

Psychiatric Morbidity and Consultations among Medical and Surgical Inpatients in a General Hospital in Kuwait

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الاضطرابات والاستشارات النفسية لدى مرضى الأقسام الداخلية للباطنة والجراحة بمستشفى عام في دولة الكويت

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Abstract:

A number of studies have shown high prevalence of psychiatric morbidity among medical and surgical inpatients. However, few inpatients with psychiatric morbidity receive psychiatric consultation. The objectives of this study were to measure the prevalence of psychiatric problems requiring psychiatric consultation among general medical and surgical inpatients and the ratio between number of patients having such problems and those referred for psychiatric consultation. The study included all patients admitted to general medicine and general surgery departments of Farwaniya General Hospital in Kuwait over one month. These patients were screened for presence/absence of clinically significant depressive and anxiety symptoms, hallucinations, excitement, disorientation, suicidal behavior, and occurrence of psychiatric consultation during their hospital stay. Patients were assessed using Brief Psychiatric Rating Scale, Beck Depression Inventory, Self Rating Anxiety Scale, and patients' medical records. Results showed that of the studied 295 inpatients (193 medical and 102 surgical), 122 (41.4%) were found to have one or more of the manifestations of psychiatric morbidity. Clinically significant depressive symptoms were found in 99 patients (35.2%), anxiety symptoms in 24 patients (8.5%), disorientation in 14 patients (4.7%), excitement in 10 patients (3.4%), hallucinations in 6 patients (2%), and suicidal behavior in 8 patients (2.7%). Only 13 patients (10.7% of patients having psychiatric morbidity) were referred for psychiatric consultation. The study concluded that the prevalence of psychiatric morbidity, especially depression, among general medical and surgical inpatients is high, and a small percentage of inpatients with psychiatric morbidity are referred for psychiatric consultation.

Key words: psychiatric morbidity, consultation, medical, surgical, inpatients

Introduction:

One problem that has attracted growing attention lately is the concurrence of physical and mental Morbidity, or what is called

“comorbidity”. A positive statistical association between these two types of morbidity has been documented by researchers and underscores the need

for collaboration between psychiatrists and their non-psychiatric colleagues¹. Medical and surgical inpatients often have psychiatric conditions that require psychiatric consultation². It is now widely accepted that psychiatric disorders are common in the general hospital³. Studies show that up to 65% of medical inpatients have psychiatric disorders⁴. Moreover, psychological symptoms of severity insufficient to satisfy diagnostic criteria for a psychiatric disorder may cause considerable morbidity and lead to an increased use of medical services⁵. However, in only a tenth of cases is a psychiatric consultation requested, with high levels of psychopathology detected in patients who do not receive psychiatric attention⁶⁻¹¹.

Although psychiatric consultation in general hospital patients can reduce mortality, morbidity, length of stay, and hospitalization costs^{12,13}, there is often reluctance on the part of patients, families, or physicians to consult a psychiatrist¹⁴.

The objectives of this study are to measure the prevalence of psychiatric problems requiring psychiatric consultation among medical and surgical inpatients and the ratio between number of patients having such problems and those referred for psychiatric consultation.

Methods:

The study included all patients who are above 12-year-old and capable of

communication admitted to general medicine and general surgery departments of Farwaniya* General Hospital (Kuwait) over one month (from 29/4/2000 to 28/5/2000 and from 23/7/2000 to 22/8/2000 for medical and surgical patients respectively).

These patients were screened for presence/absence of the following:

- 1) *Clinically significant depressive symptoms* and 2) *clinically significant anxiety symptoms* using the corresponding items in Brief Psychiatric Rating Scale (BPRS)¹⁵ (Depressive mood item for depression and Anxiety item for anxiety) in addition to Beck Depression Inventory (BDI)¹⁶ and Self Rating Anxiety Scale (SAS)¹⁷ for depression and anxiety respectively.
- 3) *Hallucinations*, 4) *Excitement* and 5) *Disorientation* using the corresponding items in BPRS.
- 6) *Suicidal behavior*, and 7) *Occurrence of psychiatric consultation during their hospital stay* through reviewing patients' medical records.

Instruments:

- a) *Brief psychiatric Rating Scale (BPRS)*¹⁵:

This is a semi-structured interview that have high reliability and is easy to use. Ratings are completed on the basis of observation and information obtained in an interview of 30 to 45 minutes. It contains 18 items dealing with groups

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of symptoms¹⁸. Each item is scored on a 7-point scale (not present, very mild, mild, moderate to severe, severe, extremely severe).¹⁹

b) Beck Depression Inventory (BDI).¹⁶

This is generally used as a self-rated inventory. It comprises 21 items, each describing a specific behavioral manifestation of depression. In each instance there are 4 self-evaluative statements. These are read aloud to the patient, who also has a copy of the inventory. He then selects the statement which fits him best at the time of interview¹⁹. An Arabic translated inventory prepared by a senior clinical psychologist^{*20} was used in the study.

C) Self Rating Anxiety Scale (SAS)¹⁷.

This is a 20-item instrument consisting of the most commonly found characteristics of an anxiety disorder (5 affective and 15 somatic symptoms). Five of the items are worded symptomatically positive and 15 are worded symptomatically negative; respondents use a 4-point scale to rate how each item applied to him-self or herself during the past week²¹. The scale was translated and prepared for use in Arabic culture by a senior clinical psychologist*.

The SAS is scored by summing the values on each item to produce a raw score ranging from 20 to 80. A cutoff score of 50 is recommended, with scores over 50 suggesting the presence

of clinically meaningful anxiety²¹. Criteria used to identify clinically significant depressive symptoms were score 3 or more in "Depressive mood" item of BPRS and score 10 or more in BDI. Depression was then classified into mild, moderate, and severe according to BDI score (10-16, 17 – 29, and 30 – 63 respectively). Criteria used to identify clinically significant anxiety symptoms were score 3 or more in "Anxiety" item of BPRS and score 50 or more in SAS. Hallucinations, Excitement, and Disorientation were identified according to the corresponding items in BPRS (score 1 or more for hallucinations and score 3 or more for excitement and disorientation).

D) Medical records:

History, examination findings, and clinical progress notes recorded in the patients' files were used to obtain information especially those related to suicidal behavior, refusal to consent to therapeutic procedures, and referral for psychiatric consultation.

Medical patients were assessed on the second or third day of admission because, on the first day, the acute somatic symptoms (e.g. dyspnoea, pains,...etc.) were severe enough to prevent being comfortable during the interview with relative improvement on the next days.

Most surgical interventions performed in surgical wards were elective and done on the second day of admission. Since patients who undergo invasive surgery can have manifestation similar

to somatic and vegetative symptoms of depression such as weight loss, loss of appetite, insomnia and fatigability in the postoperative period that are not related to depression²², psychiatric assessment of surgical inpatients were done on the first day of admission to avoid the above mentioned post-operative symptoms.

Results:

Total number of patients admitted to general medicine and general surgery wards during the study period was 339. Patients who were below 12 year-old (9 patients), comatose (14 patients), having language barrier (7 patients), aphasia (5 patients), or deafness (3 patients), and those who refused to participate in the study (6 patients) were excluded from the study. So, number of patients included in the study was 295 (193 medical and 102 surgical patients).

Of the studied 193 medical inpatients, 95 (49.2%) were males and 98 (50.8%) were females. Ages of medical inpatients ranged from 13 to 107 years with a mean (+ SD) 50.95 + 18.8. The most frequent age group was that between 41 and 60 years (39.4%). 59.6% of patients were Kuwaitis and the rest of the patients were other Arabs (18.6%) and from south Asia (India, Bangladesh, Sri Lanka, Philippines, Pakistan, Iran, and Afghanistan) (21.8%). The majority of the patients (67.9%) were married, 13.5% were single, 3.6% were divorced, and 15% widowed. Forty-one percent of the patients were employed and 59% were unemployed

(**Table 1**). Cardiovascular and respiratory diseases were the most frequent diseases (42% and 10.9% respectively) (**Table 2**).

Of the studied 102 surgical inpatients, 64 (62.7%) were males and 38 (37.3%) were females. Ages of surgical inpatients ranged from 13 to 72 years with a mean (+ SD) 35.70 + 12.48. the most frequent age group was that between 21 and years (54.9%). 43.1% of the patients were Kuwaitis, 14.7% were other Arabs and 42.2% were from south Asia. 75.5% of the patients were married, 21.6% were single, 2% were divorced, and 1% widowed. 72.6% of the patients were employed and 27.4% were unemployed (**Table 1**). Anal diseases (piles, fissure, and fistula) and hernias were the most frequent diseases (28.4% and 26.5% respectively) (**Table2**).

The treating physicians recorded only 7 medical patients (3.6%) and 2 surgical patients (2%) as having psychopathological symptoms; depressed mood (6 cases), anxious mood (one case), obsessive compulsive disorder under psychiatric treatment (one case), and delirium tremens (one case).

Of the studied 295 medical and surgical inpatients, 122 patients (41.4%) were found to have one or more of the manifestation of psychiatric morbidity. Clinically significant depressive symptoms were found in 99 patients (35.2%) [with mild, moderate, and severe depression in 17 (16%), 52 (18.5%), and 30 (10.7%) patients respectively],

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clinically significant anxiety symptoms in 24 patients (8.5%), both depressive and anxiety symptoms in 16 patients (5.7%), disorientation in 14 patients (4.7%), excitement in 10 patients (3.4%), hallucinations in 6 patients (2%), and suicidal behavior in 8 patients (2.7%). None of the patients was found to be refusing to consent to therapeutic procedures (**Table3**). N.B: Patients with disorientation (14 patients) could not go through assessment by BDI and SAS, so these patients were excluded from the results related to depression and anxiety. (i.e. number of patients assessed for depression and anxiety was 281). Of 193 medical inpatients, 93 (48.2%) were found to have one or more of the manifestation of psychiatric morbidity. Clinically significant depressive symptoms were found in 72 (40.2%) medical inpatients with mild, moderate, and severe depression in 11 (6.1%), 38 (21.2%), and 23 (12.8%) patients respectively. Nineteen medical inpatients (10.6%) were found to have clinically significant anxiety symptoms. Within the cases of depression and anxiety, 13 (7.3%) medical patients were found to have Both depressive and anxiety symptoms. Disorientation, hallucinations, and suicidal behavior were found in 14 (7.2%), 6 (3.1%), and 8 (4.1%) medical inpatients respectively (**Table 3**). Disorientation was found to be more prevalent in patients over 60 year-old than in younger patients ($P=0.000$) (**Table 7**).

Medical diagnostic categories of cases of disorientation are shown in Table 7. Of the 6 cases of hallucinations, 3 cases had comorbid depression, and 3 cases had comorbid disorientation. Cases of hallucinations had cerebrovascular disease (2 cases), cardiovascular disease (one case), substance related disease (one case), respiratory disease (one case), and metabolic disease (one case). Of the 8 cases admitted because of suicidal attempt, 6 cases (75%) were females and 2 cases (25%) were males. Six cases attempted suicide by drug overdose, one case by disinfectant (Detol) ingestion, and one case by cleaning solution (Clorox) ingestion. Seven cases of suicidal attempt were found to have depressive symptoms and one case had both depressive and anxiety symptoms. (i.e 7 cases of suicidal attempt are included within the cases of depression and anxiety). Suicidal attempt was found more prevalent in patients below 21year-old than in older patients ($P=.000$) (Table 8). Twelve cases (6.2%) were referred for psychiatric consultation; 8 cases (66.7%) of them were referred because of suicidal attempt, 2 cases because of physically unexplained somatic symptoms, one case because of positive past psychiatric history and one case because of having delirium tremens. All referred patients were identified by screening instruments used in the study as having psychopathological symptoms. Of those six patients were identified as

having depressive symptoms, two patients having anxiety symptoms, three patients having both depressive and anxiety symptoms, and one patient having hallucinations and disorientation.

Ratio of medical inpatients referred for psychiatric consultation to those having manifestations of psychiatric morbidity is 12/93 (12.9%) (**Table 3**).

