they experience a given symptom with a higher score indicating greater anxiety or depression. Cutoffs have been suggested for severity of anxiety or depression with scores of 8-10 suggesting a mild level, 11-15 moderate and 16 indicating a severe level. Cronbach's alpha values of $\alpha \geq .70$ have been reported in both English and Arabic^{12, 18}.

The Eating Attitude Test (EAT-40)¹⁹ is a 40-item questionnaire measuring abnormal eating attitudes and behaviors. It has been validated across all eating disorder

diagnoses using either a cutoff value of 30 or as a continuous measure, as it is used in the current study. Participants rate items 0-3 with a total range of 0-120; a higher score indicates higher rates of abnormal symptomology. This study has a mixed gender sample and so one question has been removed ('I have regular menstrual periods') leaving a total possible score range of 0-117. Good psychometric properties have been reported in English and Arabic^{19, 20}.

The Alcohol Use Disorders Identification Test (AUDIT)²¹ is a 10-item questionnaire measuring alcohol consumption with a higher score indicating a higher level of alcohol consumption and related problems. A clinical cutoff point of 8 has been suggested with scores in the range of 8-15 suggesting medium alcohol problems and a score over 16 indicating a high level of alcohol problems^{22 cited in 25}. Adequate reliability has been reported in both Arabic and English versions with Cronbach's alpha values of $\alpha \geq .80$ ^{23, 24}.

The Post-Traumatic Stress Civilian Checklist (PCL-C)²⁵ is a 17-item questionnaire measuring trauma as it corresponds to the DSM-IV²⁶ diagnostic criteria for Post-Traumatic Stress Disorder (PTSD). Items are rated from 1-5 with a higher score indicating a higher level of PTSD symptoms. Scores can also be examined to determine the presence of PTSD according to the DSM-IV criteria. A combined scoring method using a cutoff and the endorsement of DSM-IV criteria is considered optimal²⁷. Recommended cutoff values vary depending on the sample with 30 being suggested for the general population and 44 for trauma samples^{28, 29}. Excellent psychometric properties have been reported in both English and Arabic^{30, 31}.

The Rosenberg Self-Esteem Scale (SES)³² is a 10-item scale measuring self-esteem using a 4-point Likert-scale (0-3). The total score ranges from 0-30 with a lower score indicating poorer self-esteem. Previous studies have found it to be a reliable measure in both English and Arabic^{33, 34}.

The Perceived Stress Scale (PSS)³⁵ is a 14-item questionnaire measuring the subjective perception of stress. Participants rate each item on a 5-point Likert-scale with a possible score range of 14-70 with a higher score indicating a higher level of perceived stress. Cronbach's alpha values of $\geq .80$ have been reported for English and Arabic versions³⁶.

The Multidimensional Scale of Perceived Social Support (MSPSS)³⁷ is a 12-item questionnaire measuring the level of social support from three sources: friends, significant other and family. Several versions of the MSPSS have been used with the Likert scale varying from a 3-7 point scale and good psychometric properties e.g.³⁸.

Data Analysis

Statistical analyses were performed using SPSS. Chi-square tests were applied for categorical data and t-tests for comparing means. Stepwise linear and logistic regression analyses were used to examine the relative influence of pre-selected independent variables on clients' PTSD symptom severity and diagnostic status. Scattergrams were generated for continuous predictors and the dependent variable to examine linearity and correlation matrixes were produced for all variables used in the regressions to check for multi-collinearity.

Results

Of the 49 participants, 69% were female ($n = 34$) with a mean age of 36.8 years (standard deviation [SD] = 8.8). In total, 57% ($n = 28$) of participants were married, 33% ($n = 16$) stated they had never married, and the remaining 8% ($n = 4$) were either divorced or separated. Participants lived in four of the seven emirates with the vast majority residing in Dubai (84%, $n = 41$). The nationalities of participants varied widely with 39% ($n = 19$) being European, 14% ($n = 7$) Middle Eastern, 12% ($n = 6$) North American, 12% ($n = 6$) African, 6% ($n = 3$) South Asian, 6% ($n = 3$) Asia-Pacific, 4% ($n = 2$) South American and 4% ($n = 2$) stated a dual nationality. One participant did not report their nationality and another

failed to state their marital status. The majority of participants (69%, n = 34) had attended at least four therapy sessions compared to less than one-third (31%, n

= 15) who had attended up to three appointments. There was no significant difference between the two recruitment methods.

Table 1: Internal reliability (α), means and standard deviations (SD), and intercorrelations (N=49)

	α	Range	Mean	SD	1.	2.	3.	4.	5.	6.	7.
1.HADS anxiety	0.75	2-20	10.08	3.86							
2.HADS depression	0.74	1-17	8.24	3.69	.424**						
3. PCL-C	0.91	21-84	44.79	13.06	.511**	.622**					
4. PSS	0.81	28-62	46.25	7.13	.469**	.728**	.707**				
5. SES	0.90	1-29	15.78	5.67	.465**	-.444**	-.446**	-.514**			
6. AUDIT	0.94	1-30	7.95	8.67	.009	-.051	.064	-.103	-.113		
7. EAT-40	0.82	1-58	15.27	10.87	.123	.205	.237	.266	-.135	-.297	
8. MSPSS	0.87	28.5-84	59.92	12.19	.012	-.340*	-.215	-.210	.327*	-.272	.209

** $p < 0.01$ level (2-tailed); * $p < 0.05$ level (2-tailed)

Notes: Log transformations have been carried out with the AUDIT and EAT-40 to normalize scale distribution.

The mean values [M], SDs, range and Cronbach’s alpha values of all study instruments and correlations between variables can be seen in Table 1. On average the sample scored within a mild clinical range on the HADS for both anxiety and depression (mean scores = 10.1 and 8.2, respectively). More specifically, three quarters of clients (75.5%, n = 37) reached the clinically relevant threshold score for anxiety symptom severity (total score of > 8). Of these, 35.1% of participants (n = 13) suffered from mild anxiety compared to 59.5% (n = 22) with moderate and 5.4% (n = 2) with severe symptomology. A lower proportion of the sample reported to experience clinically significant symptoms of depression (57.1%, n = 28). Of this subsample, two-thirds indicated mild depression levels (67.9%, n = 19) compared to 28.6% (n = 8) with moderate and one client with severe symptoms. In terms of co-morbidity, 51% (n = 25) suffered from both mild anxiety and depressive symptoms.

Overall, three quarters (77.6%, n = 38) of the sample reported drinking alcohol. Among this subsample, a mean AUDIT alcohol score of 7.95 was found which suggests a medium level of alcohol problems. However, 21.1% (n = 8) indicated high levels of problematic drinking. An independent sample t-test revealed no significant demographic or mental health-related differences between those who drank alcohol and those who did not.

Self-esteem levels were rather low (M = 15.8), but attitudes towards eating (EAT-40) were within a normal range (only four clients reached the clinical threshold cutoff score). In contrast, high mean PTSD (PCL-C; M = 44.8) and perceived stress (PSS; M = 46.3) scores were shown with 51% of the total sample meeting PTSD DSM-IV criteria when a cutoff of 30 was imposed¹⁹. To minimize false positives a higher cutoff of 44 (as used by Blanchard et al.³⁰ in a trauma sample) was also applied with 42.9% still meeting PTSD DSM-IV criteria.

Non-parametric correlational analyses showed no effect of gender, nationality or marital status on any of the mental health variables. However, there was an effect of employment status with those who were employed (n = 29) reporting higher self-esteem than those who were not employed (n = 19) (17.6 vs. 12.7; $t(46) = 3.21, p = 0.002$).

Parametric correlations indicated that anxiety and depression were both significantly associated with higher levels of PTSD and with lower self-esteem (see Table 1). Lower self-esteem was also associated with a higher level of perceived stress ($r = -.514, p < 0.01$). In addition to the associations with anxiety and depression, a higher level of PTSD symptomology was associated with higher levels of perceived stress and lower self-esteem ($r = -.707$ and $r = -.446, p < 0.01$). Social support was associated with better mental health as it was positively

correlated with lower levels of depression ($r = -.340, p < 0.01$) and higher self-esteem ($r = -.444, p < 0.01$).

Due to the high PTSD mean and significant correlations with anxiety, depression, perceived stress and self-esteem, PTSD was explored in more detail. Chi-squared tests showed no effect of gender, nationality or marital status on PTSD presence and independent t-tests on the remaining mental health variables found no further effects.

Additionally, regression analyses were conducted to examine the relative influence of several other mental health variables on clients' PTSD symptom severity and diagnostic status. As a first step, the PTSD scale was used as a continuous variable and therefore a linear regression was modeled. Bivariate regression analyses were conducted to identify variables that are significantly correlated with the dependent variable (i.e. $p < 0.05$). As a result, anxiety, depression, perceived stress levels and self-esteem (all $p < 0.001$) were selected as independent variables for the stepwise regression. The final model comprised one predictor, namely perceived stress levels ($b = 9.651, p < 0.001$; Confidence Interval [CI] = 6.79-12.52). That is, higher perceived stress levels significantly predicted higher scores on the PTSD scale. The model explained 48.9% (adjusted R^2) of the variance in clients' PTSD symptom severity ratings.

In the second step, two logistic regressions were carried out using dichotomous PTSD outcome variables (i.e. positive vs. negative PTSD screening based on DSM-IV symptom criteria and a mean cutoff score of 30 or 44). Again, only variables significantly correlated with the outcome variable were used for the stepwise logistic regression. This included depression, perceived stress levels and eating attitudes (all $p < 0.05$) for model 1, in which the diagnostic PTSD cutoff score of 30 was employed, and the same set plus self-esteem ($p = 0.016$) for model 2 with the cutoff being set at 44. In both regression models, only perceived stress levels predicted clients' PTSD diagnostic status: Model 1 showed that

clients with higher perceived stress levels were significantly more likely to screen positively for PTSD than participants with lower stress levels (odds ratio [OR] 4.05, $p = 0.004$, 95% CI 1.6-10.5). The variable perceived stress level remained a significant predictor of PTSD diagnosis in the same direction when using a more conservative cutoff of 44 (Model 2: OR 2.79, $p = 0.010$, CI 1.3-6.1).

Discussion

The aim of this study was to assess the prevalence of mental health symptoms in a mental health outpatient sample in the UAE. Many of the variables explored have not been previously studied in community-based mental health care in the UAE. In general the sample demonstrated a number of mental health problems with clinical levels of anxiety, depression, alcohol problems and PTSD. Poor self-esteem and high perceived stress were also reported. Comparison with studies conducted in similar settings is hindered due to the paucity of research both in the UAE and the extended Arab region and caution is therefore required when examining studies from other areas of the world and different settings as the findings are not necessarily transferable.

In looking at other Arab mental health samples, anxiety appears to be elevated in the current sample. Studies carried out in Jordan and Saudi Arabia reported much lower figures (ranging from 15% to 28% compared to 76% in the present study)^{39, 40}. The authors of the Jordan-based study also reported a lower comorbidity figure for anxiety and depression than found in the present sample (26% compared to 51%). Primary care studies (i.e. non-psychiatric samples) within the UAE have reported lower figures still for anxiety, depression and comorbidity of the two, e.g.¹² but have identified both anxiety and depression as the most commonly reported mental illness. The fact that high levels of anxiety and depression were observed in this mental health sample is consistent with primary care findings

from the UAE that both anxiety and depression are common mental health difficulties.

The level of problematic alcohol use in the current sample is lower than reported in a UAE male prison population²⁴ but higher than that reported in a Bahrain-based study on suicides⁴¹ as well as higher than the level found in a USA outpatient mental health clinic⁴². Regarding the latter, it is unclear why the level is higher in our sample, particularly as alcohol is less easily available within an Arab society. The research carried out in the USA was primarily concerned with looking at the factorial structure of the AUDIT and other factors, such as polysubstance use, were not measured. It is possible that participants used alcohol in addition to other substances, however within UAE society substances are not as accessible and people may use alcohol in the absence of other substances being available. It is also a surprise that alcohol was not correlated with any emotional problem, particularly depression, as the two are often linked⁴³. Many studies have reported alcohol as a maladaptive coping strategy and, despite a medium level of alcohol problems being reported in this sample, the findings showed no correlations with any other variable. It is possible alcohol is being used to manage other, unrecorded, difficulties but further investigation of the role of alcohol is required.

Self-esteem and perceived stress levels have not previously been explored in an Arab, or a specific UAE, mental health population. Studies exploring self-esteem in Arab students and in a USA outpatient mental health setting have all reported higher levels of self-esteem than found in the present study^{33, 34, 44}. Perceived stress levels in the present study are also higher than those reported in a Syrian dental clinic and community samples outside the Middle East^{36, 45}. It is possible that poor self-esteem and stress levels are precursors to other mental health problems⁴⁶ and indeed both variables were associated with higher levels of anxiety, depression and PTSD. Eating attitudes were not indicative of disordered eating

and were more in line with levels seen in normal controls (in the USA)^{19, 47}. The level of reported social support was high and, consistent with existing research; the higher the level of social support the less mental health and well-being problems were reported. Social support has consistently been found to be a protective factor in depression and other emotional problems^{48, 49}. Although this sample is mixed in nationality, Arab societies tend to focus on the social collective rather than the individual and this may explain the higher level of social support⁵⁰. PTSD levels were notably higher than typically seen in primary care⁵¹ and only marginally lower than the level reported in severe mental illness settings (USA)⁵². The presence of high levels of PTSD is of interest particularly as this was not a specific trauma population. Regions in which trauma may be more prevalent than the general population due to frequent violence such as Iraq and Lebanon surprisingly report lower levels of PTSD than found in this sample^{53, 54}. Although participants' diagnosis at treatment intake (if applicable) was not recorded in this study, the findings suggest that there may be high levels of PTSD, potentially high levels of undiagnosed PTSD. The mean score is higher than means reported in primary care medical settings⁵¹ and appears to be more in line with means reported in both English-speaking and Arabic-speaking specific trauma populations^{31, 55}. The higher level of PTSD symptomology was consistently predicted by the perceived level of stress; a finding similar to that of another study⁵⁶ which also showed perceived stress⁵⁷ to be a predictor of PTSD among civilians exposed to terrorist attacks in Israel. It is possible that this link can be explained by the role of appraisals in the development and maintenance of PTSD. The Perceived Stress Scale used in the current study examines to what extent a person finds an event uncontrollable, unpredictable and overwhelming and these appraisals have been cited as playing an important role in cognitive models of PTSD and subsequent coping styles⁵⁸. For example, someone who perceives an event to be out of their control may be

more likely to demonstrate an avoidant coping style, a maintaining factor in PTSD. It is not known in this study whether these appraisals are pre-trauma or post-trauma as this was not recorded, however some studies have found that pre-trauma negative appraisals can predict PTSD and that PTSD may be linked to the confirmation of preexisting negative beliefs⁵⁹. It is possible therefore that this sample demonstrates certain appraisals which make them vulnerable to PTSD.

In considering the PTSD findings, the wider concept of trauma should be acknowledged and the extent to which this differs cross-culturally. In response to a trauma, people attempt to make sense of the event and culture will influence any interpretation or meaning about the event. The measure used in the present study focused on three specific areas, in line with the DSM-IV, to determine PTSD: re-experiencing of symptoms, avoidance/numbing and hyperarousal. While these symptoms may be present in many cultures, the expression of these, and other symptoms, should be considered. A review of the validity of DSM-IV-TR across cultures has found that some symptoms do appear to be universal such as flashbacks, however this does not mean the response is exactly the same and there remains cross-cultural differences in post-trauma responses⁶⁰. For example, some cultures appear to have a higher rate of psychosomatic symptoms than observed in western cultures and the meaning of a trauma may also differ.

Although it may have been expected for nationality to have some bearing on PTSD as some countries have experienced many traumatic events such as war in recent years, within the UAE this can be explained by people not being able to acquire Emirati nationality. Many of the present sample may identify themselves as one nationality, e.g. Afghan, but may have spent their entire life in the UAE. Further studies conducted in the UAE may also want to consider length of time living within/outside the UAE as a variable of interest. A number of limitations in the current study need to be

acknowledged. The study was limited by the small sample size and the cross-sectional design, which limits the generalizability of findings and the range of appropriate analyses. The obstacles in achieving a large sample size were primarily a difficulty in recruiting additional clinics and ensuring the distribution of questionnaires by staff.

Since it was not possible to carry out in-depth diagnostic interviews with clients, the results rely on self-report measures only. This approach carries the risk of desirability bias as well as the disadvantage of low diagnostic specificity of measures used. Hence, the psychiatric diagnoses reported should be understood as indicative rather than definitive. It is also of note that 69% of the sample had attended at least four therapy sessions and the symptom level reported may well be lower than at the onset of therapy.

We were not able to give the PCL-C (measuring PTSD) to people who had specifically experienced a traumatic event (thereby satisfying DSM-IV Criterion A) and their interpretation of the wording 'stress experience' may have varied and hence affected the results.

Conclusions

Overall the study has found elevated levels of a number of mental health problems, many of which have not been previously explored in a mental health population within the UAE. Anxiety, depression, stress and PTSD are all at higher levels than found in other studies. Alcohol also may be a problematic issue for some individuals. This information is highly important for the development of mental health treatment in the UAE so that it adequately meets patient needs. However, the study is limited by the lack of available data for comparison and, as a small sample; further research is required to explore the extent of mental health problems in a larger UAE sample. With this information clinicians and mental health services may have a more detailed picture of the mental health needs of this population.

