

# المجلة العربية للتطب النفسي

المجلد الخامس - العدد الأول أيار (مايو) ١٩٩٤

تصدر عن  
اتحاد الأطباء النفسيين العرب

**VI<sup>th</sup> INTERNATIONAL PAN - ARAB  
CONGRESS OF PSYCHIATRY**

**المؤتمر العربي السادس للطب النفسي  
THE ARAB FEDERATION OF PSYCHIATRISTS**

**اتحاد الاطباء النفسيين العرب**



**RECENT ADVANCES IN PSYCHIATRY**

**NOVEMBER 16 - 18<sup>th</sup> , 1994.**

**CAIRO - EGYPT**

**القاهرة - جمهورية مصر العربية**

**١٦ - ١٨ نوفمبر (تشرين ثاني) ١٩٩٤**

**ORGANIZED BY**

**THE EGYPTIAN PSYCHIATRIC ASSOCIATION**

**تنظيم الجمعية المصرية للطب النفسي**

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## GENERAL INFORMATION

**DATE:** 16-18 th November, 1994  
**VENUE:** Nile Hilton, Cairo, Egypt  
**THEME:** "Recent Advances in Psychiatry:"

### TOPICS

- \* Epidemiology and community psychiatry
- \* Phenomenology and Classification
- \* History, transcultural aspects of mental disorders
- \* Brain imaging and recent technology in psychiatry
- \* Updating management of psychiatric disorders
- \* Recent trends in forensic, military and occupational psychiatry
- \* New perspectives in the management of substance abuse
- \* Child, adolescent and geriatric psychiatry
- \* New developments in psychotherapy and psychopathology
- \* Primary care and liaison psychiatry
- \* Psychiatric education
- \* Future strategies for psychiatric research

### LANGUAGES OF THE CONGRESS Arabic & English

#### Exhibits

Pharmaceutical firms, medical and commercial exhibits, laboratory instrument companies and all other interested parties and invited to exhibit their new products.

## REGISTRATION

All registration must be made on the official Registration form enclosed with this announcement.

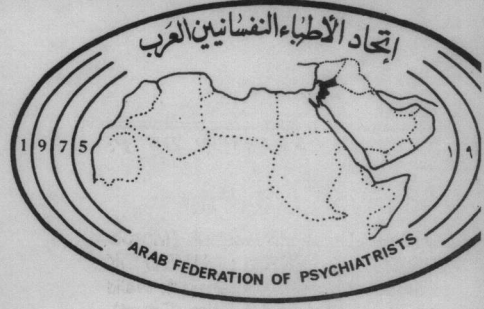
### REGISTRATION FEES (U.S.\$)

	Before	After	On Site
	March 31,1994	March 31,1994	
Participant	300	350	400
Accompanying guest	150	200	250
Banquet charge/person	40	40	50

The completed registration form should be sent together with the appropriate fees. Payment should be in the form of US\$ to be payed by cheque, made out to : The Arab Federation of Psychiatrists.

and sent to : The Organizing Committee  
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# المجلة العربية لنطب النفس

المجلد الخامس - العدد الأول آيار (مايو) ١٩٩٤

تصدر عن  
اتحاد الأطباء النفسيين العرب

شعبة اتحاد الأطباء العرب

٦١٦.٨٠٥

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الأطباء النفسانيين العرب

(تمت الفهرسة بمعرفة دائرة المكتبات والوثائق  
الوطنية)

## معلومات هامة للناشرين

يصدر اتحاد الأطباء النفسيين العرب المجلة العربية للطب النفسي مرتين في السنة .

وتستقبل المجلة من الزملاء البحوث العلمية والمقالات العلمية ودراسة الحالة في جميع حقول الطب النفسي علي أن لا تكون قد قدمت للنشر في أي مجلة أخرى وتقبل النصوص في اللغات العربية والإنجليزية والفرنسية ويرفق بالبحث ملخص لا يتجاوز (١٥٠) كلمة علي أن يضم ترجمات له في اللغتين الأخرتين . مع العلم أن هذه المجلة محكمة وينشر فيها البحث بعد أخذ رأي ثلاث محكمين عرب ودوليين .

### ملاحظات هامة لمقدمي الأبحاث :

تهتم هيئة التحرير بوضوح التعبير والصيغة الجيدة ويجب أن تكون مطبوعة بمسافات مزبوجة بين الأسطر ويوجه واحد من الورقة وبهوامش واسعة ويفضل حجم الورقة أن يكون ٢١ × ٢٨ سم ، ويجب ترقيم الصفحات ابتداء من صفحة عنوان المقال بشل متسلسل ، ويجب ان يكون العنوان قصيراً وذو دلالة لمحتويات البحث ويكتب في الصفحة الأولى أسم الكتاب ، اسماءهم ودرجاتهم العلمية وعنوانهم الكامل ويرسل الباحث ثلاث نسخ من المقال الي محرر المجلة .

### المراجع :

يعمل قائمة بالمراجع في نهاية البحث مرقمة حسب أولوية ورودها في النص الأصلي . وتشمل أسم العائلة للكاتب والحروف الأولى من أسماءه الأخرى ، سنة البحث وعنوان البحث بالاضافة الي أسم المجلة أو الكتاب ورقم المجلد ورقم الصفحة .

(١) مثال : م.س، عبد الجواد وعرفة ، م . (١٩٨٠) دراسة عبر ثقافية لاغراض الكآبة المجلة المصرية للطب

النفسي ، ٣ : ٣٢ - ٣٧ .

أما الصور والجداول والأشكال فيجب ان تقدم بأوراق منفصلة مع تفاصيل عن ماهيتها وبيان موضعها من

البحث ويجب الرجوع الي المرجع المتعلق بالابحاث المقدمة للمجلات الطبية 296:401-405 ; Br . Med . J . 1988

للتقيد بشروط تقديم الصور والجداول والأشكال . آخر موعد لتقديم الاوراق ٣٠ / ٩ و ٣٠ / ٣ .

× يرسل للباحث عشر نسخ من المقال بدون مقابل .

× الاشتراكات : أن الاشتراك في إتحاد الأطباء النفسيين العرب يهيئ للمشارك استلام المجلة مجاناً .

× الاشتراك السنوي : (٢٥) دولاراً أمريكياً / (٤٠) دولاراً أمريكياً لغير الأطباء النفسيين العرب .

× ثمن العدد الواحد : (١٥) دولاراً أمريكياً .

× يرسل الاشتراك للبنك الأهلي الأردني / جبل عمان - عمان / الأردن .

رقم الحساب ١٢٠ يُرسل الاشتراك بحوالة بنكية فقط .

× عنوان المجلة : المحرر المسؤول - الدكتور عدنان التكريتي ص.ب. (٥٣٧٠) عمان - الاردن .

**THE ARAB JOURNAL OF PSYCHIATRY**

المجلة العربية للطب النفسي

# المجلة العربية للطب النفسي

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## Neuropsychiatry in Maghreb and Andalusia

S. Ammar

### طب النفس والأعصاب في المغرب والأندلس

سليم عمار

الخلاصة :

جاء الإسلام في مفترق الحضارات القديمة لبلاد الشام والفرس والكلدان ، وبلاد الهند والصين واليونان ، على اختلاف العقائد والمذاهب والأديان ، محبياً لتراثها العلمي والفلسفي بفضل قيمه الأخلاقية العالية ، ونزعاته الروحية العالية ، مضيفاً لها إضافات نيرة وابتكارات رائعة في شتى ميادين الحياة ، بأعلى الرتب والصفات ، وقد نبغ علماء العرب والمسلمين وخاصة بالمغرب العربي والأندلس في دراسة العقل والروح والنفس وفي كل ما يتعلق بهذه العناصر الأساسية لما كان يبيده الإسلام لها من مكانة مرموقة في مصير الكائنات ووضعية المخلوقات .

وبما أن الدماغ هو العضو الرئيسي الذي يهيمن على كل أعضاء الجسد لقد أعطوا له الصدارة الممتازة خاصة وأن أعلام اليونان والروم الذين عرفهم الأطباء العرب كانوا يعتبرون الدماغ مركز التفكير والإحساس ، ومحور التعبير والقياس ولقد تمكن الطب المغربي العربي والإسلامي أن يقفز قفزة عملاقة بفضل هذه النظرية الشاملة التي كانت تتماشى إلى حد بعيد مع النظريات السابقة في الحضارات المجاورة مثل نظرية العناصر والأخلاق .

ولقد أعطى أطباء المغرب المسلمين ، للمرضى والبؤساء أجمعين ، وخاصة للمصاب بالإختبال نصيبهم من الرحمة ووسع البال ، ووفروا لهم وسائل الترفية والتسلية ، وعاملوهم بالإحسان وروح عالية ، وقد شيدوا لهم المشافي والبيمارستانات ، التي نسجت على منوالها أوروبا من عديد الصفات ، كما أخذت عن تعاليمهم لعلاج الأمراض العصبية، الذي ضرب به المثل في عصورهم الذهبية .

واليوم فإن البعث الجديد قد فتح المنعرج السديد ، في حقل طب الأنفس والأعصاب، ومعالجتها بمزيد الصواب ، بالرغم من أن التغييرات الحضارية قد زادت في إنتشار الحالات المرضية لسبب نمو وتعقد المجتمعات وإشتداد مظاهر التحدي والتناقضات ولندخل الآن وبشكل صريح ، لمزيد من البيان والتوضيح ، في صميم هذه المشكلات ، من جميع الجوانب والصفات ولنتحدث في مطلع هذا المقال وفي هذا المضمار عن أعلام أطباء المغرب والأندلس

### ABSTRACT

The Arabic Islamic civilization started in the middle of old civilizations , with great emphasis on scientific inheritance and philosophy, many Moslem scientists got interested in the mind, spirit and psychology, specially in the western part of the Islamic empire.

The humanitarian attitude is a central point in Islam , and that was clearly applied on psychiatric patients and the facilities provided to them , which became the good example for Europe .

The paper presents the work of some physicians who were eminent in the field in that part of the Islamic world.

## أعلام طب الألفس والأجساد بالمغرب والأندلس أ - أطباء وحكماء إفريقيا والمغرب الوسيط

المحفوظ بمكتبه مورشان بألمانيا وحقّقناه بمعونة صديقنا الأستاذ عبدالحفيظ منصور ممّا مهّد الطريق للأطروحة التي قدّمها بالعريه تلميذنا الدكتور شمس الدين حمودة لنيل الدكتوراه في الطب بكلية تونس سنة 1979 وفي هذا الكتاب يتعرض المؤلف في المقالة الأولى إلى التعريف بالمرض وإلى ماهيته بالاضافة إلى مظاهره السريرية المختلفة ثم يستغرق في الصحة والمرض كما يشير إلى سبب المرض الناتج عن فقدان محبوب ما أو أمر أو شيء مرغوب فيه كما يراه التفسير الأمراضي للأسباب المعاصر في نظرية التحليل النفسي كما يصف المؤلف الأفكار الخيالية الرهيبة والاعتقادات الهذيانة العصبية لهذا الداء ويذكر أيضا الصنف الشراسفي الذي يمتاز بالترقق في البطن والأرياح السوداوية الخ من الأصناف المرضية المتميزة حيث لا ينسي تداخل النوبات الهلوسية التي تتبع أو تسبق السوداء والتي لها أحيانا علاقة بالابلسيا وهو مرض الصرع كما يذكره ابن

1- رائد مدرسة القيروان اسحاق بن عمران (أواخر القرن التاسع مطلع القرن العاشر م) لقد كانت القيروان في المغرب العربي عاصمة العلم والإشعاع الحضاري زمان الأغالب وقد شيدت في دولتهم الدمنات (يعني المارستانات) بعاصمتهم ثم بسوسة وصفاقس وتونس وكانت الصدقات تنفق على المرضى بما فيهم السوداويين والمختلين وأطيب الماكل والحلويات تقدّم لهم في المواسم وقد ازدهرت في القيروان مدرسة طبية رائعة كان من أول روادها إسحاق بن عمران الذي أتى من بغداد بدعوة من الأمير إبراهيم الأغلي سنة 887 م حيث أن العلم بصناعة الطب لم يدخل بلاد المغرب قبله وقد امتاز ابن عمران بأخلاق عالية كما بعزة النفس وبتعلّق متين بمبادئ الطب وآدابه وقد طبّب الأمراء والبؤساء وكانت حياته ملائمة بالمغامرات والشدائد فألف إحدى عشرة مخطوطا لم يصل إلينا منها إلا كتابه في المالبينوخوليا ولقد استوردنا صورة شمسية من المخطوط الفريد

عمران في كتابه .

أما المقالة الثانية لقد تعرّض فيها إلى مختلف الوسائل العلاجية التي نعرفها اليوم والتي يمكن ترتيبها كما يلي :

1- العلاج بالوسائل النفسية والاعتناء بالمرضى "حتى تزول ظنونه وذلك بالألفاظ الجميلة الأنيقة وبالحيل المنطقية والمواسات والموسيقى والتنزه في الهواء الطلق والغابات والبساتين الزاهره .

2- العلاج بالتغذية والحمية حيث يرحى تعديل الاسباب الرئيسية المشتركة في الصحة والمرض كما يتعرّض الى عديد من الاطعمه من حيث الكيف والكم لتكون دائما لذيذة صالحة .

3- العلاج بالاستحمام وبالمراهم والإدهان مثل زيت الكتّان وزيت اللوز ودهن الخردل فتستعمل لذلك الرأس أو الجسد كلّه وهي تناسب بعض العلاجات الفيزيائية التي يُنصحُ بها الى يومنا هذا.

4- العلاج بالأدوية والعقاقير ومنها الصالحة للعلاج الكليّ أو للعلاج الجزئي لكلّ صنف من أصناف المرض مثل الجوارش المسهلة والسقوف التي تقوّي القلب وتذهبُ حديث النفس والملينات ومستحضرات الهليلج الاسود والافتيمون والسقمونيا والأفيون التي كانت تُستعملُ الى عهد قريب في المالبينخوليا تحت اسم لودانوم سيدنهام ويتبين من تحليلنا أن ابن عمران قد وصف إجمالاً

كلّ الحالات الاكثائية البسيطة والمعقدة بالإضافة الى مضاعفاتها المعروفة حالياً مثل الهذيان **والتوهان** ولا يذكر بالطبع الحالات الارتكاسية الناتجة عن التغييرات الحضارية التي نعيشها اليوم كما أنه لم يلجأ الى الخرافات مثل أدوار الجن والشياطين بل كان تحليله علمياً ومنطقياً مرتكزاً على التجربة والعوامل الطبيعية فحسب كما لم يذكر ولو مرة واحدة كلمة الانتحار / حيث أن الوسط الاجتماعي المتحجم في قواعده حينذا يجمع معنا باتا اليأس من رحمة الله . وفي الختام فلا يسعنا إلاّ أن نتساءل هل يحظى دائماً المريض في عصرنا الحالي من طرف الأطباء وحتى الأخصائيين منهم بنفس الدراية التي كان يديها ابن عمران لمرضاه ؟ والجواب هو كلاً ومن سوء الحظّ<sup>2</sup>.

هذا وقد تميّزت مدرسة القيروان الطبية فيما بعد بثلة من اعلام الحكماء أبرزهم :

2- أبو جعفر أحمد ابن الجزائر (المتوفي سنة 930 م).

حيث إنعقدت سنة 1984 بتونس ندوة عالمية للإحتفاء بألفيته وقد صدر بمناسبة كتاب شامل نشرته اللجنة الثقافية القومية التونسية<sup>3</sup> حول سيرة ابن الجزائر وإنتاجه الطبي والأدبي الذي يفوق أربعين عنواناً ومنها كتاب زاد المسافر وقد تُرجمَ إلى اليونانية ومؤلفه في حيز الحياة ثم إلى اللاتينية من طرف قسطنطين الافريقي واعتمدَ للتدريس والعلاج في أوروبا إلى عهد نابوليون

الذي ولد سنة 1068 م بـذنية حين وفاة علي بن رضوان المصري والذي كان شاعرا وطيبيا ومهندسا وموسيقارا لامعا تجول كثيرا بالشرق العربي حيث ذاع صيته في مصر وتوفي بالمهدية ودفن بالمنستير في إفريقيا سنة 1134 م وله كتاب في المنطق وكتاب المفردات الذي يتعرض فيه إلى رياضة النفس والأدوية حسب الأخلاق والأمزجة وعناصر المحيط<sup>5</sup>.

#### 4- عائلة الصقليين ومدرسة تونس الطبية :

هذا وبعد عصر بيت الحكمة بالقيروان ستولى التطبيب بإفريقيا عائلة الأطباء الصقليين المشهورة وذلك من أواخر القرن الحادي عشر /م إلى نهاية القرن الخامس عشر وخاصة في عهد الدولة الحفصية المزدهرة وقد برع أطباؤها في البحث والمداواة ومنهم أحمد الصقلي ومحمد بن عثمان الصقلي الذي درس في كتابه المختصر الفارسي<sup>6</sup> اليقظة والنوم والأحلام والفرع والكابوس والأوهام ،وعالج مرض الصرع بجانب عوارض الهرع ، يعني الهستيريا حيث كان يَسْتَعْمِلُ العطورات والبخارات فسي أشكالها التشنجية والصدمة الكهربائية بطريقة السمك الرعاد<sup>7</sup> في أشكالها الشللية وكانت عائلة الاطباء الصقليين تنظر لكل المرضى بنظرة شاملة جسما وروحا حتى ترسخ في شأنهم هذا القول الشائع

بونابرت<sup>4</sup> والجزء الأول من الكتاب يتعرّض في 25 بابا إلى أمراض الرأس وقد حللناه بمناسبة الندوة المذكورة أعلاه حيث عرّف فيه المؤلف بالصداع والشقيقة والسدر والدوار والسرسام وحالات السكر والصرع والعشق والفالج والتشنج والكرزاز والرعشة والخدر مستشهدا بالأوائل ومضيفا لهم نتائج تجربته الخاصة ولابن الجزائر نظريات مميزة مثل الخدر من الفصد وتفضيل الأدوية المفردة على الأدوية المركبة وقد اعتُبر من أكبر الصيادلة العرب ومع ذلك كان يؤمن بالتفاعل المتين الذي يحصل بين الجسم والنفس وله رسالة في النفس وفي ذكر اختلاف الأوائل فيها ويُعتَبَرُ إبن الجزائر أعظم علماء زمانه بالمغرب العربي ومن أبرز حكماء العالم الاسلامي على الإطلاق.

#### 3- أطباء الجزائر :

هذا وفي عهد إبن الجزائر لقد نبغ عديد من الأطباء بالمغرب الوسيط يعني بأرض الجزائر الحالية أمثال **علي بن محمد** أصيل عناية وكان فقيها للبدن كما كان يسمّى الطبيب وقتئذ يعني جامعا لمعرفة النفس والجسم والأخلاق وكذلك **عبدا لله ابن الوهراني** أصيل وهران في مطلع القرن الحادي عشرم وخاصة الإمام الطبيب **أعصم السدراتي** وكان كلهم بارعين في تطبيب الأنفس والأجساد كما يذكر **ابو صلت أمية الاندلسي**

الجمجمة بمثقاب خاصّ وإعادة وصلها بأسلوب لم تتغير أصوله إلى يومنا هذا<sup>9</sup> كما وصف المضاعفات العصبية والعقلية لرضوض وكسور الجمجمة والعمود الفقاري حتى يكاد يُعتَبَر أول جراح أرسى القواعد العملية لجراحة الأعصاب<sup>10</sup> ومع هذا فكان يتعرّض في المقالة الثانية لكتاب التصريف إلى قواعد التربية وإلى مفاهيم العادة والطبيعة عند الصبي وإلى صعوبة أو تيسير التأديب حسب مؤهلاته الطبيعية كما إلى مكانة الإرشاد والتوعية قبل الإرهاب والعقاب لأنه " لاينال منه شيئا مفيدا إن كان على طريقة الغضب والاجبار " حيث يجدر بنا أن نقول أنّ في شرحه هذا لقد سبق الزهراوي أموراً تختص بعلم النفس المقارن الحديث مما يدلّ على إتساع نظريته وشمولية علمه<sup>11</sup>.