Of 102 surgical inpatients, 29 patients (28.4%) were found to have one or more of the manifestations of psychiatric morbidity. Clinically significant depressive symptoms were found in 27 (26.5) surgical inpatients with mild, moderate, and severe depression in 6 (5.9%), 14 (13.7%), and 7 (6.9%) patients respectively. Clinically significant anxiety symptoms were found in 5 (4.9%) surgical inpatients. Of the 27 depressed patients and 5 patients having anxiety symptoms, 3 surgical inpatients (2.9%) were found to have both anxiety and depressive symptoms. One surgical inpatient (1%) was found to have excitement. No cases of disorientation, hallucinations or suicidal behavior were found among the studied surgical inpatients (**Table 3**).

One surgical inpatient (1.0%) was referred for psychiatric consultation. She was a female having clinically significant depressive symptoms. Ratio of surgical inpatients referred for psychiatric consultation to those having manifestations of psychiatric morbidity is 1/29 (3.4%).

Thirteen out of 295 medical and surgical patients (4.4%) were referred for psychiatric consultation. So, the ratio of patients referred for psychiatric consultation to those with psychiatric morbidity was 10.7%.

Overall psychiatric morbidity, clinically significant depressive and anxiety symptoms, severe depressive symptoms, disorientation, suicidal behavior, and psychiatric referrals were found to be statistically significantly more prevalent in medical inpatients than in surgical inpatients (**Table 3**). Psychiatric morbidity was found to be statistically, significantly more prevalent in female than in male, in widowed and divorced than in married and single, and in unemployed than in employed medical and surgical inpatients. No statistically significant difference in prevalence of psychiatric morbidity among different age groups (**Table 4**).

Depressive and anxiety symptoms were found to be more prevalent in female than in male medical and surgical inpatients ($P=0.001$ and 0.014 for depression and anxiety respectively), in unemployed than in employed patients ($P=0.000$ and 0.033). Anxiety symptoms were found more prevalent in widowed and divorced than in married and single patients ($P=0.018$). Differences in the prevalence of depressive and anxiety symptoms according to age were statistically non-significant (**Table 5**).

Depressive symptoms were found to be more prevalent in patients with cerebrovascular diseases (83.3%) and

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in drug overdose patients (81.8%) than in those with other diseases ($P=0.000$) (**Table6**).

Discussion

It is important to mention that our aim in this study was to detect *symptoms* indicative of psychiatric morbidity, and not to diagnose psychiatric syndromes or disorders. The majority of prospective studies on psychiatric comorbidity in general medical and surgical inpatients have relied on mental health symptoms, rather than on psychiatric diagnoses, in determining prevalence²³. There are difficulties in the use of standard criteria for the diagnosis of psychiatric disorder in the physically ill^{24,25}. Although modifications to the criteria have been suggested to make them more appropriate for patients with physical as well as psychiatric disorder, none is wholly satisfactory^{26,27}. Furthermore, according to DSM-IV diagnostic criteria for Psychological Factors Affecting Medical Condition, “*psychological symptoms affecting medical condition*” and “*mental disorder affecting medical condition*” were identified as two separate factors²⁸. This highlights the importance of psychiatric *symptoms* in case of physical illness.

Psychopathological symptoms chosen to be screened for in the study were determined on the basis of previous studies which showed that the most common psychiatric symptoms among medical inpatients are anxiety, depression, and disorientation⁴. Suicide

attempt or threat, hallucinations, agitation, and disorientation are common consultation-liaison problems²⁹.

Depressive and anxiety symptoms are not only diagnostic of Depressive Illness Spectrum Disorders (major depressive disorder, adjustment disorder with depressed mood, dysthymic disorder, organic or substance-induced depressive disorder, and depressive disorder not otherwise specified)³⁰ and Anxiety Disorders, but also, commonly associated with other psychiatric disorders e.g., somatoform and dissociative disorders.

Other symptoms chosen to be assessed in the study (hallucinations, excitement, and disorientation) are characterized by being easy to detect, each symptom of them *per se* indicates presence of an underlying psychiatric disorder (e.g., schizophrenia, delirium....etc.), and they are common reasons for psychiatric consultation⁴.

In medical and surgical inpatients, some psychopathological symptoms (e.g., depressed mood) of mild severity may be expected and may not indicate presence of psychiatric morbidity, so scores less than 3 (i.e., less than moderate severity) in the assessed items of BPRS were ignored. An exception from this rule was “hallucinatory behavior” item in which a score 1 or more was considered as having hallucinations. In case of “depressive mood” and “anxiety” items, even scores 3 or more were ignored unless they are associated with

scores 10 and 50 or more in BDI and SAS respectively.

The results of this study have shown that 41.4% of studied medical and surgical inpatients have one or more of the studied manifestations of psychiatric morbidity (**Table 3**). Previous surveys have reported variable rates of psychiatric morbidity. This variation has largely resulted from different screening instruments and diagnostic criteria used by different workers^{26,27}. However, our finding has come within the range of previous reports. Derogatis *et al.*³¹, Fulop *et al.*³², and Wells³³ have reported that as many as 50% of general medical and surgical inpatients have symptoms indicative of psychological distress or disturbance. Levenson *et al.*³⁴ identified 51% of the studied medical inpatients as having high levels of psychopathology. Bell *et al.*³⁵ found that a psychiatric diagnosis was made in 37% of medical and surgical inpatients screened for psychiatric disorders. Despande *et al.*³⁶ obtained a psychiatric diagnosis in 34% of patients studied in general medical wards of an Indian hospital.

Our finding of higher prevalence of psychiatric morbidity in female than in male medical and surgical inpatients (**Table 4**) is consistent with that of Mayou *et al.*³⁷ and Kisely and Goldberg³⁸. Hansen *et al.*³⁹ found that mental illness had a significant impact on women's health perception while men's health reports were not linked with their mental health status. This may contribute to a more help-seeking

illness behavior in mentally disordered women, and thus, to a high utilization of health resources and to comorbidity³⁹. Other studies^{40,41} showed no gender difference.

Our finding regarding the relationship between employment status and psychiatric morbidity (**Table 4**) replicates the findings of Bell *et al.*³⁵ and Kisely and Goldberg³⁸ who found that psychiatric morbidity is more prevalent in unemployed than in employed patients. Regarding marital status, Bell *et al.*³⁵ found that psychiatric morbidity among medical and surgical inpatients was associated with being single. In our study, psychiatric morbidity was associated with being divorced or widowed (**Table 4**).

Zigmond and Snaith⁴² found that the most common aspects of neurosis presenting in hospital practice are depression and anxiety. Similarly, in our study, depressive and anxiety symptoms were the most prevalent manifestations of psychiatric morbidity among medical and surgical inpatients. Clinically significant depressive symptoms were found in 35.2% of the patients with severe symptoms in 10.7% (**Table 3**). This finding is consistent with the earlier reports⁴³⁻⁴⁶ that have shown ranges of 15% - 36% for psychologically significant depression and 8% - 14% for severe depression compared with a prevalence of depression in the community of about 4% - 8%⁴⁷. In Iran, Ghoreishizadeh and his colleagues⁴⁸ who assessed 100 surgical inpatients

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using only Beck Depression Inventory found that 69% of the patients scored 10 or more and 34% scored 18 or more.

Several explanations for the high prevalence of mental disorders in medical settings have been introduced. One explanation is a psychological reaction to the distress imposed by a chronic medical condition, by a life-threatening condition, or by the overall severity of the illness. Another is a difference in illness perception and behavior in which mentally disordered patients may consider themselves more troubled by medical conditions and therefore be more likely to seek medical help than mentally healthy patients. A third possible explanation is somatization⁴⁹. Derogatis and Wise⁵⁰ have outlined four distinct modes of interaction between depression or anxiety and medical illnesses: depression/anxiety with medical etiology, depression/anxiety presenting as somatizing, depression/anxiety precipitated by a medical disorder, and depression/anxiety that is concomitant with a medical disorder.

Our finding of higher prevalence of depressive symptoms in female compared with male medical and surgical inpatients (**Table 5**) is consistent with that of Nair and Pillay⁵¹.

It should be noted that patients with depressive symptoms constituted 82.5% of patients with psychiatric morbidity in our study. So, the higher prevalence of psychiatric morbidity in

females, divorced and widowed, and unemployed patients is attributed, mainly, to the higher prevalence of depressive symptoms in these patients. An important finding in our study was the higher prevalence of depressive symptoms in inpatients with cerebrovascular diseases than in those with other diseases (**Table 6**). This finding is consistent with that of Rao⁵² that stroke is the commonest physical disorder accompanying depression in patients referred to a liaison old age psychiatry service. Previous reports have indicated that depressive symptomatology is both predictive of stroke⁵³ and a common psychiatric consequence of stroke⁵⁴ especially in cases of lesions affecting the prefrontosubcortical circuits (namely the caudate, pallidum, and genu of internal capsule) and in particular on the left cerebral hemisphere⁵⁵. In our study, owing to the cross-sectional design of the study, the temporal relationship between stroke and depression (i.e., which of them preceded the other) could not be found. In medically ill patients, anxiety or fear may be a reaction to the stress of illness or hospitalization, may be due to a pre-existing psychiatric disorder, may be a manifestation of the medical illness itself, or may be an adverse effect of medication⁵⁶. This explains the high prevalence of anxiety symptoms among physically ill patients. Previous studies have indicated that between 5% and 20% of general medical inpatients have an

anxiety disorder⁵⁷. The percentage of patients having clinically significant anxiety symptoms in our study (8.5%) (**Table 3**) has come within the range reported in previous studies.

Most cases of anxiety (66.7%), in our study, had comorbid depressive symptoms which might have contributed to the found similarities in prevalence pattern between anxiety and depressive symptoms; both of them were found to be more prevalent in female, divorced and widowed, and unemployed compared with male, married and single, and employed patients respectively (**Table 5**).

Disorientation is an invariable feature of delirium, and is almost invariable in well established cases of dementia⁵⁸. So, presence of disorientation in an apparently conscious patient in a medical or surgical ward indicates presence of delirium or dementia which might have been overlooked. It has been reported that delirium occurs in about 15-20% of all general admissions to hospital⁵⁹ with higher frequency in elderly people and in those with pre-existing cognitive impairment⁶⁰. However, disorientation is under-identified in clinical practice⁶¹. In our study, exclusion of unconscious and post-operative cases has contributed to our finding as regards prevalence of disorientation (4.7%), which is lower than the prevalence range reported in previous studies. However, our finding of statistically significant higher prevalence of disorientation in over 60 year-old

patients (**Table 7**) is consistent with the above mentioned reports.

It has been reported that women are 3 times more likely to attempt suicide than are men⁵⁶, older people attempt suicide less often than do younger people⁴, and that self medication or drug overdose is the most frequent method of attempting suicide^{56,62}. Our findings of higher prevalence of suicidal attempt in females and in individuals below 21 year-old (**Table 8**) confirm these reports. Also, 6 out of 8 cases (75%), in our study, attempted suicide through drug overdose.

The results of our study have shown that psychiatric morbidity is significantly more prevalent among medical inpatients compared to surgical inpatients (**Table 3**). This finding has come in agreement with that of Clarke et al.⁴¹. Furthermore, our finding of higher prevalence of depressive symptoms in medical compared to surgical inpatients is similar to the finding of Nair and Pillay⁵¹. However, the more frequency of females, widowed, and unemployed patients among medical patients than among surgical patients, in our study (**Table 1**) may explain the higher frequency of depressive symptoms, and total psychiatric morbidity in medical inpatients compared to surgical inpatients.

Number of patients recorded by their treating physicians as having psychiatric symptoms was much less than that of patients found to have psychiatric morbidity (9:122). This indicates that non-psychiatric

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physicians either lack the skills of eliciting psychopathological symptoms⁶³ or consider these symptoms as non-significant or having

no impact on patients' physical health. Previous studies have shown that the percentage of patient admissions receiving psychiatric consultation varies from institution to institution, ranging from 1% to 10%⁶⁴⁻⁶⁷. That percentage in our study (4.4%) (**Table 3**) was within the range reported in previous studies.