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ملخص

الأهداف: لا تزال بحوث الصحة العقلية محدودة في العالم العربي مما يجعلنا نجهل طبيعة المشاكل النفسية ونطاقها، الأمر الذي يستدعي الحصول على مزيد من المعلومات للتعامل بطريقة أكثر فعالية مع الاحتياجات العلاجية. ولهذا، كان الهدف من هذه الدراسة هو تقييم طبيعة ونطاق أعراض الصحة العقلية مثل الاكتئاب والقلق واضطراب ما بعد الصدمة واحترام الذات والإجهاد وتناول الكحوليات وسلوكيات الأكل بالإضافة إلى مستوى الدعم الاجتماعي في عينة من مرضى الخارجى "العيادات الخارجية" في دولة الإمارات العربية المتحدة. **الوسائل:** شارك في ملء هذا الاستبيان 49 مريض ممن يحصلون على خدمات الصحة العقلية في دبي. كما تم الاستعانة أيضاً بالبيانات الديموغرافية (السكانية) ومعايير القياس لقياس القلق والاكتئاب واضطراب ما بعد الصدمة واحترام الذات والدعم الاجتماعي والتوتر المحسوس وتناول الكحوليات وسلوكيات الأكل. **النتائج:** أشارت النتائج إلى ارتفاع مستويات القلق والاكتئاب والتوتر المحسوس وقلة احترام الذات وأعراض اضطراب ما بعد الصدمة، لاسيما أن مستوى الأخيرة على وجه التحديد كان أعلى بكثير من المتوقع. كما كان القلق والاكتئاب مرتبطين بالمستويات المرتفعة من اضطراب ما بعد الصدمة وقلة احترام الذات. وقد أشارت النتائج أيضاً إلى ارتباط قلة احترام الذات بالتوتر المحسوس. كما أظهر تحليل الانحدار أن التوتر المحسوس كان مُنبأً مهماً باضطراب ما بعد الصدمة. **الاستنتاجات:** تقدّم هذه الدراسة المعلومات الخاصة بالاحتياجات النفسية التي تم التعرف عليها من خلال عينة من المرضى من إمارة دبي. فقد أشارت النتائج إلى ارتفاع مستويات عدم تشخيص اضطراب ما بعد الصدمة أو إمكانية التعرض لاضطراب ما بعد الصدمة في مجموعة من مرضى الصحة العقلية العامة. اقتصر البحث على عينة صغيرة وبالتالي فهناك حاجة ماسة لإجراء دراسات على نطاقات أوسع لمزيد من حالات وعينات مرضى الصحة العقلية.

الكلمات الأساسية: العرب، الصحة العقلية، اضطراب ما بعد الصدمة، دولة الإمارات العربية المتحدة.

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Cross-Sibling Attachment Styles and Marital Satisfaction among Married Lebanese

SouhaBawab and Shahé S. Kazarian

أنماط التعلق مع الإخوة من الجنس الآخر والرضا الزوجي بين الأزواج اللبنانيين
سهى بواب وشاهي كازاريان

Abstract

Objectives: The aim of this study was to examine the two-factor model of romantic relationships and to evaluate the relation of four attachment derivatives (secure, dismissive, preoccupied and fearful) to marital satisfaction and sociodemographic factors. **Method:** A total of 201 Lebanese married adults rated their attachment styles to a favorite cross-sibling on the Arabic Relationship Questionnaire (Arabic RQ) and their marital satisfaction on the Arabic Quality Marriage Index (QMI). The factor structure of the Arabic RQ and the intercorrelations of the four attachment styles were examined, as were their relation to marital satisfaction and the demographic factors of age, sex, education, and religion. **Results:** Overall marital satisfaction was positively related to secure attachment ($r = .18, p < .02$) and negatively correlated with fearful attachment ($r = -.22, p < .003$). Sex, education and religion were not related to cross-sibling attachment styles, but age was significantly correlated with dismissing attachment, older Lebanese reporting higher dismissing attachment than younger Lebanese adults. **Conclusion:** While secure and fearful attachment styles are associated with marital satisfaction, the Western-grounded two-factor model of romantic relationships requires rethinking in the Lebanese context.

Key words: secure attachment, dismissing attachment, preoccupied attachment, fearful attachment, marital satisfaction, Lebanese.

Declaration of interest: None

Introduction

Adult attachment styles are individual differences in the regulation of emotion and behavior in social relationships. As cognitive-emotional attitudes or internal working models of self and other, adult attachment styles are rooted in early childhood emotional experiences with attachment figures and are closely connected to adults' feelings toward themselves and their relationships with significant others^{1,2}. Responsive and warm attachment figures in childhood tend to engender secure bonding between children and parents and invoke positive internal working models of self and other whereas insensitive or hostile attachment figures engender insecure attachments and give rise to negative internal working models of self and/or other^{3,4}.

Adult attachment styles have been related to romantic love and sexual relationships⁵. Bartholomew and Horowitz⁴ have described a two-factor model of

romantic attachment in which the internal working models of self and other are assumed to be independent and that in combination invoke four styles of adult romantic attachment. Individuals who have a secure attachment style in romantic relationships maintain positive models of both self (they see themselves as worthy of love) and other (they highly value others); individuals who have a preoccupied attachment style maintain a negative view of self and a positive view of other; those who have a dismissing attachment style maintain a positive view of self but a negative view of other; and finally people who have a fearful attachment style maintain negative models of both self and other. Based on their two-factor model, Bartholomew and Horowitz⁴ have developed a short measure, the Relationship Questionnaire (RQ), to assess the four attachment styles and their relationship to interpersonal and marital satisfaction. Overall, RQ based secure

attachment scores positively correlate with marital satisfaction whereas the remaining attachment styles negatively correlate with marital satisfaction⁶.

In the present study, an Arabic translation of the Relationship Questionnaire was used to examine the underlying assumptions of the two-factor model of romantic relationships in Lebanon, a non-western context, and to evaluate cross-sibling attachment styles in relation to marital satisfaction and socio-demographic factors. We were motivated by three factors for undertaking the study. First, the two-factor model of the RQ is embedded in the Western view of the autonomous self, and as such it assumes the independence of the working model of the self and the universality of the two-factor working model across cultures⁷. The underlying assumption of the universality of the independence of the working models of self and other posited by the two factor model of romantic attachment can be contested theoretically and empirically in that the self in non-Western collectivist cultures is construed as interdependent, raising the possibility that the working models of self and other in such contexts may be blurred rather than distinct as in individualist cultures⁸. In the present study, we expected the RQ to show a one factor solution rather than a two-factor solution as predicted by the two-factor model and as empirically supported in Western European and North American samples⁷ because of the interdependence of self and other in the case of Lebanese. Considering the Lebanese view of the self as an extension of the other, we also expected working models of self and other to correlate with each other rather than show an orthogonal relationship as postulated by the two-factor-theory. While we expected secure and fearful attachments which are set in diametrically opposite positions vis-à-vis self and other by the two-dimensional model to relate negatively as in Western European and North American samples^{4,7}, we hypothesized a positive rather than a negative relationship between preoccupied attachment (negative view of self and positive view of other) and dismissing

attachment (positive view of self and negative view of other) because of the interdependence of self and other in the Lebanese context.

The second reason for undertaking the present study is that the effects of sibling attachments on marital relationships have taken a back seat to attachment theory and research. While the life-span perspective to attachment styles has been focused on parent-child or mother child bonding, the importance of siblings as attachment figures, and cross-sibling relationships as prototypes for later romantic relationships, have been implicit postulates of attachment theory^{9,10}. Adult attachment theory posits that adults show patterns of attachment to their romantic partners similar to the patterns of attachment that children have with their parents. It is also conceivable that adults show patterns of attachment to their romantic partners similar to the patterns of attachment that children have with their cross-siblings.

Research has confirmed that siblings form attachment bonds and serve as attachment figures for each other^{11,12,13}. Sibling relations have been also found to meet “the strict criteria used to define full-blown attachments”, and in some cases siblings represented the primary attachment figures¹⁴. “In later childhood, adolescence, and adulthood, a wider variety of relationship partners can serve as attachment figures including siblings, other relatives, familiar coworkers, teachers or coaches, close friends, and romantic partners” (Bowlby, 1969,1982, cited by¹⁵, p18). In psychoanalytic literature, it is suggested that adult siblings serve as models for each other¹⁶; more specifically, along with the mother-child relationship, Kohut (1971), claims (cited by¹⁶, p89) that experiences with siblings “can be a major co-organizer” of the child’s psychic experiences. Sibling relationships give rise to intrapsychic representations that result in adaptive or defensive attachment and behaviors¹⁷. Therefore, individuals come to anticipate interpersonal outcomes, through the internalized views of

the self in relation to significant others, which in and of itself governs their emotions and behaviors¹⁷. Similarly, Mones¹⁸ explains:

Processes of power, gender identity, competition, cooperation, affection, proximity-distance, communication, and empathy are regularly negotiated between and among brothers and sisters. These same skills and competencies are those that are critical in our marital interactions. The degree to which these processes are negotiated between partners often determines the fate of a marriage.

Mones¹⁸ goes as far as calling the sibling experiences as the learning laboratory for marital interactions. Accordingly, “the development of identity, the deepening of the capacity to endure frustration and fluctuation in intimate relationships, the growth of the ability to love and empathize, to be faithful and trusting, all stem” from one’s internalized experiences with those upon whom one depends, including siblings (¹⁹, p30). In psychoanalytic literature, attending to sibling transference within the settings of couples therapy¹⁸ or individual therapy for people with adult relationship issues²⁰ has been pushed forth but remains greatly lacking in research and practice¹⁸.

In the present study, it was postulated that attachment styles that are similar to attachment patterns adults have with their cross-siblings contribute to marital satisfaction, in a manner similar to the contribution of attachment styles that follow parent-child attachment patterns. As such, the relation of cross-sibling attachment styles to marital satisfaction was examined in the Lebanese context. It was hypothesized that secure cross-sibling attachment will correlate positively with marital satisfaction whereas the three insecure attachment styles will correlate negatively with marital satisfaction. Past research on sibling relationships in Lebanon and the Arab Middle East has been almost nonexistent²¹, with a few exceptions such as Joseph’s^{22,23} and El-Shamy’s^{24,25} work. For example, Joseph^{22,23}, using an ethnographic approach, has described sibling roles, expectations, and

brother-sister bonding. According to Joseph²², the brother-sister relationship in the Lebanese context is distinguished from any other dyad in the family. The author found that cross-siblings in Lebanon shape each other’s masculinity and femininity, idealize and romanticize each other, and set standards for judging potential spouses for one another. She argues that men and women expect their spouses to live up to their cross-siblings’ idealized images.

A third reason for undertaking the present study was the paucity of research on attachment styles in the Arab Middle East, in contrast to the abundant Western literature on the topic in the past three decades. Our literature search on the topic revealed two studies on the RQ in the Arab Middle East^{7,26}. Al Tamimi et al²⁶ used a modified Arabic translation of the RQ in Saudi Arabia in that RQ items were 5-point ratings of husband/wives. Schmitt et al⁷, on the other hand, used the original English version of the RQ in a sample of Lebanese college students and an Arabic version of the RQ in a sample of Jordanian college students. Even though Schmitt et al⁷ did not report the specific factor analysis results of the RQ for their Lebanese and Jordanians samples, they showed negative correlations between secure and fearful attachment for both Lebanese and Jordanian samples, findings which were expected, and insignificant correlations between preoccupied and dismissing attachment styles, findings which were inconsistent with predictions from the two-factor model of romantic attachment.

In the present study, a Lebanese Arabic translation of the RQ was used with married Lebanese in which the original 7-point rating scale was maintained. The psychometric properties of the Arabic RQ in the form of factor structure and relation to marital satisfaction were examined, as were the relations of the four attachment styles to the sociodemographic factors of age, sex, education, and religion.

Method

Participants:

A convenient sample comprising a total of 201 married adults in an urban community in Lebanon participated in the study. Participants were 50.5% male (n=98) and 49.5% female (n=100) with a mean age of 37.5 years (n=170, SD=11.69, range 18-75). Participants were 44.8% college/university educated, 43.2% high school educated, and 12% below high school educated. In terms of religion (n=183), the majority of the participants were Christian (38.8%), followed by Sunni (34.4%), Shiite (21.4%) and other (3.2%).

In view of the sensitivity of the Lebanese to religion, a significant number did not respond to this item causing the total to fall short of 100%.

Instrumentation

The Relationship Questionnaire⁴ (RQ) and the Quality Marriage Index²⁷ (QMI) were translated into Arabic using translation/back-translation methodology. The two questionnaires were first translated by two separate translators from English to Arabic and then back-translated from Arabic back to English to ensure equivalence among the English and Arabic versions. Both scales were pilot-tested before final use.

The Arabic Relationship Questionnaire⁴ (Arabic RQ) “Appendix A”. The Arabic RQ is a 4-item measure of four attachment styles: secure, preoccupied, dismissing, and fearful. Participants were instructed to rate their attachment with the different-sex sibling to whom they felt closest. Items were rated on a 7-point Likert scale (1=Not at all like me, 7=Very much like me), higher scores indicating higher endorsements of each of the attachment prototypes. In addition to the four attachment styles, an overall Model of Self scale and an overall Model of Other scale were created as suggested by Schmitt et al.⁷. Overall Model of Self scores were calculated by adding together participants’ secure and dismissing scores and then subtracting the combination

of preoccupied and fearful scores. Similarly, overall Model of Other scores were calculated by adding together the secure and preoccupied scores and then subtracting the combination of the dismissing and fearful scores. While the two-factor model⁴ considers the Model of Self and Model of Other orthogonal constructs that independently underlie the secure and insecure forms of romantic attachment and predicts a non-significant correlation between the two models, we expected a significant correlation in the Lebanese context. This prediction was made building on Markus and Kitayama’s⁸ description of the self in non-Western cultures as “interdependent with the surrounding context, and [that] it is the “other” or the “self-in-relation-to-other” that is focal in individual experience” (p225).

Arabic Quality Marriage Index²⁷ (Arabic QMI) “Appendix B”. The QMI is a 6-item measure of marital satisfaction. Items are rated on a 7-point scale and summed for a total score ranging from 6 to 42, higher scores indicating higher marital satisfaction.

Procedure

Participants completed a test battery that included the Arabic RQ and the Arabic Quality Marriage Index. Self-report measures were administered in a counterbalanced order to minimize potential order effects. Also, no participants were targeted from the same couple or sibling group to ensure independence of responses. All participants signed informed consent forms for participation.

Results

Descriptive Statistics

Means, standard deviations, skewness and kurtosis for the Arabic RQ items are presented in Table 1. Standard deviations of the Arabic RQ items ranged from 1.83 to 2.03, indicating variability in the item responses. Similarly, both skewness and kurtosis for Arabic RQ items were within the recommended cutoff values of

3.00 and 8.00, respectively, indicating adequate univariate normality²⁸.

The mean of Secure Attachment (M=5.39, SD=1.83), was above the midpoint of 4, indicating that on average, participants were moderately high on this variable.

The means of the remaining patterns of attachment to the cross-sibling were lower than the midpoint, suggesting that on average participants were low on the three insecure attachment styles.

Arabic RQ Factor Structure

Using SPSS Version 18, the 4 items of the Arabic RQ were subjected to principal component analysis with

Varimax rotation, a procedure followed by Schmitt et al⁷. The Kaiser-Meyer Olkin (KMO) value of .65 for the sample exceeded the required value of .6, suggesting sampling adequacy and the Bartlett's Test of Sphericity reached statistical significance ($p < .0001$), supporting the factorability of the correlation matrix for the sample²⁹. Factor analysis resulted in one-factor solution with an eigenvalue of 2.01, explaining 50.3% of the variance. The component matrix factor loadings for the Arabic RQ are provided in Table 1. As can be seen all factor loadings were above .50.

Table 1
Arabic RQ and QMI Descriptive Statistics for Sample of Married Lebanese Community Adults (n=201)

Item Content	X	SD	Skewness	Kurtosis	FA	%
Arabic RQ						
1. Secure Attachment	5.39	1.83	-1.05	.16	-.56	71.0
2. Fearful Attachment	2.35	2.01	1.22	-.02	.82	16.5
3. Preoccupied Attachment	2.60	2.03	.98	-.39	.75	19.0
4. Dismissive Attachment	2.53	2.02	1.05	-.21	.67	17.0
Arabic QMI						
1. Good marriage	5.76	1.69	-1.46	1.42	.95	79.7
2. Stable relationship.	5.78	1.71	-1.54	1.60	.86	81.6
3. Strong marriage.	5.78	1.79	-1.51	1.34	.95	78.9
4. Relationship makes me happy.	5.72	1.84	-1.39	.82	.95	76.8
5. Feeling part of a team in marriage.	5.78	1.81	-1.56	1.42	.91	80.5
6. Overall happiness in marriage.	5.27	1.72	-.90	.14	.85	64.2
QMI Total	5.68	1.61	-1.49	1.53		82.4

Note: Percentages represent the number of scores above the midpoint out of the total number of scores.

Appendix A

إستبيان العلاقة (برثولوميه وهورويتز، 1991)

يُعدّ هذا الإستبيان بعلاقتك بالشقيق (لا الشقيقة) الذي تشعرين بأنك الأقرب إليه. في ما يلي أربع أنماط عامة من العلاقات التي يعبر عنها الناس في العلاقات مع الأشقاء. الرجاء الإجابة إلى كلّ من البيانات التالية عبر الإشارة إلى أي درجة يعتبر هذا البيان صحيحاً بالنسبة لعلاقتك بشقيقك.

من السهل بالنسبة لي أن أتقرب من شقيقي. فأنا أرتاح بالإعتماد عليه وهو يعتمد عليّ أيضاً. لا أقلق من عدم تقبله لي.

7	6	5	4	3	2	1
			محايد			لا ينطبق عليّ أبداً
						ينطبق عليّ كثيراً

لا أشعر بالارتياح حيال التقرب من شقيقي. أريد علاقة وطيدة معه ، ولكنني أجد صعوبة في الوثوق به بالكامل، أو في الإعتماد عليه. أشعر بقلق من أن يجرحني إذا سمحت لنفسني بالتقرب منه كثيراً.