هذا وكان الأديب المؤرخ الماهر، الوزير الفيلسوف الشاعر ، أبو محمد ابن حزم (994- 1063 م) صديقا للطبيب الزهراوي ومعجبا به كل الأعجاب وقد كتب بدوره في علم النفس وماهية الأمزجة والسلوك متأثرا وفي نفس الوقت بالعوامل الطبيعية وبمواقف الأديان السماوية فيها بما فيها إمكانية مس الشياطين بالمصروع حسب بعض المفاهيم والتفسيرات<sup>12</sup> كما يحلل في كتابه " طوق الحمامة " مظاهر الغزل والعشق وما تؤدي إليه من صني ونحو كما يؤكد في حالات

إلى يومنا هذا في الأوساط الشعبية التونسية ألا وهو " يا طبيب الصقلي داويني بكلي " (يعني نفسا وبدنا) .

ب - حكماء العصر الذهبي بالمغرب الأقصى والأندلس .

هذا وفي الحدود العربية لدار الإسلام لقد برزت حضارة الأندلس منذ مطلع القرن وبدأت تزدهر في القرن العاشر والحادي عشر حتى بلغت أوجها في الثاني عشرم وقد عُرف هذا القرن بالعصر المنير وقد أنجبت أرض الاندلس كواكب لامعة من الحكماء والشعراء ومن علماء الفلك والفقهاء وسلسلة من الرّواد في علم النباتات والطبيعات وفي الفلسفة وعلم النفس والماورائيات وكان لأغلبهم موسوعات في علوم زمانهم فنجد مثلا الوزير ابن الوافد اللخمي ( المتوفي سنة 1068 م ) يتكلّم عن تعامل الرياضة والاغذية ، وتفاعل الحمامات والأدوية ، قصد تقوية الأجساد ورياضة النفوس<sup>8</sup> كما نجد الجراح والصيدلاني الشهير أبو القاسم الزهراوي (936 - 1013م) يتكلم عن الأخلاق والتربية بجانب العمل باليد والعلاج بالأدوية ففي كتابه " التصريف لمن عجز عن التأليف " كنوز من التعاليم الجديدة في الجراحة وفي مختلف آلتها وهو الباعث العبقري لها بلا منازع وقد ناقش جراحة المخّ بالتفصيل كما وصف أجزاء الدماغ وطريقة فتح عظام

من كتاب التيسير دراسة جيدة عن أوجاع الرأس حسب سبب الاخلاط كما عن أورام الغشاء الذي فوق أو تحت العظم كما عن أمراض أجزاء الدماغ مثل الصرع والسكتة والهرع والانسداد وعلة الجمود والسببات والسرسام الحارّ والبارد والجنون والسدر والبيضة والشقيقة والرعدة والتشنج وأمراض النخاع وتورّمها<sup>15</sup> وفي هذا الكتاب كما في "كتاب الاقتصاد لإصلاح الأنفس والأجساد" يبرهن ابن زهر على مدى دقة معاينته السريرية ومهارته العلاجية وإيمانه الراسخ بتكامل الجسم والنفس<sup>16</sup> في الصحة والمرض حيث كان يقول "وان كان شأن طبّ الأجساد شائع المعرفة فإنّ طبّ الأنفس أكثر علاوة وقدرًا .

كما هنا كوكبة من أعلام الحكمة والفلسفة والطبّ أضاءت بنورها آفاق العلم والمعرفة لاسيما في الغرب وفي مقدمته *ابن باجه* و*ابن الطفيل* و*ابن رشد* *فابن باجه* (توفي سنة 1193م) هو من أبرز حكماء العرب والمسلمين وقد جادت تطلعاته العبقريّة وشجاعته الفكرية مبكرا وهو صاحب كتاب تدبير المتوحد المشهور وكتاب اتصال العقل بالإنسان وشرح كتاب السمع الطبيعي لإرسطو وكتاب الكلام في المزاج بما هو طبي وكتاب اختصار الحاوي للرازي كما كان بارعا في التطبيق وعلم الفلك ويعتبر موسوعة لامعة انطلقت قبل أوانها<sup>17</sup> أما *أبو بكر بن الطفيل*

الأكتساب مفعول الخلط السوداوي فيها معللا ذلك بأن "الفساد قد استحکم في الدماغ حيث المعرفة قد تلتفت والآفة قد تغلبت"<sup>13</sup> ولابن حزم رسالة في مداواة النفوس وتهذيب الأخلاق والزهد في الرذائل " مما يؤكد مدى اهتمامه بمختلف مظاهر القضايا النفسية .

كما برزت في تلك الربوع عائلة أخرى من العلماء الأفاضل هي عائلة بني زهر الأيادي أصلها من قبيلة عريقة النسب في جزيرة العرب وقد تولّت العلم خاصة بصناعة الطب ما يقرب عن قرنين نخص بالذكر الأديب المؤرخ الماهر ، الوزير الفيلسوف منها *أبو العلاء ابن زهر* (توفي سنة 1135م) صاحب كتاب تجربات الخواصّ الذي يتعرّض للعلاج الكلّي والجزئي بالأغذية والأدوية والوسائل الطبيعية والتنجيم وكذلك كتاب جامع الأسرار الذي يعلّق إهتماما خاصا بالحمامات والرياضة البدنية وتأثيرها على صحة النفس والجسد<sup>14</sup> أما أبرز أفراد العائلة هو *أبو مروان بن عبد الملك ابن زهر* (1162-1191م) وهو أعظم طبيب سريري عرفته الحضارة الإسلامية وقد ذاع صيته مئات السنين في أوروبا بفضل مصنّفاته التي تُرجمت أهمها الى العربية واللاتينية ومنها كتاب "التيسير للمداواة والتدبير" الذي أهدها لصديقه العلّامه ابن رشد ليكون تكملة لكتابه في الكلّيات ولقد نجد في الباب الأوّل

"التخيل والفكر والذكر حيث يظهر من أمرها أنها لا يتم فعلها إلا بالدماع" 21 وقد حلل بدوره الأمراض علي أساس نظرية الأخلاط ميرا فيها دقة رائعة في التحليل وأسلوبا نقديا جيدا يركز على المنطق والتجربة في آن واحد هذا وكان من أصدقائه الطبيب الفيلسوف موسى بن ميمون القرطبي ( 1135 - 1204 م ) الذي يُعتَبَرُ بدوره من أعلام الحكماء والفلاسفة وكان يهودي الأصل كما هو معروف يفخر به اليهود والعرب علي السواء حيث امتزجت نظرياته وتعاليمه بالمناخ العلمي والحضاري الذي كان ساطعا حينذاك في الديار الاسلامية وهو صاحب الرسالة الأفضلية التي كتبها بالقاهرة للملك الافضل حين مرض بالسوداء وهي عبارة عن دستور قيم في تدبير الصحة النفسية وقد تُرجمت الى العربية واللاتينية واليوم الى عديد من اللغات الاخرى<sup>22</sup> وكان ابن ميمون يؤمن بتكامل الطب النفسي والجسدي حيث ما كتب في الجماع وفي الربو يُعتَبَرُ من أجود مقالاته . هذا وفي القرن الثالث عشر م وبعد بروز عائلة الاطباء الصقليين بتونس وبينما بدأ التقهقر يتسرب في مشارق الديار الاسلامية ومغاربها سينحج المغرب العربي قطبا من أقطابه الساطعة وهو العالم الكبير ، ورائد علم الاجتماع القدير، العلامة عبد الرحمن ابن خلدون ( 1332-1406 م ) الذي ولد بتونس وتوفي بالقاهرة وكان من أعلام

( توفي سنة 1185م) فكان بدوره وزير السلطان ابي يعقوب المنصور الموحدي الى حين وفاته وهو من كبار علماء زمانه صاحب كتاب حَيّ بن يقظان المشهور وقد امتاز برشاقة آرائه في الفلسفة والطب وخاصة بإرشاده الى البحث في وظائف الاعضاء وعملية التغذي وفي تدرج النمو الجسماني في الطفل كما بقوله بإمكان نشوء الحياة بالتولد الذاتي والتطور والإرتقاء وكان قبل دارون بمئات السنين<sup>18</sup> وكان ابن طفيل الصديق الحميم لابن رشد وأبو وليد بن رشد ( 1126 - 1189م ) هو الفيلسوف الفقيه الجريء والطبيب والفلكي العبقرى الذي يُفتخر به اليوم كلّ المسلمين وقد فتح أفق المعرفة لأوروبا على طول السنين وله في شأن النفس كتابه تهافت التهافت ردّا عن الغزالي وشرح كتاب النفس وكتاب السماء والعالم لأرسطو ومقالة في اتصال العقل بالإنسان وفي الطب نذكر كتاب شرح أرجوزة ابن سينا وتلخيص كتاب التعرّف والقوى الطبيعية والمزاج لجالينوس والمقاتلين في المزاج المعتدل وخاصة كتاب الكليات في الطب<sup>19</sup> الذي أتى تكملة لكتاب التيسير لابن زهر وقد أظهر ابن رشد فيه براعة فائقة والماما جيدا بتشريح الأعضاء وبموضوع الصحة والمرض حيث إستغرق في أمراض الدماغ وخاصة في أورامه السوداوية<sup>20</sup> كما في أعراض القوى الساسية وهي كما يقول



ولنكتفِ بالقول أن أهم العلوم الطبية بما فيها جَل ما يتعلّق بأمراض الرأس والأعصاب وطب النفوس والأجساد سوف يبلغ عاجلاً أم آجلاً الجامعات الأوروبية من بادوفا الى بولونيا ومن منبيلية الى باريس ومن ليدن الى لندن وغيرها من عواصم الغرب وهكذا اخذ الغرب عن العرب الكثير من النظريات والمجربات ومن التفاسير والبيانات في مجال تطبيب الأعصاب والنفوس ، بشكل واضح وملموس ، تارة على جدارة وصواب ، وتارة دون التذكير بذلك الإنتساب ، وقد أخذ الغرب عن الأطباء العرب عددا من الأدوية المفردة والنباتات ، لعلاج السوداء والتشنجات ، والصداع والهديانات ، على اختلاف أنواع النوبات والحالات 25 .

ولاشك أن أهم ما اقتبسه الغرب هو التنظيم الصحي بالمستشفيات وخاصة الشكل المعماري للمارستانات سواء بالنسبة للأقسام المخصصة للمجانين أو كمؤسسات مستقلة بذاتها لهؤلاء المرضى وقد آيد المؤرخون أن *الاخوان سان جان دي ديرو* بإسبانيا قد أسسوا أول مارستان للمخبلين ببلنسيا في القرن الخامس عشر م إستنادا الى المشافي الاندلسية وخاصة مارستان غرناطة آنذاك وقد شيدت في نفس القرن خمسة مارستانات أخرى لنفس الغرض وعلى نفس النمط العربي بأمر من الملكة *ماري دي مديسيس* حتى

زمانه في الادارة والسياسة والقضاء والآداب والعلوم فهو مؤسس علم التاريخ والاجتماع المؤمن بتفوق تأثير الاحداث المكتسبة على الوراثة والمشير إلى أن الأصل في الادراك هو المحسوسات وأن جميع الحيوانات من الناطق وغير الناطق مشتركة في هذا الادراك الحسي ويتميز عنها الانسان بإدراك الكليات وهي مجردة من المحسوسات حيث هذا التعبير يكاد يُعتبر جوهر مدرسة الجستالست المعاصره 23 كما كتب إبن خلدون في التنجيم والشعوذة ، وفي رذائل النفس وما تحتاج اليه من موعظة ، كما في السلوك والطبائع والعادات ، وما للعرمان البشري من صفات ومميزات، وقد ركز أصول علوم البيئة والاجتماع ، حيث لها معرفة شخصية الانسان عظيم الأنتفاع.

#### 4 - نقل طب النفس والاعصاب العربي المغربي الى أوروبا

هذا وفي مطلع القرن الحادي عشر م لقد بدأت مرحلة حاسمة تتمثل في الترجمة والنقل من الشرق الى الغرب من العربية الى اللاتينية أو العبرية وحتى الإغريقية لكل العلوم بما فيها الطب وعلم النفس .

ولقد تم إحتكاك العرب بالغرب في ثلاث جهات عن طريق الحروب الصليبية اولاً وبالخصوص عن مدرسة *سالرنو* بصقلية ثانياً وعن طريق *طليطلة* بإسبانيا ثالثاً .

وعن العرافين والحمامين وإستعمال العقاقير والنباتات دون تمييز رصين ، ولقد سادت من جديد الإعتقادات في الشعوذة والتنجيم وفي الطلاسم والتعاويذ فلا يفرق الصرع عن الهرع ، ولا الشلل عن الخبل ، حيث أصبحت المرضى تنقل الى زوايا الأولياء الصالحين ، دون تفريق ثابت ومبين ، كما باتت المارستانات تقتصر على حبس المجانين ، ولو استمرت فيها مظاهر الرحمة وجوقات العزّافين ، بحيث شيدّ بتونس سنة 1663م الباي حمودة باشا بيمارستانا مشهورا للمختبلين وتبعه ماوى التكية سنة 1675 م كما أهدت الاميرة عزيزة عثمانة جانبا وافرا من ثروتها لمستشفى العزّافين<sup>27</sup> الذي خصّص للمختبلين في وسط المدينة وآثاره لاتزال قائمة الذات الى يومنا هذا وفي المغرب الأقصى كان مرضى العقول بفاس يلجؤون الى مستشفى سيدي فرج الخزرجي الذي لقب باسم الطبيب الاندلسي والذي أداره في مطلع القرن العاشر هجري وأدخل جوقات الموسيقى فيه وقد أكدّ الطبيبان الفرنسيان لفوف وسيريو أنّ المختبلين كانوا يجردون في كافة تراب المغرب الاقصى ملاحيء أقيمت لهم بمداخيل الزكاة والصدقات الى غاية سنة 1911 م من طابخة والحراش الى مرآكش والرباط وسلا والدار البيضاء.<sup>28</sup> ولاشك أن هذه الامثلة تعبّر تقريبا عمّا كان عليه شأن المختبلين في

بلغ ترتيبها فرنسا. حيث بُنيَ فيها سنة 1601 م مستشفى شارنتون المشهور والذي لا يزال الى يومنا هذا مخصصا للأمراض العقلية<sup>25</sup>. والمعروف أيضا ان الأسدين الذين يزدان بهما مدخلُ سَرادق الملكة بقصر الحمراء بغرناطة كانا في الأصل في مدخل أكبر مارستان للمدينة العربية سابقا كما أكدّه لنا ذات يوم إستنادا الى وثائق ثابتة مدير متحف غرناطة نفسه ، كما أنّ الطبيب النفساني الفرنسي الكبير **فيليب بينال** كان في " كتابه حول الاختبال العقلي " يذكر بمزيد الإعجاب مارستان سراقسطا الذي تدرج فيه مختلف العلاجات بما فيها العلاج بالشغل في المناطق الفلاحية المجاورة له وذلك إنطلاقا من التقاليد العربية الأندلسية<sup>26</sup> مع التذكير بأن المختبلين كانوا في أوروبا ومنذ قرون طائلة الى أواخر القرن الثامن عشر م يعانون في السجون ويقيدون بالسلاسل في الزنانات ، ويقفون فيها مثل الحيوانات ، الى أن تأتي ساعة الممات.

#### 4- الطبّ النفسي المغربي في غفوته :

هذا والمعروف ان الطبّ قد تدهور في كافة الاقطار العربية ما بعد القرن الثالث عشر م وبالرغم من وجود بعض الاشعاع من حين لآخر لقد أصبح النقل يتغلّب على العقل والتقليد يسيطر على التجديد حيث إقتصرت الطبّ على الوصفات الموروثة عن الاباء والاجداد

كافة الاقطار العربية والاسلامية حينذاك.

هذا والمعروف أن الطب الغربي قد دخل شيئاً فشيئاً في الربوع العربية حيث برز فيها بالمشرق منذ القرن السادس عشرم مع داود الأنطاكي وابن سلوم وفي المغرب وبصفة جلية منذ عهد **عبد الرزاق حمادوش الجزائري** حيث إحتفلت بذكره جامعة صيادلة المغرب العربي سنة 1985 وقد ترَجَّم الدكتور لوسيان لكلارك كتابه كشف الرموز ونشره بباريس سنة 1874 حيث توجد فيه معلومات عن الطب الغربي وهو لا يذكر العوامل الغيبية ولا الطرق الماورائية بتاتا كما له " كتاب الجواهر المكنون في بحر القانون " و " كتاب في تعديل المزاج بسبب قوانين العلاج " ومؤلفات أخرى في آداب الرحلة والمنطق والشعر والتوحيد<sup>29</sup>.

ومع هذا فالمعروف أنه من القرن الثالث عشر الى الخامس عشرم قد إزدهرت في العالم الاسلامي قاطبة مذاهب التصوّف بفروعها العديدة والمتميزة فمثلت سبلا رائعة لرياضة النفس وآداب السلوك على أساس فلسفة سامية لحب الخالق والمخلوقات حتى أصبحت طريقة مثلى لعلاج عديد من الاضطرابات النفسية بفضل تمارين ثابتة وفي عملية تصعيد عالية ولقد إرتكزت العلاجات على الذكر والسماع وبالخصوص على حفلات حفلات الرقص والاجتذاب والتخمير الذي كثيرا

ما يسبق التفريغ النفسي والشفاء فنذكر مثلا في تونس سيدي ابي الحسن الشاذلي وسيدي عبدالسلام الفيتوري والطريقة السنوسية بطرابلس وسيدي بن عيسى بمكناس مع التذكير بتكاثر التسلسل بين فروع كلّ هذه الطرق في غالب الاقطار الإسلامية وبأن عديدا من العلماء العباقرة المسلمين كانوا من أبرز أدباء الصوفية أمثال الفارابي وابن سينا والسهروردي وأبي مديان الانصاري وابسن العربي والغزالي وابن الفريد وغيرهم . كما لاتزال الحفلات تنعقد في المواسم في زوايا الاولياء الصالحين .

وقد سّماهم الغرب المرابطين خاصة بالمغرب العربي وافريقيا ما تحت الصحراء حيث تأتي من زياراتهم بعض النتائج عند المرضى الذين يؤمنون ببركتهم وخاصة عند المرضى النفسانيين مثل الموسوسين أو الهستيريين باستثناء الأمراض العضوية بالطبع التي لاتشفى بهذه الطرق ولو إستفادت منها نفسانيا أحيانا ولايزال هذا العلاج قائم الذات الى يومنا هذا في كافة الاقطار الاسلامية بنتائجه الإيجابية والسلبية التي كثيرا ما عرُضت للتحليل والتفسير ولا تزال بالرغم من التشويه والانزلاق في التزييف والتدجيل الذي أصاب البعض منها لم نقل جميعها على أنه ينبغي أن تُدرّس ملبسًا وتندرج تحت المراقبة الطبية الصحيحة ولو وجب التعاون بين المعالجين

الحال اليوم في العالم بأسره وخاصة في بلدانه المتحضرة فنشاهد إجمالاً اليوم في الأقطار المغاربية إزدياد الفصام والمُصابات ، والكهابة والمهذبات ، وادمان الكحول والمخدرات ، والشذوذ النفسي والانتحارات، كما المهستيريا في أوساط الشابات ، وذُهان النساء بعد الولادات ، وإضطرابات الشيوخ والاطفال ، السيئة الوطأة والمآل .وقد نمت بمقتضى ذلك المراكز الصحيّة والكوادر الطبية وتعددت الأقسام المخصّصة لمرضى العقول والأعصاب كما مستشفيات الأمراض العقلية لكنّ حسب درجات في التطوير ، نظرا لما يتطلبه هذا الحقل العسير ، فهناك الأقسام الحديثة الرائدة وهناك المصحّات الخاصّة وهناك المؤسسات التقليدية الكبرى التي كثيرا ما تقتصر على العقاقير الشديدة الحديثة دون اللجوء الى النظرة الشاملة التي يقتضيها الطب النفسي الجسدي الاصيل(والحديث) ودون التعمق فيما للعلاجات النفسية التقليدية مثلا من فائدة .