Some previous studies have shown that in only 10% of general hospital patients with psychiatric disorders a psychiatric consultation is requested⁶⁻¹¹. In other studies^{68,69}, 11% - 12% of medical inpatients with significant psychiatric morbidity are referred for psychiatric consultation. Saravay et al.⁷⁰ found that only 12% of patients with psychologically significant depression and 14% with organicity were referred for psychiatric consultation. In our study, the ratio of patients referred for psychiatric consultation to those having psychiatric morbidity (10.7%) (**Table 3**) was within the range reported in the above mentioned previous studies.

In our study, the ratio of patients referred for psychiatric consultation to those having psychiatric morbidity in medical patients was higher than that ratio in surgical patients (12.9% vs. 3.4%) (**Table 3**). This may be due to the high frequency of suicide attempts, who are usually admitted in

general medical wards; among patients referred for psychiatric consultation (53.8% of patients referred for psychiatric consultation were suicide attempters).

Our study confirms findings from previous studies that, despite high prevalence of psychiatric morbidity among medical and surgical inpatients, there is often reluctance on the part of physicians to consult a psychiatrist¹⁴. Hospital doctors, who readily admit their lack of psychiatric knowledge and skills, frequently fail to detect psychiatric disorders and even when problems are recognized they are usually not treated or referred⁶³.

An important reason of non-referral, as proposed by Nair and Pillay⁵¹, is the high patient turnover and the constant pressure placed upon doctors to have beds available for the numerous seriously ill, new patients requiring admission. Similarly, Zigmond and Snaith⁴² reported that physicians and surgeons are usually aware of the emotional components of their patients' illnesses but, under pressure of work in busy hospital settings, they have little time to sort out how the neurosis contributes to the disorder or from just what form of neurosis the patient is suffering. Nair and Pillay⁵¹, however, attributed non-referral of some patients to negative counter-transference issues in the doctors, who although recognize the problem, do not refer patients for psychiatric treatment. In Saudi Arabia, Alhamad et al.⁷¹ found that poor knowledge and

negative attitude of physicians towards psychiatry negatively influenced psychiatric referral rates and reflected the lack of integration of psychiatry and medicine at the training level. The authors recommended that psychiatrists need to work in collaboration with hospital doctors to integrate psychiatry into medicine at all levels and that education of hospital staff, patients and the community in consultation-liaison psychiatry should be a priority.

Although the problem of under-detection of psychiatric symptoms by non-psychiatric physician, and consequently under-referral, is not limited to Arab countries, poor undergraduate psychiatric training, which characterizes most Arab medical schools, is an important factor exacerbating this problem in our countries. The "stigma" of psychiatric disorders, which is more prominent in Arabic culture than in Western culture, is another factor contributing to the problem. Some non-psychiatric physicians may avoid informing their patients, who perceive psychiatry as a

stigma that they are suffering from a psychiatric disorder.

Conclusions

1. Despite the high prevalence of psychiatric morbidity, especially depression, among general medical and surgical inpatients, a few number of patients are noted by their treating physicians as having psychopathological symptoms and a small percentage of those patients with psychiatric morbidity are referred for psychiatric consultation.
2. Female gender, unemployment, and being divorced or widowed are associated with higher prevalence of depressive and anxiety symptoms in medical and surgical inpatients. Depressive symptoms are also more common in patients with cerebrovascular diseases than in patients with other physical illnesses.
3. Disorientation is more common in elderly than in younger medical and surgical inpatients.

الملخص

أظهرت العديد من الدراسات ارتفاع معدل إنتشار الإضطرابات النفسية بين مرضى الأقسام الداخلية للباطنة والجراحة العامة ومع ذلك فإن القليل من هؤلاء المرضى يتم عمل استشارات نفسية لهم. تهدف هذه الدراسة إلى قياس معدل إنتشار المشكلات النفسية التي تستدعي طلب إستشارة نفسية بين مرضى الأقسام الداخلية للباطنة والجراحة العامة وكذلك قياس النسبة بين عدد المرضى ذوي هذه المشكلات وعدد الإستشارات النفسية المطلوبة لهم.

تم فحص جميع المرضى الذين أدخلوا لقسمي الباطنة والجراحة العامة بمستشفى الفروانية العام بدولة الكويت خلال شهر من حيث وجود أو عدم وجود أعراض اكتنائية، أعراض قلق، هلاوس، هياج، عدم إدراك الزمان والمكان والأشخاص، السلوك الانتحاري، وحدوث استشارات نفسية للمريض خلال فترة إقامته بالمستشفى. وقد تم ذلك من خلال استعمال المقاييس النفسي المختصر (Brief Psychiatric Rating Scale)، استبيان بيك للاكتئاب (Beck

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على السجل الطبي للمريض.

من بين 295 مريضا ومريضة شملتهم الدراسة وجد أن 122 (41.4%) لديهم واحد أو أكثر من مظاهر الاضطرابات النفسية. فقد وجد أن 99 (35.2%) لديهم أعراض اكتئاب ذات دلالة إكلينيكية و 24 (8.5%) لديهم أعراض قلق ذات دلالة إكلينيكية و 14 (4.7%) لديهم عدم إدراك للزمان أو المكان أو الأشخاص و 10 (3.4%) لديهم هياج و 6 (2.7%) لديهم هلاوس و 8 (2.7%) لديهم سلوك انتحاري. وقد وجد أن 13 مريضا فقط (4.4%) تم طلب إستشارات نفسية لهم وكانت النسبة المئوية للاستشارات النفسية المطلوبة بالنسبة لعدد المرضى ذوي الاضطرابات النفسية 10.7%. وقد خلصت الدراسة إلى ارتفاع معدل انتشار الاضطرابات النفسية وخاصة الاكتئاب بين مرضى الأقسام الداخلية للباطنة والجراحة العامة وإلى انخفاض نسبة الاستشارات النفسية المطلوبة لمؤلفي المرضى.

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Table (1): Characteristics of medical and surgical inpatients

	Medical pts.(n=193)		Surgical pts. (n=102)		Total(n=295)	
	N.	%	N.	%	N.	%
Sex						
Male	95	49.2	64	62.7	159	53.9
Female	98	50.8	38	37.3	136	46.1
Age						
Mean ± SD (years)	50.95±18.8		35.70 ± 12.48		45.68±18.39	
Age groups (years):						
< 21	15	7.8	13	12.7	28	9.5
21 – 40	41	21.2	56	54.9	98	33.2
41 – 60	76	39.4	29	28.4	105	35.6
> 60	61	31.6	4	3.9	64	21.7
Nationality						
Kuwaiti	115	59.6	44	43.1	159	53.9
Other Arab	36	18.6	43	42.2	79	26.8
Asian*	42	21.8	15	14.7	57	19.3
Marital status						
Married	131	67.9	77	75.5	208	70.5
Single	24	12.4	22	21.6	46	15.6
Divorced	6	3.1	1	1.0	7	2.4
Widowed	32	16.6	2	2.0	34	11.5
Employment						
Employed	79	41	74	72.6	153	51.9
Not employed	114	59	28	27.4	142	48.1

*From India, Bangladesh, Sri Lanka, Philippines, Pakistan, Iran, and Afghanistan.

Table (2): Physical diagnosis of medical and surgical inpatients

Medical patients	N.	%	Surgical patients	N.	%
Cardiovasc. dis.	81	42.0	Anal dis. (piles, fissure& fistula)	29	28.4
Gastrointest. dis.	22	11.4	Hernias	27	26.5
Respiratory dis.	21	10.9	Biliary dis.	11	10.8
Blood dis.	6	3.1	Goiter	5	4.9
Cerebrovasc. dis.	14	7.3	Appendicitis	4	3.9
Other CNS dis.	9	4.7	Miscellaneous	26	25.5
Drug overdose	9	4.7			
Endocrine dis.	7	3.6			
Infectious dis.	5	2.6			
Neoplastic dis.	5	2.6			
Miscellaneous	12	6.9			
No organic dis.	2	1.6			

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Table (3): Psychiatric morbidity, referrals and comparison between medical and surgical inpatients

	<u>Medical pts.</u> (n=193)##		<u>Surgical pts.</u> (n=102)##		<u>Total</u> (n=295)##		
	Count	%	Count	%	Count	%	P
Depression							
Mild	11	6.1	6	5.9	17	6.0	.109
Moderate	38	21.2	14	13.7	52	18.5	.099
Severe	23	12.8	7	6.9	30	10.7	.015*
Total	72	40.2	27	26.5	99	35.2	.014*
Anxiety	19	10.6	5	4.9	24	8.5	.074
Mixed anx.&dep.	13	7.3	3	2.9	16	5.7	.105
Disorientation	14	7.2	0	0.0	14	4.7	.002*
Excitement	9	4.7	1	1.0	10	3.4	.087
Hallucinations	6	3.1	0	0.0	6	2.0	.076
Suicidal behavior	8	4.1	0	0.0	8	2.7	.032*
Overall psych. morb.	93	48.2	29	28.4	122	41.4	.001*
Psychiatric referrals	12	6.2	1	1.0	13	4.4	.029*
Referral /morb. ratio	12.9%		3.4%		10.7%		

Patients with disorientation were excluded from results related to depression and anxiety. ##Chi-Square test * significant $P < 0.05$

Table (4): Prevalence of psychiatric morbidity according to sex, age, marital and employment status in medical and surgical inpatients($n=295$)

	<u>Psychiatric morbidity</u>		
	<i>Count</i>	<i>%</i> (within group)	<i>Significance</i> <i>P</i>
Sex			
Male (<i>n</i> =159)	49	30.8	0.000*
Female (<i>n</i> =136)	71	52.2	
Age (in years)			
< 21 (<i>n</i> =28)	9	32.1	0.239
21 – 40 (<i>n</i> =98)	35	35.7	
41 – 60 (<i>n</i> =105)	44	41.9	
> 60 (<i>n</i> =64)	32	50.0	
Marital status			
Married (<i>n</i> =208)	84	40.4	0.016*
Single (<i>n</i> =46)	12	26.1	
Divorced (<i>n</i> =7)	3	42.9	
Widowed (<i>n</i> =34)	21	61.8	
Employment			
Employed (<i>n</i> =153)	42	27.5	0.000*
Not employed (<i>n</i> =142)	78	54.9	

* Significant

Table (5): Prevalence of depression and anxiety according to sex, age, employment and marital status in medical and surgical inpatients(n=295)

	Count	<u>Depression (n=99)</u>			<u>Anxiety (n=24)</u>		
		% within group	P	<u>Significance</u>	Count	% within group	P
Sex							
Male (n=149)	39	26.2	.001*		7	4.7	.014*
Female (n=132)	60	45.5			17	12.9	
Age (in years)							
< 21 (n=28)	9	32.1	.569		0	0.0	.385
21 – 40 (n=98)	30	30.6			10	10.2	
41 – 60 (n=103)	41	39.8			9	8.7	
> 60 (n=52)	19	36.5			5	9.6	
Marital status							
Married (n=199)	70	35.2	.259		17	8.5	.018*
Single (n=46)	12	26.1			0	0.0	
Divorced (n=7)	3	42.9			1	14.3	
Widowed(n=29)	14	48.3			6	20.7	
Employment							
Employed(n=152)	39	25.7	.000*		8	5.3	.033*
Unempl. (n=129)	60	46.5			16	12.4	

* Significant

Table (6): Prevalence of depression in different diagnostic categories

Diagnostic categories	N.	<u>Depression (n=99)</u>			
		%within diag. cat.	Chi-Squ.	df	P
Cerebrovascular dis. (n=12)	10	83.3	47.725	17	.000*
Drug overdose (n=11)	9	81.8			
Blood dis. (n=6)	4	66.7			
Biliary dis. (n=11)	6	54.5			
Urinary tract dis. (n=4)	2	50.0			
GIT dis. (n=12)	6	50.0			
Appendicitis (n=4)	2	50.0			
Respiratory tract dis. (n=20)	7	35.0			
Other CNS dis. (n=11)	3	27.3			
Cardiovascular dis. (n=75)	22	29.3			
Diabetic complic.. (n=7)	2	28.6			
Anal dis. (piles, fissure& fistula) (n=29)	8	27.6			
Hernias ((n=27)	1	3.7			
Goiter (n=5)	0	0.0			
Fever for investing. (n=3)	0	0.0			
No organic dis. (n=2)	1	50.0			
Miscellaneous (n=42)	16	38.1			