7	6	5	4	3	2	1
ينطبق علي كثيراً			محايد	لا ينطبق علي أبداً		

أريد أن أكون شديدة التقرب من شقيقي، ولكنني غالباً ما أجد أنه يتردد في الاقتراب مني بالقدر الذي أريده. لا أشعر بالارتياح بالألا يكون لي علاقة وثيقة بشقيقي، ولكنني أقلق أحياناً من ألا يقدرني بحسب ما أقدره.

7	6	5	4	3	2	1
ينطبق علي كثيراً			محايد	لا ينطبق علي أبداً		

أشعر بالارتياح من دون علاقة وثيقة بشقيقي. من المهم جداً بالنسبة لي بأن أشعر بالاستقلالية والإكتفاء الذاتي، و أفضل ألا أعتد على شقيقي وألا يعتمد هو علي.

7	6	5	4	3	2	1
ينطبق علي كثيراً			محايد	لا ينطبق علي أبداً		

إستبيان العلاقة (برثولوميه وهورويتز ، 1991)

يُعنى هذا الإستبيان بعلاقتك بالشقيقة (لا الشقيق) التي تشعر بأنك الأقرب إليها. فيما يلي أربع أنماط عامة من العلاقات التي يعبر عنها الناس في العلاقات مع الشقيقات. الرجاء الإجابة إلى كل من البيانات التالية عبر الإشارة إلى أي درجة يعتبر هذا البيان صحيحاً بالنسبة لعلاقتك بشقيقتك.

من السهل بالنسبة لي أن أتقرب من شقيقتي. فأننا أرتاح بالإعتماد عليها وهي تعتمد علي أيضاً. لا أقلق من عدم تقبلها لي.

7	6	5	4	3	2	1
ينطبق علي كثيراً			محايد	لا ينطبق علي أبداً		

لا أشعر بالارتياح حيال التقرب من شقيقتي. أريد علاقة وطيدة معها، ولكنني أجد صعوبة في الوثوق بها بالكامل، أوفي الإعتماد عليها. أشعر بقلق من أن تجرحني إذا سمحت لنفسني بالتقرب منها كثيراً.

7	6	5	4	3	2	1
ينطبق علي كثيراً			محايد	لا ينطبق علي أبداً		

أريد أن أكون شديد التقرب من شقيقتي، ولكنني غالباً ما أجد أنها تتردد في الإقتراب مني بالقدر الذي أريده. لا أشعر بالارتياح بالألا يكون لي علاقة وثيقة بشقيقتي، ولكنني أقلق أحياناً من ألا تقدرني بحسب ما أقدرها.

7	6	5	4	3	2	1
ينطبق علي كثيراً			محايد	لا ينطبق علي أبداً		

أشعر بالارتياح من دون علاقة وثيقة بشقيقتي. من المهم جداً بالنسبة لي بأن أشعر بالاستقلالية والإكتفاء الذاتي، و أفضل ألا أعتد عليها وألا تعتمد هي علي.

7	6	5	4	3	2	1
ينطبق علي كثيراً			محايد	لا ينطبق علي أبداً		

Appendix B

مؤشر نوعية الزواج (نورتون، 1983)

التعليمات: تصف البيانات التالية المشاعر التي قد تنتاب أحدهن تجاه زوجها. الرجاء الإجابة على كل من البيانات التالية عبر الإشارة إلى أي درجة يعتبر هذا البيان صحيحاً بالنسبة لك في حياتك بشكل عام. إستخدمي المقياس التالي:

1 2 3 4 5 6 7
أعارض بشدة أوافق بشدة

زواجنا جيد.

علاقتي بزوجي مستقرة.

زواجنا قوي.

علاقتي بزوجي تجعلني سعيدة.

أشعر حقاً أنني أشكل فريقاً مع زوجي.

في الجدول أدناه، أشيري إلى النقطة التي تصف بأفضل صورة درجة السعادة في زواجك، مع الأخذ بعين الاعتبار كافة النقاط.

7	6	5	4	3	2	1
سعيدة تماماً			سعيدة			مستاءة جداً

مؤشر نوعية الزواج (نورتون، 1983)

التعليمات: تصف البيانات التالية المشاعر التي قد تن تا بأحدهم تجاه زوجها. الرجاء الإجابة على كل من البيانات التالية عبر الإشارة إلى أي درجة يعتبر هذا البيان صحيحاً بالنسبة لك في حياتك بشكل عام. إستخدم المقياس التالي:

1 2 3 4 5 6 7
أعارض بشدة أوافق بشدة

زواجنا جيد.

علاقتي بزوجتي مستقرة.

زواجنا قوي.

علاقتي بزوجتي تجعلني سعيداً.

أشعر حقاً أنني أشكل فريقاً مع زوجتي.

في الجدول أدناه، أشر إلى النقطة التي تصف بأفضل صورة درجة السعادة في زواجك، معال أخذ بعين الاعتبار كافة النقاط.

7	6	5	4	3	2	1
سعيد تماماً			سعيد			مستاء جداً

Arabic QMI Factor Structure

Principal component analysis of the Arabic QMI supported a one factor solution accounting for 83.4% of the variance and all factor loadings were .85 and above (see table 1 for details). The internal consistency of the

Arabic QMI in the present study was $\alpha = .96$, a finding comparable to $\alpha = .94$ reported for the English version of the scale³⁰.

Arabic RQ Intercorrelations

Arabic RQ-derived Model of Self scores and Model of Other scores correlated significantly with each other ($n=198$, $r=.24$, $p<.001$) rather than insignificantly as predicted by the two-factor model of romantic attachment^{4,7}. Similarly, and contrary to the two-factor theory of romantic attachment, preoccupied attachment scores which were expected to correlate negatively with dismissing attachment scores, correlated positively in the present study ($n=199$, $r = .29$, $p < .0001$). On the other hand, and consistent with the two-factor theory of romantic attachment, secure cross-sibling attachment scores correlated negatively with fearful attachment scores ($n=199$, $r = -.29$, $p < .0001$). Contrary to Bartholomew and Horowitz's findings (1991), secure cross-sibling attachment scores also correlated negatively with preoccupied attachment scores ($n=198$, $r = -.19$, $p < .009$), and dismissing scores ($n=200$, $r = -.29$, $p < .0001$).

Arabic RQ and Demographic Comparisons

Scores on the four cross-sibling attachment styles of the Arabic RQ were comparable across sex, religion, and education. On the other hand, age correlated significantly with Arabic RQ dismissing attachment scores ($n=170$, $r = .20$, $p < .009$), but not with the scores of the remaining attachment styles, suggesting higher dismissing attachment scores with age.

Arabic RQ and Arabic QMI

Means, standard deviations, skewness and kurtosis for the Arabic QMI items and QMI total score are presented in Table 1. Standard deviations of the Arabic QMI items ranged from 1.69 to 1.84, indicating variability in the item responses. Similarly, both skewness and kurtosis were within the recommended cutoff values of 3.00 and 8.00, respectively, indicating adequate univariate normality²⁸. The mean of marital satisfaction ($M=5.68$, $SD=1.72$) was above the midpoint, indicating that on average, participants were moderately high on marital satisfaction.

Marital satisfaction scores as measured by the Arabic QMI correlated $r = .18$ ($p<.05$) with Arabic RQ secure attachment scores and $r = -.22$ ($p<.05$) with fearful attachment scores but not preoccupied attachment scores ($r = -.14$, ns) or dismissing attachment scores ($r = -.14$, ns). These results suggest that higher secure attachment scores are associated with higher overall marital satisfaction whereas higher fearful attachment scores to the sibling are associated with lower overall marital satisfaction.

Discussion

In the present study, factor analysis of the Arabic RQ resulted in a one factor solution rather than a two-factor solution as predicted by the two-factor model of romantic attachment. In addition, and contrary to expectations from the two-factor model of romantic attachment, Model of Self scores and Model of Other scores correlated significantly, suggesting that the self and other dimensions are not orthogonal constructs as postulated by the two factor-model of romantic relationships. Thirdly, the pattern of intercorrelations with marital satisfaction was such that only secure attachment scores and fearful attachment scores were correlated with marriage quality. Taken together, these findings challenge the two-factor model assumption of the orthogonality or independence of the dimensions of self and other that underlie the various forms of secure and insecure romantic attachment. The findings suggest that the romantic attachment psychology represented by the two-factor model of romantic relationships may be culture bound in its relevance to Western European and North American countries in which the self is construed as independent and needs rethinking in the collectivist Lebanese context in which the self is construed as interdependent. The four attachment styles derived from the RQ are based on independent construals of self and other. However, the idea of self and other as separate or orthogonal entities seems more relevant to Western European and North American cultural contexts than

non-Western cultures in which “the self is viewed as interdependent” (p225). As such, it is possible that ‘the self-in-relation-to-other’ or the blurred boundaries between the Lebanese self and other could be the underlying common variance to the three insecure attachment styles. While the lack of support of the two-factor model in the case of Lebanon may be due to the modification of the RQ and its grounding in cross-sibling relationships, it is also possible that Lebanese attachment styles are more parsimonious in their focus on the secure and insecure prototypes of attachment. Further studies are required to examine these alternate possibilities.

In the present study, sex, education and religion were not related to cross-sibling attachment styles while age was weakly correlated with dismissing attachment. While these findings also require replication, taken together, they suggest that attachment styles are invariant across sex, education and religion.

In relation to marital satisfaction, the Arabic version of the Quality Marital Index showed a one-factor solution as expected and high reliability, supporting its cultural relevance in the Lebanese context. To our knowledge, this is the first successful application of an Arabic version of the Quality Marital Index. In the present Lebanese sample, the majority of the married Lebanese reported satisfaction with their marriage. In the absence of published normative data on marital satisfaction in Lebanon, it is difficult to ascertain whether our finding on marital satisfaction is an underestimate or an overestimate.

Secure cross-sibling attachment in the present study correlated positively with marital satisfaction whereas fearful cross-sibling attachment correlated negatively. These results are consistent with the relation between marital satisfaction and adult romantic attachments, and as such extend the findings to cross-sibling relationships. In a related study, Rauer and Volling³¹ proposed a model that depicts differential treatment and sibling jealousy as predictors of romantic relationship attachment in young adulthood. Both maternal and

paternal differential affection were strongly correlated with sibling jealousy, which was strongly correlated with one’s cognitive and affective models. Equal parental affection was associated with equal sibling jealousy, positive internal models, and better romantic relationship outcomes. Being on the receiving end of perceived parental favoritism was associated with higher self-esteem and fearful or dismissing attachment styles, while being less favored was correlated with higher sibling jealousy, lower self-esteem, and preoccupied attachment styles. Of course, the insecure attachment styles were related to young adult’s romantic relationship distress.

Clearly, this study does not directly explore the child’s attachment style to the parents, but the variables that influence the quality of the parent-child relationship, which in turn influence the attachment style. This study sheds light on the importance of the sibling relationship in the formation of the attachment style.

Building on the results of the current study and previous research³¹ it is possible that attachment styles in marital relationships that are similar to attachment patterns adults have with their cross-siblings contribute to marital satisfaction, in a manner similar to the contribution of attachment styles that follow parent-child attachment patterns. While the results suggest that cross-sibling attachment styles may contribute to marital satisfaction as prototypes for marital relationships, the findings require future replication. Research has shown that both partners and siblings can act as adult attachment figures¹⁴. However, it is not clear if it is the attachment to the parents that is reenacted in sibling and marital relations, or if the attachment to the sibling -colored by parental attachment- is an influential factor in its own right on one’s marital attachment.

In summary, the present study provides preliminary support to the value of the Arabic RQ as a measure of attachment styles in the Lebanese context but not necessarily the conceptual framework on which the scale is grounded. Also, the present study is limited by its focus on urban Lebanese in the city of Beirut, and its

consideration of cross-sibling attachment to the exclusion of other attachment prototypes. More diverse samples of Lebanese and measures complementary to self-report assessments of attachment styles need to be considered in the future to further evaluate the correlates of marital satisfaction in the case of Lebanon and other Arab countries. On a practical level, the traditional application of attachment theory has been preoccupied with programs that aim at the improvement of parent-child relationships. Our findings, while tentative, suggest that interventions that focus on improvement in cross-sibling relationships may also be important in healthy conjugal relationships in adulthood.

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ملخص

الأهداف: تهدف هذه الدراسة إلى اختبار نموذج العلاقات الرومانسية القائم على عاملين اثنين، بالإضافة إلى تقويم علاقة مشتقات أنماط التعلق الأربعة (الآمن، والتجاهلي/إستخفاقي، والمنشغل، والخائف) بالرضا الزوجي والعوامل الاجتماعية الديموغرافية. **المنهج:** نسبت مجموعة راشدين لبنانيين متزوجين تتألف من 201 فرداً، أنماط تعلق أفرادها مع أشقائهم المفضلين من الجنس الآخر، وذلك وفق إستمارة العلاقة العربية (Arabic RQ)، والرضا الزوجي وفق مؤشر جودة الزواج العربي (QMI). تم اختبار تركيب/هيكل العامل في إستمارة العلاقة العربية وكذلك العلاقات المترابطة بين أنماط التعلق الأربعة، كما تم اختبار علاقة هذه الأنماط بالرضا الزوجي وبالعوامل الديموغرافية كالسن والجنس، والتحصيل العلمي، والدين. **النتائج:** يرتبط الرضا الزوجي ككل إيجابياً بالتعلق الآمن (ر.=.18؛ p<.02) ويرتبط سلباً بالتعلق الخائف (ر.=.22؛ p<.003). ولم ترتبط عوامل الجنس والتحصيل العلمي والدين بأنماط التعلق مع الإخوة من الجنس الآخر، ولكن السن كان مرتبطاً بالتعلق التجاهلي/إستخفاقي بشكل ملحوظ، حيث أبلغ اللبنانيون الأكبر سناً عن تعلق تجاهلي/إستخفاقي أكثر من الراشدين اللبنانيين الأصغر سناً. **الخلاصة:** بينما يرتبط نمطي التعلق الآمن والخائف بالرضا الزوجي، يستلزم النموذج الغربي القائم على عاملين اثنين في العلاقات الرومانسية إلى إعادة التفكير بالسياق اللبناني الجماعي. **الكلمات المفتاح:** التعلق الآمن، التعلق التجاهلي/إستخفاقي، التعلق المنشغل، التعلق الخائف، الرضا الزوجي، لبناني.

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Validation of the Arabic Translation of the Multidimensional Scale of Perceived Social Support (Arabic-MSPSS) in a Lebanese Community Sample

Rana Merhi and Shahe S. Kazarian

صحة وموثوقية الترجمة العربية لمقياس الدعم الاجتماعي المتعدد الأبعاد - MSPSS (العربي) في عينة من المجتمع اللبناني
رنا مرعي و شاهي كازاريان

Abstract

Objective: The aim of this study is to report on the Arabic translation of the 12-item Multidimensional Scale of Perceived Social Support (Arabic-MSPSS) and its reliability and validity when administered to a community sample of Lebanese adults. **Method:** A total of 221 participants completed the Arabic translation of the MSPSS, the Emotion Regulation Questionnaire (Arabic-ERQ), and the Satisfaction with Life Scale (Arabic-SWLS). The factor structure, internal consistency and correlation of the Arabic MSPSS with sociodemographic factors, emotion regulation and subjective well-being were evaluated. **Results:** Three factors (Family, Friends, and Significant Other) with high reliabilities were obtained. MSPSS scores were associated with sex and religion but not age, marital status, education or income. Social support scores were independent of ERQ emotional suppression scores but correlated with ERQ cognitive reappraisal scores ($r=.17$ for global social support, $r=.17$ for Family support, and $r=.20$ for Significant Other support), as well as subjective wellbeing scores ($r=.33$ for global social support, $r=.32$ for Family social support, and $r=.29$ for Significant Other support). **Conclusion:** The Arabic translation of the MSPSS is a reliable and culturally valid measure of social support in the Lebanese context.

Key words: Arabic MSPSS, emotion regulation, subjective well-being, Lebanese

Declaration of Interest: None

Introduction

The Multidimensional Scale of Perceived Social Support (MSPSS)¹ is a brief and widely used self-report tool for the assessment of social support in community and mental health contexts. The MSPSS was developed for the assessment of perceived adequacy of three sources of social support (family, friends and significant other) in European-Americans in the United States. Zimet et al. conducted principal components factor analysis with oblique rotation with all 12 items of the English MSPSS in a group of young adults from the United States and supported a three-factor solution for the scale. The tridimensional structure of the MSPSS and the independence of the measure from social desirability was subsequently confirmed.²

Since the inception of the MSPSS, the measure has been extended to a variety of populations, age groups and

cultural contexts. In relation to populations, the MSPSS has been applied to inpatient and outpatient psychiatric settings^{3, 7}, medical facilities and medical residents⁸, rescue workers such as firefighters and emergency medical service personnel⁹, and caregivers¹⁰.

In relation to age, the use of the MSPSS has been extended from young adults¹ to children^{11, 12}, adolescents⁸ and older adults⁷. In relation to cultural groups within the pluralist North American context, MSPSS validation studies on European-Americans have been extended to African-American adolescents¹³, Arab Muslim youth in the United States¹⁴ and Mexican-American adolescents¹⁵.

Finally, the MSPSS has been translated into a variety of languages and validated for cultural appropriateness in several Western European and Asian countries including China¹⁶, India⁶, Israel^{11, 17,18}, Italy^{19,20}, Pakistan^{21,22}, Turkey¹⁰, and Uganda²⁴.

The MSPSS appears to be a psychometrically reliable and valid instrument for use across clinical and non-clinical populations. Nevertheless, there is lack of clarity on the cross-cultural stability of the factor structure of the measure in that the three factors identified in Western samples have not been uniformly observed in non-Western countries. Akhtar et al.²¹ examined the factor structure of the Urdu version of the MSPSS and reported that the Pakistani women in their rural sample perceived social support as a unitary rather than a tridimensional source of social support as in Western samples. Akhtar et al.²¹ attributed the discrepant factor structure of the Urdu version of the MSPSS to cultural factors. More specifically, the authors suggested that the communal living in the Pakistani extended family system and the high rates of marriages within families dilute differences between family members, friends and significant others as sources of social support.