هذا ولقد تأسست عديد من الجمعيات العلمية والخيرية وخاصة بتونس والمغرب الأقصى والجزائر وكذلك جمعيات الطبّ النفسي وعلم النفس وطبّ وجراحة الأعصاب والتي تقصد حماية المتخلفين ذهنيا والتنشئة النفسية عامّة هذا ولقد أحرز الطب النفسي المغاربي على الجائزة الكبرى للمغرب العربي في الطب ثلاثة مرّات منذ تأسيسها

التقليديين والاطباء الأحداث في هذا المضمار<sup>30</sup> .  
5 - البعث الجديد

هذا وقد دخل المغرب العربي منذ أواخر القرن التاسع عشر م خاصة في إحتكاك شديد مع الغرب الذي إستعمر غالب أقطاره وأحدث فيها أشد الصدمات ، وأعمق التغييرات ، وقد نتجت عنها كما هو معروف كثير من المصائب والسلبيات ، كما عديد من الفوائد والإنجازات ، وقد برز الطبّ الغربي الحديث شيئا فشيئا في عواصمه بتشديد الكليات والمستشفيات ، وبواسطة الكتب والمؤلفات ، سواء عن طريق الإحتكاك والتبشير ، أو عن طريق التقدّم والتعمير ، من خلال كفاح طويل ومرير ، فلا مجال هناك للإستغراق في هذه المراحل بالتفصيل حيث نكتفي بعرض أهم ما يتمثّل في البعث الجديد الذي أصبح عارما بنسب متفاوتة حسب الأقطار وثرواتها ، والأمصار وإمكانياتها ، وقد دخلت كلّها في بحر تغييرات حضارية عميقة من شأنها أن تؤدي الى تفكك العائلة التقليدية والى إنعزال أفرادها كما الى تناطح الأفكار وصراع الأجيال حيث تفهقرت القيم الأصلية وأزدادت تارة أسباب الحضر والقلق ، والإكتئاب والأرق ، وتارة أخرى دوافع العنف والعدوان على حساب الرحمة والسلوان ، فنتج عن ذلك إرتفاع نسبة الاضطرابات النفسية والعلل العصبية والامراض النفسية الجسدية كما أصبح

في الغرب نفسه محل المراجعة والانتقاد ، حيث ينبغي هناك مزيد التمعن والإجتهاد، وحيث أن الغرب نفسه بل العالم بأسره أصبح اليوم في حاجة الى تثبيت القيم الروحانية وتوطيد المبادئ الاخلاقية ليتخلص من سيطرة الماديات ، ومن الخضوع لمبدأ الاستهلاك والم لذات ، ويتغلب علي كّل وسائل الإعلام المناهضة لرياض النفس والورثام والتي تركز على تمجيد الجنس والعنف والفساد بدعوي انها توافق غرائز العباد ، فهناك بلا شك عمل مفيد وعظيم ، للتعاون المثمر القويم ، قصد توفير السلام والصحة الشاملة للناس أجمعين.

سنة 1973 حيث كان لنا الشرف بنيل الجائزة الاولى .

على انه لايزال يوجد تضارب بين الأجهزة الحديثة القائمة في العواصم والمدن والعلاجات التقليدية السائدة في القرى والأرياف دون مجهود ثابت للتعاون والتنسيق ، في منهاج علمي ورشيق للبحث المشترك العميق ، في مجال النظرية والتطبيق .

ولابد إذا من مزيد النقد والتنسيق، كي لا تقتبس النظريات والتقنيات الغربية دون تمييز رشيق، مثل النظريات الفرويدية التي أصبحت

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## اخبار المجلة

\* البورد العربي لإختصاص الأمراض النفسية :

بعد أن وضعت مسودة دليل إختصاص الأمراض النفسية لمجلس الأختصاصات العلمية الاستشارية للأمراض النفسية قد عقد اجتماعان في دمشق خلال العامين المنصرمين . هذا وقد وضعت برامج التدريب والاعتراف بالمستشفيات وتعيين مشرفين في مختلف الدول العربية ومن المتوقع أن تعلن مواعيد الامتحانات خلال العام الحالي .

\* تجتمع الهيئة العامة لإتحاد الأطباء النفسانيين العرب إبان انعقاد المؤتمر العربي

السادس للطب النفسي والذي يعقد في القاهرة ما بين 16-18 نوفمبر 1994 .  
وإننا إذ نهيب بالزملاء حضور هذا المؤتمر لما فيه من فائدة لرفعة الطب النفسي مع العالم العربي .

\* تم الاعتراف بالمجلة العربية للطب النفسي كمجلة معتمدة من قبل كلية الطب بجامعة الملك سعود بالرياض لأغراض التقييم والترقية للهيئة الأكاديمية لهذه الكلية.

The clinical dilemma of readministering the neuroleptics in patients who have previously developed NMS is discussed in perfect detail in chapter 11. It is with this concern that the authors have extensively reviewed the literature and very wisely suggested that the premature rechallenge with neuroleptics ought to be avoided. Neuroleptics should be of low potency and dosing should definitely be slow. The most interesting finding that we noted in this section was the prophylactic use of pharmacological drugs like bromocriptine, dantrolene and nifedipine in the prevention of a recurrence of NMS in vulnerable individuals. It is commented that these are the drugs which have therapeutic value in the treatment of NMS. The authors also suggested other alternative therapies for treating psychosis with NMS. Chapter 12 deals with the development of NMS in certain situations, including the elderly population, in neurologic diseases, pregnancy, surgical patients acute lymphoblastic leukaemia and finally acquired immunodeficiency syndrome. It is noticeable that the administration of neuroleptics is the common denominator in the development of NMS in these specific circumstances. The variations in clinical phenomenology and enhanced mortality due to physiological changes in aging could be found in elderly patients developing NMS. In the last chapter of this monograph the authors focus on future research recommendations regarding the specific aspects of

NMS, include its occurrence in the elderly, the prospective evaluation of risk factors, drug pharmacokinetics, biological markers, the significance of calcium and iron ions, in vitro muscle biopsy testing models, pharmacological treatment efficacy, prophylactic treatment, genetics and development of animal models for unraveling the pathophysiology. Since the time this book came into inception many of these research recommendations have been performed for example, NMS has been reported two members of the same family and the risk factors have been evaluated prospectively. Finally this monograph is comprehensive, very well written and easy to understand. Reviewers have gathered tremendous knowledge about NMS, which until now remains a clinical dilemma. To clinically recognize this syndrome at an early stage this monograph should be read by all concerned in the medical community, which includes internists, psychiatrists, critical care specialist, neurologists, surgeons, pharmacologists and pharmacists, anaesthesiologists, obstetricians and gynaecologists, GPs and researchers. The availability of this book in all medical libraries will, by all means, prompt clinicians to read it and thus apply the knowledge gained by promptly recognizing the early symptoms of NMS, to apply the appropriate treatment, help in avoiding a recurrence, reducing the morbidity and the mortality of this potentially dangerous idiosyncratic reaction.

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## Book Review

### **Neuroleptic Malignant Syndrome (Clinical Approach)**

**Gerard Addonizio and Virginia L.Susman**

Mosby Year Book, Inc. St Louis, Mo 63146, 1991.

ISBN 0-8151-0055-8.00, pp. 167

Neuroleptic malignant syndrome [NMS], is a recognized complication of neuroleptic therapy in the neuropsychiatric population. It is a potentially life-threatening condition. This monograph, which we reviewed with great interest, describes this syndrome in a comprehensive way. This book contains a preface, thirteen chapters and a bibliography, which unfortunately does not list all the references given at the end of each chapter. Notably, the authors have collected world literature concerning this syndrome, as it is reflected in this written book. Chapter 1 describes the historical perspective, with special emphasis on early recognition, definition and clinical criteria of this disorder. Interestingly, NMS in the past has been referred to in various terms and the major and minor diagnostic criteria proposed by Levinson has been criticized by researchers on certain grounds. Chapter 2 deals with demography and several risk factors in the development of NMS. Though the incidence rates of NMS due to a variety of reasons continued to be disparate the authors reported it to be between 0.07% and 1.4%. This incidence rate concerns male and female psychiatric in-patients. Besides other susceptible factors according to these authors, an interesting observation is that the "microclimate" of hospital wards or seclusion rooms could be of more relevance to the development of NMS. In chapter 3 the two experts describe the causal role of medication in NMS. Besides neuroleptic drugs, non-neuroleptic agents were also researched in detail, all causing NMS by a common mechanism of acute down-regulation of central dopaminergic receptors. In chapter 4 the clinical core features, including hyperthermia, extra pyramidal rigidity, autonomic instability and altered consciousness are highlighted and NMS is looked upon as a spectrum disorder with varying severity, presentations and clinical courses. The laboratory findings of NMS with a special emphasis placed on WBC and CPK are presented in chapter 5. Besides these investigations many other tests are also essential to exclude a variety of medical diseases bearing a resemblance to NMS. According to the authors no laboratory test is pathognomonic of NMS. The reviewers feel that the relevance of laboratory investigations should be considered in the background of the entire gamut of symptoms and signs of NMS. In

chapter 6 the differential diagnoses of NMS, which include malignant hyperthermia, lethal catatonia and heat stroke are discussed along with other NMS-like syndromes caused by a variety of drugs. Non-neuroleptics are also mentioned. Also included in differential diagnoses are other several conditions which could masquerade the NMS.

The pathophysiology of NMS is well documented in chapter 7. The role of several central pathways, including hypodopaminergic functioning, excessive adrenergic state, relative gamma-aminobutyric acid deficiency, 5-hydroxytryptamine, overactivity of endorphins, prostaglandins and calcium ion are highlighted. Furthermore, the resemblance of NMS with malignant hyperthermia has led various researchers to perform muscle contracture studies which have given a variety of results and as yet the studies do not explain the nature of NMS. The clinical course of NMS is discussed under several headings in chapter 8. This syndrome continues to be a highly variable disorder, swinging along the clinical spectrum of most fulminate cases to the most insidious/milder cases. It remains ambiguous whether the symptoms of EP or those autonomic dysfunctions of NMS appear first. The NMS is coupled with a variety of medical complications which are very well explained in chapter 9. Besides searching for the common complications, the clinicians ought to be cognizant of other complications, which are disseminated intravascular coagulation, myocardial infarction, myoneuropathies, anterior tibial compartment syndromes, necrotizing enterocolitis and short-term memory deficits. It is an encouraging sign that the mortality from NMS is decreasing. This may be attributed to increasing awareness, milder cases and specific treatments. In chapter 10 the authors discussed very comprehensively the clinical management of cases with NMS, which included intensive supportive care, relatively specific pharmacological agents and other drugs. The effective use of propranolol, clonidine and nifedipine in some reported cases of NMS is extremely interesting. It is prudent to say that there could be some cases of NMS which would improve with conservative treatment without resorting to aggressive pharmacological treatments.

**TABLE 1**  
SEX AND AGE DISTRIBUTION

Total No. of Patients	144	Male 77 (53%)	Female 67 (47%)
Age Distribution			
below 20 years	9	4	5
20 - 30 years	63	35	28
31 - 40 years	50	27	23
41 - 50 years	16	9	7
51 - 60 years	5	1	4
Above 60 years	1	1	-

**TABLE 2**  
DISTRIBUTION OF 144 CASES ACCORDING TO THEIR DIAGNOSIS

Diagnosis	No. of patients	Percentage
Schizophrenic illness	46	31 %
Acute psychotic episodes	13	9 %
Persistent delusional disorder	3	2 %
Hypomania	15	10.4 %
Depressive illness	26	18 %
Adjustment disorder	19	13.1 %
Dissociative disorder	2	1.3 %
Obsessive compulsive disorder	2	1.3 %
Personality disorder	8	5.5 %
Organicity	8	5.5 %
Mental retardation	2	1.3 %

**TABLE 3**  
HYPNOTIC PRESCRIBED ON THE FIRST NIGHT OF ADMISSION

Diagnosis	No. of patients	Dosage & Type
Depressive episodes	4	Nitrazepam 5mg
Adjustment Disorder	5	Nitrazepam 5mg

None of the above were on hypnotics prior to their admission and they were new admissions.

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## Short Report

### ROUTINE USE OF HYPNOTICS IN A PSYCHIATRIC HOSPITAL

F. Al Nasheet , M.K. Al-Haddad & V.S. Mathur

#### الاستعمال الروتيني للمنومات في المستشفى النفسي فضل النشيط ، محمد الحداد ، ماثور

#### ABSTRACT

الخلاصة :

In a retrospective survey on the use of a hypnotic in cases admitted to the acute ward of the psychiatric Hospital-Bahrain , it was found that only 9 out of a total of 144 cases were administered such a drug. The study included all admissions during the period 15th July 1990 till 15th October 1990.

In all cases ,the drug used was Nitrazepam 5 mg tablet. Out of a total of 12 attending doctors only 3 prescribed pm hypnotic (Nitrazepam). Eight patients were given the drug on the initiative of the nurses and one requested himself.

#### Methods

The inpatient files and drug charts of all cases admitted to the acute ward of the psychiatric hospital , Bahrain , during the period 15/7/1990 to 15/10/1990 formed the source of this project. The study included demographic data , drugs taken by individual patients , the name and dosage form of hypnotic if any , and whether it was on doctors' pm prescription or on nurses' initiative or on patients' request was recorded. History of insomnia prior to admission was also noted. All such information was recorded on a proforma specially designed ; the information was subsequently analyzed.

#### Results

A total of 144 inpatient files and drug sheets were examined. Table 1 shows the age and sex distribution of the patients. The majority were in the 20-30 age bracket . Considerable number of cases, 46 were diagnosed as schizophrenic illness, 26 as depressive illness, 19 as adjustment disorder, 15 as hypomania and 13 as acute psychotic episodes. Table 2 gives the details of the distribution of the cases according to the diagnosis. Only 9 cases were given a hypnotic; 4 of these were of depressive episodes and 5 of adjustment disorder. They were all given the benzodiazepine- Nitrazepam 5 mg tablet. None of these cases were on hypnotic therapy prior to the admission to the hospital (table 3). The number of admitting doctors were 12 and only 3 of these prescribed pm hypnotic . Eight patients were given the hypnotic on the initiative of the nurses and the ninth requested the medication himself .

في مسح رجعي أجري حول استخدام المنومات للمرضى الذين ادخلوا العنبر الحاد في المستشفى النفسي في البحرين بين أن من بين 144 حالة فقط أعطوا علاج منوم . هذه الدراسة شملت جميع الإدخالات في الفترة ما بين 5 تموز 1990 ولغاية 15 تشرين أول 1990 . في جميع الحالات ألتسع المذكورة فإن النايورازيبام ( موجادون ) 5 ملغم هو العلاج المستخدم . من بين 12 طبيب فإن ثلاثة منهم فقط وصفه عند اللزوم . ثمانية مرضى أعطوا العلاج بإيعاز من الممرضين ومرض واحد بناء على طلبه .

#### Discussion

Although it is widely accepted that hypnotics should not be prescribed indiscriminately and routine prescribing is undesirable , the practice continues unabated. The Com-mittee for safety of medicine of the UK (1991) recom-mended the use of benzodiazepine, such as Nitrazepam for short term use only. In a survey on night sedation in the admission wards of a psychiatric Hospital, Fry ( 1989 ) re-ported that 39.5% of patients received night sedation. Out of the 23 doctors who were involved in the prescribing, it appears that a significant motivation for the pm prescription of a hypnotic was a desire on the doctors' part not to be disturbed by nursing staff during the night . Our study showed that only 6.2% of the cases received a hypnotic and these were confined to depressive episodes and adjust-ment disorders. A total of 12 prescribing doctors were involved. Only 3 prescribed pm hypnotics. Our study shows that there is an effective control on the routine prescribing of hypnotics at acute ward of the psychiatric hospital. Further studies are now planned to look at the case records of patients admitted to the medical wards of the parent institution, Salmaniya Medical Centre . This study would show whether this practice of rational use of hypnotics only followed by the doctors of the psychiatric Hospital or is also applicable in the settings of a general medical ward .

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Table - 4

Age in years at onset and index interview ( II ) in relation to four groups of mental disorders

Age at onset	Schizophrenic psychoses n=45	Affective psychoses n=88	Neurotic illnesses n=38	Organic conditions n=29	P value
< 50*	39	30	29	01	*Pooled
50-59*	02	35	06	03	< 0.05
> 60	04	23	03	25	
Age at					
50-59	33	39	28	04	< 0.05
> 60	12	49	10	25	

Table-5

Distribution of physical comorbidity among studied patients (N=200)

Medical disorders	Number	%	Total	%
Cardiovascular diseases*	25	12.5		
Endocrinological diseases**	21	10.5		
Neurological diseases	19	09.5		
Ophthalmic diseases	08	04.0		
Respiratory diseases	06	03.0	96	48
Gastrointestinal disorders	05	02.5		
Ear, nose, and throat diseases	04	02.0		
Musculoskeletal diseases	04	02.0		
Dermatological diseases	04	02.0		

\*Hypertension, \*\*Diabetes Mellitus were the modal diagnoses.

**TABLE-2**

**CLUSTERS OF PSYCHIATRIC SYNDROMES AMONG STUDIED PATIENTS  
(N=200)**

<b>Diagnoses</b>	<b>n</b>	<b>%</b>	<b>Total</b>	<b>%</b>
Dementia's	25	12.5		
Alcoholic Dementia	01	00.5	29	14.5
Others	03	01.5		
Schizophrenic psychoses	31	15.5		
Paranoid states	11	05.5	45	22.5
Schizoaffective	02	01.0		
Others	01	00.5		
Unipolar depression	50	25.0		
Involuntional depression	20	10.0	88	44.0
Manic-depressive psychosis	05	02.5		
others	13	06.5		
Neurotic depression	09	04.5		
Chronic anxiety	06	03.0		
Obsessive-compulsive disorder	04	02.0	38	19.0
Sexual disturbances	08	04.0		
Drug dependence	07	03.5		
Hypochondriasis	03	01.5		
Others	01	00.5		

**TABLE-3**

Comparison between four clusters of psychiatric disorders regarding their duration of illness

<b>Variable</b>	<b>Schizophrenic Psychoses</b>	<b>Affective psychoses</b>	<b>Neurotic illnesses</b>	<b>Organic conditions</b>
Number	45	88	38	29
Mean±SD of duration	11.8±12.41	6.18±6.47	7.47±6.81	6.67±7.66

F ratio = 4.71, d.f = 3, p< 0.003

correct criteria as differing concepts exist about when old age really begins<sup>11</sup>. However, in developing countries where the life expectancy is comparatively lower than in western nations, 50 years of age is taken as the arbitrarily figure for the onset of old age in the developing world.