* Significant

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Table (7): Distribution of cases of disorientation according to sex, age, and physical diagnostic categories in medical and surgical inpatients

		Disorientation (n=14)			
	Count	% within Group	% within disorientation		Significance P
Sex					
Male (n=159)	10	6.3	71.4		.178
Female (n=139)	4	3.3	28.6		
Age groups (in years):					
< 21 (n=28)	0	0.0	0.0		.000*
21 – 40 (n=98)	0	0.0	0.0		
41 – 60 (n=105)	2	1.9	14.3		
> 60 (n=64)	12	18.8	85.7		
Physical diagnosis					
Cardiovascular dis. (n=78)	3	3.8	21.4		.101
Respiratory dis. (n=23)	3	13.0	21.4		
Cerebrovascular dis. (n=14)	2	14.3	14.3		
Other CNS dis. (n=14)	3	21.3	21.3		
Diabetic complic. (n=8)	1	12.5	7.1		
Miscellaneous (n=18)	2	11.1	14.3		

* Significant

Table (8): Prevalence of suicidal attempt according to sex and age

	Suicidal attempt (n= 8)			Significance P
	Count	%		
Sex				
Male (n= 159)	2	25.0		.096
Female (n= 136)	6	75.0		
Age groups (years)				
< 21 (n=28)	6	75.0		.000*
21 – 40 (n=98)	2	25.0		
41 – 60 (n=105)	0	0		
> 60 (n=64)	0	0		

* Significant

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* One of 6 regional general hospitals in Kuwait serving a catchment area of about 650,000 (of the total 3 million population). It has 449 beds, of which 114 in general medicine department (57 for male and 57 for female) and 87 in general surgery department (68 for male and 19 for female).

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Early Onset Non-Affective Psychosis: Clinical and Developmental Perspectives

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الذهان المبكر غير الوجданى : منظورات إكلينيكية و تطورية
زينب بشرى , غادة حسن , غادة طه , ياسر السيد , منى عبد الهادى

Abstract

Introduction: Childhood psychosis is a rare disorder with much controversy between studies investigating its clinical features and premorbid function. Data concerning early onset non-affective psychosis is still lacking. **Aim:** The aim of this study was to describe socio-demographic data, early development, pre-morbid function and clinical characteristics of children presenting with early onset non-affective psychosis.

Methods: Forty two Saudi patients with child and adolescent onset psychosis diagnosed according to DSM-IV criteria were assessed using Schedule for Affective Disorders and Schizophrenia for School Aged Children Present and Lifetime Version (K-SADS-PL) and positive and negative symptom scale (PANSS). Developmental aspects and premorbid function were assessed by General Developmental Scale (GDS), Childhood Behavioral Scale (CBS) and Premorbid Adjustment Scale (PAS). All data were subjected to statistical analysis. **Results:** The sample included 27 patients diagnosed with schizophrenia, 10 with psychotic disorder not otherwise specified and 5 with acute psychotic episode. 61.9 % of the sample had gradual onset and 38.1% had acute onset. The mean age of onset was 12.3 ± 3.8 . Negative symptoms were more manifested than positive symptoms among the whole sample. The most frequently reported positive symptoms were hallucinations (95.2%). Physiological disturbances were relatively common as disturbed sleep (81%), appetite disturbances (28.6%) and impaired sphincter control (14.3%). All schizophrenic and non-schizophrenic children were similar in having impairment in early development and premorbid functions that were significantly correlated with more negative symptoms and younger age of onset. **Conclusions:** The developmental and premorbid impairments are more emphasized in children with early onset non-affective psychosis and significantly influence the clinical presentation.

Introduction

Psychosis presented in childhood and adolescence has been a controversial topic throughout the history of the field of child psychiatry because of the conundrum of diagnostic clarity¹. Most

of knowledge about schizophrenia comes from studies conducted on adults. Despite nosological similarities between adult and childhood onset schizophrenia yet, the age and developmental stage of the individuals

with the disorder influence the way they experience and react to it². In addition, the insidious onset in at least 75% of children, the high rates of premorbid problems and the hesitancy of clinicians to make a diagnosis of schizophrenia in a child usually delay the recognition of the syndrome³. So, there is a need for more research concerned with phenomenology and etiology of early onset psychosis to improve understanding and management of this syndrome.

Hypothesis and Aim:

Impairment of premorbid functioning has received much attention in the research of schizophrenia and other related psychoses and is considered an important hypothesis but most of studies were western studies in adult patients. So the main aims of the current study were to test the credibility of this hypothesis and to describe socio-demographic data, early developmental and pre-morbid functions and clinical characteristics of Arab sample of children presenting with early onset non-affective psychosis.

Methods

This work was a cross-sectional descriptive study, done at Al-Amal Complex for Mental Health, Dammam, Kingdom of Saudi Arabia (KSA) in the period between May 2005 and October 2008. The study was approved by the scientific and ethical committee of the complex. Patients were recruited from the child psychiatry clinic according to certain inclusion and exclusion criteria.

Inclusion criteria included; age of onset of psychosis before 18 years, with upper age limit for the study 18 years. In order to make the sample homogenous as much as possible exclusion criteria included any DSM-IV axis I diagnosis from the following disorders: schizoaffective, bipolar, Major depression, substance induced psychotic disorder in addition to exclusion of cases with known organic pathology. However, patients with past history of epilepsy or febrile convulsions were not excluded. Diagnosis of non-affective psychosis was based on DSM-IV and confirmed by Schedule for Affective Disorders and Schizophrenia for School Aged Children Present and Lifetime Version (K-SADS-PL)⁴. All patients presented to child and adolescence outpatient clinic (N=864) were screened for psychosis through the general part of K-SADS-PL. Seventy three patients were positive for psychosis so assessed again in a second interview with the psychotic supplement of K-SADS-PL. Sixty six out of 73 proved to be psychotic. Those who met inclusion and exclusion criteria and gave informed consent by themselves and their legal guardians were 47, of which 42 patients completed the study. Assessment was done by three psychiatrists with good inter-rater reliability.

A control group consisted of 21 normal healthy volunteers, selected from general pediatric outpatient clinic for the same catchments area of the

Early Onset Non-Affective Psychosis

hospital. The group included 10 males and 11 females, with no past history of psychiatric disorders and was matched for age, sex and other socio-demographic data.

Instruments and Procedures

Patients were assessed through the following procedures: **1)** history taking and mental state examination, **2)** K-SADS-PL for diagnosis and clinical assessment of psychotic symptoms⁴, **3)** Positive and negative symptoms scale (PANSS) for assessment of severity of psychosis⁵, **4)** IQ evaluation via Stanford Binet Intelligence Test⁶, **5)** Lewis Murray Scale for assessment of Obstetric complications⁷, **6)** Children's Global assessment scale for evaluating the level of general functioning⁸, **7)** General Developmental scale (GDS)⁹ **8)** Child Behavior Scale (CBS)¹⁰ and lastly **9)** pre Morbid Adjustment Scale (PAS)¹¹.

GDS was used to record early childhood developmental delay and neurodevelopmental problems and covered seven areas: motor milestones, language milestones, social development, reading problems, neurodevelopmental problems, enuresis and encopresis. The Total GDS score range from 0 to 12 and higher scores indicate more developmental impairments.

CBS was used for rating of the pre morbid period which ends 12 months before the onset of the first psychotic symptoms. The scale has 10 aspects: social isolation, social aloofness, separation anxiety; unusual stereotyped interest, deviant social communication,

affect, suspiciousness, thought content, deviant speech and antisocial behavior. Total CBS Score is 0-20 and higher scores indicate more premorbid impairments.

PAS is consisted of 28-items and assesses sociability and withdrawal, peer relationships, adaptation to school, and scholastic performance in four life stages (childhood, early adolescence, late adolescence; adulthood). Higher scores of PAS indicate poorer function. PAS also assesses socio sexual aspect after age 15 but this item was excluded from application because of cultural differences. PAS was used for both patients and control groups as the test has no cutoff score.

Also it is important to mention that inter-rater reliability for tools used were good as kappa was ≥ 0.8 .

Statistical analysis

Analysis of the data was done using SPSS, version 10 (statistical program for social science), with descriptive statistics, Chi square and cross stab for analysis and relation of categorical variables. Mann Whitney and Kruskal-Wallis test were used to compare quantitative variables in the same group instead of independent group t test and one way between group (ANOVA) because of the non-parametric criteria of the data ($SD > 50\%$ mean). Spearman's rank correlation was also used.

Results

Socio-demographic and clinical data

Total number of patients was 42, with age range 7 to 18 years. They included 20 males and 22 females with no

significant difference as df =1 and P value 0.095. The mean age was 15.05 ± 3 . The sample included 27 schizophrenic, 10 psychotic disorders not otherwise specified and 5 cases with

brief psychotic episode. Within the schizophrenic group, 11 were paranoid, 7 were undifferentiated and 9 were disorganized.

Table (1) Demographic and clinical data

Variable		Whole sample (n= 42)	Schizophrenia (n= 27)	Non Schizophrenia (n= 15)	P value
Sex No. and %	Male	20 (47.6%)	9(33.3%)	11 (73.3%)	.013*
	Female	22(52.4%)	18(66.7%)	4 (26.7%)	
Age of onset		12.3+-3.8	12.04+-3.72	12.8+-4.02	.539
Mode of onset	Acute	16 (38.1%)	7 (25.9%)	9 (60%)	0.029*
	Gradual	26 (61.9%)	20 (74.1%)	6 (40%)	
Family history No. and %	Schiz	19 (45.2%)	13 (48.1%)	6 (40%)	.634
	MR	5 (11.9%)	3 (11.1%)	2 (13.3%)	
	Anxiety	1 (2.4%)	1 (3.7%)	00	
	Epilepsy	1 (2.4%)	00	1 (6.7%)	
Past history No. and %	MR	11 (26.2%)	6 (48.1%)	5 (33.3%)	.763
	Autism	6 (14.3%)	3 (11.1%)	3 (20%)	
	Conduct	2 (4.8%)	2 (7.4%)	00	
	Anxiety	2 (4.8%)	1 (3.7%)	1 (6.7%)	
	Epilepsy	12 (28.6%)	8 (29.6%)	4 (26.7%)	
Obstetric Complication No. and %	yes	8 (19%)	5 (18.5%)	3 (20%)	.780
	No	26 (61.9%)	16 (59.3%)	10 (66.7%)	
	Unknown	8 (19%)	6 (22.2%)	2 (13.3%)	
GDS, mean & SD	Total	2.6 ±3.3	2.3±3	3.1±3.9	.777
	CBS, mean & SD	6.3±4.6	6.8±4.2	5.6±5.2	.405
	PAS, mean & SD	12.2±6.3	12.9±6.1	11±6.6	.399
PANSS, mean &SD	Positive	27.7±6.4	27.3±5.4	28.3±7.8	.568
	Negative	29.3±11.9	33.4±11.1	22.6±10.3	.003**
	General	56±13.2	58.1±11.4	52.6±15.6	.385
IQ No. and %	Average	23 (54.8%)	14 (51.9%)	9 (60%)	.199
	Borderline	8 (19%)	7 (25.9%)	1 (6.7%)	
	MR	11 (26.2%)	6 (22.2%)	5 (33.3%)	

* P value is significant; ** P value is highly significant. CBS: Child Behavior Scale. Higher scores indicate more impairment. GDS: General Developmental Scale. Higher scores indicate more impairment. PAS: Premorbid adjustment scale. Higher scores indicate poorer function. PANSS: Positive and Negative symptoms Scale.