Chou²⁵ also examined the factor-analytic properties of the Chinese version of the MSPSS in a Hong-Kong Chinese adolescent sample and found a two-factor (friend and family) rather than a three-factor structure for the measure. The author suggested that age may explain the discrepancy in findings in that significant others of adolescents are more likely to be peers whereas significant others of young adults are more likely to be romantic partners. As such, adolescents may fail to differentiate between sources of social support from friends and significant others as invoked by the MSPSS whereas young adults may have no difficulty in differentiating between sources of social support from friends and significant others.

In view of the ambiguity in the universality of the factor structure of the MSPSS cross-culturally, and considering the lack of cultural application of the measure in the Arab Middle East generally, and the Lebanese context in particular, the reliability and validity of an Arabic translation of the scale in a community group of Lebanese are evaluated. Social support is of particular significance to Middle Eastern societies generally and

Lebanon in particular^{26, 28}. The Middle Eastern Lebanon represents a pluralist society in which Christians, Muslims and secular groups are not only negotiating peaceful coexistence after a protracted civil war of 15-years duration (1975-1990)²⁹, but are also facing the challenge of adapting to the shift from a traditional collectivist cultural orientation (i.e., where the extended family of origin is the main source of social support) to a more individualist cultural orientation²⁶. Through an individualist cultural orientation familial ties are loosened, and familial social support competes with other prevailing non-familial sources of social support such as friends and romantic relationships³⁰.

While the MSPSS has been translated into the Arabic language for use with Arab Muslim adolescents living in the United States^{14, 31}, the measure was adapted such that a 3-point rating scale instead of the original 7-point rating scale was used to assess social support from family, friends and school personnel rather than family, friends, and significant other. In the present study, we readapted the Arabic translation of the MSPSS in that the 7-point rating scale was used to measure the original three sources of social support (family, friends, and significant other) as conceptualized by Zimet et al.¹. To our knowledge, the psychometric properties of an Arabic translation of the MSPSS in a community sample of Lebanese have not been analyzed. The cross-cultural validation of the Arabic translation of the MSPSS in the Lebanese context is important to determine if the measure is culturally appropriate for Lebanese and if it is tapping dimensions of social support among Lebanese similar to the family, friends and significant other sources of social support found in the North American context.

The aim of the present study was to evaluate the reliability and validity of the Arabic translation of the MSPSS in a community sample in Lebanon. We were interested in finding out if the three-factor structure reported by Zimet et al.¹ in the United States also applies to adults in Lebanon. Moreover, we aimed at assessing

whether scores obtained from the Arabic translation of the MSPSS are likely to correlate with the sociodemographic factors of age, sex, education, marital status, and income. Additionally, we examined the discriminant validity of the MSPSS through its correlation with measures of emotion regulation and subjective well-being.

Method

Participants

A total of 221 Lebanese residents from the Greater Beirut Area of Lebanon participated in the study. The majority of the participants were female ($n=123$, 55.7%), and their mean age was 33.98 years ($SD=11.71$, range = 21 to 75). Four religious groups were represented in the sample (34.9% Christian, 8.3% Druze, 18.1% Shiite, and 34.8% Sunni). In relation to marital status, 51.4% of the group reported being single, 41.4% married, and 4.5% separated or divorced. With regard to education, 24.3% reported high school or lower education, 12.4% vocational diplomas and 63.3% university level education. Finally, 19.4% reported a monthly income of \$500 and less, 28.4% an income between \$500-\$1000, 19.4% an income between \$1000 and \$1500, and 33.0% an income above \$1500.

Instrumentation

Arabic translation of the Multidimensional Scale of Perceived Social Support (Arabic-MSPSS)¹. This is a 12-item measure of perceived social support. Each item is rated on a 7-point Likert rating scale (1= very strongly disagree, 7= very strongly agree), higher scores indicating higher perceived social support. The Arabic translation of the MSPSS that was adapted to measure support from family, peers and school personnel¹⁴ was readapted to measure support from family, friends and significant other, as originally designed by Zimet et al.¹ (see Appendix I). Readaptation of the Arabic translation of the MSPSS comprised use of Ramaswamy et al.'s

Arabic translations of the 12-item MSPSS¹⁴ with replacement of the Arabic term 'school personnel' by the Arabic term 'significant other' in the four items of the school personnel source of social support so that the readapted subscale measures social support from a significant other rather than school personnel. While the 3-point rating scale has been preferred in the case of American-Arab adolescents¹⁴, we chose to use the original 7-point rating scale for three reasons: our sample was an adult population, our concern that a 3-point scale would not capture the variability of the social support construct, and the necessity to use a methodology that is consistent with the original development of the scale and subsequent research on it.

Arabic translation of the Emotion Regulation Questionnaire (Arabic-ERQ)³². This is a 10-item measure of two emotion regulation strategies: emotional suppression (4 items, e.g., 'I keep my emotions to myself') and cognitive reappraisal (6 items, e.g., 'I control my emotions by changing the way I think about the situation I'm in.'). Each item requires a 7-point Likert rating that ranges from 1=Strongly disagree to 7=Strongly agree, higher scores indicating higher emotional suppression or higher cognitive reappraisal. An internal consistency of $\alpha = .73$ for the emotional suppression subscale and $\alpha = .79$ for the cognitive reappraisal subscale of the English ERQ is reported³². In the present study, the original ERQ was translated into Arabic by a professional translator, and the Arabic translation was then translated back to English by another professional translator, independent of the first translator. The two English versions were then compared and differences reconciled. The internal consistencies of the Arabic translation of the ERQ subscales were .66 for cognitive reappraisal and .62 for emotional suppression.

Arabic translation of the Satisfaction with Life Scale (Arabic-SWLS)^{33, 34}. This is a 5-item measure of subjective well-being. Each item is rated on a 7-point Likert rating scale (1= very strongly disagree, 7= very

strongly agree), higher scores indicating higher subjective well-being. The internal consistency of the Arabic translation of the SWLS in the present study was $\alpha = .77$, a finding comparable to the internal consistency of $\alpha = .76$ reported by Bassil³⁴, but somewhat lower than $\alpha = .85$ for the English SWLS³³.

Procedure

After obtaining the approval of the Institutional Review Board (IRB) of the American University of Beirut, Lebanese residents above 21 years of age were conveniently sampled from the Greater Beirut Area of Lebanon. All participants understood written and spoken Arabic, and participated voluntarily. Potential participants were approached by the first author in different shops across eight different areas in the Greater Beirut Area (i.e., Hamra, Achrafieh, Firm El-Shebbak, Mar-Elias, Verdun, Haret Hreik, Corniche El-Mazraa, and Jnah-Beirut). The battery of questionnaires (the Arabic translation of the MSPSS¹, the Arabic translation of the ERQ³², and the Arabic translation of the SWLS³³) was administered to participants on an individual basis: Measures were pilot tested prior to final use and administered in a randomized order to minimize order effect. Data collection took around two months before completion (early October 2010 – early December 2010).

Informed consent was obtained from all participants prior to their participation.

Results

Arabic Translation of the MSPSS: Factor Structure

The 12 items of the Arabic translation of the MSPSS were subjected to principal factor analysis using SPSS Version 19. The principal axis extraction approach typically results in the identification of the same number of factors as confirmatory factor analysis using structural equation modeling³⁵. The Kaiser-Meyer Olkin (KMO) value of .80 exceeded the required value of .636 and the Bartlett's Test of Sphericity reached statistical significance ($p < .001$), supporting the factorability of the correlation matrix.

Principal factors analysis with Oblique rotation, as suggested by Zimet et al.¹, revealed the presence of three factors with eigenvalues exceeding 1 (4.50, 1.54, 1.18), and explaining 37.48 %, 12.87%, and 9.84%, of the variance, respectively. The factor analysis pattern matrix for the Arabic translation of the MSPSS is provided in Table 1. As can be seen, the first factor was a Friends source of social support, whereas the second factor was a Family source of social support and the third a Significant Other source of social support.

Table 1: Pattern Matrix for the Arabic Version of the Multidimensional Scale of Perceived Social Support (MSPSS).

Item Content	I	II	III
7. I can count on my friends when things go wrong.	.87	-.04	-.01
12. I can talk about my problems with my friends.	.75	.06	-.05
9. I have friends with whom I can share my joys and sorrows.	.72	.04	.10
6. My friends really try to help me.	.70	-.02	.15
4. I get the emotional help and support I need from my family.	-.09	.89	.06
3. My family really tries to help me.	-.16	.82	.05
11. My family is willing to help me make decisions.	.19	.60	-.06
8. I can talk about my problems with my family.	.16	.56	.00
2. There is a special person with whom I can share my joys and sorrows.	-.02	-.03	.91

1. There is a special person who is around when I am in need.	-.03	-.01	.85
5. I have a special person who is a real source of comfort to me.	.03	.08	.68
10. There is a special person in my life who cares about my feelings.	.09	.00	.61

Appendix I: Arabic version of the Multidimensional Scale of Perceived Social Support (MSPSS)

إرشادات:

يتضمن هذا الإستفتاء عدد من الإقتراحات التي تتعلّق بالدعم الإجتماعي. إستعمل المقياس أدناه من 1 إلى 7 لتقييم كل بند من البنود من خلال وضع دائرة حول الرقم المناسب.

7	6	5	4	3	2	1	
أوافق بشدة	أوافق باعتدال	أوافق قليلا	حيادي	اعتراض قليلا	أعترض باعتدال	أعترض بشدة	
7	6	5	4	3	2	1	1- هناك شخص مميّز بجانبني عندما أحتاجه.
7	6	5	4	3	2	1	2- هناك شخص مميّز أستطيع ان اشارك أفرحي و أحزاني معه.
7	6	5	4	3	2	1	3- عائلتي تحاول مساعدتي.
7	6	5	4	3	2	1	4- أنال مساعدة عاطفية ودعم من عائلتي.
7	6	5	4	3	2	1	5- هناك شخص مميّز هو/هي مصدر حقيقي للراحة لي.
7	6	5	4	3	2	1	6- اصدقائي يحاولون مساعدتي.
7	6	5	4	3	2	1	7- بإمكانني الإعتماد على أصدقائي عندما تجري الأمور بشكل سيء.
7	6	5	4	3	2	1	8- بإمكانني التحدث عن مشاكلي مع عائلتي.
7	6	5	4	3	2	1	9- عندي أصدقاء أستطيع ان اشارك أفرحي و أحزاني معهم.
7	6	5	4	3	2	1	10- هناك شخص مميّز في حياتي يهتم بمشاعري.
7	6	5	4	3	2	1	11- عائلتي ترغب في مساعدتي لإتخاذ القرارات.
7	6	5	4	3	2	1	12- أستطيع ان اتحدث عن مشاكلي مع اصدقائي.

هو الشخص المميّز الذي أشرت إليه بالإستمارة ؟ حدد علاقتك به وليس الإسم. مثلاً، أختي، زوجي.

Arabic translation of the MSPSS: internal consistencies and intercorrelations

The internal consistency of the 12-item Arabic translation of the MSPSS was high ($n=221$, $\alpha = .87$), a value comparable to the reliabilities of .88 reported by Zimet et al.1. Similarly, the internal consistencies of the Family, Friends and Significant Other sources of social support for the total sample were high ($\alpha = .82$, $\alpha = .86$ and $\alpha = .85$, respectively). These findings are comparable to reliabilities reported by Zimet et al.¹.

Using Spearman correlations, the Arabic translation of the MSPSS global scores for the total sample correlated $r=.67$ ($p < .01$) with Family scores, $r=.81$ ($p < .01$) with Friends scores, and $r=.74$ ($p < .01$) with Significant Other scores. Similarly, Family scores correlated $r=.34$ ($p < .01$) with Friends scores and $r=.33$ ($p < .01$) with Significant Other scores, and Friends scores correlated $r=.43$ ($p < .01$) with Significant Other scores.

Arabic translation of the MSPSS: descriptives and sociodemographic factors

A repeated measures Analysis of Variance (ANOVA) was conducted to examine how the current sample of Lebanese adults rated sources of perceived social support. Results indicated a significant difference in perceived social support source, $F(2, 408) = 36.01, p < .001$ such that Lebanese adults in the current sample reported significantly lower social support on friends social support than family social support ($F(1, 204) = 5.10, p < .05, r = .37$), and significantly higher social support on the significant other social support than family social support ($F(1, 204) = 33.34, p < .001, r = .16$).

In terms of sociodemographic factors, comparisons of the Arabic translation of the MSPSS overall, Family, Friend and Significant Other scores in relation to age, marital status, level of education, and income were all non-significant, suggesting the independence of these factors in the reporting of total and the three sources of social support in this group of Lebanese adults. The associations between social support and religious affiliation were not examined because there was more than 5% of missing data on the religion variable. Using the Mann–Whitney U test statistic, comparisons between males and females indicated females scoring higher on overall social support ($U = 3,718.50, p < .01, r = -0.24$) than their male counterparts (Median=66.0 for females and Median=61 for males). Multivariate Analysis of Variance (MANOVA) with sex and the two sources of social support as variables (Significant Other scores were dropped from the analysis due to a violation in the assumption of homogeneity of variance) showed a sex difference on Family social support scores and Friends social support scores ($T = .07, F(2, 208) = 5.78, p < .01$). Discriminant function analysis resulted in one discriminant function with a canonical correlation of 0.23 between sources of social support and sex. Standardized Canonical Discriminant Function Coefficients for both, Family social support (.15) and

Friends social support (.94) indicated that social support from Friends had a greater contribution in differentiating males from females. In contrast to females, males reported lower social support on the friendship dimension.

Arabic translation of the MSPSS and Emotion Regulation

The Arabic translation of the ERQ emotional suppression scores failed to correlate with the Arabic version of the MSPSS total scores and each of the sources of social support. Cognitive reappraisal scores, on the other hand, correlated $r = .17, p < .05$ with the social support total scores, $r = .17, p < .05$ with Family scores, and $r = .20, p < .01$ with Significant Other scores, but not with Friend scores ($r = .06, ns$). These results supported the discriminant validity of the MSPSS as a measure of social support and not emotion regulation.

Arabic Translation of the MSPSS and Subjective Well Being

The Arabic translation of the SWLS scores correlated $r = .33 (p < .01)$ with the Arabic translation of the MSPSS total scores, $r = .32 (p < .01)$ with Family scores, and $r = .29 (p < .01)$ with Significant Other scores, but not with Friends scores ($r = .12, ns$). These findings are comparable to those reported for the English MSPSS¹. The moderate correlations furthermore indicate that MSPSS measures social support rather than life satisfaction.

Discussion

To the best of our knowledge, this is the first study that validates the Arabic translation of the MSPSS in a community sample of Lebanese in the religiously pluralist Lebanon. In the present study, the three MSPSS informed sources of social support identified in American¹³ and European²⁰ samples were observed in the Lebanese context and Arabic translation of the MSPSS scores showed low to moderate correlations with emotion regulation and life satisfaction scores, indicating

the Arabic MSPSS to be measuring a separate and distinctive variable (i.e., social support). Taken together, these findings support the construct validity of the scale and the cross-cultural stability of the factor structure of the MSPSS. The tridimensional factor structure of the Arabic translation of the MSPSS, the high internal consistency of the total scale and its three subscales, and the moderate intercorrelations of the sources of social support suggest that the Arabic translation of the MSPSS may be measuring distinct and reliable dimensions of social support, a view consistent with the conceptualization of the original MSPSS as a tripartite measure of perceived adequacy of social support¹.

Since past MSPSS research has examined the relationship of perceived social support to age, sex, marital status, and education, the present study extended this area of investigation to income. The finding of a lack of an association with income suggests that Lebanese from different income levels benefit similarly from the varied sources of social support. The finding of a lack of an association between perceived social support and education is consistent with previous research²⁰. On the other hand, the correlation with age is at odds with previously reported studies^{16, 25} as is the lack of a correlation between perceived social support and marital status²⁰. While further research is required to elucidate the reasons for the discrepancy in findings on age and marital status, the present study suggests that the benefits obtained from the different sources of social support are universal across age and marital status rather than specific to developmental milestones.

The sex comparisons on the Arabic translation of the MSPSS parallel those reported previously^{1, 13, 14} but are inconsistent with those found by Edwards¹⁵. Lebanese females reported higher support from friends, in addition to reporting higher overall social support. Cheng and Chan¹⁶ suggested that females benefit more from the social support of friends than males because they engage in more self-disclosure than their male counterparts.

While this explanation may apply in the present context, it requires further examination as self-disclosure was not measured directly in the present study. Nevertheless, the sex differences in perceived social support reported in the present study are important and require replication as lower levels of social support in the present study were associated with lower life satisfaction, and as lower social support has been shown to associate with increased psychological distress and high-risk behaviors including sexual behaviors and suicide^{4,5,18, 37}.

As a group, Lebanese in the present study reported lower perceived social support from family than from significant others, a finding consistent with the Kazarian and McCabe⁵ study but inconsistent with those reported by others^{13, 15}. It should be pointed out that family members (e.g., spouse) may also be significant others in people's life. This is not problematic since the participant answering the questionnaire would be differentiating between family and significant other according to his/her own terms. The finding of lower perceived social support from family than from significant others in the Lebanese context is of particular significance given the primacy of family in the traditional Lebanese collectivist culture²⁶. This finding may be suggestive of the loosening of family ties in Lebanese society because of the shift from a traditional collectivist cultural orientation in which the self is construed as an extension of kin, as opposed to an individualist cultural orientation in which the self is preoccupied with validation of self-identity and autonomy from family³⁰. Nevertheless, Lebanese in the present study reported higher perceived social support from family than from friends, a finding that may highlight the primacy of the family over that of friends. It is possible that the differential ordering of social support is due to type of support (e.g., financial or emotional) provided by each source, in that the Lebanese adults of the present sample experienced more financial and/or emotional support from significant others (e.g., spouse) than they do from family members (e.g., parents), and

from family members than they do from friends. While this interpretation is consistent with Farsoun and Farsoun²⁷, who reported that Lebanese adults receive and provide financial and emotional support from family members, it remains to be examined in the future. Moreover, while other explanations such as the sociodemographic characteristics of the present study sample are equally plausible, direct measures of cultural orientations need to be considered in the future.