Thirdly, we used multiple standardized psychiatric scales and diagnostic definitions for diagnostic purposes during the index interviews. The initial data collection in patients' case sheets supported by such evaluations may have reflected robust observations and also better methodological feature. Finally, the sampling bias and the confounding effects of psychotropic drugs and multiple visits to the hospital on the diagnostic formulations were not completely ruled out in our study. Despite some important pitfalls, this research has some clinical implications; firstly certain socio-demographic parameters as revealed here will adversely affect the mental health of elderly people which call for some preventive measures; secondly, besides

organic brain conditions, a fairly good proportion of psychotic, neurotic and physical disorders would compound the problems of the elderly, which clinicians must always bear in mind when interviewing such patients. In conclusion, we feel that the tentative data of this study would help other researchers to investigate the biopsychosocial problems of elderly patients over 65 years of age in a prospective manner, by using standardized scales supported by currently available refined diagnostic criteria. The derived data would be of tremendous help for Saudi mental health planners for the elderly clinical population which is possibly increasing.

### *Acknowledgment*

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**TABLE-1**  
Demographic parameters and their significant correlation with clusters of mental disorders

Variables	Schizophrenic psychoses n=45	Affective psychoses n=88	Neurotic illnesses n=38	Organic conditions n=29	p
- Family type					
Nuclear	09	42	21	04	
Joint	36	46	17	25	< 0.05
- Occupation					
Employed	11	71	32	07	
Unemployed	34	17	06	22	< 0.05
- Social class					
low class	33	38	16	21	
Upper class	12	50	22	08	< 0.05

reported that female mental patients generally underutilized the psychiatric outpatient and inpatient services. We speculated two reasons for this discrepancy; firstly the referral bias by female receptionists and secondly the disproportionately higher affective and OBS disorders generally found among females as reported by various researchers<sup>8</sup> might have inflated their representation in the utilization of mental health services. This gender divergent utilization of mental health services by patients over 50 years of age need further documentation from other research centers. Our study found that the largest group of patients were suffering from affective disorders (  $n = 88, 44\%$  ) followed by schizophrenia (  $n=45, 22.5\%$  ), neurotic conditions (  $n = 38, 19\%$  ), and organic diseases (  $n=29, 14.5\%$  ). On comparing these clusters with our previous research<sup>16</sup> [schizophrenia =111 , affective disorder = 33 , neurotic illnesses = 25, and OBS=26]. It has been found that affective and neurotic disorders were significantly represented in the current study ( $X^2=55.71, d.f = 3, p < 0.001$ ). Alternatively, the schizophrenia (56.92%) was the most significant diagnosis among admitted adult patients<sup>6</sup>. It was further found that patients with schizophrenia and neurotic disorders were beginning to have symptoms of these illnesses before reaching 50 years of age in a significant manner ( $p < 0.05$ ) and carrying them, in a chronic condition into old age. The significant longer duration of these diseases as compared to affective and OBS ( $P < 0.003$ ) further substantiated the notion that schizophrenia and certain neurotic illnesses are the chronic disorders persisting into old age. Interestingly there was a significant ( $p < 0.05$ ) trend that patients with pre-

dominant organic conditions and, to a lesser extent, with affective disorders developed their illnesses from the age of 60 and over. Such findings are more or less in agreement with the results of other researches<sup>9,10</sup>.

Finally our study also reported the physical morbidity among the outpatients. 48% of patients ( $n=96$ ) were suffering from a variety of medical disorders of which hypertension (12%) and diabetes mellitus (9%) were among the commonest of the chronic diseases. Our previous research, 37.95% ( $n = 74$ ) of adult patients had a variety of physical diseases for which they were referred to various specialists<sup>6</sup>. The significantly high physical morbidity in our current study as compared to the previous research ( $Z=2.017, p < 0.02$ ) substantiated the fact that the medical diseases are more prevalent among elderly patients.

This study, however, did not address the etiological relationships between physical comorbidity and psychiatric disorders.

This study has a number of limitations. Although we have done intergroup statistical comparisons and also compared some of our current findings with previous research results, recruitment of a psychologically normal control group to match certain important demographic variables and others would have been a better strategy. We attempted but failed to achieve our wishes due to non cooperation of the people. Secondly, an important factor, in which it is easy to find a flaw with the age criterion of elderly people, (>50 years) as considered in this research. We have strong reservations as to whether this age is the

to find out any correlation with various groups of psychiatric syndromes as depicted in table-2, only family type, occupation, and social class achieved the significant association with clusters of mental disorders ( $p < 0.05$ ). The significant distribution of schizophrenic and organic brain syndrome patients were observed in joint families ( $p < 0.05$ ). The higher proportion of patients with affective and neurotic disorders were holding jobs ( $p < 0.05$ ). Similarly, patients with neurotic and affective illnesses came from upper social classes ( $P < 0.05$ ). Table - 3 demonstrated that 49.5%(n=99) of patients had an onset of various mental disorders below 50 years of age and were carrying these psychopathologies (15% affective diseases, 19.5% schizophrenia, 14.5% neurotic conditions, and 0.5% OBS) into old age. It was further observed that patients with schizophrenia and neuroses were having a significantly earlier onset of these disorders ( $P < 0.05$ ). Similarly, patients with these two disorders, as compared to OBS and affective diseases, were of a significantly lower age at the time of their index interview ( $p < 0.05$ ). Further, there were significant observations when the mean duration of four groups of mental disorders were compared by applying the test analysis of variance as shown in (table-4). The results reflected that patients with schizophrenia and neurotic disorders as compared to the two other groups, had been suffering a significantly longer duration of these illnesses ( $p < 0.003$ ). Finally, 96 patients (48%) showed physical diseases which were; cardiovascular (12.5%), endocrinological (10.5%), neurological (9.5%), ophthalmic (4%), respiratory (3%), gastrointestinal

(2.5%), and ear, nose throat, musculoskeletal, and dermatological (2%)( table - 5).

## Discussion

This research studied the sociodemographic parameters, patterns of psychiatric morbidity, magnitude of psychotic and neurotic disorders progressing into old age, and finally the physical comorbidity in the elderly outpatient population. There is a large body of researches<sup>5</sup> that indicate the etiological significance of several psychosocial factors in mental disorders. The present study has found a significant association, but not the cause and effect relationships, between joint families, unemployment, low social class and various mental disorders, especially schizophrenia and organic conditions. At the same time the significant correlations of affective and neurotic disorders within the nuclear family employment, and upper social classes reflect that patients with these disorders as compared to schizophrenia and OBS, were socially and occupationally stable and carrying family responsibilities. We have reported similar findings in our previous research, concerning admitted adult patients<sup>6</sup>, thus corroborating the notion of a downward social drift that patients with schizophrenia and OBS unlike patients with affective and neurotic disorders, tend to assemble into joint families with financial difficulties, as they live unproductive lives.

We unexpectedly found that both sexes (49.5% Vs 50.5%) in this age group (>50 years), equally utilized the psychiatric outpatient services. This is in contrast with our previous report concerning the adults in patient population<sup>6</sup> and others<sup>7</sup>, who have

was discovered that their age was below 50 years ;3 patients ( 1.42% ) were without a close relative ;and 4 patients (1.89%),were suffering from only neurological diseases, (Parkinsonism=2,Organic hemiparesis= 2 ). Finally , 200 patients who also agreed for participation entered the study .

Following selection of these patients the inpatient (n = 8,4%) and outpatient (n = 200,100 % ) , records of individual patients were extensively reviewed . As a policy of the hospital each patient was thoroughly examined and interviewed by psychologists, social workers, resident doctors , and psychiatric specialists. Relevant data was recorded by each member of the psychiatric team in the psychiatric case sheets . Moreover , each patient was also evaluated at the time of their index interview by the author (NQ ) and , thereafter relevant information regarding demographic, clinical variables , and physical morbidity was recorded on a semistructured proforma . As regards patients' physical diseases , which were already confirmed by physicians who had carried out detailed physical evaluations and extensive laboratory tests . The mental status findings , as recorded in the case sheet at the time of the first interview were reviewed and further mental status examinations of each patient was also undertaken at the index interview by using

- (1) Hamilton Rating Scale for Depression,
- (2) Brief Psychiatric Rating scale,
- (3) Mini-Mental Mental State Questionnaire to determine the nature of psychopathology for backing up the diagnostic formulations. In addition the ICD - 9 definitions were used for classifying the diagnoses of these patients.

The data were analyzed by computer and two tailed t-test , chi square and F tests were used at appropriate places .

## Results

It was demonstrated that 196 patients (98%) were Saudis and 4 were non-Saudis (2%) . There were 99 males (49.5%)and 101 females(50.5%).The age, in years, both at the onset and index interviews of males ( $51.28 \pm 11.78, 60.00 \pm 09.3$ )and female patients ( $52.17 \pm 11.77, 59.03 \pm 09.32$ ) when analyzed by using the two tailed t-test, did not achieve any statistical significance ( $p > 0.05$ ) . Similarly , when the duration of mental diseases between male ( $8.72 \pm 4$  ) , and female patients ( $6.86 \pm 1$ ) were compared, it also failed to achieve the statistical significance ( $p > 0.05$ ). For the purpose of statistical comparison, the demographic variables were dichotomized. It was observed that 32% (n=64 ) were educated, 68% (n=136) were illiterate 38% (n=76) came from nuclear family set up whereas , 62% (n=124) were from joint families, that is , a unit comprising of parents, children , and individuals united by kinship or marital ties . 36% (n=72 ) were from rural backgrounds and 64% (n=128) from urban areas. Furthermore , it was observed that 60.5% (n=121) were employed while 39.5% (n=79) were unemployed or retired .In addition , arbitrarily 54% (n=128) were from low social classes while 46% (n=92) were from upper classes . That is , their aggregate monthly income , from multiple sources was 1500 Riyals or more. Finally, 91% (n=182) were married and 9% (n=18) were living non conjugal lives. When these demographic variables were analyzed ( table - 1 )

## *Introduction*

It has been suggested that apparently old age is relatively a phase of stability. However, this stage of development is beset by numerous special problems which impinge on the psyche of old people in an adverse manner. These adverse biopsychosocial events are retirement, widowhood, loneliness, changing roles, the empty nest syndrome, poverty, decline in physical health, physiological aging, development of physical diseases, fear of death, malnutrition, and many other similar difficulties. It has been reported that these multiple overwhelming stresses interact in a very complex way with the individual's vulnerability and possibly determine the development of psychological and related disorders. In addition to these disorders, the major functional psychoses and, to a lesser extent, neurotic illnesses taking chronic course and therefore compounding the diverse problems of elderly people further. Most importantly, the technological advancements in the medical field have definitely enhanced the life expectancy of people. However, it has not resolved many major psychosocioeconomic issues, hence adding further problems for the elderly population. Alternatively not all elderly persons lead psychologically as well as physically infirm and dissatisfied lives; they live happy and well adjusted ones.

This may be due to their stable constitutional characteristics, as well as having the immediate availability of healthy psychosocial support in the milieu in times of life crises. Undoubtedly there is vast literature from the west concerning elderly mental patients. In contrast,

there is a paucity of studies from developing countries regarding elderly mental patients. This study is the first attempt towards evaluating the different perspectives of elderly mental patients in Saudi Arabia. This study has four goals; 1) To study the demographic parameters of elderly psychiatric patients (age > 50 years); 2) To describe clusters of mental disorders and their correlations with demographic variables; 3) To study the magnitude of psychotic/neurotic disorders that are carried into late age; 4) And finally, to describe the physical comorbidity among those mental patients.

## *Methods and Material*

The sample of this study comprised 212 outpatients attending psychiatric clinics at the Buraidah Mental Health Hospital. Their age was 50 years and over, all were referred to the first author, (NQ), by the reception staff of the hospital. The receptionist was unaware of the objectives of this procedure. During a period of one year, October 1988 to November 1989, 212 patients were chosen for the study. They fulfilled the following criteria:

1-The age of 50 years or more at the index interview and; 2- Able to give the detailed information needed; 3 - Availability of a key relative to verify all information given by the patient; and 4 - Two visits or more at the psychiatric outpatient department, which was considered necessary for diagnostic consistency. As a result of this selection method, 12 patients (7 males and 5 females) were excluded; 5 patients (2.36%) were found unsuitable when it

## PATTERNS OF PSYCHIATRIC DISORDERS AMONG ELDERLY PATIENTS (> 50 YEARS) ATTENDING PSYCHIATRIC OUTPATIENT CLINICS AT THE BURAIDAH MENTAL HEALTH HOSPITAL, BURAIDAH, AL-QASSIM, SAUDI ARABIA

N. A. Qureshi, I. S. Hegazi

أنماط الأمراض النفسية بين المرضى الكبار (فوق ٥٠ سنة) الذين يراجعون العيادات  
النفسية التابعه لمستشفى البريده للصحة النفسية ،  
القصيم - المملكة العربية السعوديه

نسيم لخطر قريشي ، ابراهيم سليمان حجازي

### الخلاصة:

اجريت هذه الدراسه على ٢٠٠ مريض نفسي ( اعمارهم اكثر من ٥٠ سنة ) ويتابعون بالعياده الخارجيه وذلك لغرض دراسة حالتهم النفسيه حسب معايير نفسيه قياسييه متعدده واتضح ان بعض التغيرات السكانيه لها علاقه ذات دلالة احصائيه مع بعض مجموعات الامراض النفسيه . كما تبين بشكل غير متوقع أن كلا الجنسين يستخدم الخدمات الصحيه النفسيه بشكل متساوي . وقد تبين ان ٤٩,٥ ٪ من المرضى بدأوا يعانون من أمراض نفسيه متعدده قبل سن الخمسين . وان ٤٨ ٪ منهم مصابون بأمراض عضويه بالاضافه إلى المناقشه والنتائج ومعوقات هذه الدراسه ثم إلقاء الضوء على بعض الإستنتاجات الإكلينيكيه ثم وضع بعض التوصيات .

### ABSTRACT

200 psychiatric outpatients over 50 years of age were recruited for studying patterns of psychiatric disorders by using multiple psychiatric rating scales. It was revealed that family type, occupation and social class were significantly correlated with some clusters of mental disorders. Both sexes unexpectedly equally utilized the mental health services, 49,5% of patients had different psychopathologies with an onset of below 50 years of age, and finally 48% of probands showed physical comorbidity. In addition to the discussion of findings and limitations of this study, some clinical implications were highlighted and certain recommendations were also suggested.



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psychiatry clinic in a primary health care center , in nearby Saudi Arabia , 9% were categorized as having an anxiety- depressive state .

One of the difficult areas in psychiatry is to construct clinically relevant taxonomy of affective disorders by identifying defined criteria to delineate one disorder from another . This is difficult because of complex symptom patterns in which there is considerable overlapping of symptomatology between two disorders<sup>30</sup> . This is the case with anxiety and depressive disorders,

especially among primary health care patients . Many anxious patients present with concurrent symptoms of depression , and many depressed patients present with concurrent symptoms of anxiety. Such clinical presentation has significant implications in formulating a diagnosis, as well as the immediate and long term management outcome <sup>24</sup>. Anxiety depressive states among primary health care patients needs further research to investigate their clinical entities , responses to treatments , outcomes and differences to separate anxiety and depressive disorders.

**Table (1)**

The sex distribution of the 42 cases diagnosed as depression and anxiety - depression states from within the total of 60 identified

Diagnostic Category	I.C.D. Code	Males		Females		Total	%
		No	%	No	%		
Neurotic Depression	300.4	10	17 %	23	38%	33	55%
Endogenous Depression	296.1	0	0	1	1.7%	1	1.7%
Anxiety-Depressive States	-	1	1.7%	7	11.7%	8	13%
Total	-	11	18%	31	52%	42	70%

**Table (2)**

The age distribution of the diagnosed cases of depression and anxiety - depressive states.

Age	Neurotic Dep.		Anx. Dep. State		End. Dep.		Total	
	No.	% age	No.	% age	No.	% age	No.	%age
15-24	7	16.7%	2	4.7%	0	0	9	21.4%
25-34	4	9.5%	0	0	0	0	4	9.5%
35-44	11	26.2%	3	7.1%	1	2.4%	15	35.7%
45-54	7	16.7%	3	7.1%	0	0	10	23.8%
55-64	2	4.8%	0	0	0	0	2	4.8%
65+	2	4.8%	0	0	0	0	2	4.8%
Total	33	78.6%	8	19%	1	2.4%	42	100%

nationals attending a Primary Health Care Centre ,and to compare the results with other relevant studies. The reason for not including expatriates in this study was to minimize the influence of various economic and sociocultural factors, including migration, which vary among different nations.

## ***Method***

This study is part of a larger one, and only parts relevant to this study will be highlighted. The depressive subjects investigated for the purpose of this study were derived from a group of patients identified as suffering from minor psychiatric morbidity in primary care, which is reported elsewhere <sup>10</sup> .

The study was conducted in a Primary Health Care Centre in Al Ain , U.A.E. Al Ain is a city with a multi-ethnic population ranging between 200,000 - 250,000. The study was performed during the period beginning December 1991 to March 1992.

## ***Subjects and Procedure***

Study subjects were U.A.E. nationals, (16 years or above) , attending the Primary Health Care Centre irrespective of the type of complaint. Excluded were the very ill , those who refused to participate, those who were screened during a previous visit and those attending for reasons other than health complaints, e.g. for certificates, vaccinations of their children etc. Systematic random sampling was adopted ; one patient at random from those who reported to the the morning and afternoon sessions.

It is unfortunate that the Primary Health Care Centres in this country have no base

line statistics, including an age/ sex breakdown of the population served by the Health Centres. Therefore , it was not possible to report statistical information representative of the study sample. However, the authors consider the study sample is representative of U.A.E. nationals attending the Health Centre because of the randomness of the selection procedure .

In the first part of the study all subjects were screened by a research technician using the Arabic versions of the Self Reporting Questionnaire (SRQ-20)<sup>11</sup> and the Hospital Anxiety and Depression (HAD)<sup>12</sup> scales. The work relating to these two scales will be reported elsewhere. All screened patients were then interviewed by a consultant psychiatrist (OR). This interview was undertaken after seeing the primary health care physician. The psychiatric interview was performed without any knowledge of the screening results. Standardized clinical interviews, using the clinical interview Schedule (CIS), was conducted<sup>13</sup> . The CIS , a standardized semi-structured inventory, was originally designed for use in community surveys and general practice<sup>14</sup>. Its usefulness in primary care settings and its reliability has been tested in different countries <sup>13,15,16</sup> . The CIS was designed to be administered by a psychiatrist with some training in its use. The CIS was not translated into Arabic because the psychiatrist who conducted the standardized clinical interview was bilingual and it was easy for him to Health Centre during the first half-hour until the end of the session. Research work was performed three days a week , during administer the interview without such translation.

## *Introudction*

Depression is the commonest psychiatric disorder in the community and most people who develop it present themselves to their general practitioners ; evidence for this was derived from many recent studies. However there is evidence that only a small proportion of these depressed patients are referred to psychiatrists, and so general practitioners remain the principal source of health care for this distressing condition<sup>1</sup>. Fahy, 1974, demonstrated that only 17% of G.P.'s depressives were ultimately referred to psychiatrists<sup>2</sup>.

The co-existence of physical and psychiatric morbidity has been recognised for a long time. This has become a subject of concern among primary care physicians over the last few years. Comorbidity raises complex diagnostic issues which are equally troublesome for primary health physicians and specialist clinicians.