Within the schizophrenic group, there was significant difference between mean age of onset and subtypes of

schizophrenia as the mean age of paranoid patients was 14.1 ± 2.7 years, for undifferentiated was 10.9 ± 4.3 years

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and for disorganized was 10.4 ± 3.5

years and the p value was 0.03.

2. Clinical symptoms

Table (2) Description of psychotic symptoms as assessed by PANSS. :

Symptoms		Frequency N & (%)	Severity by PANSS Mean \pm SD
Highest Score	Judgment	37 (88.1%)	5.9 ± 1.8
	Hallucinations	40 (95.2%)	5.5 ± 1.8
	Difficult abstraction	30 (71.4%)	4.8 ± 2.3
	Excitement	30 (71.4%)	4.8 ± 2.2
	Delusion	28 (66.7%)	4.6 ± 2.2
	Blunted affect	27 (64.3%)	4.3 ± 2.2
	Formal thought disorder	18 (42.9%)	3.3 ± 1.8
Lowest Score	Somatic	3 (7.1%)	1.6 ± 1.6
	Grandiosity	3 (7.1%)	1.5 ± 1.4
	Guilt	1 (2.3%)	1.1 ± 0.6

NB: Frequency: number of patients having the symptom with score 4 or more

Clinically, the most common symptom was hallucination as 24 patients (57.1%) had auditory hallucination, 13 patients (31%) had both auditory and visual hallucination. There were 28 patients (66.7%) patients with delusion. The delusion was persecutory in 23 patients (54.8%). At the same time, 92.9% of the sample reported disturbed behaviors in form of aggression (n= 23, 54.8%), bizarre behavior (n= 8, 19%) or social isolation (n= 8, 19%). In addition, 81% of the sample reported sleep abnormality in the form of insomnia (n= 27, 64.3%) or hypersomnia (n= 7, 16.7%). Whereas 28.6% of the sample reported appetite abnormalities as diminished appetite (n= 10, 23.8%) or hyperphagia (n= 2, 4.8%). Also, 14.3% of patients reported incontinence, urinary (n = 3 , 701%), stool

incontinence (n= 1, 2.4%) or double incontinence (n= 2, 4.8%). Motor symptoms as hyperactivity, retardation, catatonia and stereotypes were present in 36 (85.7%) of the sample, the most frequent was hyperactivity (n= 17, 40.5%) and the least frequent was catatonia (n= 1, 2.4%). Those with impaired academic achievement were 29 patients (69.1%) versus 4 (9.5%) without impairment while 9 patients (21.4%) didn't join school yet, as age of governmental school entry in Saudi Arabia was 7 years, in addition those with co morbidity with autism didn't join school .

3. Premorbid and developmental status

As shown in table (3) and according to GDS, 11 (26.2%) patients had abnormal motor development , 13 (31%) patients had abnormal language

development, 19 (45.2%) patients had impaired social development, 3 (7.1%) patients had reading difficulties, 6

(14.2%) patients had autism, 4 (9.5%) patients had enuresis and no one had encopresis.

Table (3) the frequency and percentage of sub-items of GDS for all patients

GDS	N (%)
Abnormal motor development	11(26.2%)
Abnormal language development	13(31%)
Impaired social development	19(45.2%)
Reading difficulty	3(7.1%)
Autism	6 (14.2%)
Enuresis	4 (9.5%)
Encopresis	00

GDS : General Developmental Scale.

In table (4), according to CBS, 26 (61.9%) patients had social isolation, 26 (61.9%) patients had deviant social communication, 25 (59.5%) patients had social aloofness, 22 (52.4%) had abnormal affect, 17 (40.5%) patients

had stereotyped interest, 14 (33.3%) patients had abnormal though content, 8 (19%) patients had separation anxiety, 8 (19%) patients had deviant speech and 8 (19%) patients had antisocial behavior.

Table (4) the frequency and percentage of sub-items of CBS for all patients

CBS	N (%) in the whole sample
Social isolation	26 (61.9%)
Deviant Social Communication	26 (61.9%)
Social Aloofness	25 (59.5%)
Abnormal affect	22 (52.4%)
Stereotyped interest	17 (40.5%)
Abnormal thought content	14(33.3%)
Separation anxiety	8 (19%)
Deviant speech	8 (19%)
Antisocial behavior	8 (19%)

CBS: Child Behavior Scale

Table (5) Comparison between patients and control regarding premorbid function.

PAS	Patient M±SD	Control M±SD	P value
PAS total score	12.2±6.3	2±1.9	.000**
PAS Childhood stage	11.5±6.5	1.7±1.9	.000**
PAS early adolescence	10.7±6.6	1.9±1.9	.003**
PAS late adolescence	6±6.8	1.2±1	.180

Note: * p value is significant; ** p value is highly significant

PAS: Premorbid Adjustment Scale, Higher scores of PAS indicate poorer function

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As shown in table 5, there were highly significant differences between patients and control regarding all stages of PAS except for late adolescence stage. Compared with control children most

severe impairment in subscales of PAS were school performance and peer relation in childhood phase as the mean were (3.5, SD ± 1.8 and 3.3 ± 2.1) respectively.

Table (6) Correlation between premorbid state and PANSS, GAS, mode of onset and age of onset (r-value)

Premorbid function	PANSS			GAS	Mod of onset	Age of onset
	Positive	Negative	GPS			
GDS	-0.4**	0.2	-0.2	-0.09	.2	-0.5**
CBS	-0.3*	0.3*	-0.2	-0.1	.5**	-0.5**
PAS	-0.2	0.6**	-0.007	-0.3*	.4**	-0.5**
GAS	-0.2	-0.4**	-0.4**	-----	.1	-0.02
Age of onset	0.3*	-0.05	0.2	-0.02	-.3*	-----

NB: * indicates significant $p < 0.1$; ** indicated highly significant $p < 0.01$

GDS: General Developmental Scale; CBS: Child Behavior Scale; PAS: Premorbid Adjustment Scale; GAS: Global Assessment Scale; GPS: General Psychopathology Scale

As shown in table 6, the age of onset of psychosis and its mode of onset were significantly related to early development and premorbid functions (GDS, CBS and PAS). Moreover early development and premorbid functions (GDS, CBS, and PAS) were significantly related to psychotic symptoms (positive and negative) while current functioning (GAS) was significantly related to negative symptoms and GPS.

As shown in table (7) premorbid function was poorer in those with gradual onset rather than acute onset group as PAS were 12.5 ± 5.9 and 9.4 ± 5.9 while GDS were 2.9 ± 3.5 and 2.2 ± 3 . Lastly, CBS were 7.9 ± 4.1 and 3.8 ± 4.3 with marked significant difference as p was .004. Furthermore there was significant difference in age of onset in the different mode of onset as it was 14.2 ± 2 in acute onset group and 11.2 ± 4.2 in gradual onset group with p value .03.

Table (7) correlation between mode of onset and PAS, GDS, CBS and age of onset

Variable	GRADUAL ONSET	ACUTE ONSET	P VALUE
PAS mean & SD	12.5 ± 5.9	9.4 ± 5.9	0.004**
GDS, mean & SD	2.9 ± 3.5	2.2 ± 3	
CBS, mean & SD	7.9 ± 4.1	3.8 ± 4.3	
AGE Of ONSET, Mean & SD	11.2 ± 4.2	14.2 ± 2	0.03*

NB: * indicates significant $p < 0.1$; ** indicated highly significant $p < 0.01$

GDS : General Developmental Scale; CBS : Child Behavior Scale. ; PAS: Premorbid Adjustment Scale.

Using Spearman's correlation, there was no significant relation between family history of schizophrenia and symptoms severity; positive symptoms, negative symptoms and GPS (p-value was 0.869, 0.471 and 0.482 respectively) or with premorbid state ($p= .436$).

Discussion:

Diagnostic dilemma

Childhood schizophrenia is a rare but serious disorder with complex symptoms that affect children and their families. The term childhood schizophrenia was once applied for all childhood psychoses, including autism and mood disorders, but more recently, researchers have distinguished childhood schizophrenia from other disorders.

Going with the conceptualization of clinical entity and in a trial to make the sample of patients homogenous as much as possible, affective and organic psychoses were excluded from this study, but only atypical psychosis (psychotic disorder not otherwise specified) and brief psychotic episode were included. Ten cases of the patients in the current study were diagnosed as psychotic disorder not otherwise specified. This diagnosis may be given due to the use of same adult criteria without considering the developmental stage of the children or due to hesitancy of the clinician to stigmatize the child with diagnosis of schizophrenia. The same findings were reported by Hollis⁹ who found that the vast majority of adult schizophrenia

was originally assigned as having atypical or other unspecified psychoses in childhood or early adolescence.

In addition, Masi et al³ reported that, the developmental immaturity causing hesitancy on part of clinicians to make a diagnosis of schizophrenia in a child and the relative inadequacy of fulfilling diagnostic criteria in children increases the tendency to diagnose more atypical psychosis than childhood schizophrenia.

In those having diagnosis of schizophrenia, the relative predominance was for paranoid subtype which contrasts literatures reporting disorganized subtype to be most common of childhood schizophrenia¹². This may be related to higher age group and older age of onset in the current sample (12.3 ± 3.8). Nevertheless, the mean age of onset in this study was similar to other studies like Remschmidt *et al*¹³ in which the mean age of onset was 12.7 ± 2.5 and Hollis's study⁹ in which the mean age of onset was 14.4 years ± 1.5 . Moreover, from table 6, the age of onset was negatively correlated to developmental, behavioral and premorbid states and positively correlated with positive symptoms. This means that the older age of onset, the more the positive symptoms and less premorbid and developmental impairment, which was reported in literature to be more characteristic of the paranoid type of schizophrenia¹².

2. Clinical symptoms

There are differing views on the continuity of childhood schizophrenia

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into adult schizophrenia and on similarities and differences between childhood-onset and adult-onset forms of the disorder. In the current study, patients showed more gradual onset and higher scores of negative symptoms more than positive symptoms. These findings were more evident in schizophrenic than non-schizophrenic children (table 1) and were similar to other studies^{9, 14, 15, 16}.

A number of symptoms have been identified in psychotic children. The most frequent symptoms reported in this study were hallucinations in 95.2% more than delusions in 66.7%. Similarly, Russell's study¹⁵ reported that 63% of schizophrenic children presented with delusions and 80% with auditory hallucinations.

While the most severe symptoms among PANSS positive subscale was impaired judgment and among negative subscale was difficult abstraction followed by blunted affect and emotional withdrawal, which agreed with the reporting of Hollis¹². Generally, many symptoms may be over estimated or under estimated according to developmental stage of the child especially symptoms like judgment and abstraction. So, it is especially important for diagnosticians to consider child's development when assessing the presence or absence of the diagnostic criteria for schizophrenia.

Blunted affect was found in 27(64.3%) patients and formal thought disorder was found in 18(42.9%) patients and

these findings were similar to what was reported in the literatures¹⁷. Furthermore, sleep and appetite disturbances as well as disturbances in motor behavior were seen in a high proportion of patients. These findings were similarly reported in other studies^{14, 17, 18}.

Another important finding is the rate of psychotic children having below average IQ (26.2% of the sample had mild to moderate MR and 19% had borderline IQ). This down shift of IQ has been previously reported by other studies^{7, 9, 19}. It is still debatable whether it is a premorbid trait and expression of impaired early brain development as hypothesized by Murray and Lewis⁷ and Weinberger¹⁹, or it is a consequence of psychotic process with failure to learn rather than loss of function as reported by Rajkumar and David¹⁷. In the current study, 26.2% of patients had past history of mental retardation so the first explanation looks more logic for them while the second explanation may be more logic for patients who had borderline IQ (19%). Intellectual delays have long been considered as general risk factor for psychopathology and psychosis in children²⁰. But, 69.1% of the patients in the current study had impaired academic achievement indicating impairment of function and may be part of cognitive impairment as well. Similar report by Fuller et al²¹ suggested that, deterioration in scholastic performance occurs at age 13-16 years may be a precursor to the

cognitive impairment seen during the first episode of illness.