Since past research has not focused on perceived social support and emotion regulation, the present study extended the field of perceived social support to emotion regulation. Perceived social support, particularly from family and significant other was associated with increased use of cognitive reappraisal as an emotion regulation strategy. Perceived social support was also correlated with life satisfaction, the cognitive component of subjective well-being, a finding consistent with previous research¹⁵. While it seems plausible to suggest that positive conditions of social support may contribute to the use of subjective well-being and cognitive reappraisal, which has been identified as the more effective emotion regulation strategy³⁸, the correlational nature of the study also raises the alternate possibility; that subjective well-being and cognitive reappraisal may contribute to perceived adequacy of social support.

The present study provides preliminary support to the value of the Arabic translation of the MSPSS and its three sources of social support as a valid, reliable and culturally appropriate scale for assessing perceived social support of Lebanese adults in the Lebanese context. While factor structure, internal consistency, and discriminant validity were used to examine the reliability and validity of the Arabic MSPSS in the present study, test-retest reliability and convergent validity should be examined in future studies. Also, participants were not examined for symptoms of anxiety or depression. Since social support has been found to negatively relate to anxiety and depression³⁹, future validation studies in the Lebanese and Arab context should take into

consideration the presence of anxiety or depressive symptomatology.

Finally, the present study is limited by its focus on Lebanese adults in the urban city of Beirut. More representative samples of Lebanese, rural vs. urban comparisons to address issues concerning extended vs. nuclear families and communal living and marriages within families as was done by Akhtar et al.²¹, and applications in other Arab countries need to be considered in the future to further evaluate the correlates of social support in the diverse religious and ethnic Arab Middle East context.

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المخلص

الخلفية: قد ترجم مقياس الدعم الاجتماعي المتعدد الأبعاد (MSPSS) إلى لغات مختلفة، وتم استخدامه في أبحاث مع مجموعات متنوعة من السكان، والفئات العمرية، والسياقات الثقافية، ومع فئات إكلينيكية وغير إكلينيكية. **الأهداف:** تهدف هذه الدراسة إلى تقديم تقرير عن موثوقية وصحة الترجمة العربية لمقياس الدعم الاجتماعي المتعدد الأبعاد عندما يدار على عينة من البالغين في المجتمع اللبناني. مقياس الدعم الاجتماعي المتعدد الأبعاد يحتوي على 12 بند. **الأسلوب:** تم إكمال الترجمة العربية للـ (MSPSS)، والترجمة العربية لإستبيان ضبط المشاعر (ERQ)، والترجمة العربية لمقياس الرضا في الحياة (SWLS) من قبل 221 مشاركاً. جرى تقييم تركيبة العنصر والثبات الداخلي للـ (MSPSS) بالإضافة إلى ترابط الـ (MSPSS) مع العوامل الاجتماعية الديموغرافية، ومع ضبط المشاعر و الرفاهية الذاتية. **النتائج:** تم الحصول على ثلاثة عوامل (الأُسرة، الأصدقاء، الأُحباء) ذات مصداقية عالية. ترابطت نتائج الـ (MSPSS) مع الجنس والمذهب الديني ولكن ليس مع العمر، الوضع العائلي، أو المستوى التعليمي. نتائج الدعم الاجتماعي كانت مستقلة عن نتائج كبت العواطف ولكن ارتبطت مع نتائج إعادة تقييم المعرفة للـ (ERQ) ($r=.17$) للدعم الاجتماعي الشامل، $r=.17$ للدعم الاجتماعي الأسري، و $r=.20$ للدعم الاجتماعي من الأُحباء و مع نتائج (الرفاهية الذاتية $r=.33$) للدعم الاجتماعي الشامل، $r=.32$ للدعم الاجتماعي الأسري، و $r=.29$ للدعم الاجتماعي من الأُحباء. **الخلاصة:** إن الترجمة العربية للـ (MSPSS) هو مقياس موثوق به ذات شرعية ثقافية لقياس الدعم الاجتماعي في السياق اللبناني. **الكلمات الأساسية:** النسخة العربية للـ (MSPSS)، الأسرة، الأصدقاء، الأُحباء، ضبط المشاعر، الرفاهية الذاتية، لبنانيين.

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Socio-demographic factors predicting perceived Parenting styles: implications for counselors

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العوامل الاجتماعية الديمغرافية المتنبئة بأساليب

المعاملة الوالدية المدركة: تضمينات للمرشدين

عبد الكريم محمد جرادات

Abstract

Parenting styles may place children, adolescents and young adults at risk of developing psychiatric disorders, such as depression, low self-esteem and high anxiety. Therefore, the present study sought to examine the role of socio-demographic factors in predicting perceived parenting styles. The sample of the study composed of 505 (233 males, 272 females) undergraduate students selected from Yarmouk University. A shortened version of the parental authority questionnaire was used. Results showed that the father whose family income is high is more authoritative than others; the father who is married to two wives or more, whose education is high school or below, whose wife is working, whose family size is small or who is working is more permissive than others; the father who is married to two wives or more or whose family income is low is more authoritarian than others; the mother whose education is college or above or whose husband is married only to her is more authoritative than others; the mother whose husband is married to two wives or more, whose husband's education is high school or below, who is working or whose family size is small is more permissive than others; and the mother whose husband is married to two wives or more or whose family income is low is more authoritarian than others. In light of these results, implications for counseling were discussed.

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Key words: Parenting styles, family factors, parental authority questionnaire.

Introduction

Parenting styles are the methods used by parents when dealing with their children¹. Some theorists in counseling and psychotherapy have emphasized the importance of parenting styles in forming children's personalities. For example, Alfred Adler found that pampered and neglected children tended to adopt negative life styles². Baumrind³ proposed three prototypes of parenting styles: permissive, authoritarian, and authoritative. Permissive parents tend to make few demands on their children, allowing the children to regulate their own behavior as much as possible. These parents use minimal punishment and tend not to require mature behavior from their children^{4,5}.

Authoritarian parents are highly directive with their children and value unquestioned obedience. These parents keep their children in a subordinate role, restrict their children's autonomy, believe that children should accept parents' word about what is right³, and use punitive methods to control their children's behavior⁶. Baumrind³ reported that these parents may be overprotective or neglecting.

Authoritative parents attempt to direct their children's activities and tend to exercise their authority in a rational, flexible manner. They recognize their children's

individual needs and assert the children's positive qualities⁷. Parents characterized by this style put forth exceptional effort and encourage verbal give-and-take and responsible interpersonal behavior. Authoritative style is not rigid, punitive, or intrusive⁸.

These parenting styles have been explored extensively and are associated with different levels of social and cognitive competence in children and adolescents^{9,10}; self-esteem, depression¹¹, decision making¹², and learned resourcefulness in adolescents¹³; dysfunctional procrastination in young women¹⁴; goal orientations¹⁵, optimism, and self-actualization in college students¹⁶.

The results of these studies are consistent and lead to precise conclusions about optimal childrearing styles. Children, adolescents and young adults of authoritative parents are less anxious, depressed, and dependent; earn higher grades in school; and are more achievement oriented, independent, self-reliant, friendly, and cooperative^{17,18}. In other words, children who are raised by authoritative parents tend to display better emotional well-being and have better psychosocial skills than do the offspring of parents who are permissive or authoritarian^{19,1}.

A literature search failed to locate any research exploring the role of socio-demographic factors in predicting the

parenting styles, indicating that more studies should be done to fill this void. Consequently, the purpose of this study was to examine the role of some socio-demographic factors in predicting the parenting styles as perceived by university students. The following research question was addressed: What are the socio-demographic factors predicting parenting styles as perceived by a sample of Jordanian university students?

Method

Participants

The study used a convenience sample of 505 undergraduate students at Yarmouk University, who were enrolled in four compulsory courses. The sample consisted of 233 (46.1%) male and 272 (53.9%) female students. Students ranged from 19 to 27 years of age ($M=20.93$, $SD=1.32$). Table 1 displays the demographic characteristics of the participants.

Table 1
Demographic characteristics of the participants

Socio-demographic factors	N	%
working	288	57.0
non-working	217	43.0
Mother's working status		
working	88	17.4
non-working	417	82.6
Father's education		
high school ≤	243	48.1
some college ≥	262	51.9
Mother's education		
≤ high school	326	64.6
some college ≥	179	35.4
Number of father's wives		
one wife	461	91.3
two wives ≥	44	8.7
Family income		
low (≤350 JD)	199	39.4
medium (351-800 JD)	210	41.6
high (≥801 JD)	96	19.0
Family size		
small (≤5 members)	138	27.3
medium (6-8 members)	247	48.9
large (≥9 members)	120	23.8

Instruments

Demographic item sheet. The demographic information requested the participant's gender, age, parent's working status, parent's education, number of father's wives, family income and family size.

Parental authority questionnaire (PAQ) ²⁰. This questionnaire assesses participants' perceptions of parental permissiveness, authoritarianism, and authoritative. In order to increase the participants' motivation to fill the questionnaire without getting bored, a shortened version (15 items of the original 30 items) was used. Each of the three parenting styles was assessed separately for father and mother using five items per scale. Responses to each of these items are rated on a five-point Likert scale ranging from strongly disagree (1) to strongly agree (5). Thus, the shortened version of the

PAQ yields six separate scores for each participant. Sample items are "As I was growing up, my mother/father seldom gave me expectations and guidelines for my behavior" for permissive, "Whenever my mother/father told me to do something as I was growing up, she/he expected me to do it immediately without asking any questions" for authoritarian, and "My mother/father has always encouraged verbal give-and-take whenever I have felt that family rules and restrictions were unreasonable" for authoritative.

The PAQ was translated into Arabic by two professional translators. Then, it was administered to a pilot sample of 60 undergraduate students to determine the items of the shortened version. Five items were selected for each scale based on corrected item-total correlations.

For the present study sample, internal consistency reliabilities (Cronbach's alphas) for the six scales ranged from .79 to .87. The corrected item-total correlations ranged from .56 to .71 for father's authoritativeness; from .62 to .77 for father's permissiveness; from .55 to .69 for father's authoritarianism; from .57 to .66 for mother's authoritativeness; from .59 to .77 for mother's permissiveness; and from .52 to .63 for mother's authoritarianism. These high correlations demonstrate the validity of these scales.

Procedure

The demographic sheet and the parental authority

Questionnaires were completed in class in the presence of the author. Participants remained anonymous by not signing their names, and they were informed that their participation was voluntary. The questionnaires were completed in about 10 minutes.

Results

As a preliminary analysis, means and standard deviations for the sample scores on the scale of perceived parenting styles were computed (See Table 2). Then, stepwise multiple regression analysis was conducted to explore the power of the socio-demographic factors in predicting each parenting style, as indicated in Table 3.

Table 2: Means and standard deviations (in parenthesis) for the sample scores on the scale of perceived parenting styles across the socio-demographic factors

Socio-demographic factors	Father's authoritative	Father's permissive	Father's authoritarian	Mother's authoritative	Mother's permissive	Mother's authoritarian
Father's working status						
working	15.54 (4.53)	5.74 (6.20)	8.95 (5.51)	16.13 (4.03)	5.07 (5.62)	8.21 (5.03)
non-working	15.47 (4.46)	5.12 (5.57)	8.59 (5.30)	15.76 (4.51)	5.07 (5.46)	8.56 (5.33)
Mother's working status						
working	15.60 (4.53)	6.60 (6.54)	9.41 (5.551)	16.07 (3.91)	5.98 (5.92)	8.44 (5.33)
non-working	15.49 (4.49)	5.23 (5.78)	8.66 (5.38)	15.95 (4.32)	4.88 (5.46)	8.34 (5.13)
Father's education						
high school ≤	15.28 (4.39)	6.26 (6.10)	9.32 (5.56)	15.63 (4.43)	5.65 (5.67)	8.86 (5.21)
some college ≥	15.73 (4.58)	4.73 (5.70)	8.31 (5.54)	16.29 (4.04)	4.53 (5.39)	7.89 (5.07)
Mother's education						
≤ high school	15.28 (4.58)	5.56 (6.01)	8.79 (5.59)	15.57 (4.55)	5.23 (5.65)	8.53 (5.26)
≥ some college	15.94 (4.31)	5.31 (5.82)	8.79 (5.09)	16.70 (3.52)	4.77 (5.36)	8.04 (4.97)
Number of father's wives						
one wife	15.61 (4.47)	5.21 (5.77)	8.59 (5.32)	16.11 (4.13)	4.80 (5.36)	8.18 (5.04)
≥ two wives	14.50 (4.60)	8.20 (6.99)	10.86 (5.99)	14.50 (5.14)	7.93 (6.64)	10.25 (5.95)
Family income						
low	15.14 (4.34)	5.59 (5.78)	9.40 (5.42)	15.77 (4.39)	5.25 (5.59)	8.69 (5.28)
medium	15.43 (4.70)	5.95 (6.46)	8.96 (5.64)	15.77 (4.44)	5.33 (5.79)	8.59 (5.23)
high	16.48 (4.25)	4.16 (4.84)	7.13 (4.56)	16.83 (3.32)	4.13 (4.82)	7.18 (4.60)
Family size						
small	14.62 (5.19)	6.80 (6.72)	9.83 (5.66)	15.53 (4.54)	6.19 (6.36)	9.10 (5.42)
medium	16.14 (3.77)	4.91 (5.41)	8.21 (5.17)	16.28 (3.89)	4.57 (5.11)	7.83 (5.05)
large	15.25 (4.83)	5.08 (5.81)	8.79 (5.49)	15.84 (4.57)	4.81 (5.27)	8.59 (4.98)

Table 3: Results of stepwise multiple regression analysis for each parenting style

Parenting styles	Predictors	Beta	R	R ²	F	P
Father's authoritative	Family income	0.10	0.10	0.01	5.14	0.024*
Father's permissive	Number of father's wives	0.14	0.14	0.02	10.42	0.001**
	Father's education	-0.12	0.19	0.04	8.99	0.000***
	Mother's working status	-0.12	0.22	0.05	8.41	0.000***
	Family size	-0.11	0.25	0.06	8.02	0.000***
	Father's working status	-0.09	0.26	0.07	7.26	0.000***
Father's authoritarian	Number of father's wives	0.12	0.12	0.01	7.14	0.008**
	Family income	-0.09	0.15	0.02	5.86	0.003**
Mother's authoritative	mother's education	0.13	0.13	0.02	8.23	0.004**
	Number of father's wives	-0.09	0.16	0.03	6.32	0.002**

Socio-demographic factors predicting perceived parenting styles

Mother's permissive	Number of father's wives	0.16	0.16	0.03	13.14	0.000***
	Father's education	-0.09	0.18	0.03	8.76	0.000***
	Mother's working status	-0.10	0.21	0.04	7.57	0.000***
	Family size	-0.09	0.23	0.05	6.87	0.000***
Mother's authoritarian	Number of father's wives	0.11	0.11	0.01	6.56	0.011*
	Family income	-0.09	0.15	0.02	5.44	0.005**

*P<0.05; **P<0.01; ***P<0.0001

Table 3 shows that family income predicted father's authoritative parenting style ($R^2 = 0.01$, $p < 0.05$); number of father's wives, father's education, mother's working status, family size and father's working status predicted father's permissive parenting style ($R^2 = 0.07$, $p < 0.01$); number of father's wives and family income predicted father's authoritarian parenting style ($R^2 = 0.02$, $p < 0.01$); mother's education and number of father's wives predicted mother's authoritative parenting style ($R^2 = 0.02$, $p < 0.01$); number of father's wives, father's education, mother's working status and family size predicted mother's permissive parenting style ($R^2 = 0.05$, $p < 0.0001$); and number of father's wives and family income predicted mother's authoritarian parenting style ($R^2 = 0.02$, $p < 0.05$).

Discussion

This study sought to investigate the role of socio-demographic factors in predicting perceived parenting styles. In the following, results related to each parenting style are discussed separately.

First: Socio-demographic factors predicting father's authoritative parenting style.

It was found that family income is the only significant predictor of father's authoritativeness, the more income the family has, the more authoritative the father is. This indicates that when the father feels his family members can fulfill their different needs, he becomes more understanding of their demands and circumstances, and more rational and flexible in dealing with them.

Second: Socio-demographic factors predicting father's permissive parenting style.

Results indicated that several socio-demographic factors were predictive of father's permissiveness, these factors were: Number of father's wives, father's education, mother's working status, family size and father's working status.

The father who is married to two wives or more is more permissive with his children, when compared with that married to one wife, indicating that he has more responsibilities, and thus less time to direct or guide his children's behaviors. Additionally, it was found that the

higher father's education is, the less permissive he is. This demonstrates that fathers with higher education are more aware of the consequences of being highly permissive in treating their children. They realize that children need guidance; otherwise they will learn deviant behaviors.

It was also demonstrated that if mothers are non-working, their husbands are less permissive with their children, indicating that non-working mothers have more time to watch closely their children's behaviors when they are at home, and then inform their husbands about these behaviors whether acceptable or not. Such information is not equally available for the fathers whose wives are working, which may lead them to be more permissive. In other words, these fathers may become more permissive because of the insufficient information that they have about their children. Likewise, given non-working fathers spend more time at home, they have more opportunities to observe their children's behaviors, and then to be less permissive with them, compared with working fathers.

With regard to the family size, it was found that the smaller the family is, the more permissive the father is. This suggests that the father whose family is small tends to be overprotective with his children. As a result he rarely uses punishment with them, and gives them more chance to conduct as they like and make their own decisions, despite children need feedback and guidance in order to behave in a better way in their lives.