The dilemma of how best to distinguish the aetiology and manifestations of somatic and functional illness is particularly acute with regard to depressive disorders, whose signs and symptoms consist typically of both the mood and neurovegetative types. Increased medical visits may result when vegetative signs of depression, (disturbances of appetite, libido, energy and sleep), are interpreted by the patient as evidence of physical illness. This is why the Primary Health Care physician is in a crucial position in detecting, treating or referring patients who are clinically depressed. Consequently it is essential to enhance the Primary Health Care physician's skills to recognize and respond effectively to depression<sup>4</sup>.

There is evidence that most primary care depressives do satisfy the criteria as suffering from psychiatric problems, although the disorder is milder, less specific in diagnosis and less severe in character than those that are treated by psychiatrists<sup>5</sup>. However, other care worker considered psychiatric disorders in primary care as nonspecific, corresponding instead to a group of "distress syndromes" ; where psychiatric diagnosis may be of limited value<sup>6</sup>. Brown and Harris (1978) reported 17% of cases among Camberwell women<sup>7</sup>, while Bebbington et al argued that these tended to be transient stress disorders rather than clinical illnesses<sup>8</sup>. This raises the issue of how we operationally define a "case" of depression in primary care ? This is an essential, unresolved research challenge at present. It is understandable that the defining characteristics of depressive disorders vary according to the diagnostic classification system used, but the value of strict application of such classification systems to the primary care patient is doubtful<sup>4</sup>. Still, there is confusion surrounding the clinical construction of depression. The term depression is used to indicate quite different concepts, e.g. extension of grief, self-defeating attitudes, etc., while the medically oriented psychiatrist considers depression as a state based upon the malfunction of neurotransmitter systems in the brain. The depression screening scales add to the confusion since each is directed towards the assessment of a particular aspect of depression, e.g. cognition, anhedonia, behaviour, ect<sup>9</sup>. The aim of this study was to investigate the prevalence rate, clinical characteristics and some sociodemographic aspects of depressive disorders among a sample of U.A.E.

## DEPRESSION IN PRIMARY HEALTH CARE

O. E. F. El-Rufaie G.H. Absood

### الاكتئاب النفسي بين مرضى الرعاية الصحية الأولية

عمر الرفاعي وجميل عيسود

الخلاصة :

تمثل هذه الدراسة جزءاً من مشروع بحثي شامل متعدد الأغراض . الهدف من هذا الجزء هو بحث وتحليل حالات الاكتئاب النفسي التي تم مسحها بين عينة الدراسة . كانت حالات الاكتئاب النفسي ٧٠٪ من المجموع الكلي للحالات المرضية النفسية التي تم فرزها . وكانت حالات الاكتئاب النفسي التفاعلي ( العصابي ) عبارة عن ٥٥٪ من المجموع الكلي للحالات بينما كانت حالات الاكتئاب الذهاني ٧٪ وكانت ١٣٪ من المجموع الكلي للحالات عبارة عن حالات تمثل مزيجاً من الاكتئاب النفسي والقلق النفسي . كل أنواع الاكتئاب النفسي كانت أكثر إنتشاراً بين النساء عنها بين الرجال .

### ABSTRACT

This study is part of a comprehensive project investigating psychiatric morbidity and relevant psychiatric instruments at a primary health care setting in Al Ain, United Arab emirates (U.A.E) . The aim was to investigate the group of depressive disorders identified from within the identified cases of minor psychiatric morbidity in the studied primary health care sample. Depressive disorders constituted 70% of the total identified minor psychiatric morbidity. Out of all identified cases 55% were suffering from neurotic depression, 1.7% endogenous depression and 13% from anxiety-depressive states. Females outnumbered males in all types of depressive disorders .

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thus leading to changes in his / her behaviour . And the parents' preoccupation with stress may prevent them from supervising their children's activities or protecting them from hazards.<sup>15</sup>

Health visitors and female social workers can play an important role in educating parents. Some success may be achieved by direct individual counselling. The aim of this is to produce a gradual alteration in the

parents: behaviour and the environment that they are bringing their children up in, rather restricting the children's activities. further studies are required to determine the predeliction of children for certain types of accidents. Also , the frequency and extent of environmental stress in children more prone to repeated incidents ought to be adequately studied. studies are also required to determine the effectiveness of home visits by health personnel.

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accidental poisoning is 7 times greater among children from families with one or more stress factors, (odds ratio = 7.17).

All factors played a strong role in being effective in the occurrence of accidental poisoning. The only exemption was among single parent families and children with working mothers, Table (6).

Families were also categorized according to the number of stress factors within each family.<sup>6</sup> A highly significant difference was found between cases of accidental poisoning and the controls in respect to the degree of problems within the family, (p,0.001). Cases who came from families with mild to very mild problems were significantly different from their controls, (p , 0.001) . Table (7)

## *Discussion*

Accidental poisoning among children presents a challenging problem for pediatricians, epidemiologists and medical psychologists. For the pediatrician the diagnosis concerning the type of poisoning, its severity and adequate therapeutic intervention are areas of prime concern. On the other hand, the clinical epidemiologist and medical sociologist are interested in making an assessment concerning the pattern and extent of the problem in the community as well as the risk factors<sup>7</sup>. Nothing is known concerning the morbidity and mortality rates, as well as the risk factors in accidental poisoning among children in our country ,since neither a regional nor a national register of such children exist. due to this circumstance , admissions to casualty departments and hospital wards provide the best numerical indicator.

A child's behaviour plus family stress were considered to be one of the important risk factors in accidental poisoning<sup>8,9</sup>. The present study reveals that a child's behaviour is a relevant factor in childhood poisoning; and poisoned children have more behavioural problems than their controls such as hyperactivity, stubbornness, nocturnal enuresis, temper tantrums, aggression , pica , thumb sucking, stammering, nightmares in addition to head nodding and tics. Similar findings were noticed earlier in the same locality.<sup>9</sup> Children who poisoned themselves as toddlers can be differentiated from controls even after several years, as they suffer from more deviant and significant problems, including hyperactivity destructiveness , uncooperative attitudes and fighting.<sup>10</sup> Children with such characteristics are more likely to react to stressful situations with impulsiveness. Also they tend to be stronger than their peers and respond to environmental stresses by having repeated accidents.<sup>11</sup> Such characteristics may expose children to hazards which may be reinforced by the inability of their mothers to modify or control such behaviours. It has been revealed that home atmospheres in which accidental poisoning cases occur differ significantly from that of the controls, where serious family stresses were more predominant. The presence of such factors may help in making poisons more readily available to children because parents under stress may be less aware of their children's needs and safety. Any medicines being required for a member of the family may not be kept safely out of the child's reach.<sup>12</sup> Anxiety and depression in one or other parents, as well as unhappiness and disorganization in the home are more likely to affect directly the child's behaviour.<sup>13</sup> Moreover , mothers with psychiatric disorders may lose interest in their children



**Table (6)**  
The association of each type of family stress factor in the occurrence of accidental poisoning.

Family Stress Factor	Cases	Controls	odds ratio value p-value
Single parent	13	15	0.86 (N.S.)
One parent away from home	99	51	2.28 =0.001
Maternal pregnancy	114	59	2.34 =0.001
Working mother	17	24	0.69 (N.S.)
Unemployed father	43	22	2.08 =0.01
Marital disharmony	30	4	8.09 =0.001
Moving house within the last 3 months.	74	24	3.59 =0.001
Other child aged less than 1 year in the family	128	35	5.03 =0.001
Recent onset of anxiety and depression in the parents	54	16	3.77 =0.001
Serious illness or bereavement in parents, siblings and grandparents.	55	8	7.88 =0.001

\* odds ratio test of significance

**Table (7)**  
Accidental poisoning cases and controls according to the degree of defect in their families

No. of stress factors	Degree of defect	Cases	controls
1 and 2	very mild	259	183
3 and 4	mild	71	9
5 and 6	moderate	1	—
7 up to 10	severe and very severe	—	—
Without defect		44	182
Total		375	375

$\chi^2 = 29.057$       D.F. = 1      P < 0.001

Table (2) indicates that a child's behaviour was significantly associated with an occurrence of accidental poisoning, ( $p < 0.001$ ). The same table shows that behavioural disorders are 52 times greater in children suffering from accidental poisoning than in children suffering from non - accidental poisoning , ( odds ratio = 52.2). All of the behavioural disorders were found to be operational in the occurrence of accidental poisoning. Nail biting and dummy sucking proved to have no significant association with accidental poisoning , (Table 3).

A classification of the severity of the behaviour disorders was adopted in both cases and controls. <sup>6</sup> Regarding the degree of neurotic traits, Table(4) shows that 76.0% of the cases had very mild or mild neurotic traits, compared to 32.8% of the controls. And one quarter (20.3%), of the cases had moderate to severe degrees compared to 0.3% of the controls , ( $p < 0.001$ ) .

Table (5) demonstrates that family stress factors were more significantly encountered among cases of accidental poisoning than among the controls, ( $p < 0.001$ ). Moreover,

**Table (3)**  
The association of each type of behaviour disorder in the occurrence of accidental poisoning.

(Behaviour Disorders)	(Cases)	(Controls)	odds ratio Value p-value
Nightmares	32	2	17.4 =0.001
Nocturnal enuresis **	140	28	7.38 =0.001
Stammering **	30	1	32.52 =0.001
Hyperactivity	278	67	13.17 =0.001
Tic and head nodding	13	1	13.36 =0.01
Nail biting	14	5	2.86 (N.S.)
Thumb sucking	41	5	9.08 =0.001
Dummy sucking	9	2	4.58 (N.S.)
Aggression	119	16	10.43 =0.001
Stubbornness	243	53	11.18 =0.001
Temper Tantrums**	134	25	7.78 =0.001
pica	111	14	10.84 =0.001

\* odds ratio test of significance.

\*\* Recorded only for children above 2 years of age .  
Accidental Poisoning

**Table (4)**  
Accidental poisoning cases and controls according to the degree of defects in their personality in percentages.

No.of behaviour disorders	Degree of the neurotic trait	Cases	Controls
1 and 2	very mild	32.8	27.5
3 and 4	mild	43.2	5.3
5 and 6	moderate	18.4	0.3
7 and 8	severe	1.9	---
9 and 10	very severe	---	---
11 and more	devastating	---	---
	maladaptive	---	---
without defect		3.7	66.9
Total		375.0	375.0

$\chi^2 = 87.997$       D.F. = 3      P < 0.001

**Table (5)**  
Accidental poisoning cases and controls according to the presence or absence of stress in their families.

Family stress	Cases	Controls
Present	331	192
Absent	44	183
Total	375	375

$\chi^2 = 122.055$       D.F = 1      P < 0.001  
odds ratio = 7.17      P = 0.001

Mosul city and its vicinity. Children with mental subnormalities and any above the age of five years were excluded. This also applied for those suffering from vapour and gas inhalation, plus children with food poisoning.

The sample of children used as controls, were selected according to the method of paired sampling with individual matching. The criteria for control selection were: a child suffering from any disease other than accidental poisoning, under the age of five years, admitted next to the case of accidental poisoning in the hospital who admitted them. Those with mental subnormalities or who failed to fulfil the above criteria were excluded. The patients' mothers were interviewed soon after transferring the child to the inpatient wards.  $\chi^2$  test and odd ratio tests of significance used to examine the association and the strength of causal relationships.

## Results

A sample of 375 patients who were diagnosed as suffering from accidental poisoning were considered to meet the requirements necessary for this study and 375 patients with a diagnosis of diseases other than accidental poisoning were taken as controls.

The Sample of cases consisted of 88.7% of the total number of patients suffering from poisoning incidents who attended either of the two emergency units of the pediatric hospitals during the study period. There were no significant differences in respect to sex distribution among cases of accidental poisoning when compared with the controls. Males were more frequently encountered in both cases and controls, with a male to female ratio of 1.8:1 and 1.5:1 respectively. Table (1).

**Table(1)**  
Sex of accidental poisoning cases and controls

Sex	Cases	Controls
Male	239	225
Female	136	150
Total	375	375

$\chi^2 = 0.955$       D.F. = 1      N.S.

**Table (2)**  
Accidental Poisoning cases and controls according to the presence or absence of behaviour disorders.

Behaviour disorders	Cases	Controls
Present	361	124
Absent	14	251
Total	375	375

$\chi^2 = 327.750$       D.F. =1      P < 0.001  
odds ratio = 52.2      p = 0.001

both cases and controls were drawn from the two pediatric hospitals in Mosul city during the period of 1st. October 1991- 31 st. March 1992.

This study demonstrates that males were more predominant than females in both cases and controls. The estimation of the probability value and odds ratio suggested that a presence of behaviour disorders in the affected child may possibly be regarded as a risk factor in the occurrence of accidental poisoning. Also families suffering from stress factors were significantly higher among accidental poisoning cases than among controls. The results obtained are highly valuable in monitoring a programme aimed at creating a prevention strategy.

### *Introduction*

Current researches indicate that psychosocial variables, especially behavioural problems in children, abnormalities in parents' child relationship and family stresses were more vital etiological indicators, concerning childhood poisoning, than the degree of surrounding environmental hazards<sup>1</sup>.

Many studies have shown that behavioural disturbances in children are provoked by stress in their family. Such children may become aggressive during a post-divorced period or their upset may manifest itself by bedwetting in a single parent family. Depression and anxiety may develop if the father is temporarily absent from home. Other studies have shown, a link between financial loss and a deterioration of the child's socioemotional state.<sup>2,9</sup> It has been noted that repeated poisoning may be a sign of family problems requiring intervention on the child's behalf.<sup>4</sup> Certain behaviours are associated with accidental poisoning in children, who tend to be more anxious, harder, active and cause more worry to their parents and have a habit of

placing objects, other than food, in their mouths<sup>5</sup>. This present work has been designed to examine the association between the occurrence of incidents of purely accidental poisoning against such an incident in a child with behavioural problems due to family stress as a possible cause.

### *Materials and Methods*

It was decided to select the study sample from the only two general pediatric hospitals in Mosul, (Ibn Al-Atheer and Al-Khansaa hospitals), during the period of the 1st. October 1991- 31st. March 1992. These hospitals are situated on the left side of the River Tigris. They receive cases referred from the primary health care centres distributed throughout the Ninevah Governorate and have catchment areas of approximately similar sizes.

The target population of this study consisted of Iraqi children under the age of five years who were admitted to the above two pediatric hospitals, with a diagnosis of accidental ingestion of toxic substances. During the study period all were from

## Child Behaviour and Family Stress The Possible Risk Factors in Accidental Poisoning

A. A. Jawadi , W. F. Al-Chetachi

### سلوك الطفل والضغط العائلي ( عوامل المخاطر المحتملة في الحالات العرضية للتسمم )

اسماء جوادي ، وفاء خاشقجي

#### الخلاصة :

هدفت الدراسة الحاليه إلى معرفة الترابط الموجود لدى التسمم العرضي لدى الأطفال دون سن الخامسة والمشاكل العائليه الموجودة والتصرفات والسلوكيات والإنحرافات لدى الطفل المصاب .

سجلت الدراسة مقارنة ٣٧٥ طفل مصابا بالتسمم العرضي مع عينه ضابطه بلغت أيضا ٣٧٥ طفلا لايعانون من التسمم تم إختيارهم حسب طريقة العينه المزدوجه مع التطابق للأطفال في مدينة الموصل خلال الفتره التي امتدت من ١٩٩١/١٠/١ - ١٩٩٢/٣/٣١ .

بينت الدراسة أن نسبة الذكور كانت اكبر من نسبة الإناث في حالات التسمم العرضي وكذلك ضمن أطفال العينة الضابطة وكذلك بينت الدراسة أن هناك ترابط إحصائي بين حوادث التسمم والمشاكل العائليه والتصرفات السلوكيه الخاطئة عند الطفل المصاب وكذلك حسب ما اشارته ( قيمة ح ونسبة أ و د ) .

نتائج هذه الدراسة ذات قيمة وفائدة لتخطيط ومتابعة وتنفيذ برنامج وقائي يهدف للسيطرة وللحد من وقوع هذه الحوادث والتي تشكل خطرا يهدد هذه الشريحة من المجتمع .

#### ABSTRACT

The present study has aimed to examine the association between the occurrence of accidental poisoning incidents and any family stress including the child's behaviour as expected risk factors. To attempt to accomplish any possible risks, 375 incidents of accidental poisoning in children of less than five years of age were compared with 375 controls, who were selected according to the method of paired sampling with individual matching.

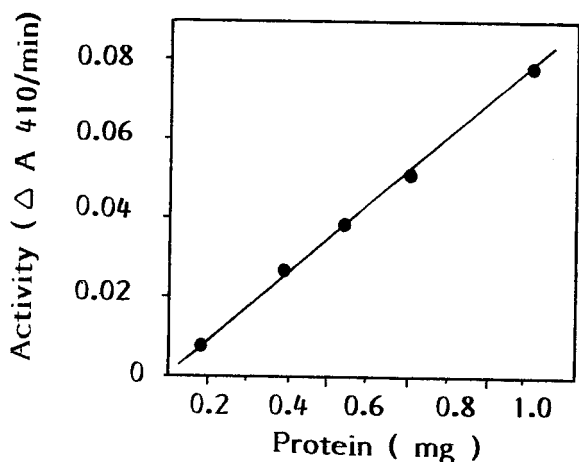


Fig. (1): Relations between the protein concentration and the activity of DEAE Purified - Spd Oxidase from Sera of Schizophrenic subjects .

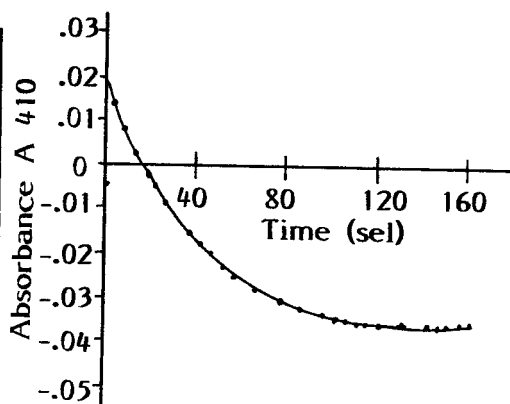


Fig. (2): Time Course of Enzymatic Oxidation of Spermidine by DEAE Cellulose Purified - Spd Oxidase from the Sera of Schizophrenic subjects. Conditions are those of a standard Assay

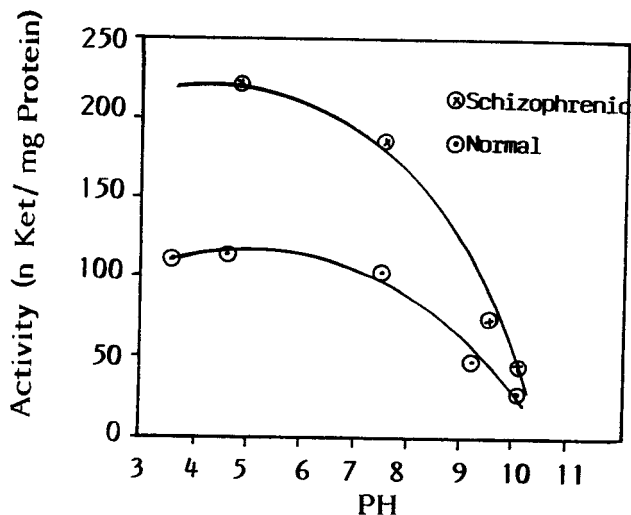


Fig. (3): Effect of PH on DEAE Purified - Spd Oxidase Activity from the Sera of Schizophrenic and Normal Subjects. Conditions are those of the Standard Assay , Except that 200 mM of Acetic Acid - Sodium Acetate Buffer were Used for PH 3.5 - 4.5 , 20 mM Phosphate Buffer for PH 7.0 - 7.5 and 200 mM Carbonate - Bicarbonate Buffer for PH 9.0 - 10.0 .