3. Premorbid status and family history

The results of the current study as well as previous, studies^{9, 22, 23, 24} strongly agreed that children with early-onset psychosis show frequent developmental abnormalities as impairment in social skills, language and motor abilities and school achievements prior to presenting signs of schizophrenia. Moreover, Volkmar²⁵ suggested a developmental continuity from premorbid impairment to negative symptoms with difficulty to differentiate between premorbid and active psychotic states and this was applicable in the current study at least for patients who had gradual insidious onset.

As shown in table 6, more impairment in premorbid function as indicated by PAS is associated with more negative symptoms, which appear to affect the current functioning as shown by GAS. At the same time, the developmental and behavioral problems predating onset of psychosis (GDS, CBS) were significantly correlated to severity of psychotic symptoms, mode of onset and age of onset rather than current functioning (GAS).

Similar to other studies^{9,15}, the current study found positive past history for other psychiatric disorders as mental retardation, autism, conduct and anxiety disorders in 50% of cases.

One of the vulnerability factors frequently reported in schizophrenia is the presence of positive family history

for psychosis in general^{9,26}. In the current study, 13 schizophrenic patients (48.1%) had history of schizophrenia in at least one of their first-degree relatives although; there were no significant differences between patients with positive family history of schizophrenia and those without, in symptom severity nor in premorbid function. The same finding was also found by Canon *et al*²⁷ who reported that PAS scores did not differ significantly between the subjects with positive family history of psychosis and those without.

Limitations

Although this study presents a general cross-sectional design, GDS, CBS and PAS are instruments used for the evaluation of development or past functioning. Since subjects PAS ratings are compared with controls' ratings, it would be important to take into account the fact that retrospective data might be memory biased. The authors tried to minimize the bias through assessment of each patient by two examiners and in different sessions.

In this study there was a trial to make the sample homogenous as much as possible however co-morbidities as mental retardation , autism and epilepsy were not excluded as they were highly prevalent in the sample which may indicate impaired premorbid status, vulnerability factor or shared same etiology as all are neurodevelopmental disorders. This point may be a source of bias in the

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study but it is the same like previous studies^{9,15, 17}. Because of rarity of non-affective psychosis in children, cases were recruited over a period of 3.5 years to include a fairly adequate number of cases.

Conclusion

The current study on Arab sample of patients agreed with other western studies that most of patients of non affective childhood psychosis had gradual onset and more negative symptoms especially for schizophrenic cases. Paranoid schizophrenia was the most prevalent subtype in the study. Also, there was marked impairment in developmental and premorbid function. The developmental stage of the child

influences the disease process and colors the psychotic symptoms with more atypical form. The premorbid level of functioning appear to influence the mode and time of onset of psychosis as well as later functioning after developing psychosis, and has important predictive and prognostic value. So, Psychiatrists should consider those children with developmental, social and behavioral impairment as high risk for developing psychosis. Also, there is an urgent need for new diagnostic assessment tools that take into consideration the stage of child maturation and diagnostic criteria for psychosis in children.

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الخلاصة:

المقدمة: يعتبر الذهان من الإضطرابات النادرة لدى الأطفال و تختلف الدراسات في وصف الأعراض الإكلينيكية و علاقتها بتطور الوظائف الطبيعية قبل المرض. و من الجدير بالذكر أن عدد الدراسات التي تبحث في هذا الموضوع قليل للغاية و على أعداد قليلة و خاصة في الدول العربية. **الأهداف:** هدفت هذه الدراسة إلى وصف أعراض الذهان غير الوجداني و علاقتها بالوظائف التطورية و الخصائص الديموغرافية. **الطريقة:** تم عمل الدراسة في أحد مستشفيات وزارة الصحة بالسعودية و شملت الدراسة عدد 42 حالة و تم تشخيص الحالات بناء على التقسيم الامريكي الرابع للأمراض النفسية و شملت المقاييس التي تم تطبيقها كلاً من مقياس الفاصام و الإضطرابات الوجدانية في المرحلة العمرية المدرسية و مقياس الأعراض الموجبة و السالبة و المقياس التطورى العام و المقياس السلوكي للأطفال و مقياس التكيف في مرحلة ما قبل المرض، وبعد جمع البيانات و تطبيق الاختبارات خضعت كل المعلومات إلى التحليل الإحصائي. **النتائج:** كان عدد مرضى الفاصام 27 حالة و عدد مرضى الذهان غير الفاصامي 15 حالة و كان تطور المرض تدريجياً في نسبة 61.9% من الحالات و كان معدل العمر 12.3 ± 3.8 سنة و كانت الأعراض لسالية أكثر حدوثاً من الأعراض الموجبة و مثلت إضطرابات النوم 81% من العينة و إضطرابات شهرية الكل 28.6% و كان هناك قصور واضح في التطور و وظائف ما قبل المرض و خاصة عند مرضى الأعراض السالبة. **الاستنتاج:** تؤكد هذه الدراسة وجود قصور في التطور و وظائف ما قبل المرض لدى الأطفال و أن هذا القصور يؤثر على شكل الاعراض الذهانية لديهم.

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ARABIC CONTINGENCIES OF SELF WORTH
Arabic Translation and Validation of the Contingencies of Self-Worth Scale in
Lebanese Youth
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النسخة العربية لمقياس احتمال حدوث قيمة الذات لطلاب لبنانيين جامعيين.
شاهي كازاريان

Abstract

Objectives: This research examined the reliability and validity of the Arabic version of the 35-item Contingencies of Self-Worth Scale (CSW) in Lebanese youth. The Arabic CSW measures seven domains on which people base their self-worth: Others' Approval, Appearance, Academic Competence, Competition, Family Support, Virtue and God's Love.

Method: A total of 282 Lebanese university students were administered the Arabic CSW after translation, using back-translation methodology. Lebanese youth were also administered the Arabic Rosenberg Self-Esteem scale and the Arabic Center for Epidemiological Studies-Depression scale to assess their relationship to the seven domains of self-esteem.

Results: Factor analysis of Arabic CSW resulted in the identification of seven empirically derived and internally consistent factors comparable to those reported for the English version of the measure. Females reported basing their self-worth more than males on academic competence, family support, moral adequacy and religious faith. Also those sourcing their self-esteem on the approval and acceptance of others reported lower self-worth and higher depression.

Conclusion: Overall, the findings support the cultural application of the Arabic CSW Scale in the collectivist Lebanese context.

KEY WORDS: Arabic Contingencies of Self-Worth Scale, self-esteem, depression, Lebanese university students

Introduction

The Contingencies of Self-Worth Scale (CSW)¹ is a self-report measure of seven domains on which individuals base their

global self-esteem: approval and acceptance from others, physical appearance, academic competence,

competition or being better than others, family support, virtue or one's judgment of moral adequacy, and God's Love or one's belief that one is loved, valued and unique in the eyes of God. The English version of the CSW scale has been shown to be a reliable and valid measure of the seven sources of self-worth, and a factor structure that is invariant across gender and ethnicity¹. As importantly, the CSW has been shown to be distinct from social desirability¹ and to relate to self-worth^{2,3}, social anxiety and social avoidance⁴⁻⁶, interpersonal styles⁷, anxiety and depression^{2,8}, and disordered eating and alcohol use^{9,12}.

In the present study, the reliability of an Arabic version of the CSW and its validity in the form of factor structure and relation to global self-esteem and depressive symptoms were examined. While the constructs of self-image, self-concept, self-perception, and self-esteem have been investigated among Arabs^{13,17}, in Arab Americans including Lebanses^{17,18}, and in Lebanese children^{19,20} and youth^{21,27}, contingencies of self-worth and their relation to mental health have not been studied in the Arab Middle East.

Method

Participants and Procedure

A total of 282 Lebanese university students from state-run and private institutional settings participated in the study. The majority of the participants

were female (73.8% [n=206]), and single (84.2%) and their mean age was 21.7 years (n=270, SD=4.74). Reported religious affiliation was 65% Muslim, 21% Christian, 11% Druze and 2% other. To minimize fatigue, different sets of measures were administered to different groups, all of whom completed the CSW Scale. Thus, not all participants completed all scales (sample sizes for each measure are indicated below). Measures were administered in randomized order and all participants signed informed consent forms.

Instrumentation

Arabic Rosenberg Self-Esteem Scale²⁸. (**Arabic RSES**). The 10 -item Arabic version of the RSES was used as a global measure of self-esteem. It was translated using methodology identical to that followed in the translation of the CSW. A total of 59participants completed this measure. Respondents indicated the degree to which they agreed with each item using a 4 – point rating scale, higher scores indicating higher global self-esteem. In the present study, the internal consistency of the Arabic RSES was high ($\alpha = .71$).

Arabic Center for Epidemiologic Studies Depression Scale^{29,30} (Arabic CES-D). The Arabic CES-D scale is a 20-item measure of depression. A total of 52 participants completed this measure.

Respondents rated depressive symptoms using ratings from 0 to 3 (0, rarely or none of the time, < 1 day; 1, some or little of the time, 1-2 days; 2, occasionally or a moderate amount of time, 3-4 days; and 3, most or all of the time, 5-7 days), higher scores indicating higher levels of depression. In the present study, the internal consistency of Arabic CES-D was high ($\alpha = .83$), a value comparable to that reported in an earlier study³⁰.

Result

Arabic CSW Factor Analysis

The 35 items of the Arabic CSW were subjected to principal factor analysis using SPSS Version 16. The Kaiser-Meyer-Olkin (KMO) value of .82 exceeded the recommended KMO value of .6, suggesting sampling adequacy. Similarly, the Bartlett's Test of Sphericity reached statistical significance ($p < .0001$), supporting the factorability of the correlation matrix.

Principal factors analysis revealed the presence of nine factors with eigenvalues exceeding 1 (6.85, 4.09, 2.48, 1.92, 1.77, 1.52, 1.37, 1.07, and 1.01), and explaining cumulatively 63.1% of the total variance. Principal factor analysis with Oblimin rotation and retention of seven factors resulted in a solution that explained a total of 47.1% of the variance, with the first factor contributing 18.3%, factor 2 contributing 10.3%, factor 3 contributing 5.6% factor 4 contributing 4.0%, factor 5

contributing 3.8%, factor 6 contributing 2.8%, and factor 7 contributing 2.3%. The empirically derived factor loadings based on the structure matrix can be obtained from the author.

The first empirically derived factor corresponded to the Family Support domain in that it included four of the original family support items and an original Academic Competence item. The second empirically derived factor corresponded to the Appearance domain as it contained all five original Appearance items. Similarly, the third empirically derived factor corresponded to the Others' Approval domain in that it contained all five original Others' Approval items. The fourth empirically derived factor corresponded to the God's love domain in that it included all five original God's Love items plus two original Virtue domain items. The fifth empirically derived factor corresponded to the Virtue domain as it included three original Virtue domain items. The sixth empirically derived factor corresponded to the Competition domain as it included five of the original Competition domain items and two Academic Competence domain items. Finally, the seventh empirically derived factor corresponded to the Academic Competence domain as it included two of the original Academic Competence domain items and one Family Support domain item. Given the close correspondence of the factor structure to

the English version of the measure, scale totals were computer using the original items.

Arabic CSW Internal Consistencies and Inter-correlations

The internal consistencies of the seven contingencies of self-worth domains

are presented in Table 1. The reliabilities of the

seven sources of self-esteem were acceptable ranging from $\alpha=.66$ for Others' Approval and $\alpha=.92$ for God's Love, values comparable to internal consistencies reported by Crocker *et al.*¹.

Table (1)

Reliabilities and Correlations among Arabic Contingencies of Self-Worth Domains (n=282)

Subscales	1	2	3	4	5	6	7
1. Others' Approval	.66	.53**	.37**	.37**	.31**	.16**	-.02
2. Appearance	.33**	.72	.45**	.42**	.30**	.08**	-.01
3. Competition	.18**	.30**	.80	.54**	.23**	.08**	-.03
4. Academic Competence	.18**	.27**	.45**	.69	.45**	.31**	.07**
5. Family Support	.15*	.08	.25**	.52**	.63	.37**	.22**
6. Virtue	.07	-.09	.22**	.21**	.32**	.71	.32**
7. God's Love	.04	-.06	.17**	.18**	.33**	.48**	.92

*Note: Reliabilities (Coefficient alphas, α) are in bold. Correlations for the present study are below the diagonal and those for the Crocker *et al.* (2003) study above the diagonal.*

** $p < .01$

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The inter-correlations of the seven contingencies of self-worth obtained in the present study are also presented in Table 1, as are the inter-correlations of the domains as reported by Crocker *et al.*¹ for comparison purposes. As can be seen, the magnitudes of the correlations and the pattern of inter-correlations among the seven Arabic CSW domains are similar to those reported by Crocker *et al.*¹ for youth in the

United States, and support the convergent validity of the Arabic CSW.