Third: Socio-demographic factors predicting father's authoritarian parenting style.

Results indicated that the predictive factors of father's authoritarianism were number of father's wives and family income. This indicates that the father who is married to two wives or more emphasizes obedience in his home, and tends to use harsh punishment with his children, which reflects that he lacks emotional control, because of severe family burdens. Regarding family income, it was found that the father whose family income is high tends to be less authoritarian with his children, indicating that he feels more relief as a result of being more able to satisfy his children's needs.

Fourth: Socio-demographic factors predicting mother's authoritative parenting style.

Results revealed that the mothers whose education is college or above are more authoritative with their children than those whose education is high school or below, reflecting the importance of high education for mothers to adopt positive parenting styles. On the other hand, although number of father's wives wasn't a significant predictor of father's authoritative parenting style, it was predictive of mother's authoritative parenting style. This suggests that the wife, whose husband is married only to her, feels more stable and appreciated, and thus deals with her children in a better way.

Fifth: Socio-demographic factors predicting mother's permissive parenting style.

Results indicated that the factors, which predicted significantly mother's permissive parenting style, were all predictive of father's permissive parenting style. These factors were: Number of father's wives, father's education, mother's working status and family size. Counselors should pay greater attention to such factors in interpreting why some parents are permissive with their children.

Sixth: Socio-demographic factors predicting mother's authoritarian parenting style.

Results indicated that the same factors that predicted significantly father's authoritarian parenting style, predicted also mother's authoritarian parenting style. These factors were number of father's wives and family income. It is noteworthy that when considering the role of family income in predicting mother's parenting styles and those of father, we find that it predicted significantly only mother's authoritarian parenting style, whereas it predicted significantly father's authoritarian and authoritative parenting styles. This means that fathers are more affected by family income.

Based on the results of the present study, the following points should be addressed: It is beneficial for counselors to be well-acquainted with the factors predicting parenting styles, therefore more studies should be conducted to examine not only the power of the socio-demographic factors in predicting the different parenting styles, but also the quantitative ones. Counselors should provide parents with some insight into the socio-demographic factors related to each parenting style, so that they improve their own parenting styles, this can be done by giving lectures and holding workshops. Given that the literature shows the positive aspects of authoritative childrearing style over the other parenting

styles, parents should be aware that their children ought to be treated authoritatively. This demonstrates the significant role that counselors could play to provide parents with the necessary skills and methods leading them to adopt positive parenting styles.

Limitations

The sample of this study was selected from undergraduate students, which may limit the generalizability of the results. Additionally, a shortened version of the PAQ was used, meaning that some aspects of the parenting styles might not be covered. Although this version was found to be valid in this study, it needs to be administered, along with other scales of parenting styles, to diverse samples of students for more validation. This should be taken in consideration in future studies. Also, it is important to note that this study didn't shed light on personality or biological predictors of parenting styles, which is left for future research.

Conclusions

When working with clients, who convey that their parents use negative (permissive or authoritarian) parenting styles, and because of which they suffer from different emotional disorders, counselors should consider the socio-demographic factors related to each parenting style, so that they can support parents to understand their motives behind using a particular parenting style. As it was shown, each parenting style was predicted by certain factors, and the predictive power of these factors differed from one factor to another.

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ملخص

قد تؤدي أساليب المعاملة الوالدية إلى جعل الأطفال والمراهقين والراشدين الصغار عُرضةً إلى اضطراباتٍ انفعاليةٍ مختلفة كالإكتئاب وتقدير الذات المنخفض والقلق المرتفع. لذلك، حاولت الدراسة الحالية اختبار دور العوامل الاجتماعية الديمغرافية في التنبؤ بأساليب المعاملة الوالدية المدركة. وتكونت عينة الدراسة من 505 طلابٍ (233 ذكراً، 272 أنثى) في مستوى البكالوريوس، اختبروا من جامعة اليرموك. وقد استُخدمت نسخةٌ قصيرةٌ من مقياس السلطة الوالدية. أظهرت النتائج أن الأب الذي دخل أسرته مرتفع أكثر حُزماً من الأباء الآخرين؛ وأن الأب المتزوج من زوجتين أو أكثر، أو الذي مستوى تعليمه ثانوي أو أدنى، أو الذي زوجته تعمل، أو الذي أسرته صغيرة، أو الذي يعمل أكثر تساهلاً من الآخرين؛ وأن الأب المتزوج من زوجتين أو أكثر أو الذي دخل أسرته منخفض أكثر تسلطاً من الآخرين؛ وأن الأم التي مستوى تعليمها كلية أو أعلى، أو التي زوجها متزوج منها فقط أكثر حُزماً من الأمهات الأخريات؛ وأن الأم التي زوجها متزوج من زوجتين أو أكثر، أو التي مستوى تعليم زوجها ثانوي أو أدنى، أو التي تعمل، أو التي أسرته صغيرة أكثر تساهلاً من الأخريات؛ وأن الأم التي زوجها متزوج من زوجتين أو أكثر، أو التي دخل أسرته منخفض أكثر تسلطاً من الأخريات. وفي ضوء هذه النتائج، نوقشت بعض التضمينات الإرشادية.

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Asneezia – a medically unexplained symptom and abnormal illness behavior: Review of literature and a case report

Santosh K Chaturvedi, Geetha Desai, Manoj K Sharma.

اللاعطس – عَرَضٌ غير مفسر طبيّاً مصحوب بسلوك مرضي غير طبيعي:

مراجعة للأدبيات وتقرير حالة

سانتوش ك شاترفيدي، جيثا د. بيساس، مانوج ك شارما

Abstract

Objective: Asneezia, absence of sneezing or inability to sneeze, is presented here as a form of abnormal illness behavior. A symptom of indeterminate value, and a medically unexplained symptom, asneezia can cause tremendous distress to the person, and become a burden on the health services. **Method:** A case report is presented here, along with the assessment of abnormal illness behavior and psychological assessment of the patient. **Results:** Asneezia is reported to be associated with depressive disorders, and, here, in association with obsessive compulsive disorder and dysthymia. **Conclusions:** Asneezia, as a medically unexplained symptom, can lead to hypochondriacal concern and disease conviction, and manifest as abnormal illness behavior.

Key words: Asneezia – medically unexplained symptom - depression – OCD – abnormal illness behavior

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Introduction

Asneezia, signifying absence of sneezing or inability to sneeze, was described by Shukla¹ as a hitherto unrecognized psychiatric symptom with slightly over 1% of patients spontaneously complaining of asneezia, which was a prominent symptom. In a later report Shukla² reported asneezia in 2.6% of psychiatric patients, although only half complained of the symptom spontaneously. The main diagnostic categories for these patients were endogenous depression and schizophrenia. Endogenous depression was the commonest psychiatric diagnosis, followed by schizophrenia, but 'asneezics' differed significantly from controls in their diagnostic distribution. They also tended to be older, poorer, and less educated. The course and outcome of the asneezic triad (asneezia, infrequent attacks of coryza and light-headedness) ran almost parallel to those of the primary psychiatric illness. In order to challenge Shukla's^{1,2} observations, Akhtar and Verma³ studied 523 consecutive patients in a general practice clinic and found that 3.5% complained of absence of coryza and/or asneezia, either spontaneously or on specific questioning. Most of them believed that coryza or sneezing might relieve their maladies. Almost half suffered from chronic and recurrent headaches of various etiologies; the diagnoses of the remainder varied considerably. The only other report of asneezia is by Kwen and Munschauer⁴ who reported a patient with asneezia of several years duration that was secondary to progressive neurodegenerative disorder-progressive supranuclear

palsy (PSP). We came across a person, highly distressed by his inability to sneeze.

Case report

During the course of data collection, for a research project on somatic symptoms and abnormal illness behavior [approved by Institutional Ethics Committee], a married man [who provided written informed consent] in his fourth decade of age, presented with chief complaints of pain in the head and inability to sneeze since fifteen years. He had sustained injury to the scalp 15 years ago without associated loss of consciousness. The wound was sutured and healed within a month. Since then, the patient has been experiencing pain in the area of injury. He describes pain as "meetha meetha" [sweet, dull aching] and is not associated with any aggravating or relieving factors. He described the intensity of pain as 5/10 on visual analogue scale. The pain has been constant and interferes with his functioning. He had consulted many neurologists and other specialists, including alternative therapists such as homeopaths, with no relief. He had been investigated with CT scan brain three times with no positive findings.

He expressed concern about his inability to sneeze since the time of the injury. He considered this as very odd and different from other healthy persons. He tried many ways to stimulate his nostrils and sneeze, but could not. He reported a lack of desire to sneeze as well, even in dusty and smoky places. At the same time he noted that he did not yawn even when others would yawn. He considered

sneezing and yawning as normal phenomenon and as signs of health, hence, the absence of these, indicated ill health, in his opinion.

On further evaluation, he was noted to have obsessions and health anxiety. In view of his 'doctor shopping' behaviors and concerns for health, he was evaluated for abnormal illness behavior. Assessments using the Illness Behavior Assessment Schedule (IBAS)⁵ and Illness Behavior Questionnaire (IBQ)⁶ indicated high scores on disease conviction, somatic focus, gross affective disturbance, rejection of psychological explanation, denial of life stress, and irritability. Scores on Hypochondriasis subscale were also high. IBQ scores: Hypochondriasis -5/9, Disease Conviction- 4/6, Psychological vs. Somatic focusing - 4/5, Affective Inhibition - 3/5, Affective disturbance-5/5, Denial-2/5, Irritability-4/6. On the YBOCS⁷ scale for obsessions and compulsions, he scored 19 on obsessions and 13 for compulsions. On the PGI memory scale,⁸ the findings indicated poor memory functioning.

A diagnosis of dysthymia with obsessive compulsive disorder and abnormal illness behavior (AIB) was made. For pharmacological management, he was prescribed Amitriptyline 25 mg and Fluoxetine 40 mg daily. Cognitive therapy included explanation of the inter-relationship between thinking processes, mood changes and the effect on cognition. He was also taught deep breathing exercises and attention enhancement tasks by a grain sorting method.

Discussion

This case led us to search for literature on asneezia and the distress it can cause for those affected by it. We found very few studies. Refined tobacco [snuff] is commonly used in many places in the Indian subcontinent to stimulate the nostrils and produce a series of explosive sneezes. In the background of this socially acceptable practice, it is understandable that the person who does not sneeze is concerned by the inability to do so. In traditional systems of medicine, the act of sneezing is significant for understanding health and disease². There have been no published studies of similar symptoms from the western culture⁹. Nearly all ancient people considered the act of sneezing to be sacred, holy, and a divine sign of great importance.

From a neurochemical point of view, serotonin induces a variety of nasal responses including sneezing. Though sneezing is a common, complex respiratory reflex, it has not been well studied. Sneezing is also reported to be a sign of CNS disease, most notably temporal lobe epilepsy, and other forms of neurological diseases,

including mild encephalitis, poliomyelitis and tabes dorsalis⁹. However, asneezia was reported with PSP, as mentioned above⁴.

Our case presented asneezia as a 'medically unexplained symptom', and confirmed occurrence of asneezia with dysthymia as in the earlier reports^{1,3} and an abnormal illness behavior, which was perhaps influence the man's 'doctor shopping' behavior. Asneezia was, however, questioned by Clarke¹⁰.

It is difficult to say if 'asneezia' is the appropriate name for such a symptom of inability to sneeze and a neologism database¹¹ questioned the credibility of the term. This database suggests that 'Asternutus' or 'Asternutation' would be a more viable term, consisting in meaning and with the bulk of medical terminology currently in existence. Asneezia may appear popular, but will likely die out a nonce term, failing to integrate within medical jargon¹¹. Further, the observation that this symptom has laid dormant in the psychiatric literature for nearly 30 years makes one wonder, whether most health professionals encounter this or not, in their clinical practice.

Medically unexplained bodily symptoms raise the possibility of AIB, a concept proposed by Pilowsky^{5,6}. The persistence of a maladaptive mode of experiencing, perceiving, evaluating, and responding to one's own health status is considered as AIB. Asneezia, could be a manifestation of AIB, and would need appropriate management strategies to deal with such a behavior.

Conclusions

There may be other infrequent but interesting 'medically unexplained bodily symptoms', like asneezia, which go unreported and without being discussed. The significance of such reports may be unclear at the moment; however, such symptoms, presenting as abnormal illness behaviours put a cost on the health services and distress for the family and individual.

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الملخص

الأهداف: اللاعطس، أو غياب العطس أو عدم القدرة على العطس، يتم تقديمها هنا على أنها شكل من أشكال السلوك المرضي الغير طبيعي، هذا المرض والذي لا تعرف نتيجته ولا يمكن تفسيره طبيياً يمكن أن يؤدي لزجاج هائل للفرد، ويصبح عبئاً على الخدمات الصحية. **الطريقة:** تقدم هنا حالة مع التقييم للسلوك المرضي الغير طبيعي والتقييم النفسي. **النتائج:** حالة اللاعطس، وصفت بأن لها علاقة باضطراب الإكتئاب، وهنا لها علاقة باضطراب الوسواس القهري وتكرر المزاج. **الخلاصة:** اللاعطس هو عرض غير مفسر طبيياً وقد يؤدي للإهتمام المراقبي والإعتقاد بوجود مرض، ويظهر كسلوك مرضي غير طبيعي.

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The World Federation for Mental Health: Building its constituency in the East Mediterranean Region for improving care and the lives of the mentally ill and their families

Mohammed T Abou-Saleh

الاتحاد العالمي للصحة النفسية: دعوة لبناء العضوية في منطقة شرق البحر الابيض المتوسط لتحسين الرعاية النفسية و حياة المصابين و عائلاتهم
محمد طموح ابو صالح

Abstract

The World Federation for Mental Health (WFMH) is an international membership organization founded in 1948 to advance, among all peoples and nations, the prevention of mental and emotional disorders, the proper treatment and care of those with such disorders, and the promotion of mental health. The Federation, through its members and contacts in more than 100 countries on six continents including the East Mediterranean Region, has responded to international mental health crises through its role as the only worldwide grassroots advocacy and public education organization in the mental health field. Its organizational and individual membership includes mental health workers of all disciplines, consumers of mental health services, family members, and concerned citizens. The organization's broad and diverse membership makes possible collaboration among governments and non-governmental organizations to advance the cause of mental health services, research, and policy advocacy worldwide.

The article will introduce the WFMH current work programmes and initiatives including ones to address the mental health consequences of post conflict situations with the aim of building its constituency in the East Mediterranean Region to advance the Mental Health agenda as outlined in the World Health Organization Mental Health Atlas 2011 and establish links with governmental and non-governmental organizations and contribute to their efforts to achieve country objectives for improving the lives of the mentally ill and their families. The WFMH has developed the 'Great Push for Mental Health' initiative for global action; has contributed to the WHO draft Comprehensive Mental Health Plan (CMHP); developed the Charter for Mental Health; and, jointly with the WHO has developed an Action Plan for its implementation and proposed the establishment of a Mental Health Observatory to monitor global implementation of the CMHP). WFMH seeks the support of all organizations in the EMRO for contributing to these initiatives and programmes for improving care and the lives of the mentally ill and their families.

"The world was sick, and the ills from which it was suffering were mainly due to the perversion of man, his inability to live at peace with himself."

George Brock Chisholm Founding Member of the WFMH

Key words: Constituency Building, Eastern Mediterranean Region, Global Mental Health Action Plan, Mental Health, NGO, World Federation for Mental Health, World Health Organization.

Declaration of interest: None

The early beginning

The World Federation for Mental Health (WFMH) is an international membership organization founded in 1948 to advance, among all peoples and nations, the high standards evidence-based treatment and care, prevention of mental disorders, and the promotion of mental health. The Federation, through its members and contacts in more than 100 countries on six continents, has responded to international mental health crises through its role as the only worldwide grassroots advocacy and public education organization in the mental health field. Its organizational and individual membership includes mental health workers of all disciplines, consumers of mental health services, family members, and concerned citizens. The organization's broad role is advancing the

cause of mental health services, research, and policy and diverse membership makes possible collaboration among governments and non-advocacy worldwide¹.

It was the first Director-General of the World Health Organization (WHO) who suggested that WFMH be created. George Brock Chisholm, a Canadian psychiatrist, envisaged the WFMH as an international, non-governmental body to provide a link to 'grassroots' mental health organizations and United Nations agencies. A radical thinker, Chisholm's view that "health is a state of complete physical, mental and social well-being and not merely the absence of disease or infirmity" provided early direction for both the WHO and the WFMH. Chisholm's close friend, John Rawlings Rees, a British military psychiatrist and a founder of the renowned

Tavistock Clinic, accepted the challenge. Resigning from the clinic to organize the 3rd International Congress of Mental Hygiene, in 1946, Rees traveled to New York to meet with the congress parent sponsors, the International Committee for Mental Hygiene (ICMH). The original purpose of the ICMH was mental hospital reform. Clifford Beers, a former psychiatric patient, who had suffered dehumanizing treatment and abuse within mental institutions, founded the National Committee for Mental Hygiene in 1910 and the ICMH in 1919. In the aftermath of WWII, the new ICMH board recognized the need for advocacy in mental health, beyond that of raising standards of care for the mentally ill. In 1947, the ICMH agreed to change their name to the WFMH and accept as a new purpose “to promote among all peoples and nations the highest possible level of mental health in its broadest biological, medical, educational, and social aspects”. The lead architects of this vision were Rees and Chisholm, together with eminent psychiatrists George Stevenson, Clarence Hincks, Arthur Ruggles and Harry Stack Sullivan, and noted anthropologist Margaret Mead¹. In preparation for the congress and to reach out to the societies who would later become WFMH members, Rees hosted a meeting of 26 academics representing a wide range of disciplines and nationalities. Dr. Margaret Mead described the meeting thus: “Never before has so informal, so simple and so fruitful an organizational scheme been tried with individuals working to communicate with the others instead of covering themselves for the folks back home”. These discussions were later published as “Mental Health and World Citizenship” and provided the core principles of the WFMH. The Resolution to found WFMH began with a meeting in the British Ministry of Health building during the London Congress on the night of 18 August and completed on the night of 19 August 1948. Dr. Jack Rees announced the resolution at a plenary session of the Congress the following day and was ratified by the official Congress delegates on 21 August. The Federation began with members, ‘not of individuals or countries, but of societies’ from 46 countries. Today, with members and contacts in over 150 countries, the founding principles of the WFMH still hold true and are reflected in current WFMH activities including World Mental Health Day, the Biannual World Congresses, WFMH Collaborating Centers and ongoing initiatives to improve awareness and remove prejudice about mental disorders¹.