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**Table (2)**

Effects of various compounds on Spd oxidase activity.

Each of the following tested compounds , in a final concentration of 20  $\mu\text{p.mol/L}$ , were pre-incubated with the purified spd oxidase of schizophrenics for 20 min. at 20°C. The activity of spd oxidase was assayed, as indicated in methods. Enzyme activity in the absence of a tested compound was normalised to 100 . Spd oxidase activity is expressed as nkat. 1 nkat is equivalent to the enzyme activity which catalyzes the oxidation of 1 nmole of spd per min. at 20°C.

Compound tested	spd oxidase activity nkat/mg protein	Activity relative to control
None (control)	375	100
Folic acid	506	135
Ospexin	531	141
Al(OH) <sup>3</sup>	452	120
CaCO <sup>3</sup>	906	241
Inderal	188	50
Antipyrine	113	30
pyrazole	53	14
Iodeacetamide	94	25
Glutathione	153	41

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On the other hand, folic acid and the broad spectrum antibiotic ospexin increased markedly the activity of DEAE-cellulose purified-spd oxidase. Both of these compounds have similar structural moieties, (ph-CO-NH- and ph-CH<sub>2</sub>-CO-NH-), which may play a role in the activation mechanism. Activity of purified spd oxidase was greatly stimulated by Ca<sup>+2</sup> and, to some extent, by A.L<sup>+3</sup>. These results may indicate that Ca<sup>+2</sup> provided a good stabilizing effect to spd oxidase interactions, and thus to an increase in its catalytic activity.

Activity of purified Spd oxidase was inhibited almost completely by Pyrazole, and to some extent by Antipyrine. Pyrazolone is an analgesic drug. Antipyrine structure included a pyrazole moiety, thus pyrazole may play a role in the catalytic mechanism of Spd oxidase. Iodoacetamide, which is known to react with the SH group,

inhibited greatly the spd oxidase activity. This indicated that the SH-residues of Spd oxidase are essential for its catalytic activity. Glutathion was found to inhibit markedly the spd oxidase activity. This result supported previous reports, which have indicated the involvement of glutathion in polyamine metabolism<sup>2,7</sup>. The results obtained in the current study have indicated some distinct properties of spd oxidase in schizophrenic subjects, which may provide an aid for diagnosis and in therapy.

### *Acknowledgements:*

The authors are grateful to Professor Robert A. Campbell, School of Medicine, The Oregon Health Sciences University, Portland, U.S.A. for his interest and encouragement.

**Table (1)**

Partial purification of spd oxidase from the sera of schizophrenic and normal subjects. Activities were determined in 20 mM of potassium phosphate buffer, PH 7.2 (see method). The enzyme activity is expressed as nkat. 1 nkat is equivalent to the enzyme activity which catalyzes the oxidation of 1 nmole of spd per min. at 20°C.

Purification steps.	Fraction volume mL	Total protein mg	Total activity nkat		Purification fold
Crude sera of schizophrenics	6.8	836.0	1904	2.2	1
Dialysis	7.2	652.0	1575	2.41	1.1
DEAE-cellulose chromatography	28.8	17.4	4025	231.	105.1
Crude sera of normals	5.0	690.2	726	1.05	1
Dialysis	5.4	596.7	674	1.12	1.06
DEAE-cellulose chromatography	20.0	21.8	2949	135.	128.7
				2	

to be 280 and 145 nkat/ml sera respectively. Partial purification of spd oxidase from schizophrenic and normal sera subjects by dialysis process increased the specific activities of spd oxidase approximately 9% and 6% respectively (Table 1).

On DEAE-cellulose chromatography of dialyzed sera from schizophrenic and normal subjects the eluate at 20-25 ml with 20mM phosphate buffer PH 7.2 gave a main peak which exhibited spd oxidase activity. Determination of the enzyme specific activities, showed that relative to the original crude sera, a 105 and 128 purification-fold of spd oxidase activities had been affected for schizophrenic and normal subjects respectively (table 1)

On studying some of the kinetic properties of the enzyme it was found that under standard conditions the oxidation of spd by DEAE - cellulose purified - spd, oxidase of schizophrenic and normal subjects were linearly proportional to the amount of protein up to 900µg, and with the time of reaction up to 50 sec. (Fig 1 and 2). The effects of PH on spd oxidase activity are shown in (Fig 3). It was found that the enzyme exhibited an optimal activity at PH 4.5, for both schizophrenic and normal subjects.

The DEAE-cellulose purified-spd oxidase was found to be relatively heat stable. Incubation of the enzyme for 10 min. at 38°C and 48°C resulted in about 150% and 180% gain of activity respectively. However, above 70°C the enzyme was rapidly inactivated. Determination of DEAE - cellulose purified-spd oxidase activity after one week in storage at -15°C produced nearly a 10% loss of original activity.

The effects of various drugs and inorganic salts on the activity of spd oxidase from schizophrenics are depicted in (Table2). It was found that relative to the control folic acid and ospexin exhibited an activation of 35% and 41% to spd oxidase, respectively, where the inorganic salts Al (OH)<sub>3</sub> and CaCo<sub>3</sub> exhibited an activation to spd oxidase of 20% and 141% respectively. However, Inderal (a B - Blocker drug,) showed an inhibition of 50% to spd oxidase, while antipyrine and pyrazole exhibited an inhibition of 70% and 86% to the enzyme activity respectively. Iodoacetamide inhibited 75% of the enzyme activity, Glutathion inhibited 59% of spd oxidase activity.

## Discussion

The marked difference in the specific activities of DEAE-purified spd oxidase between normal and schizophrenic subjects found here, supports the previous report, which indicated that the activity level of this enzyme in the crude sera of schizophrenics is significantly higher than that of normal. The increase of spd oxidase activity in schizophrenics may be due either to an induction of enzyme synthesis or to a stimulation of enzyme activity through antagonistic effects led by schizophrenic serum. The spd oxidase under the current investigation was found to exhibit maximum activity at an acidic pH. However, Spd oxidase from serum during pregnancy has been shown to have an optimum activity at an alkaline pH6. These results may indicate that the Spd oxidase which had been found at high levels in schizophrenia and during pregnancy, were either two isoenzymes or entirely two different enzymes. Further study should be undertaken in this aspect.

of potassium ferricyanide. The reaction system consisted of potassium phosphate buffer (20 mM, PH 7.2), potassium ferricyanide 0.5mM, and spd trihydrochloride (substrate) 277 $\mu$ M. This mixture was freshly prepared daily. 3 ml. of the mixture was placed in a 3-ml cuvette with a 1-cm light bath. Spd oxidase 300  $\mu$ g was added and the reaction mixture was stirred rapidly. The control cuvette was prepared identically to that of the schizophrenic subjects except that the substrate (spd) was excluded. Both reactions and controls were pre-incubated for 20 min. at 20°C. The kinetic of reaction was followed at 410 nm at 20°C for 60 sec with readings taken every 5 sec. in a Shimadzu uv-visible recording spectrophotometer uv-160. Two equivalents of ferricyanide were reduced per mole of spermidine. The molar absorptivity of potassium ferricyanide is  $0.96 \times 10^3$ . Spd oxidase activity was expressed as nkat (nkat), where 1 nkat is equivalent to the enzyme activity which catalyzed the oxidation of 1 nmol of spd per 1 min. at 20°C.

#### **Purification of spd oxidase from human sera :**

Purification of spd oxidase from pooled sera of schizophrenic and normal subjects made as follows :

#### **Dialysis :**

Sera from each schizophrenic and normal subject were dialyzed in Visking cellulose tubing at 4°C for 4 hr. against 200 volumes of 0.9% NaCl.

#### **DEAE - cellulose chromatography:**

The dialyzed sera were chromatographed on a column (1.5x10 cm) containing anion

exchange gel DE - 52, which was equilibrated with 20 mM of phosphate buffer PH 7.2. The flow rate was 20 ml per. hour at 4°C. Aliquots of effluent of 5 ml were collected.

#### **Determination of protein content :**

Protein concentrations were estimated as described in reference (11), by measuring the absorbance at 280 nm, assuming a 0.1% solution of protein had  $A_{280}$  equal to 1.0.

#### **Effects of various drugs on spermidine oxidase activity :**

Inderal (Propranolol hydrochloride), Antipyrin, Folic acid, Pyrazole, Iodoacetamid, Glutathion (reduced), Ospexin (cephalexin),  $\text{CaCO}_3$  and  $\text{Al}(\text{OH})_3$ , each at 20 $\mu$  mol/L. The final concentrations were preincubated with DEAE - cellulose purified-spd oxidase for 20 min. at 20°C, after which activity of the enzyme was assayed as indicated above.

#### **Effect of pH on spermidine oxidase activity :**

To study the effect of PH on the activity of DEAE-cellulose purified-spd oxidase the standard assay was followed, except that buffer solutions of acetic acid-sodium acetate, 200 mM for PH 3.5-4.5, phosphate 20mM for PH 7.0-7.5 and sodium carbonate-bicarbonate, 200 mM for PH 9.0-10.0, were used.

## **Results**

Freshly pooled crude sera of schizophrenic and normal subjects were assayed immediately to observe their spd oxidase activities, (see methods). They were found

Spermidine oxidase was found to be highly activated by  $\text{Ca}^{++}$ , ospexin and to a lesser extent, by  $\text{Al}^{+++}$  and folic acid. While the activity of this enzyme was found to be inhibited highly by pyrazole, antipyrine, iodoacetamide, glutathione and Inderal.

## ***Introduction***

The spermidine is one of the major polyamines (PA) which are considered as cell regulators.<sup>1,10,16</sup> The involvement of PA in the development of the central nervous system have been well established<sup>14</sup>. Maintenance of PA levels is important for neuronal cell replication, migration and axonogenesis<sup>13,15</sup>. It has been reported that spermidine (spd) and its metabolites are involved in schizophrenia<sup>12,9</sup>.

Polyamine oxidase(PAO) are catabolic enzymes which play an important role in adjusting the intracellular PA concentrations<sup>9,10,4</sup>.

PA oxidase activity has been evaluated in pregnancy<sup>8</sup> and neoplasms<sup>10</sup>. Spd. oxidase has been detected in schizophrenic subjects in our laboratory<sup>5</sup>. The activity of this enzyme in the serum of schizophrenics was found to be significantly higher than that of normal subjects<sup>15</sup>. This led us to partially purify and investigate some of the kinetic properties of this enzyme in the sera of schizophrenic and normal subjects and evaluate its potential clinical utility.

## ***Materials and Methods***

### **(Preparation of sera samples):**

Blood samples were obtained from 45 unselected normal (volunteers) men and

nonpregnant women of varying ages between 15-40 years with the assistance of a blood bank institute in Mosul. Other blood samples were obtained from 45 acutely ill schizophrenic patients admitted to the psychiatric unit of Mosul general hospital. The patients, consisting of both men and women varying in age between 15-40 years and were not receiving treatment at the time of sampling. They manifested delusional ideas, auditory hallucinations, frank thought disorders, ideas of reference and influence, passivity feelings, behaviour disorders, sleep disturbances and inappropriate affect. The clinical diagnosis of schizophrenia was based on the categories presented in the DSM III R and ICD9, but they were free of any known organic diseases. The blood was taken by venipuncture, using sterile disposable syringes, transferred into glass tubes and allowed to clot for 5 minutes at 37°C. Sera were separated by centrifugation, assayed on the day of collection and stored at -20°C for further analysis.

### **Standard assay of serum spermidine oxidase activity :**

Sera of each group, schizophrenic and normal, were assayed for spd oxidase activity. The assay was performed in duplicate according to the method described in reference<sup>5</sup>. Spd oxidase activity was assayed spectrophotometrically by measuring the decrease in absorbance due to the reduction

## CHARACTERISTICS OF SPERMIDINE OXIDASE FROM SERA OF SCHIZOPHRENIC AND NORMAL SUBJECTS

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خصائص أنزيم سبيرميدين أوكسيديس من مصل

مرضى الفصام العقلي والأشخاص الأصحاء.

نجاه محمود الصفار ، خولة احمد فليح ، مي خليل إسماعيل

**الخلاصة :**

تم تنقية أنزيم أوكسيديس مبدئياً ولأول مره من مصل الدم لمرضى الفصام العقلي ومن مصل الأشخاص الأصحاء . وذلك باستخدام تقنية كروماتوغرافي التبادل الأيوني السالب الشحنة بعد عملية الفرز الغشائي للمصل . حيث أدى هذا إلى تنقية الأنزيم بمقدار ١٠٥ , ١٢٨ مره مقارنة بالأنزيم الخام للمرضى والأصحاء على التوالي واصبحت الفعالية النوعيه للأنزيم المنقى جزئياً ٢ , ١٣٥ و ٢ , ٢٣١ نانوكاتال/ملغم بروتين للمرضى المصابين بالفصام العقلي والأشخاص الأصحاء على التوالي .

وجد أن فعالية أنزيم سبيرميدين لكل من المرضى والأصحاء تتناسب خطياً مع كمية البروتين لحد ٩٠٠ مايكروغرام كما تتناسب خطياً مع زمن التفاعل لحد ٥٠ ثانيه تقريباً . وقد وجد أن هذا الأنزيم في كل من المرضى والأصحاء يظهر فعالية قصوى عند أس هيدروجيني PH مقدار ٥ , ٤ . وقد تبين أن فعالية أنزيم السبيرميدين لوكسيديس تزداد بشكل كبير بواسطة أيون الكالسيوم واوسبيكسين وبدرجة أقل بأيون الألمنيوم وحامض الفوليك . بينما تقل فعاليته بشكل كبير بواسطة ال بايرازول وانتي بايرين وأيودواستياميد وكلوتاتيون والانديرال .

### ABSTRACT

Spermidine (spd) oxidase was initially purified from sera of schizophrenic and normal subjects by anion exchange chromatography. This purified the spd oxidase 105 and 128 folds, relative to the crude sera of schizophrenics and normals respectively . The specific activities of purified Spd oxidase were 231.3 and 135.2 nkat/mg protein, for schizophrenic and normal respectively.

Spermidine oxidase activity was found to be linearly proportional to the amount of protein up to 900 µg and with time of reaction up to about 50 sec. The enzyme showed a maximum activity at PH 4.5 for both schizophrenic and normal subjects .

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But, due to his illness he finds himself unable to carry his responsibilities any more. It is difficult for him to accept what seems to be a loss of status. Other sources of stress include "loss of job". No wonder that the loss of a job has negative consequences for the patient, his family and his self esteem. It creates tension and anxiety in an already difficult situation. In general, the influence of these sources of stress have a mixed influence on each other, physiological may influence psychosocial sources or visa versa. Comparing males and females rating in the different sub-scales suggested that females suffer more than males psychologically. This reflects that males can cope relatively better with psychological stress than females. These results are consistent with previous studies<sup>16</sup> which report that women are more sensitive to stress and thus cannot cope with stress the same way as men do. Therefore anxiety and depression are more prevalent in females than males

The results of this study indicate that Hemodialysis patients complain of wide range stresses. In order to reduce the effects of stress, proper constructive methods should be established to help patients in coping with any psychosocial and physiological stress. This could be accomplished by establishing a health care team, consisting of a physician as the head, staff nurses, nutritionists, a pharmacist, social workers, and psychologists to provide holistic care to the patient and his/her family. Psychologists provide psychotherapy services to support their patients, help them to accept their problems, provide their family with counselling and discuss the conflicts between

dependence and independence which exists in HDP's.

They may also assist the patient in implementing methods in coping with various stressors, including such strategies as time management, relaxation techniques and an effective communication practice with family members.

The long standing relationship that the nephrology nurse has with patients and their families allows him/her to move toward acceptance and adaptation of their illness and treatment<sup>4,5</sup>. The social worker also plays a very important role in HDU. His/her role can be summarized as follows

1-Assisting staff by obtaining information about the social impact of the disease on the patient and his/her family.

2- Helping the patient and his/her family to face and accept their current situation and assist them in realistic adjustment and planning for their future.

3- Act as a liaison between the community and hospital setting<sup>10,17</sup>. Although this study highlights the main psychosocial and physiological problems facing HDP, it does not differentiate between various types of psychological disturbances. Neither does it study coping methods. Clearly, further research ought to focus on identifying different psychopathologies in dialysis patients by identifying differences between patients who cope effectively with their illness and treatment and those who experience psychosocial morbidity.

However, four items of the (HDS) did not meet the required standards. This may indicate that the items are not serious sources of stress for hemodialysis patients. The four items are nausea and vomiting, itching, relationships with the nursing staff and transportation to the Hemodialysis unit. Therefore, these items can be eliminated from the scale. The results of the factor analysis support previous studies which used Stress Scales<sup>11,13,14</sup> and found that Hemodialysis patients suffer mainly from physiological and psychosocial stress.

The results when comparing the severity of the three sub-scales show that psychological and social items are more severe than the physiological sub-scale, but nevertheless this still falls within the moderate range of severity. The results reflect the impact of psychosocial sub-scales as a serious source of stress which could aggravate the patient's physical condition. The results are not consistent with Gurklis and Menke<sup>4</sup>, who found that physiological stress was more severe than the psychosocial. Bladree, Murphy, and Powers<sup>13</sup> found that HDP's psychological and physiological stress were equal. Such variations in studies may well be due to factors such as differences in cultural and socioeconomic backgrounds, or differences in the measurement tools used in their studies.

Reading the results of the three sub-scales show that in the psychological sub-scale, the highest severity lies within the dependency on doctors and other staff as well as changes in body appearance and fear of health deterioration. Dependency on doctors and nurses puts the patient in highly

dependent situation. His life is literally in the hands of medical staff who supervise him and operate the dialysis equipment. Patients become extremely dependent on the staff and emotionally attached to them, but at the time they have independent needs. This conflict may develop into anxiety and a lack of self esteem as well as feeling that he/she has little control over their lives<sup>15</sup>.

Renal failure and its complications lead to changes in body appearance and this is also a source of stress, which affects the patient's self image and psychological integrity.

The items which rank the highest in severity in "physiological sub-scale" are fatigue, limitation in body movement and food limitation. Restriction of food and body movement may be sources of stress because meals and body movement can be associated with security, gratification and socialization. Fatigue in hemodialysis patients may be caused by chronic anaemia, bone and muscle pain and sleep disturbances.

The items with the highest severity in the "social sub-scale" are family, children responsible for the patient, the high cost of treatment, loss of job and salary. Husband / wife or children who are carrying the responsibilities for the patient causes stress to the patient because to them it is a reversal of roles and will complicate his or her status in the family. Also, having a patient in the family leads to a creation of stress among the other members of the family. Traditionally in our society it is men who are responsible for their children and wife.



**Table (4)**  
Differences between males and females in  
severity of stressors

Factor	Male N(47)	Female N(43)	T-Value
Psychological	M.26.85 Sd (6.9)	32.41 (7.4)	T(88)=3.7,p< .001
Physiological	M 24.06 SD (5.9)	25.4 (5.6)	T(88)=1.07,P.ns
Social	M26.7 SD(6.1)	27.1 (4.0)	T(88)=.38,P.ns

## Discussion

The results of this study support the multidimensional sources of stress that hemodialysis patients face. These stressors interact with each other and may aggravate the patients' physical and psychological condition.

Factor analysis demonstrates the three factors that the stress scale structured upon. The highest factor on the scale, with certain items linked together, concerns "psychological stress" and consists of ten items. The items at the top of this factor are those related to the dependency on staff and doctors, which reflects the patients conflict in being dependent and independent. This fact indicates their feelings of the inability of having no control over their lives and the outcome of their illness.