Arabic CSW Norms and Gender Differences

Table 2 presents the mean scores of males and females, as well as the total

sample, on each of the seven contingencies of self-worth. While there were no gender differences on Others' Approval, Appearance and Competition, females reported significantly higher scores than did males on Academic Competence ($t(276) = 2.07$, $p < .04$), Family Support ($t(276) = 2.16$, $p < .03$), Virtue ($t(277) = 4.60$, $p < .0001$) and God's Love ($t(277) = 5.12$, $p < .0001$). The findings of significant gender differences on Academic Competence and Family Support are consistent with those reported by Crocker *et al.*¹ while the lack of gender differences on Approval of Others and Appearance are inconsistent with those reported for youth in the United States.

Table (2)

Means and standard deviations for the seven Arabic Contingencies of Self-Worth Scale for all participants, and for females and males separately.

Scale	Gender	n	Mean	SD	t	p
Others' Approval				0.89	ns	
	Female	205	3.78	1.15		
	Male	72	3.92	1.13		
	Total	279	3.82	1.14		
Appearance				0.57	ns	
	Female	206	3.98	1.21		
	Male	73	4.08	1.13		
	Total	281	4.01	1.19		
Competition				1.13	ns	
	Female	206	5.54	1.07		
	Male	73	5.38	.94		
	Total	281	5.50	1.03		
Academic Competence				2.07	.04	
	Female	205	5.55	.92		

	Male	73	5.28	1.01	
	Total	281	5.48	.96	
Family Support				2.16	.03
	Female	206	5.75	.90	
	Male	72	5.49	.76	
	Total	280	5.68	.87	
Virtue				4.60	.001
	Female	206	5.93	.89	
	Male	73	5.35	1.02	
	Total	281	5.77	.96	
God's Love				5.12	.001
	Female	206	6.12	1.11	
	Male	73	5.23	1.66	
	Total	281	5.88	1.34	

Arabic CSW, Self-Esteem and Depression

Global self-esteem scores correlated significantly with Others' Approval ($r = -.29$, $p < .05$) but not Appearance ($r = .06$, ns), Academic Competence ($r = -.01$, ns), Competition ($r = .02$, ns), Family Support ($r = .01$, ns), Virtue ($r = .15$, ns), and God's Love ($r = -.02$, ns). Similarly, depression scores correlated significantly with Others' Approval ($r = .33$, $p < .05$) but not Appearance ($r = -.00$, ns), Academic Competence ($r = .07$, ns), Competition ($r = -.03$, ns), Family Support ($r = .09$, ns), Virtue ($r = -.13$, ns), or God's Love ($r = -.06$, ns).

Discussion

The present study examined the reliability and validity of the Arabic translation of the CSW. Factor analysis identified seven sources of self-esteem with acceptable internal consistencies. The

modest size of the inter-correlations among the CSW subscales supported the

convergent validity of the scale, and their differential correlations with self-esteem and depression supported the value of distinguishing between the seven sources of self-esteem. The contingencies of self-worth were also sensitive to gender differences in that female Lebanese youth reported basing their self-worth more than their male counterparts on academic competence, family support, virtue and God's love. These gender differences are consistent with the socialization of Lebanese women to the imperatives of family honor, female modesty, and piety.

In the present study, Others' Approval but not the remaining sources of self-esteem correlated significantly with self-worth and depression, suggesting that those who base their self-worth on the approval and acceptance of others are more likely to

suffer from low self-esteem and depressive symptoms. The identification of acceptance and approval of others as a significant predictor of negative self-esteem and negative mood is consistent with findings reported by Crocker et al.¹ for youth in the United States in which the Rosenberg Self-Esteem scale and the Neuroticism factor of the Big Five Inventory were used to assess mental health. Nevertheless, the present study and that of Crocker et al.¹ are

correlational such that it is equally likely that those with low self-esteem and depressive symptoms are more likely to base their self-esteem on the acceptance and approval of others.

The present study is limited by its correlational methodology and focus on youth. Future studies are likely to benefit from clinical application of the Arabic CSW in youth, adults and the elderly.

الملخص

الأهداف: هدف البحث إلى دراسة اعتمادية وصلاحية النسخة العربية لمقياس احتمال حدوث قيمة الذات عند الشباب اللبنانيين تقييس النسخة العربية من (CSW) سبع مجالات يؤسس عليها الناس قيمتهم بالذات وهي: موافقة الآخرين، الشكل الخارجي، الجدارة الأكademie، المنافسة، الدعم العائلي، الفضيلة ومحبة الله.

الأسلوب: منحت مجموعة من ٢٨٢ طلب لبنانيين جامعيين النسخة العربية لـ CSW بعد ترجمتها باستخدام منهجية الترجمة الخلفية. منح الشباب اللبنانيين النسخة العربية لمقياس روزنبرغ للثقة بالنفس و مقياس الإكتئاب من المركز للدراسات الويلانية و ذلك لتقييم علاقتهم بالمجالات السبع للثقة بالنفس.

النتائج: التحليل العنصري للنسخة العربية من ال CSW أدى إلى تحديد سبعة عوامل مستمدّة تجريبياً و ثابتةً داخلياً مماثلةً للعوامل التي أُبلغ عنها سابقاً في النسخة الإنكليزية. وأفادت النساء استناداً لقيمتهنّ الذاتية، أكثر من الرجال، على جدارهنّ الأكاديمية، الدعم العائلي، الكفاءة الأخلاقية والإيمان الديني أيضاً، أفادت النساء اللواتي تتبع ثقتهنّ بنفسهنّ من قبول الآخرين إلى إنخفاض لقيمتهنّ الذاتية وارتفاع في الإكتئاب.

الخاتمة: بالإجمال، دعمت النتائج التطبيق التفافي لمقياس النسخة العربية لـ CSW في النطاق اللبناني الجماعي.

الكلمات الأساسية: النسخة العربية لمقياس احتمال حدوث قيمة الذات، الثقة بالنفس، الإكتئاب، طلاب لبنانيين جامعيين.

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Appendix أ.بيس

الرجاء قراءة كل إفادة. ضع دائرة حول الرقم المناسب للإشارة إلى مدى موافقتك أو اعتراضك على كل من الإفادات التالية باستعمال المقياس العددي أدناه:

اوافق بشدة							محابي				عارض بشدة			
							7	6	5	4	3	2	1	
7	6	5	4	3	2	1								1. لا اهتم بما يظنه الآخرون عنِّي.
7	6	5	4	3	2	1								2. لا يعتمد تقديرِي لذاتِي على شعوري أو عدم شعوري بأنني جذاب / جذابة.
7	6	5	4	3	2	1								3. أن أعمل أفضل من الآخرين يعطيني إحساساً باحترام الذات.
7	6	5	4	3	2	1								4. تقديرِي لذاتِي يتأثر بإنجازِي الأكاديمي.
7	6	5	4	3	2	1								5. وجود عائلة تهتم بي مهم لاحترامي لذاتِي.
7	6	5	4	3	2	1								6. يعتمد تقديرِي لذاتِي على اتباع مبادئي الأخلاقية.
7	6	5	4	3	2	1								7. يزداد تقديرِي لذاتِي عندما أشعر أن الله يحبني.
7	6	5	4	3	2	1								8. لا يؤثُر ما يظنه الآخرون عنِّي في ما أظنه عنِّي نفسِي.
7	6	5	4	3	2	1								9. يتأثر تقديرِي لذاتِي بمدى اعتقادِي بجاذبية وجهي.
7	6	5	4	3	2	1								10. يزداد تقديرِي لذاتِي حين أقوم بمهمةٍ ما بشكل أفضل من غيري .

اوافق بشدة							محابي				عارض بشدة			
							7	6	5	4	3	2	1	
7	6	5	4	3	2	1								11. أشعر بأنني أفضل حين أعلم أن ادائِي الأكاديمي جيد.
7	6	5	4	3	2	1								12. يزداد شعوري بقيمة ذاتِي حين يفخر أفرادُ اسرتي بي.
7	6	5	4	3	2	1								13. قد يتأثر تقديرِي لذاتِي سلباً اذا فعلت شيئاً غير أخلاقي.
7	6	5	4	3	2	1								14. أشعر بالأهمية عندما أملك حب الله.
7	6	5	4	3	2	1								15. لا أهتم إذا كون الآخرون رأياً سلبياً عنِّي.
7	6	5	4	3	2	1								16. يتدنى إحساسِي بقيمتي الذاتية كلما فكرتُ ان

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- | | | | | | | | | |
|---|---|---|---|---|---|---|-------|--|
| 7 | 6 | 5 | 4 | 3 | 2 | 1 | | 34. أفقد احترامي لذاتي حين ارتكب خطأ ما. |
| 7 | 6 | 5 | 4 | 3 | 2 | 1 | | 35. أشعر بالاستياء من نفسي حين أفكر أنني قد عصيت الله. |

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The Borderline Patient: Mental Health Clinicians' Experience and Views

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اضطراب الشخصية الحدية

وجهة نظر وخبرة الممارسين الإكلينيكيين في مجال الصحة النفسية

ممدوح العدل ، سامح حسان

Abstract:

Traditionally training and service planning in mental health were focused on Psychosis, Affective and Neurotic disorders. Recently Personality disorders represent a significant portion of clinicians' caseload and Mental Health services need to meet their needs.

Aim:

1. To examine the adult mental health clinicians' experience while working with individuals diagnosed with Borderline Personality disorder (BPD) and ways of supporting them.

2. To identify training needs

Method:

A cross sectional survey of adult mental health clinicians employed by Northamptonshire Healthcare NHS Foundation Trust (NHFT)

Results:

1. Response rate: 69% (185 of 269) including: psychiatrists 40 (85%), community staff 98 and inpatient staff 47.
2. Self-rated ability to diagnose/identify BPD: very good: 19 (10%). Good, 65 (35%), average: 74 (40%) and 19 (10%) were unsure and 9 (5%) did not answer. Preferred diagnostic system: ICD-10: 27 (15%), DSM-IV: 9 (5%), clinical sense: 139 (75%) and 9 (5%) did not answer.
3. Working with BPD is experienced as: Enjoyable: 9 (5%), challenging: 111 (60%), stressful: 27 (15%), very stressful: 19 (10%), I hardly like: 9 (5%), no answer: 9 (5%). 159 (85%) agreed that training is needed, 19 (10%) did not agree, 6 (3%) were unsure and 4 (2%) did not answer.

Conclusion: The majority of clinicians' experience managing individuals diagnosed with BPD as challenging and agreed that training is needed.

Background:

Personality disorder symptoms are alloplastic i.e. alter and adapt to the external environment and are ego

syntonic i.e. acceptable to the ego¹. Clinicians may not have difficulty making diagnosis but usually find the

clinical management challenging. The majority of patients diagnosed with BPD have experienced sexual, physical and or emotional abuse in their childhood² Kernberg (1977,1981) differentiated neurotic, psychotic and borderline “intrapsychic organisations” which are to some extent independent of manifest symptomatology³.

Patients diagnosed with BPD stand on the border between psychosis and neurosis. They are characterised by unstable affect, emotions, behaviour, object relations and self-image with intense affective instability and impulsivity together with an unstable sense of self-identity. It is often manifested by impulsive, self-directed aggression, suicide attempts, substance abuse, chronic feelings of emptiness and persistent pattern of severely unstable interpersonal relationship and fear of abandonment⁴. The disorder has been called ambulatory schizophrenia, as-if personality (a term coined by Helene Deutsch), pseudo-neurotic schizophrenia (described by Paul Hoch and Philip Politan) and psychotic character disorder (described by John Frosch)¹.