The WFMH envisions a world in which mental health is a priority for all people. Public policies and programs reflect the crucial importance of mental health in the

lives of individuals. Its mission is to promote the advancement of mental health awareness, prevention of mental disorders, advocacy, and best practice recovery focused interventions worldwide. Its goals are: to heighten public awareness about the importance of mental health, and to gain understanding and improve attitudes about mental disorders; to promote mental health and prevent mental disorders and to improve the care, treatment and recovery of people with mental disorders.

Scope

The article will introduce the WFMH’s current work programmes with the aim of building its constituency in the East Mediterranean Region to advance the Mental Health agenda as outlined in the World Health Organization Mental Health Atlas 2011 and establish links with governmental and non-governmental organizations and contribute to their efforts to achieve country objectives for improving the lives of the mentally ill and their families.

WFMH program

The WFMH had launched numerous programmes over decades to operationalize its vision^{1, 2, 3} and established World Mental Health Day (WMHD) in 1992; the only annual global awareness campaign to focus attention on specific aspects of mental health and mental disorders, and is now commemorated in over 90 countries on October 10 through local, regional and national World Mental Health Day commemorative events and programs.

The theme for the WMHD 2012 is “Depression, a Global Crisis” and aims to encourage governments and civil society around the world to address depression as a widespread illness that affects individuals, their families and their peers, and to recognize that it is a treatable condition. People should be alert to the early signs of depressive disorder—it can affect anyone, from young people to seniors. It is now estimated that 350 million people globally are affected by depression, and this alarming figure is a wakeup call for us to address this global non-communicable disease. World Mental Health Day is the signature project of the WFMH and its yearly information package is used in many different ways. The text can be translated for use by local organizations⁴.

Currently the focus is on 3 projects: the Great Push for Mental Health; Diabetes and Depression Dialogue and the WHO Comprehensive Mental Health Plan.

The Great Push for Mental Health

The WFMH continues to push its vision of a world in which mental health is a priority for all people. Even though mental health services are increasingly being recognized as critical, they still get short shift. They do not get the resources and support they deserve. The WFMH has redoubled efforts to achieve its vision through the initiative of the Great Push for Mental Health. WFMH has formed a strategic alliance with the Movement for Global Mental Health (MGMH). The Movement is best reflected in two series of articles in *The Lancet*^{5, 6}. Essentially, these articles make the case that mental illnesses constitute a significant proportion of the global burden of disease and that prioritization and attention on mental health intervention will contribute significantly to both economic and social development. The *Lancet* series called on all governments and donors for “Action on Mental Health” drawing attention to the impact of mental illness on the economies of countries and the wellbeing of its citizens, many millions of whom go untreated. As few governments appear to have responded they need encouragement by direct action. Supporting capacity building in global mental health is one of the core aims of the MGMH which conducted a survey of capacity building initiatives and the findings were used to develop a Capacity Building Atlas for Global Mental Health⁷. This Atlas (www.globalmentalhealth.org/cb_atlas.html) provides information on 25 programmes that have been identified thus far and members can add new programmes using an online submission form. The WFMH embarked on:

- The development of a grass-roots campaign so that mental health can have more visibility and priority in the public mind internationally;
- Working with the Commonwealth Secretariat on the UN Special Session on Non-Communicable Diseases in September, 2011;
- Participation in the United Nations process to reformulate the Millennium Development Goals;
- Developing strategic partners with international agencies and advocacy groups to promote the Great Push; and
- Promotion of the Great Push using both traditional and social media.

The World Health Organization has recently (September, 2010) released a report entitled *Mental Health and Development*, which makes the case for the integration of mental health in development efforts. Mental health is intimately tied with key areas of development such as education and human productivity. As we identify non-communicable diseases like heart disease, diabetes, cancer and respiratory diseases as the new scourge, the

relationship to mental health is both intimate and unavoidable. The bottom line is that there is no health without mental health and that there is no development without health and mental health.

The WFMH has developed the ‘Great Push for Mental Health’ initiative for global action; has contributed to the WHO draft Comprehensive Mental Health Plan (CMHP); developed the Charter for Mental Health; and, jointly with the WHO has developed an Action Plan for its implementation and proposed the establishment of a Mental Health Observatory to monitor global implementation of the CMHP. WFMH seeks the support of all organizations in the EMRO to contribute to these initiatives and programmes for improving care and the lives of the mentally ill and their families.

Diabetes and Depression Dialogue - The Africa Training Program for Nurses on Diabetes and Depression. Depression is the most common mental disorder in the community affecting 121 million. It is now ranked as the fourth most debilitating health problem in 1990 and estimated to be the second only to cardiovascular disease accounting for 15% of the disease burden worldwide by 2020. Recent studies have demonstrated that depression is two to three times more likely in those with diabetes than the general population. Diabetes is a major global health problem with enormous economic and social costs both for health care and through loss of productivity. It is recognized that low and middle income countries face the greatest burden of diabetes as around two thirds of those affected live in these areas of the world. When diabetes and depression occur together there is higher symptom burden with worse functioning, poorer quality of life and overall shortened life expectancy.

The Dialogue on Diabetes and Depression was set up as a multi-professional and multi-agency international collaborative effort to examine these co-morbid conditions. The group’s objectives were clearly outlined by a Scientific Committee which consisted of representatives from major professional organizations with a view to the researching the field of co-morbidity of diabetes and depression, improving awareness by further training and education of mental health care professionals and assessing and evaluating interventions to promote effective treatment.

As part of the dialogue, recently the World Federation for Mental Health has had the opportunity to engage in an innovative training program for nurses on Diabetes and Depression in Africa^{2, 3}. This project is a collaborative initiative which started early on in 2011

involving the International Council of Nurses, DDD Representatives along with various nurse associations in 7 countries in Africa to develop core competencies and capacity of nurses, facilitate change in the environment, evaluate the shift in practice and overall aimed to reduce stigma of diagnosis of depression and diabetes.

This program emphasizes the critical role of nurses in providing the workforce to implement this transformation to ensure proper screening, early recognition and link to a care pathway of evidence-based interventions and effective management. Future plans include adaptation of the program to include primary care practitioners, psychiatrist and diabetologists with expansion to the Far East and Middle East.

It is only by increasing awareness and education that we can start to implement a more holistic approach to the care of those with comorbidities such as diabetes and depression and improve the quality of life for this population with overall better outcomes and increased life expectancy.

Mental health systems in the Eastern Mediterranean Region

World Health Organization (WHO) report on the mental health systems of 14 countries in the WHO Eastern Mediterranean Region using the WHO Assessment Instrument for Mental Health Systems (WHO-AIMS) summarized its key findings as follows:

- In almost all aspects, the mental health systems of the Region reflect the status of mental health systems in the global sample.
- Although a few aspects of the Region's mental health systems differ according to countries' income and emergency status, for the most part, they have more similarities than differences on WHO-AIMS indicators.
- Mental health resources are scarce, inequitably distributed and inefficiently used.
- Community-based mental health services are underdeveloped.
- Mental health systems often are not well linked to other relevant sectors.
- Human rights are given insufficient attention.

The report concluded that WHO-AIMS's assessment of the essential building blocks of mental health systems can be used for scaling up mental health care in the Region. The information compiled can help these 14 countries to fulfill the objectives of the WHO mental health Gap Action Program ⁸ and prioritize the mental

health agenda in the Region. In summary, the report highlighted the urgent need in the Region for additional resources to be directed toward mental health care, for the limited resources available to be more equitably distributed, and for resources concentrated in mental hospitals to be diverted to community care.

More recently the WHO Regional Committee for EMRO, developed a comprehensive mental health strategy (2012-2016) to guide the response of Member States, to promote mental health and to provide for integrated efforts for prevention, treatment and rehabilitation of persons with mental, neurological and substance use disorders. The regional strategy and actions proposed provide a foundation for the development of national strategies and action plans. The strategy made the following recommendations to member states:

- Endorse the strategy for mental health and substance abuse in the Eastern Mediterranean Region 2012–2016;
- Review and update national health policies, strategies and plans in line with the regional strategy to ensure that mental health and substance abuse are identified as a priority public health issue with commensurate allocation of resources;
- Set up a national multidisciplinary mechanism with the involvement of concerned ministries and relevant sectors, with the Ministry of Health taking the lead, in order to coordinate, plan and monitor the implementation of the national mental health and substance abuse strategies/plans of action with commensurate resource allocations;
- Integrate mental health and substance abuse services within the existing health systems including primary health care;
- Strengthen the secondary and tertiary level mental health and substance abuse services to provide training, referral and supervisory support to the primary health care system;
- Promote intersectoral collaboration to enhance mental health literacy; to minimize stigma and discrimination faced by persons suffering from mental disorders; prevent mental disorders and promote mental health particularly focusing on the vulnerable sections of the society; and,
- Promote applied research and build up the capacity to undertake research in the area of mental health and substance abuse.

The Global Mental Health Action Plan

At its Sixty-fifth session in May 2012, the World Health Assembly adopted resolution WHA 65.4 - The global burden of mental disorders and the need for a comprehensive, coordinated response from health and social sectors at the country level- and called on the WHO to develop a comprehensive mental health action plan. This draft Global Mental Health Action Plan presents (GMHAP), for discussion by all partners, the global mental health context, the vision, cross-cutting principles, goal, objectives, targets and key areas for potential action that need to be ultimately agreed upon by Member States.

The draft Action Plan, which has been developed through consultation with WHO Member States, civil society and international partners, proposes actions to address the health, social and economic burden of mental disorders by adopting a comprehensive and multisectoral approach involving coordinated services from the health and social sector, with an emphasis on promotion, prevention, treatment, care and recovery, and with due attention to the principles of equity, human rights, evidence and user empowerment. It also sets out clear roles for Member States, WHO Secretariat and international, regional and national level partners, and proposes key indicators and targets that can be used to evaluate levels of implementation and impact.

Member States, intergovernmental organizations, WHO Collaborating Centers, nongovernmental organizations and any other organizations/associations are kindly invited to comment on the 'zero draft' from 27 August 2012 to 19 October 2012. The WHO Secretariat will then convene an informal consultation with Member States and UN agencies on 2 November 2012 on the 'zero draft' 2013-2020 Global Mental Health Action Plan. During the informal consultation, a summary of comments received from Member States and UN agencies will be provided by the WHO Secretariat, as well as the views received from relevant global NGOs and selected private sector entities. To conclude the work, the WHO Secretariat will submit a final draft of the 2013-2020 Global Mental Action Plan to the Sixty-sixth World Health Assembly through the Executive Board, for consideration by Member States.

WFMH contribution to the GMHAP

The WFMH with its Consultative Status with the WHO as the Global Mental Health NGO has contributed to the efforts to develop the GMHAP and delivered a Statement

to the 65TH WORLD HEALTH ASSEMBLY in May 2012 urging that:

- Mental disorders should be placed on the Non-Communicable Disease agenda in parity with other NCDs, because of the wide prevalence of mental disorders and also their close connection with other NCDs;
- Attention should be given to women's mental health from a "whole life" perspective, inclusive of social issues and gender-based violence;
- Noting with appreciation the September 2010 WHO report, Mental Health and Development: Targeting People with Mental Health Conditions as a Vulnerable Group, we urge that mental illness be viewed not only as a medical issue but also as a development issue relevant to poverty and productivity, and to human rights; and,
- Sufficient funding and resources be allocated by Member States to support strong mental health initiatives in their countries.

The WFMH fully supported the proposal of a comprehensive Mental Health Action Plan and is committed to collaborating with the World Health Organization and Member States in its development and implementation.

Recalling the Lancet series of articles providing the economic, medical and humanitarian evidence for moving forward world mental health, the Federation in 2009 established the Great Push for Mental Health Program in alliance with the Movement for Global Mental Health around the themes "Unity, Visibility, Rights, Recovery" to rally civil society to the cause of international mental health. To date over 500 organizations representing diverse constituencies from 112 countries have signed up their members. As a contribution to inform the WHO Action Plan, the Federation, in the spirit of cooperation and collaboration, has begun a survey of these organizations to obtain their views of the most important issues in mental health. These views will be brought together as a "People's Charter for Mental Health" and offered to WHO as a reference guide to the concerns of civil society.

The WFMH in collaboration with the WHO is developing a Collaborative Project to support the development and implementation of the GMHAP. The project involves organizing:

1. Consultations with all stakeholders, e.g. member states, NGOs, academic institutions, user groups and international development partners to obtain feedback on draft action plan.

These consultations will be global as well as regional. WFMH will organize a survey to obtain feedback of WFMH affiliated NGOs on the draft action plan and incorporate the survey's feedback in order to support WHO in finalizing the action plan.

2. Support of countries to develop their national action plans. WFMH will disseminate the action plan and use it as an instrument to raise awareness amongst the countries and service providers. WFMH Associations (affiliates in 140 countries) will assist the governments with implementation.
3. Establishment of an oversight technical monitoring observatory to monitor progress of global mental health. WHO will establish the observatory, monitor the progress and prepare periodic reports. WFMH will assist in collection of data from NGO sources within countries to supplement data from governmental sources and in disseminating reports of the observatory.

Building the WFMH constituency in the East Mediterranean Region

In view of the aforementioned developments, particularly the landmark development of the GMHAP and the continuing challenges to its implementation, the WFMH through its Constituency in the Eastern Mediterranean Region aims to do the following:

- Establish a Regional Council of Representatives of national mental health NGOs and civil society organizations to develop and implement its regional plans.
- Increase its Membership whether individual or association particularly NGOs.
- Organize consultations with all stakeholders e.g. member states, NGOs, academic institutions, user groups and international development partners to obtain feedback on draft action plan.
- Support countries to develop their national action plans. WFMH will disseminate the action plan and use it as an instrument to raise awareness amongst the countries and service providers. WFMH Associations and Affiliates will assist the governments with implementation.
- Establishment of an oversight Regional technical monitoring observatory to monitor progress of global mental health. WFMH will assist in collection of data from NGO sources within countries to supplement data from

governmental sources and in disseminating reports of the observatory.

- Contribute to local and regional conferences proceedings raising awareness and engaging the constituencies including the organization of training workshops such as the DDD and to inform practice and action plans on NGOs in emergency and post-emergency settings.

Conclusion

The WFMH envisions a world in which mental health is a priority for all people. Public policies and programs reflect the crucial importance of mental health in the lives of individuals. Its mission is to promote the advancement of mental health awareness, prevention of mental disorders, advocacy, and best practice recovery focused interventions worldwide. Its goals are: to heighten public awareness about the importance of mental health, and to gain understanding and improve attitudes about mental disorders; to promote mental health and prevent mental disorders and to improve the care, treatment and recovery of people with mental disorders.

The WFMH as the lead global NGO with worldwide reach and unique special consultative status with the WHO is poised to take a lead on the development of the Global Mental Health Action Plan and its implementation on behalf of civil society and service users and their families.

For the East Mediterranean Region, the WFMH will endeavor to work in partnership with the WHO EMRO and professional mental health organizations to advance the mental health agenda as outlined in the World Health Organization Mental Health Atlas 2011 and establish links with governmental and non-governmental organizations and contribute to their efforts to achieve country objectives for improving the lives of the mentally ill and their families. WFMH seeks the support of all organizations in the EMRO for contributing to these initiatives and programmes for improving care and the lives of the mentally ill and their families.

"Never doubt that a small group of thoughtful, committed citizens can change the world. Indeed, it is the only thing that ever has." Margaret Mead, WFMH President 1956-57

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المخلص

الاتحاد العالمي للصحة النفسية هو منظمة دولية تأسست بعام 1948، لارشاد جميع الشعوب و الافراد، في الصحة النفسية والوقاية من الاضطرابات النفسية، و الرعاية و العناية المناسبة والارتقاء بمستوى الرعاية النفسية من خلال اعضاء الاتحاد و صلاتهم في اكثر من 100 دولة بالقارات الست ومن ضمنها إقليم شرق البحر الأبيض المتوسط، لقد تجاوزت المنظمة مع الازمات بالعالم من خلال دورها المتفرد عالمياً في الترشيد و الدفاع عن حقوق المرضى النفسيين . من خلال عضويتها من الافراد و المنظمات المهنية و غير الحكومية ومن العاملين في مجال الصحة النفسية. و مستهلكي خدمات الصحة النفسية، و افراد الاسرة، و المواطنين المعنين. عضوية الاتحاد مختلفة و متنوعة الأعضاء من مختلف المهن الصحية المعنية مما يخولها التعاون مع منظمات حكومية و غير حكومية وإرشادها في مجالات الرعاية النفسية، و البحث العلمي و التطبيقي، وسياسات التأييد العالمي. والمقال يستعرض برامج العمل الحالي للاتحاد و مبادراتها التي تتضمن برامج لمعالجة الآثار الصحية النفسية للحالات ما بعد الصراعات الإقليمية بهدف بناء جمهورها و عضويتها في إقليم شرق البحر الأبيض المتوسط للمضي قدماً في تنفيذ برامج تطوير الصحة النفسية على النحو المبين في مطبوعة أطلس للصحة النفسية لمنظمة الصحة العالمية 2011، و إقامة صلات مع المنظمات الحكومية و غير الحكومية والمساهمة في الجهود الرامية إلى تحقيق الأهداف الوطنية لتحسين حياة لمرضى النفسية و حياة أسرهم. و قد بادرت المنظمة في مشروع "الدفع العظيم" حملة شاملة للصحة النفسية على مستوى العالم، و ساهمت مع منظمة الصحة العالمية بوضع الخطة العالمية للرعاية النفسية، و وضعت ميثاق الصحة النفسية بالتعاون مع منظمة الصحة العالمية، كما طورت خطة العمل هذه وطرق تنفيذها و إنشاء مرصد لمراقبة الصحة النفسية عالمياً. الاتحاد العالمي للصحة النفسية يدعم جميع الاتحادات التابعة لإقليم شرق البحر الأبيض المتوسط و تعزيز مبادراتها و برامجها وفي تحسين الرعاية و حياة المرضى النفسيين و حياة عائلاتهم.