Factor two consisting of twelve items concerns "physiological stressors". Among

the most stressful items in question are limitations of food and fluid and body movement. These conform with previous studies<sup>5,6</sup>.

The third factor consisting of six items concerns "social stressors". Among the most stressful items in this factor were wives / husbands and family who have to bear the patient's responsibilities, children responsible for the patient, limitations of a social life and loss of a job. These items reflect the patient's fear of losing their source of living plus leading a normal life and fulfillment of that requirements bring.

The Hemodialysis Stress Scale shows that it is a valid instrument in identifying the relevant issues affecting the quality of life for these patients. It may be considered as a reasonable standard of reliability and found to be internally consistent.

**Table (3)**  
**SEVERITY OF ITEMS**

<b>ITEMS</b>	<b>Mean</b>	<b>SD</b>	<b>Maxim</b>
1- Arterial-venous	2.12	1.2	5
2- Nausea and vomiting	2.40	1.1	5
3- Muscle cramps	2.33	1.2	5
4- Itching	2.73	1.3	5
5- Long duration of treatment	2.82	1.2	5
6- Joint stiffness	2.52	1.3	5
7- Fatigue	3.11	1.3	5
8- Unavailability of medication	1.2	1.2	5
9- Food limitation	3.0	1.3	5
10- Fluid limitation	2.712	1.4	5
11- Poor social life	2.97	1.4	5
12- Interference with job	2.14	1.3	5
13- lack of sexual drive	2.83	1.5	5
14- limitation in body movement	3.19	1.2	5
15- Sleep disturbances	2.77	1.4	5
16- Relationship with nursing staff	1.8	1.7	5
17- Wife, husband carried pt responsibility	3.47	1.6	5
18- children carried pt responsibility	3.01	1.4	5
19- Uncertain about future	2.64	1.3	5
20- changes in body appearance	3.10	1.4	5
21- High cost of treatment	3.10	1.4	5
22- Transportation to HDU	2.79	1.5	5
23- Limitation in work ability	2.91	1.4	5
24- Frequent admission to hospital	2.62	1.2	5
25- Loss of job and income	3.20	1.2	5
26- Dependency on nurses	3.19	1.2	5
27- Dependency on doctors	3.16	1.3	5
28- fear of loneliness	2.58	1.4	5
29- feeling of despair	2.81	1.3	5
30- Fear of health deterioration	3.2	1.5	5

**Differences between males and females in rating the severity of stress in each factor,**

Differences in rating the severity of stress between male and female patients in the three factors (sub-scales) were found by using T-tests. Results showed that female

patients rated psychological stressors significantly higher than males ( $t(88)=3.68, P, < .001$ ), while no significant differences were found between males and females when rating physiological and social sub-scales. See Table (4).

## Results

### Comparing mean scores in each factor

To examine the severity of each factor, items of each factor were computed and compared with other factors using the T-Test. The results of the comparisons showed that the severity rating of psychological items were significantly higher,

( $t=(88)5.3, P < .001$ ), than the physiological and social factors. ( $t(88)2.1, P < .01$ ). Ratings in the social factor were marginally higher than in the physiological factor ( $t=(88)1.8, P, .6$ ). Mean and standard deviations for each factor are presented in Table (2).

**Table (2)**  
**Mean severity of stress among each factor**

Factor	Mean	Sd
Psychological	29.51	7.66
Physiological	24.69	5.81
Social	26.88	5.60

### Severity of the stress rating within each factor:

The level of stress severity that each factor held was measured by using the patient's subjective rating concerning the extent to which they were troubled by each stressful item (as seen in Table (3)).

The highest ratings were items among the psychological factors which are dependency on staff, doctors and changes in body appearance and fear of health deterioration.

The least severe item was fear of loneliness.

The most severe items of the physiological factors are fatigue, limitations in food and body movement. The least severe is unavailability of medications.

The most severe items amongst the social factors are family, or children having to bear the responsibilities, the high cost of treatment, loss of job and salary. The least severe of all of the above items fell within the moderate range (3 points and above to maximum 4). The lowest rated items (1 point) amongst the three factors are, unavailability of medication, and relationships with nursing staff. These items were not considered as sources of stress.

**Table (1)**  
**FACTOR ANALYSIS**

	<b>ITEMS</b>	<b>PSYC</b>	<b>PHYS</b>	<b>SOCIAL</b>
1-	Arterial-venous	.15	*.39	-.20
2-	Nausea and vomiting	.14	.23	.069
3-	Muscle cramps	.11	*.33	.046
4-	Itching	.18	.26	-.28
5-	Long duration of treatment	** .50	.24	-.15
6-	Joint stiffness	.010	** .58	-.03
7-	Fatigue	.011	** .51	.25
8-	Unavailability of medication	-.24	*.34	.055
9-	Food limitation	.095	** .62	.020
10-	Fluid limitation	.055	** .57	.14
11-	Poor social life	-.73	.021	** .65
12-	Interference with job	.064	.10	*.34
13-	Lack of sexual drive	.057	** .50	-.19
14-	Limitation in body movement	.084	** .61	.13
15-	Sleep disturbances	*.43	*.40	.11
16-	Relationship with nursing staff	.09	-.05	.28
17-	Wife, husband carried pt responsibility	.21	.14	** .61
18-	Children carried pt responsibility	-.37	.012	*.45
19-	Uncertain about future	*.43	.09	.15
20-	Changes in body appearance	** .66	.14	.06
21-	High cost of treatment	.25	.043	*.44
22-	Transportation to HDU	.26	.20	.29
23-	Limitation in work ability	.007	** .51	.06
24-	Frequent admission to hospital	.051	*.34	.02
25-	Loss of job and income	.10	.02	*.33
26-	Dependency on nurses	** .71	.01	.02
27-	Dependency on doctors	** .75	.003	.14
28-	Fear of loneliness	*.42	.26	.12
29-	Feeling of despair	*.45	.24	*.35
30-	Fear of health deterioration	** .62	.07	.21

Three items loaded in more than one factor. these are : Disturbance of sleep (item 15) , high cost of treatment (item 21) , and feeling of despair (item 29) . It is possible that such items comprised of more than one component. Therefore , the highest loading

that the items attain are considered its factor. These results suggest that a three factor solution is reasonable to use for this particular data, because it is conceptually clear, informative and has a logical relationship.

Internal consistency of the scale was evaluated by using Cronbach's alpha and was computed for the total Stressor Scale of the psychological, physiological and social sub-scales. The coefficients obtained were .88, .87, .85 and .77 respectively. These results suggested that the three sub-scales were internally consistent.

### **Validity**

Two types of validity were found for (HDSS)

1- Content validity: The content validity of the HDSS was supported by literature. The Consultant Physician and three staff nurses supported the validity content of the items.

2- Construct validity: The construct validity was determined by performing a factor analysis. The data was subjected to a principle component analysis followed by a Varmix rotation to identify the factor structure. This procedure was performed on 90 HDPs. A coefficient of (0.3) and above was considered as a criterion for significant loading in such factor.<sup>12</sup> The principle components analysis resulted in three factor solutions that explains 50% of the total variance. Loading of the items of the three rotated factors are shown in Table 3. Items

contributing to a factor were selected on the basis that they ought to have a high loading on the factor and low loading on others. For most of the items their factor position was clear.

### **The three factors were as follows :**

- Factor one loaded with items concerning psychological stressors, such as a long duration of treatment (item 5), sleep disturbances (item 15), uncertainty about the future (item 19), changes in their body appearance (item 20), dependency on staff nurses and doctors (items 26,27), feelings of loneliness, despair and fear of further health deterioration (items 28, 29, 30).
- Factor two loaded on items concerning physiological stressors. For example arterial - venous and muscle cramps, ( items 1,3 ), joint stiffness. ( item 6 ), fatigue (item 7), unavailability of medication (item 8), food and fluid limitation (items 9,10), lack of sexual drive (item 13), limitations in body movement (item 14) and limitations in working abilities. (item 23).
- Factor three loaded on items concerning social problems, such as a limited social life(item 11), illness interfering with job (item 12), wife / husband or family carrying responsibilities (item 17), children having to carry the patients' responsibilities (item 18), high cost of treatment ( item 21), and loss of job and income (item 25). See table (1).

depression. The precise and prevalence rates of depression and other psychopathologies amongst HDPs are unknown<sup>7</sup>. Nearly all patients on dialysis experience episodes of depression at some time during their treatment. Israel<sup>9</sup> estimates the incidence of depression in HDP ranges from 20 % to 50% , and found that HDP mainly suffer from depression and anxiety reactions and over 10% psychotic organic syndromes. Graven , Roden and Johnson<sup>10</sup> studied 99 HDPs using the Diagnostic Interview Schedule (DIS) and found that 8.1% had depressive disorders, while Tynes, Ruggiero and Brantly<sup>11</sup> found 10% of 90 HDP suffered from depressive disorders and 8% from anxiety. These psychological disturbances may influence the patients' medical progression and coping mechanisms.

To date, there has been no systematic study to identify sources and severity of stress among HDPs in Jordan. Therefore this study is an attempt to identify the sources and severity of stress among HDP through using the Hemodialysis stress scale.

## *Method*

( Sample and procedures ) :

The sample consists of ninety hemodialysis patients (HDP) receiving treatment at the Hemodialysis unit - King Hussein Medical Centre. The patients were interviewed individually by staff nurses and asked to fill the Stressors Scale. Inclusion criteria were 1-receiving dialysis for at least 2 months 2-No history of previous psy-

chiatric treatment. The sample consisted of 47 males and 43 females , a mean age of ( $X=42$ ) ( $SD13.18$ ) range of 18 - 62 years. Regarding marital status, 27 patients were single, 61 married and 2 were widowed. Regarding job situation , 46 of the sample were unemployed, 10 were retired and 24 were employed . Educational level was varied.

## *Instrumentation*

**Development of the hemodialysis stressors scale (HDSS)** :The Hemodialysis Stressor Scale consists of 30 items aimed to evaluate the incidence and severity of stress facing hemodialysis patients. Twenty-three items were selected from a literature review concerning this matter. The rest of the items were coined locally by the staff dealing with HD patients. Patients were asked to rate on a 5 point Likert Scale the extent of their suffering by responding to each of the thirty potential stresses , starting from not at all = 1, to very much so=5. A total stressor score was derived by summing the rating for all items. The higher the score the greater the stress experienced by the patient .

## *Reliability of the scale*

Reliability coefficient was determined using the Test-Retest method. A scale was administered to ten HD patients and was repeated after 4 weeks. A person Product-Moment correlation coefficients were computed and the results indicated that the stability coefficient was ( $0.77, >0.001$ ).

differences between male and female patients in their rating of stress severity.

Ninety HDPs who received treatment at the Hemodialysis unit at the King Hussein Medical Centre were using the Hemodialysis Stress Scale which was developed to fulfill the purpose of this study. The scale consists of 30 items that rate different stresses associated with hemodialysis.

A factor analysis was performed using a principle component analysis. This resulted in three factor solutions that explained 50% of the total variance. The item loadings in the (HDP) revealed a coherent theme, with factors reflecting psychological, physical and social stress. In addition a stability coefficient was established using the Test-Retest method. Results showed that female patients suffer from psychological stress significantly more frequently than male patients. But no differences were found between male and female patients when rating the severity of physical and social stresses. This study suggests some methods which may help HDP to cope more effectively with stress.

### *Introduction*

Stress was defined by Gathercole<sup>1</sup> as "mental and physical responses, usually negative, which arises from a transaction between the individual and his/her internal external environment and affected by demands made on him / her ability to cope" (p633)". Stress may be either a cause or a consequence of disease<sup>2</sup>. It was found that stress increased the risk of disease by negatively affecting the autonomic nervous system, hormonal system and by impairing the immune system<sup>3,4</sup>.

Hemodialysis patients suffered from severe stress arising from various sources. The psychosocial and physiological stresses experienced by renal dialysis patients have been the subject of much interest in recent years<sup>5,6,7,8</sup>.

A hemodialysis patient usually approaches dialysis with considerable apprehension because of fear of pain, injury, death, uncertainty about the future and the realisation that his life is now dependent upon an unfamiliar machine. This experience inevitably influences the integrity of the patient's body image and activity level in life.

Hemodialysis affects the patients' social life, impinges on their financial status and affects their meal and drink habits due to the restriction of fluid and food intake. Previous studies<sup>3,4</sup> have shown that not all HDP patients can tolerate severe stresses they face. Therefore, they develop psychological problems, such as anxiety and

## IDENTIFICATION OF THE PSYCHOSOCIAL STRESSORS IN CHRONIC HEMODIALYSIS PATIENTS

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التعرف على الضغوطات النفسية والاجتماعية لدى مرضى غسيل الكلى

محمد اللوزي ، تيسير أحمد

**الخلاصة :**

يعاني مرضى الكلى من تهديدات نابذة من مصادر ضاغطة داخلية وخارجية في بيئتهم . وهذه الضغوطات تؤثر سلبا على قدراتهم في التكيف مع مرضهم وعملهم وحياتهم الاجتماعية .

تهدف هذه الدراسة للتعرف على مصادر الضغوطات لدى مرضى الكلى في الاردن ومعرفة الفروق بين المرضى من الجنسين في تقديراتهم لهذه الضغوطات .

استخدمت الدراسة تسعون مريضا من مرضى الكلى وطبق عليهم مقياس طور خصيصا لغاية قياس الضغوطات التي يعانون منها . اشتمل المقياس على ثلاثين فقرة استخدم التحليل العائلي للقياس وأشار نتائج الى ثلاثة عوامل تفسر ٥٠% من التباين العام . وهذه العوامل هي العامل النفسي والعامل الفسيولوجي والعامل الاجتماعي وقد وجد معامل الثبات للمقياس بواسطة طريقة إعادة الإختبار .

إشارت نتائج هذه الدراسة الى فروق ذات دلالة بين المرضى الإناث عن الذكور في تقدير عامل الضغوطات النفسية وليس في عاملي الضغوطات الفسيولوجية و الاجتماعية وقد إقترحت الدراسة بعض الاساليب من أجل مساعدة مرضى الكلى في التكيف مع الضغوطات التي يعانون منها .

### ABSTRACT

Hemodialysis patients (HDP) are threatened by many sources of stress from the internal and external environment. These stresses affect their ability to cope with their illness, work , social life and therefore aggravate the patient's physical and psychological condition. This study is aimed at identifying the major sources of stress experienced by HDP in Jordan. Furthermore, it will examine the



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**ERRATUM :**

WE Apologize that the following errors did happen in the Article " AN OVERVIEW OF EATING DISORDER " that was published in Nov. 1993 .

- 1- Page 71 in number 3. The majority of non-western societies are beset with economic problems .
- 2- Page 72 - line 27 (Rt.) This segment has been demographically found to be at risk of developing .
- 3- In the references-number 24 Wakeling A .  
Neurobiological aspects of Eating ( not feeding ) .

In addition in the book review of the same issue the reviewer dropped the chapter called Sad Motherhood .

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## Eating Attitude Test (English)

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Always   Very often   often   Sometimes   Rarely   Ever

- 1- like eating with other people
  - 2- like prepare foods for others but do not eat what I cook.
  - 3- Become anxious prior to eating
  - 4- Am terrified about being over weight.
  - 5- Avoid eating when I am hungry
  - 6- Find myself preoccupied with food.
  - 7- Have gone on eating binges where I feel that I may not be able to stop.
  - 8- cut my food into small pieces.
  - 9- Aware of the calorie amount of foods that I eat.
  - 10- Particularly avoid foods with a high carbohydrate content (e.g bread, potatoes , rice etc.)
  - 11- feel bloated after meal.
  - 12- feel that others would prefer if I eat more.
  - 13- Vomit after I have eaten
  - 14- Feel extremely guilty after eating
  - 15- Am preoccupied with a desire to be thinner .
  - 16- Exercise strenuously to burn off calories
  - 17- Weigh myself several times aday.
  - 18- Like my clothes to fit tightly
  - 19- Enjoy eating meat.
  - 20- Wake up early in the morning.
  - 21- Eat the same foods day after day.
  - 22- Think about burning calories when I exercise.
  - 23- Have regular menstrual periods.
  - 24- Other people think that I am too thin.
  - 25- am. Preoccupied with the thought of having fat on my body.
  - 26- Take longer than others to eat my meals.
  - 27- Enjoy eating at restaurants.
  - 28- Take laxatives.
  - 29- Avoid foods with sugar in them.
  - 30- Eat diet foods.
  - 31- Feel that food controls my life.
  - 32- Display self control about food.
  - 33- Feel that others pressure me to eat.
  - 34- Give too much time and thought to food.
  - 35- Suffer from constipation.
  - 36- Feel uncomfortable after eating sweets.
  - 37- Engage in dieting behaviour.
  - 38- Like my stomach to be empty.
  - 39- Enjoy trying new rich foods.
  - 40- Have the impulse to vomit after meals.
-

## Eating Attitude Tests (Arabic)

البيان

مطلقاً نادراً أحياناً عادة غالباً دائماً

- ١- أحب تناول الطعام مع الآخرين
- ٢- أحب اعداد الطعام للآخرين ولا أحب ان اكل ما اعد
- ٣- اشعر بالاضطراب قبل تناول الطعام
- ٤- اشعر بالخوف من الاصابة بالسمنة
- ٥- تجنب تناول الطعام عندما اشعر بالجوع
- ٦- اشعر ان الطعام يشغل تفكيري
- ٧- اشعر لحينما يرغب ملحه في تناول الكثرة من الطعام مع علمي بعدم مقرتي في التحكم في كمية ما سأتناوله
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**TABLE 1**

Community studies using the EAT Questionnaire

	<b>Type of population</b>	<b>% of positive scorers</b>
Mann et al (1983)	Secondary school girls, UK	6.9 %
Szmukler (1983)	Secondary school girls, UK	6.2 %
Clark & Palmer (1983)	University students, UK	11.5 %
Mervat Nasser (1984)	University students, Egypt	12 %
Sabine et al (1988)	Secondary school girls, UK	8.2 %
King (1989)	General practice population, UK	13 %
Mervat Nasser (1994)	Secondary school girls, Egypt	11.4 %

**TABLE 2**

Comparison of the observable proportion of EAT-positive pupils in the current study and other studies

<b>Study</b>	<b>LL</b>	<b>OP</b>	<b>UL</b>
Mann et al (1983)	0.038	0.069	0.099
Szmukler (1983)	0.058	0.070	0.082
Sabine et al (1988)	0.065	0.082	0.099
Mumford & Whitehouse (1989)	0.099	0.147	0.195
Nasser (1994)	0.081	0.114	0.147

LL = Lower Limit  
 OP = Observable Proportion  
 UP = Upper Limit

Wells et al (1985) warned against the possible misinterpretation of the EAT scores in normal or overweight individuals due to the known weak positive correlation of the EAT scores with weight.

Eisler and Szukler (1985) reported differences in the response to the Questionnaire between their state and private school population, which was attributed to social class. In this study there were significant variation between EAT scores and social class.

The UK Registrar General's Classification of occupation (OPCS) was used as a measure of social class, determined by the father's profession: 68% were found to belong to either class I or II and only 4% belonged to social class V. An initial rise in EAT scores with social class I, followed by a fall and then a sharp rise in social class V was found. A more or less similar pattern of response was shown in Eisler & Szukler (1985) study where the EAT scores decreased with higher social class contrary to usual assumptions that these kinds of concerns are *Par excellence* prevalent in high socio-economic classes. However, because of the small proportion of the pupils in this study who belonged to social class V, no great value could be attached to this finding. But the findings highlighted the difficulties in measuring social class in this population. The OPCS is a measure of occupations which does not necessarily correlate to the level of wealth, particularly in Egypt where expansion of education resulted in a great proportion of professionals who may in fact considered poor in terms of wealth compared to their non professional counterparts.