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Avicenna's no health without mental health

Abdi Sanati, Mohammed T Abou-Saleh

ابن سينا: لا صحة بدون الصحة العقلية

عبدی صنعتی، محمد ابو صالح

Abstract

The medieval Persian Muslim physician and philosopher, Ibn Sina (Avicenna) exerted significant influence on Western medicine and thought for centuries. In this article we examine the convergence of medicine and humanities in work of Avicenna and how it was applied to mental health. We include some famous case histories and his ingenious therapeutic methods.

Keywords: Ibn Sina, Avicenna, Middle Eastern Psychiatry.

Declaration of Interest: None declared.

Avicenna

"As to mental essence, we find it in infants devoid of every mental form" Avicenna

Abu Ali Hussain Ibn Abdullah Ibn Sina, recognized in the west as Avicenna and in his native land Iran (then Persia) as Ibn Sina, was one of the most eminent physicians and philosophers of his time. He was born in the village of Afshaneh, near the city of Bukhara (now in Uzbekistan) at 980 CE ¹. He spent his earlier life studying Quran, which he knew by heart at age of ten, mathematics and philosophy. He later turned to medicine and became the most famous physicians of his time. He spent his life as a scholar, moving between different cities of Persia. He died at age of fifty eight and buried in the city of Hamadan, Iran.

Calling Avicenna an "intellectual phenomenon," Leclerc stated that "Never perhaps has an example been seen of so precocious, quick, and wide an intellect extending and exerting itself with so strange and indefatigable an industry." His output was around 450 works, of which 240 have survived to this day ², and includes medicine, astronomy and philosophy.

His main philosophical book, "The Book of Healing" includes logics, physics, mathematics and metaphysics ³. His metaphysics was a "thoroughly thought-out original system" ³. In one of his philosophical arguments he anticipated Descartes' Cogito Ergo Sum. He stated a fully grown man who suddenly comes to the existence with his eyes covered and limbs separated, would have no sensation but nevertheless he would be aware of his existence ⁴. He cannot be empirically aware of the existence of his physical body, yet as he is thinking he will be aware of the existence of his self.

His version of Cosmological Argument, highly influential on Thomas Aquinas, stated being was an accident of essence, and contingent beings require necessary causes for their existence ⁴. This separation of essence and existence was quite a novel idea and had a significant influence on future philosophers ³.

In physics, he invented an instrument for observing the coordinates of a star and correctly stated that the velocity of light is finite ². Being also a poet and a musician he had a unique understanding of human mind and emotions.

In philosophical psychology, Avicenna provides with an elaborate theory of the human mind which includes stages of development of human intellect and a classification of "internal senses" ³. It is linked with his epistemology, theory of knowledge, on how we acquire knowledge through different stages. His philosophy inadvertently put him in opposition of the orthodoxy of his time which labeled him a heretic.

Avicenna's contribution to medicine is his mammoth masterpiece, Canon of Medicine. It is a summary of the medical knowledge of his time and encompasses every disease known at his time. It is seen as a "systematic attempt to correlate Aristotelian philosophy, Hippocratic observation and Galenic speculation" ⁵.

Canon consists of 5 books, the third concerns the disorders of the nervous system, including sexology, lovesickness, delusion, hallucination, insomnia, nightmare, mania, melancholia, dementia, epilepsy, apoplexy, paralysis, vertigo, stroke, spasm, and tremor, and it also classifies 15 kinds of pains ². He also

identified the transition of melancholia to mania through appearance of anger, restlessness and violence ⁶.

There are two special cases where the ingenuity of Avicenna manifests itself.

The first case illustrates what Avicenna called the Disorder of Love. He described one of these patients as:

Hereby it is possible to arrive at the identity of love of a person if the patient will not reveal it, such knowledge affording one means of treatment desired. Whereby it may be affected is that many names shall be mentioned and repeated while the fingers rest on the pulse. When the pulse becomes rapid or so-called irregular, one should then repeat the process. I have tried this method repeatedly and have discovered the name of the beloved. Then in a like manner, mention the names of the streets, families, and countries, joining each one with the name of the lover. When it (the pulse) alters on mention of any one thing several times, you will infer from this all particulars about the beloved as regards names, appearances, and occupation. We have ourselves tried this plan and thereby arrived at the knowledge which was valuable.

Then, if you can discover no cure except to unite the two in such wise as is sanctioned by religion and law, you will do this. We have seen cases where health and strength completely were restored and health regained after the patient has become extremely extenuated and weak resulting from excessive love.

When he was accorded union with his beloved in a short time he recovered so that we were astonished thereat and realized the subordination of human nature to mental imagination ⁷.

He described the symptoms of the Disorder of Love as cachexia, fever, severe depression with obsessional features, poor grooming and emotional lability ¹.

It is also apparent from this quote that Avicenna did not separate mind and body and he is considered one of the early adherents to psychosomatic medicine ⁸.

The other case, and by far his most famous one, concerns treating a Prince with a psychotic delusion where he believed he was a cow and demanded to be slaughtered. He refused to eat anything. Avicenna pretending to be a butcher claimed the patient was to lean and needed to be fed. Following a period of good nutrition input the patient recovered from his delusions.

In his approach to madness, Avicenna considered madness as a disorder of reason and described it as a condition when reality is replaced by fantasy ⁹. This assertion has an important historical significance. The antagonism of madness and reason has been traced to the Enlightenment by prominent figures like Foucault. It is clear that Avicenna stated the link long before that. It puts the history of psychiatry in a new perspective.

It is also clear that the management of mental illnesses was in the domain of medicine for centuries. Avicenna was also one of the prominent figures promoting more humanized care in the hospitals for the insane ¹⁰. His knowledge of music allowed him to use it as a form of therapy for emotional disturbances. He was one of the first physicians to use electrical shock to treat diseases like melancholia using electric fishes ⁶.

Many of the ideas expressed by Avicenna have been refuted. Nevertheless there is much to learn from the great man. Avicenna belonged to the group of scholars with thorough education on philosophy, science and mathematics. All these converge in his theory and practice. There is a clear trajectory from his philosophy to his psychology and to his medicine, which included mental health in great detail. He was a holistic physician in the real sense of the term, not the politically correct way it is used today. Someone who studied and understood human condition from different points of view and implemented his knowledge in his practice. He did not separate soma from psyche, or humanism from science.

“Now it is established in the sciences that no knowledge is acquired save through the study of its causes and beginnings, if it has had causes and beginnings; nor completed except by knowledge of its accidents and accompanying essentials” Avicenna.

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ملخص

لقد ترك الطبيب والفيلسوف الفارسي المسلم ابن سينا أثراً جليلاً في الطب والفكر الغربي لقرون من الزمان. وفي هذه المقالة نفحص التحولات في الطب والنواحي الأنسانية في أعماله وكيف طبقت في مجال الصحة العقلية. أن هذه الدراسة تشتمل على دراسة حالات لإبن سينا وطرق علاجه له امتازت بالعبقرية.

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Dear the Chief Editor

The Arab Journal of Psychiatry

I read Dr Mansour's paper titled 'Concept, Diagnostic Criteria and Classification of Autistic Disorders: A proposed New Model' with great interest. I am happy to be given the opportunity to comment on the paper.

The paper introduces a refreshing set of ideas by merging evolutionary and neuropsychological perspectives and organizing these ideas in ways that have the potential to be of clinical relevance. It is abundantly obvious that the author holds knowledge in this area, developed through both clinical empiricism and theoretical/academic literacy of the topics discussed. The paper has the potential to offer a refreshing and thought provoking theoretical account of autistic spectrum disorders (ASD).

Albeit fascinating, the paper is too ambitious in the tasks it sets itself from the offset. That is, to reformulate and provide clearer diagnostic criteria on the concepts of ASD. Instead I found the paper to work well as a proposed new theoretical model for ASD and social and emotional intelligence that future research may explore further. Therefore, it may be important to attend to the direction and focus of the paper; a more carefully restricted focus on a proposed model for ASD, couched within a framework of social and emotional intelligence will work best.

The paper should begin with a clear argument that explains why the current way of thinking about ASD (e.g., triad of impairment) is potentially problematic. For example, this paper may be particularly valuable in prompting researchers and clinicians to rethink the conceptualization of ASD in high functioning individuals where arguably greater ambivalence surrounds diagnosis. However, this should be stated more clearly in the introduction of the paper. Emotional intelligence is an existing psychological construct, however, the use of the term in this paper gives the impression that a different or new definition applies. The concept of 'emotional intelligence', as it is used in this paper, should be more clearly defined and supported with appropriate sources of evidence.

It is excellent to see a dimensional approach being taken in considering issues about classification of ASD with or without associated intellectual disability. With respect to further developing the proposed model for ASD, there should be explicit reference to a framework of developmental psychopathology. That is, rather than an exclusive focus on the identified deficits in individuals with ASD, functioning should be considered in the context of typical development (e.g., Frye, Zelazo, and Burack, 1998)¹. To an extent, the paper does this by placing ASD functioning on a continuum rather than relying on categorical decision-making criteria. However, this needs to be developed further. I agree that at present the concept of ASD is much too broad and ill defined, and this is where this model has the potential to offer new insights. However, it seems that the model needs further developing before presenting the proposed set of diagnostic criteria of ASD. Any diagnostic criteria would need to emerge through future factor-analytic research. As such, these proposed criteria should be firmly based on existing literature and their presentation herein needs to be cautious, theoretical, and exploratory in nature, otherwise there is a risk of offering a very tenuous argument.

At present adequate attention is not paid to the task of understanding the individual with an ASD and their relationships with others. In addition to neuropsychological and genotype-phenotype associations, the paper would benefit from opening up a dialogue on equally salient topics such as linguistic and social development, relationships with family members, and the person with ASD in the context of the broader social community. These topics are hugely important; one cannot discuss ASD without touching on developmental issues. After all, ASD is diagnosed early in childhood and continues to be evident

throughout the lifespan, affecting a person's development across all domains of functioning. The account of ASD offered in the paper is predominantly a deficit-theory account. Whilst this is certainly true in that individuals with an ASD present with deficits across multiple domains, the model needs to also account for the relative strengths observed in some individuals with ASD. In order to account for this varied profile of ASD and the common occurrence of ID in most cases, there needs to be reference to a developmental aspect. From a psychological viewpoint, a view of ASD that is not an ecological one tells only half the story (e.g. Loveland and Tunali, 1991; Loveland et al, 2001) ^{2,3}.

I am not convinced that the concept of personality disorders adds value to the model; or at the very least it should not occupy a main focal point in the paper. This is controversial in that a disorder with the strongest medical-genetic multifactorial etiology is related and compared with what we currently regard to be a disorder with no known medical etiology and no identified pathogen. The clustering of a personality disorder together with ASD should be carefully considered in this sense. Even if one or more personality disorders are presented here, the disorders should be considered from a diathesis-stress and ecological perspective. For example, environmental influences exerted during the early stages of development, such as different parenting styles that play a role in a person's social emotional development (e.g., Clarkin and Lenzenweger, 1996) ⁴.

Moreover, there is a broader point to be considered here and it relates to the language and tone of the paper and the negative connotations this communicates as well as consistency and clarity of terms used. I recommend making changes to some of the language used throughout the transcript to reflect current terminology used in the UK/US mental health literature. For example, there is a need to clarify the distinction between autism and autistic spectrum in this paper, or if there is a difference to be more consistent in the terms used; the use of the word 'normal' should be substituted for 'typically developing', the reference to ASD as a regressive disorder should be avoided.

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Letter to the editor

Subject: Re: prevalence and correlates of physical and sexual history in patients with schizophrenia Arab journal of psychiatry 2012, 23 (22-29).

Dear Sir,

This was a very carefully designed study, and in my opinion it corrects a popular misconception regarding a correlation between sexual abuse and the later development of schizophrenia. The results - as stated in the next paragraph - are consistent with my own findings. To quote their findings directly:

“Our findings around the lack of significant association of previous exposure to abuse with psychotic symptoms replicated previous reports.^{15,43,44} On the contrary, it contradicts previous studies that reported significant associations of abuse with positive symptoms and lowered functioning in patients with schizophrenia.^{7,41} This finding deserves special consideration since it suggests that sexual and physical abuse alone did not show influence over clinical picture or disability in our study. These two kinds of trauma are likely to affect children later in life in relation to other traumas such as emotional and physical neglect and emotional abuse, which is not measured in this study.”

Yes. Other studies immediately search for and "find" a correlation between early sex abuse and the later development of schizophrenia, but the original presumption is incorrect. The age of origin of schizophrenia is in the first 18 months of life, schizoaffective disorder is 19-21 months, bipolar hypomania peaks at 22 months, the remainder of the psychotic depressions up to 24 months, and non-psychotic depressions between 24 and 34 months.

There could be co-morbidity, in that other kinds of infant separation traumas at an early age could be associated with abuse at a later age, etc.

What people do not realize is that more overwhelming than war trauma to a soldier is separation from mother to a baby, because, for as long as mammals have populated the earth, separation from mother has meant death. Then years or decades later, instead of a loud noise precipitating the flashback, it is separation or rejection from some other "most important person" (husband, wife, girlfriend, boyfriend) which precipitates the initial step back in time, and instead of combat reality and behavior it is infant reality and behavior that we see.

My earlier studies began in 1966 - and extended over a course of about 20 years. Patients who were on average 20 years old at that time, had mothers who spent 5 days in the hospital following delivery of the next baby -which was overwhelming to the older child. The first two studies were sequential and therefore cumulative. Thirteen with schizophrenia or psychotic depression were traumatized prior to 24 months and 14 with non-psychotic depression were traumatized between 24 and 34 months. That's one over two to the 27th power, or one chance in 134,217,728 by chance alone. An unbelievable number! But PTSD cannot occur without original trauma, and I just happened to identify a trauma for which we knew the exact age when it occurred. Further calculations revealed an estimate of about one chance in 50 that another trauma would have been responsible for the origin of the disorder.

My work further supports the above referenced article in that it reveals twelve precise parallels between posttraumatic stress disorder from adult life and post-traumatic stress disorder from infancy (schizophrenia, depression), and it reveals, for the first time, the derivation of the precursors of schizophrenia, the negative symptoms of schizophrenia and the derivation of the positive symptoms of schizophrenia.

Clancy D. McKenzie, MD

USA

Dear Editor

Re: The prevalence of mental health symptoms among outpatients in the UAE

I was happy to read this article but I have my own reservations about the method and even some of the results.

This study, considering the small number of subjects, can only be considered a pilot one and only a first step before doing a much larger study. However, there is some originality in the way it was conducted.

I believe that using and elaborating on the several standardized assessment instrument used in this study would prove useful particularly for junior mental health care professionals.

Some of the results were rather unexpected and unusual e.g. the very high prevalence of PTSD (42.9%) in a country not known to have suffered from wars or disasters. Even research from Iraq, a country which has suffered from several wars has not reached that level of prevalence.

Another problem is the high prevalence of Alcohol. This is likely to cause selection bias and diagnosis problems.

A third problem is the fact that all participants have had at least 3 sessions of psychological therapy. This is also likely to affect the presentation of symptoms and diagnoses.

However, in spite of all that I believe this study is a useful one and empowers research in UAE.

Dr. Ali Alqam

Amman-jordan

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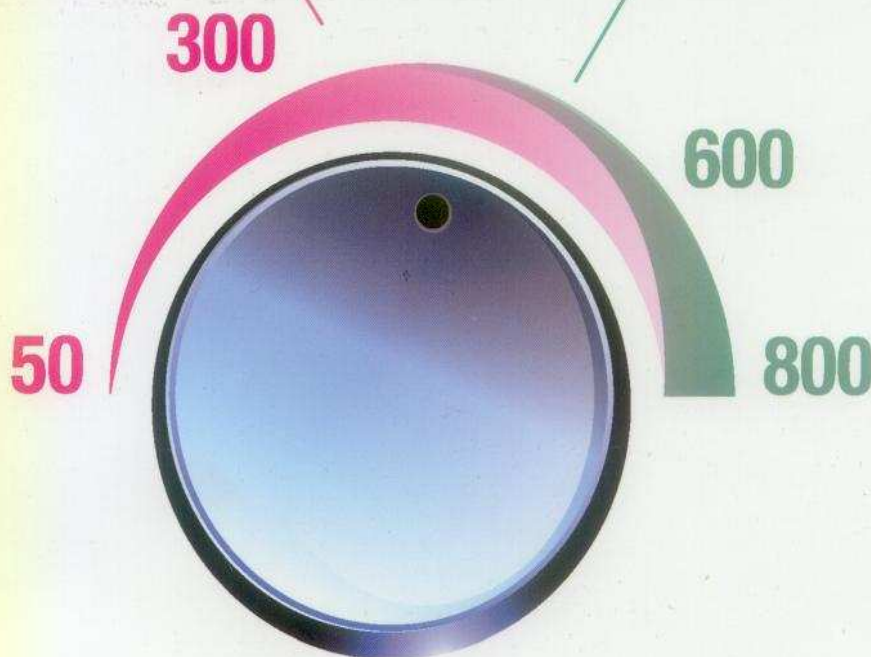
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