This point is by and large relevant to any type of epidemiological research conducted in this area as demographic variables undoubtedly play an important role in the final analysis.

## Conclusion

The paper examined the issue of applying the eating attitude test questionnaire as an instrument for screening of eating morbidity in the Arabic culture. The author draws on her experience with the EAT in this respect and focuses on its performance in an Egyptian population of secondary school girls. The findings indicate that the instrument on the whole behaves in a similar way in this group as in the western culture. The EAT scores compare favourably in this population to other scores obtained in the recent UK eating disorders studies.

The relationship of the EAT scores to weight and social class are discussed where it pointed to the limitation of assessing social class in this cultural group. As a way of ascertaining the validity and the internal consistency of the items of the questionnaire, factor analysis was carried out. It confirmed the coherent structure of the EAT in this population and highlighted the good performance of the dieting factor. An argument was put in favour of its continued use in future research in this culture, however attempts should be made to overcome the limitations of the questionnaire as far as the bulimia factor is concerned. These results should be of some value to those intending to embark on any form of eating disorders research in the Arab world.

## **The psychometric validity of the EAT in this study**

Despite the apparent success of the EAT in this population, its use in non-western cultures was treated with some scepticism. The criticism was based on the possibility of semantic confusion and cultural misconception<sup>13</sup> which could result in a spurious overall positive score without necessarily reflecting the level of internal consistency between the questionnaire items. In view of this it was necessary for the author to perform a factor analysis of the questionnaire to assess its overall reliability as a screening instrument in this population and measure the level of internal consistency between various items. Factor analysis is a statistical technique which can reduce a very large number of interrelated behaviours to a relatively small number of dimensions. The type of factor analysis used in this study was a confirmatory one, which is different from an exploratory analysis, as it is used to discover factors rather than test theories regarding the existence of factors. The analysis and the level of internal consistency between the items representing each factor, was determined by calculating the alpha reliability for each factor<sup>3,4</sup>. The analysis showed that the dieting factor attracted the highest reliability figures. The reliability of this factor in the Egyptian sample was sufficiently high to assume that this cluster of items have similar meaning and fully understood in the Egyptian population in the same manner as their western counterparts. Garner and Garfinkel (1982) considered this factor a reliable measure of dissatisfaction with shape and a desire to be thinner. They even suggested

that it could be used in its own right as a substitute for the total scale in some circumstances. However the internal consistency of the items representing the bulimia factor was at a much lower level. The reliability of the EAT in identifying bulimic behaviours was repeatedly questioned, hence the low figure in this analysis is likely to be an indication of the limitation of the questionnaire itself rather than an expression of true cultural differences.

As for the items concerned with social forces in the environment and the pressures to gain weight, caution had to be exercised in interpreting the results of the analysis which showed reasonable level of consistency. This is related to the fact that environmental pressures to eat are still exercised in the Arabic culture based on the cultural values that attach significance to hospitality and the use of food as symbolic of care and affection, perhaps more than any genuine differences in terms of body shape preferences.

On the whole, the factor analysis of the EAT in this population revealed a coherent three factor structure in broad agreement with Garner et al analysis, indicating reasonable psychometric standards of the eating attitude test questionnaire<sup>20</sup>.

### **EAT scores, Height, Weight and social class**

In the same study the EAT scores had significant correlations with both weight and height, but this was not the case when the EAT scores were correlated with the body mass index (BMI, weight /height)<sup>2</sup>.

Caseness was determined after interviewing the positive scorers in the two groups. A structured clinical interview was used ( the Eating interview , Szmukler , unpublished ). The reliability of the interview in making a diagnosis was tested and significant correlations were found between EAT scores and individual items of the eating interview that were positively rated ( $p < 0.001$ )<sup>16</sup>. Russell criteria were used in the diagnosis<sup>22</sup>, six cases of bulimia nervosa were identified in the London sample but none in the Cairo one. The study was the first to tackle this epidemiological issue in a non western population and was also the first to comment on the performance of the EAT in this population, where it was found to be an efficient and highly sensitive instrument. The positive predictive value of the EAT was 54%. Both sensitivity and specificity, were 100 % and 88.6%,<sup>17</sup>.

The study had nonetheless several limitations, primarily the small size of the sample which was limited by the lack of availability of Arab female students in the UK. Therefore replication of the study was necessary. The objective was mainly to verify that disordered forms of eating are emerging in the Arabic culture as well as properly assess the reliability of the EAT in this cultural group.

A population of Egyptian secondary school girls in Cairo was selected (N=351) and screened for eating morbidity. This particular age group had the advantage of allowing direct comparisons of the results with other prevalence studies conducted on similar age group in the UK<sup>19</sup>.

### **Comparative analysis of the EAT scores in this population compared to others**

The Eating Attitude Test Questionnaire (EAT-40) was administered to this group. At the same cut off point of 30, the percentage of the positive scorers was found to be 11.4%. This result was in keeping with that of the earlier study of 12%, despite the lapse of three years and the difference in the age between the two populations. The results were also strikingly similar to those yielded by studies conducted on relatively older populations of females attending university and general practice in the UK, of 11.5% and 13%<sup>3,12</sup>.

However on comparing the results of this study with other studies conducted on the same age group in the UK, the percentage of the positive scorers was clearly higher than those reported by Mann et al (1983), Szmukler (1983) and Sabine et al (1988) of 6.9% , 6.2% and 8.2% respectively. The figure was nonetheless lower than that obtained in Mumford and Whitehouse (1988) study of Asian girls in the UK, where the percentage of the positive scorers was reported to be 15%. (table 1).

The confidence intervals were calculated to measure for the variability between the different populations, the observable proportion of the EAT positive in this study was higher than Mann et al (1983) and Szmukler's (1983), but lay between the observable proportion calculated from the data in Sabine et al (1988) (and Mumford and Whitehouse (1988)). (Table 2).



subjects , at a cut off point of 30<sup>9</sup>. However some aspects of this validation was questioned in view of the fact that the positive predictive value of the questionnaire was not taken into account . The positive predictive value is the probability that a positive score on the EAT will turn out to be an actual case<sup>27</sup>. The total EAT score is derived from an item pool which aggregate into three factor structure. Factor I ( dieting )of the questionnaire is related to body image variables and reflect avoidance of fattening food and shape preoccupations. Factor II (bulimia and food preoccupations) was thought to specifically measure for bulimic tendencies. The items on factor III (oral control) acknowledge social forces in the environment and the pressures to gain weight.

A factor analysis of the questionnaire was conducted by its authors which led to the elimination of 14 items that did not load on any of the three factors and were subsequently regarded as redundant . This resulted in the abbreviated 26 item questionnaire which is more in common use now. The intercorrelation between its variables suggest that the EAT26 is highly predictive of the total EAT 40, and hence considered to be the same<sup>16</sup>.

### **The use of the EAT as a screening instrument for eating morbidity in an Arab population .**

In a study conducted by the author<sup>18</sup> , two samples of Arab female students , matched for age, social class and marital status, attending both London and Cairo universities were recruited to determine the prevalence of anorexia nervosa and allied

eating disorders in the Arabic culture and investigate the exposure to western culture upon eating attitudes. The eating attitude test questionnaire EAT 40, was translated into Arabic and the Arabic version was translated back into English , by an independent translator . The retranslated version was found to match the original closely. The EAT was well received by this population and all its items were reasonably understood except for Q18 (like my clothes to fit tightly ) which was clearly misconstrued and consistently attracted a negative response. The response to this question was culturally determined as tightfitting clothes are perceived in the Arabic culture as socially undesirable. This was not thought to have any great bearing on the overall score for being only one question. At the agreed cut off point of 30, 22% in the London group scored above the threshold and were considered EAT +ve. This high percentage of positive scorers in this group was the subject of debate and was partially explained on the basis of the fact that it was a highly selective population. The percentage of the positive scorers in Cairo of 12% was much lower than the London one, but still higher than reported in the UK studies<sup>1,14</sup>. The emergence of these concerns in the Arabic culture was interpreted in the light of the possible identification with western cultural norms in connection to weight/body shape , which was more apparent in the London group and amounted to actual caseness. El-Islam et al (1983, 1986) found a tendency towards a greater number of psychiatric symptoms in the Arabic culture (as measured by the general health questionnaire , GHQ in Arabic) in association with great difference in cultural attitudes between parents and children .

The results offered some support for the continued use of the EAT in future eating disorders research in this part of the world, particularly for some aspects of eating pathology, namely dieting and concerns about weight and shape.

## *Introduction*

Systematic community studies in the field of eating disorders were initially hampered by the lack of a standardised and valid screening instrument. All the available rating scales were designed to assess anorexic behaviour patterns in an inpatient setting. Slade (1973) devised a 22 item rating scale to be administered by observers who would evaluate patients in hospital. Goldberg et al (1980) developed a 66 item self report measure of anorexic attitudes, but was again restricted for use only in hospital. The introduction of the Eating Attitude Test questionnaire<sup>8</sup> contributed greatly towards overcoming this handicap and revolutionised epidemiological work in this field. It is important however to acknowledge that a number of instruments designed to measure eating pathology have since been introduced and are widely used. The significance of the EAT nonetheless lies in the fact that it was the main instrument in many major and pioneering eating disorders studies in the UK and across the Atlantic.

It also arguably remains the most satisfactory existing instrument for screening for abnormal eating attitudes, despite some limitations. One of these limitations is concerned with the nature of the instrument itself i.e. being a questionnaire susceptible to possible misinterpretation of

its items. This limitation is clearly highlighted if the questionnaire is applied in a population or setting different from the one where it was originally created for and validated. The problem is also compounded by the fact that the instrument is a measure of abnormalities in eating behavior generally considered rare or at least uncommon in other cultures. This meant that the use of this instrument in different cultural groups was open to scrutiny and therefore assessment of its performance as vital if these studies were to be taken seriously and their results can reliably be interpreted.

### **Description of the eating attitude test questionnaire (English & Arabic version Appendix)**

The eating attitude test questionnaire was introduced as a self report 40 item questionnaire, which is economical in terms of administration and scoring. It was designed to measure a broad range of symptoms characteristic of anorexia nervosa, each extreme response in the anorexic direction earns 3 points, the very often and often have a score of 2 and 1 respectively.

The EAT 40 was validated on a Canadian population and was found to discriminate well between anorexic and normal female

## " Culture and Research Instruments" The Performance of the Eating Attitude Test Questionnaire in the Arabic culture

M. Nasser

### الثقافه وادوات البحث اداء استبيان اختبار الموقف من الطعام في الثقافه العربيه

ميرفت ناصر

#### الخلاصه :

تقيم الورقه كفاءه استبيان الموقف من الطعام عبر الثقافه العربيه . وقد قدمت الباحثه نتائج دراستين كانت قد قامت بهما على الطالبات العربيات مستعمله نفس الاستبيان كأداه للكشف عن اضطرابات في هذه الفئه . لقد كان أداء الاستبيان جيد في هذه المجموعات ويقدر عالي من الحساسيه والخصوصيه . تناقش الورقه أيضا تحليل المعاملات الإحصائي للإستبيان الذي كان مؤكدا لهذا على عينه من طالبات من مدارس مصريه : وأظهر التحليل من قبل الباحثه العوامل التركيبية الثلاثه في ثلاثم مع تركيب العوامل الذي توصل اليه الباحثون ، وقد حصل عامل تخفيف الطعام على أعلى درجه من التكرار بينما كان هناك شكوك حول عامل النهم .

وقد دعمت النتائج الاستمرار في إستعمال هذا الإستبيان في بحوث اضطرابات الطعام في هذا الجزء من العالم ، وخصوصا في جوانب معينه من إضطرابات المرضيه ذات العلاقه بالطعام ، وخصوصا التخفيف من الاكل والإهتمام بالوزن والشكل .

#### ABSTRACT

The Paper assesses the cross-cultural validity of the eating attitude test questionnaire in the Arabic culture. The Author reports her findings from two studies conducted on Arab female students where the EAT was the main screening instrument for eating morbidity in this culture. The EAT performed reasonably well in this population with high degree of sensitivity and specificity. The paper discusses as well the results of a confirmatory factor analysis of the EAT carried out by the author on a sample of Egyptian school girls<sup>20</sup>. The analysis yielded three factor structure in conformity with the factor structure reported by the authors of the questionnaire themselves<sup>16</sup>. The dieting factor attracted the highest reliability but doubts were raised in connection to the bulimia factor.

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- \* New developments in psychotherapy and psychopathology
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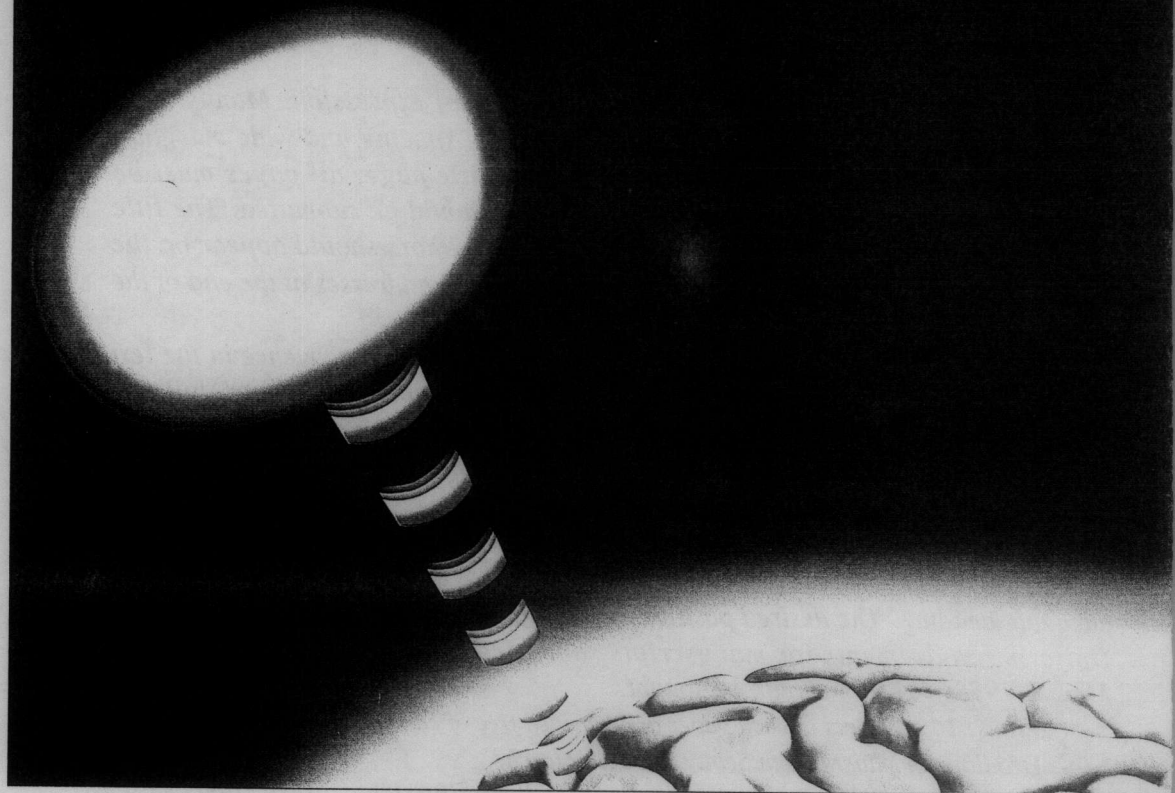
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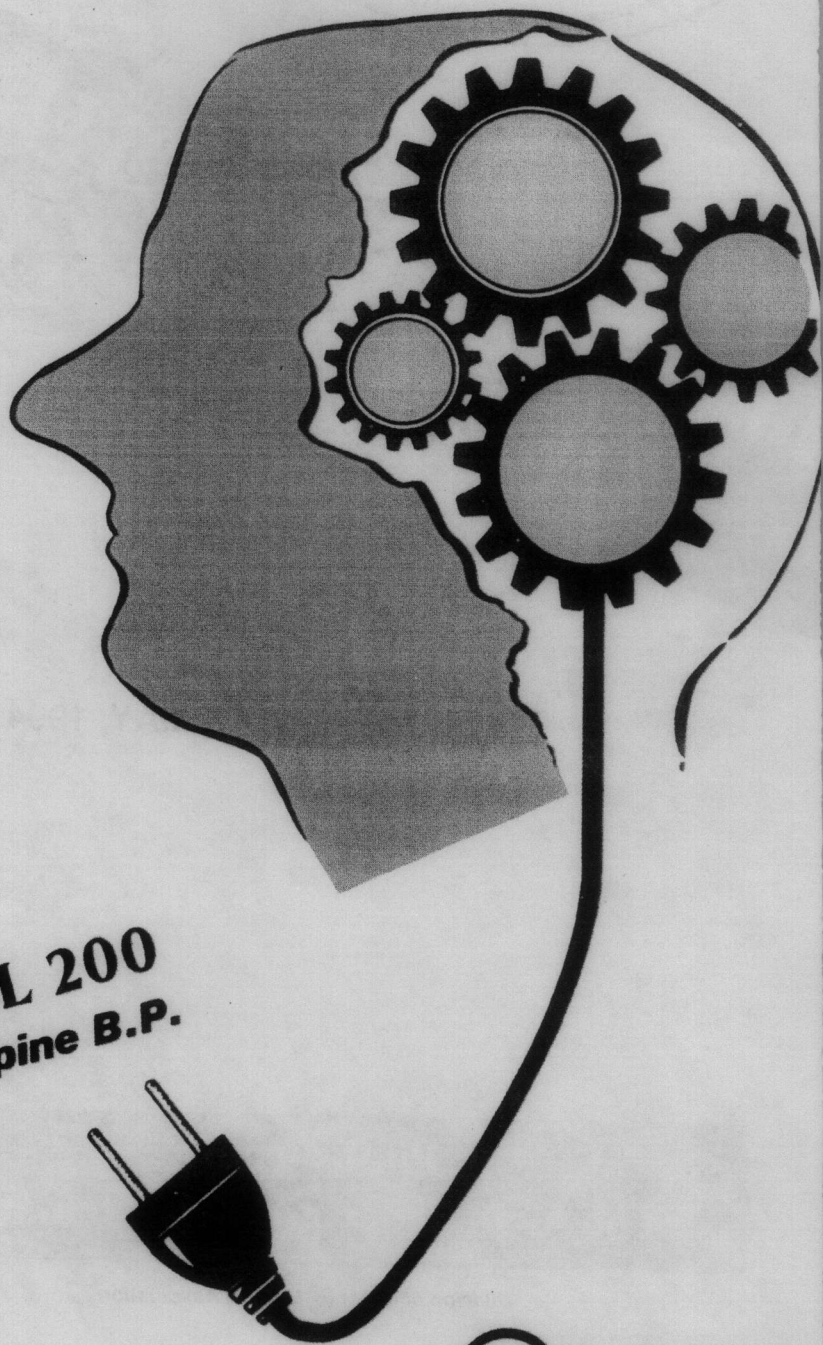
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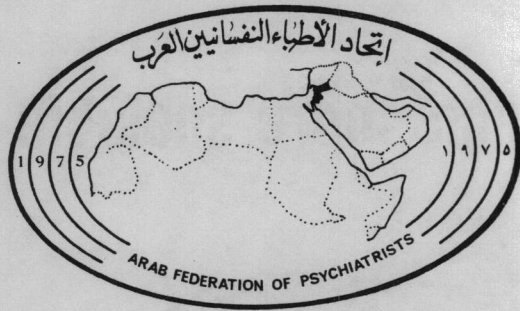
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