Recent epidemiological surveys show that personality disorders are frequent and have been found in different countries and sociocultural settings. Personality disorder can seriously impair life of the affected individuals and can be highly disruptive to families, societies and to healthcare system. Personality status

is often a major predictive variable in determining the outcome of Axis I mental disorders and the response to treatment^{4,5}. It is therefore important that mental health clinicians feel adequately supported and trained to handle individuals diagnosed with the commonly encountered personality disorders e.g. borderline personality disorder.

The number of people suffering from BPD ranges from 1.5–5% in the general population with wide differences between studies due to lack of reliable measures¹². In the outpatient clinic BPD increases ranging from 10–15%. It is more common in women and usually diagnosis is made between the age of 18–35 years². In psychiatric inpatients the ratio increases to reach about 19 - 20%^{4,5}. However with the increased awareness of BPD presenting among the mentally ill population, there seems to be some difficulty addressing their presentations and needs of such population either due to lack of training, clinical skills or attitude problem. Treating individuals with personality disorder particularly BPD is rather complex and challenging. Clinicians who have been trained to deal with the individuals suffering from psychosis or mood disorder may not feel in a position to manage cases with BPD. This study aims to examine clinicians' experience with diagnosis and management of individuals diagnosed

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with BPD and identify possible training gaps

Aim:

1. To study the clinical experience of mental health clinicians while working with individuals diagnosed with Borderline Personality disorder (BPD).
2. To identify training needs.

Methodology:

A cross sectional survey using a colour-coded, confidential questionnaire sent to all clinicians, from various disciplines, in Adult Mental Health service by the Clinical Governance Support Team (CGST) with a covering letter explaining the aim of the study and requested a response within 3 weeks.

Study sample:

All 269 mental health personnel were involved in the study. They include:

1. Psychiatrists: 47 (18 consultants, 14 staff Grade and ass. Specialist doctor (SAS), 15 Senior house officer (SHO)).
2. Non-medical mental health professionals working in General Adult Psychiatry service including:
3. A. Community Mental Health Teams including 150: Community Mental Health Nurses 95, Mental Health Social Workers (SW) 35, Occupational Therapists (OT) 15 and Psychologists 5.

B. Inpatient unit 72: Psychiatric nurses 60, OT 8 and Psychologists 4.

Results:

4. Response rate: 269 questionnaires were distributed only 185 responded with an overall response of 69% including: psychiatrists 40 (85%) (15 consultants, 12 SAS and 13 SHO), community mental health professionals 98 (65%) including: community psychiatric nurses 60, (SW) 25, (OT) 10 and psychologists 3. Inpatient staff 47 (65%) including: psychiatric nurses 40, OT 4 and 3 psychologists.
5. Self - rated ability to diagnose/ identify BPD: very good: 19 (10%). Good, 65 (35%), average: 74 (40%) and 19 (10% were unsure and 9 (5%) did not answer. Psychiatrists (30%) very good and (70%) good in making diagnosis of BPD, Nurses 45 (45%) very good, 30 (30%) good and 25 (25%) average. OT: 4 (25%) good and 10 (75%) average and SW: 8 (30%) very good, 10 (40%) good 6 (25%) average and 1 (5%) did not answer). Psychologists: 5 (85%) very good & 1 (15%) good.
6. Preferred diagnostic system: ICD-10: 27 (15%), DSM-IV: 9 (5%), clinical sense: 139 (75%) and 9 (5%) did not answer.
7. Ability to manage BPD: very good:

- 27 (15%), good: 47 (25%), average: 83 (45%), poor: 19 (10%) and 9 (5%) did not answer.
8. Working with BPD is experienced as: Enjoyable: 9 (5%), challenging: 111 (60%), stressful: 27 (15%), very stressful: 19 (10%), I hardly like: 9 (5%), no answer: 9 (5%).
 9. Whether training is needed or not? Yes: 159 (85%), no: 19 (10%), 6 (3%) unsure and 4 (2%) did not answer.
 10. 120 (65%) believed that individuals diagnosed with BPD are mentally ill, 55 (30%) believed that they are not mentally ill, 10 (5%) did not answer. Majority of those who believed that individuals diagnosed with BPD are not mentally ill were from inpatient staff (25% from inpatient and 5% from community staff).
 11. 102 (55%) believed that BPD needs treatment by a specialist personality disorder service, 46 (25%) feel they can work with BPD but with more support and 27 (15%) undecided and 10 (5%) did not answer. 75% of Psychiatrists believed that patients with BPD are mentally ill while only 40% of non-psychiatrists believe that patients with BPD are mentally ill

Discussion:

Personality disorder is a recognised diagnostic entity in the well-known diagnostic classifications of mental disorders such as ICD-10 and DSM-

IV. Individuals diagnosed with BPD represent a significant percentage of mental health professionals' workload. The experience of clinicians with those individuals may vary according to clinicians' background, knowledge and training. James et al (2007) conducted a survey. 80% of responders view clients with BPD as more difficult to care for than other clients and 81% believed that the care offered was inadequate⁶.

The majority of the responders of our study believed that individuals diagnosed with BPD are mentally ill, however about one third of the responders did not believe that individuals diagnosed with BPD are mentally ill. An important factor that may influence clinicians' ability to work with individuals diagnosed with BPD is their attitude. In previous studies staff expressed views that may reflect a similar view or attitude including: not sick, manipulative, non-compliant⁷; time wasters, difficult to treat, not mentally ill and attention seeker⁸. This may reflect the degree of frustration and sense of helplessness. This probably indicates the need to address this in the teaching and training of the clinicians, which is likely to improve their attitude, their ability to care for BPD and promote the development of a therapeutic relationship.

Community Mental Health Team (CMHT) nurses who volunteered to participate in an awareness workshop

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reported higher levels of enjoyment, security, acceptance and purpose when working with individuals diagnosed as personality disorder compared with those who did not volunteer⁹. In our study results as the majority of responders stated that training is needed.

Psychiatrists tend to use diagnostic criteria of one of the recognised classifications (ICD-10 is more preferred). Psychiatric nurses, social workers, occupational therapists and probably psychologists tend to use their clinical sense in diagnosing BPD. However this did not seem to affect the ability of clinicians to confidently identify BPD. The main difficulty clinicians raised was not about recognition of BPD but how to help and care for them?

Majority of clinicians rated working with BPD as challenging and stressful, smaller percentage described it as enjoyable and a similar percentage as: they hardly like. It is quite possible to find working with BPD challenging and demanding but enjoyable. It is also possible that the sense of frustration and lack of training render clinicians unable to experience working with BPD as enjoyable. The attitude of nurses to BPD was assessed in a study by Gallop et al (1989) who found that respondents were more likely to demonstrate affective involvement in response to the schizophrenia patients' statements and were more likely to offer belittling or

contradicting responses to the statements of patients with BPD¹⁰. Deans & Moecevic (2006) found out that psychiatric nurses experience negative emotional reactions and attitude towards people with BPD.

The majority of nurses perceived people with BPD as manipulative¹¹. Deans & Moecevic (2006) expressed concern about: how people diagnosed with BPD feel about the negative attitudes of the staff that care for them¹¹. In our study a significant percentage of staff that believed that individuals diagnosed with BPD are not mentally ill were mainly from the inpatient staff. Watts and Morgan (1994) in their important editorial in the British Journal of Psychiatry believed that feeling rejected by the clinicians is the basis for the development of "Malignant Alienation" which is a dangerous condition that is associated with high suicide risk and end with a fatal outcome¹².

Lack of service was the most important identified factor contributing to lack of care and the development of a specialist service was reported as the most important resource to improve care⁶. In our study the majority of responders indicated that BPD needs a special service. This may indicate that with the lack of skills and training in treating BPD, the specialist service is a preferred option. Whether this is a viable option or not? This would need to be objectively evaluated.

Special note:

While working in the Arab World 20 years ago, we did not see much of the BPD and our main source of knowledge at that time was essentially from western textbooks. Recently colleagues practicing in the Arab World spoke with me about the increasing numbers of individuals presenting with BPD. I spoke with colleagues practicing in various Arabic countries including Egypt, Saudi Arabia and United Arab Emirates who confirmed this phenomenal change. This would invite Arab Mental Health Professionals to study this phenomenon, which reflects a cultural change. There is an important opportunity for work to be done in this area both in prevention and in therapy. We should be able to learn from the western countries and other countries who are struggling to handle this problem inspite of dedicating huge resources including emergency admission in crisis situations, therapeutic community settings, individual and group psychological therapies and pharmacotherapy. What the west failed in, was essentially the preventive approach and how to prevent the society from generating more BPD. There is certainly less emphasis on promoting family values, social cohesion and religious teaching. Additionally, the alarming spread of substance misuse has direct

and indirect effects on childhood adversities, which in turn, contribute to pathological upbringing.

Sadly the statistics coming from Arab countries are alarming as well with divorce rates reaching 40 – 50% in countries that were well known with their cohesive families and low divorce rates.

I am calling upon experts in sociology; psychology and psychiatry to start jointly working now before it is too late. We need Pan-Arab studies of the epidemiology, presentation, management and more important developing a preventive strategy. In addition we need to evaluate the current service and training needs to meet the unmet needs of those individuals already diagnosed with BPD.

Conclusion: The study results indicate that many clinicians experience significant difficulty while working with BPD. Clinicians who attend training workshops seem to have a positive experience while working with BPD. There are training needs to be addressed. Arab Mental health professionals may find important lessons to learn and mistakes to avoid from the experience of mental healthcare organizations with BPD in western countries.

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Acknowledgement: I wish to thank my colleagues from various disciplines who kindly participated in this survey. Special thanks to Dr Jamal Turky, Consultant Psychiatrist and director of Arabpsynet network for his valuable review and advice on Arabic translation of this paper.

الملخص

يعد اضطراب الشخصيه من الأجزاء الهامة في التقسيمات التشخيصيه المعاصرة ، وقد لا توجد صعوبات كبيره في مسألة التشخيص ولكن التحدى الأكبر هو في مجال التعامل الاكلينيكي مع هذه الحالات وقدرة خدمات الطب النفسي على سد الاحتياجات المتناميّه لهؤلاء الأشخاص مما قد يتطلب تدريبات ومهارات اكلينيكيه خاصه وربما خدمات طب نفسيه متخصصه . والبحث الحالى يتناول القرارات التشخيصيه والمهارات العلاجيه وخبرة الاكلينيكيين في التعامل مع هذه الحالات في الغرب . وهنا نطرح بفقرة أسئلة هامه عن نفس التشخيص فى العالم العربي: ما نسبتهم، كيف يتم التعامل معهم من قبل خدمات الطب النفسي و لإلكلينيكيين العرب، وهل هناك احتياجات تدريبيه وخدميه؟ ويا لإضافه إلى ذلك: هل هناك اهتمام كاف بهذه القضية الهامة في البحث العربي ونشرها؟ إننا بحاجة ماسه لأن ندرس الخبره الغربيه في هذا المجال بسلبياتها العديدة وإيجابياتها المحدوده لنبدأ في بناء برنامج وقائي لمنع استفحال وتعاظم هذه المشكله والذى يتطلب تعاون المتخصصين في كل المجالات من العاملين في العالم العربي والمهاجر . والله الموفق لنفع مرضانا ومهنتنا وأمتنا.

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Figures

Table 1:

Psychiatrists		Consultants		SAS		SHO					
Total targeted	Total answered	T	A	T	A	T	A				
47	40 (85%)	18	15	14	12	15	13				
Community		Nurses		OT		Psychologists		SW			
Total targeted	Total answered	T	A	T	A	T	A	T	A		
150	98 (65%)	95	60	15	10	5	3	3 5	2 5		
Inpatient		Nurses		OT		Psychologists					
Total targeted	Total answered	T	A	T	A	T	A				
72	47 (65%)	60	40	8	4	4	3				
Total	Answered										
269	185 (69%)										

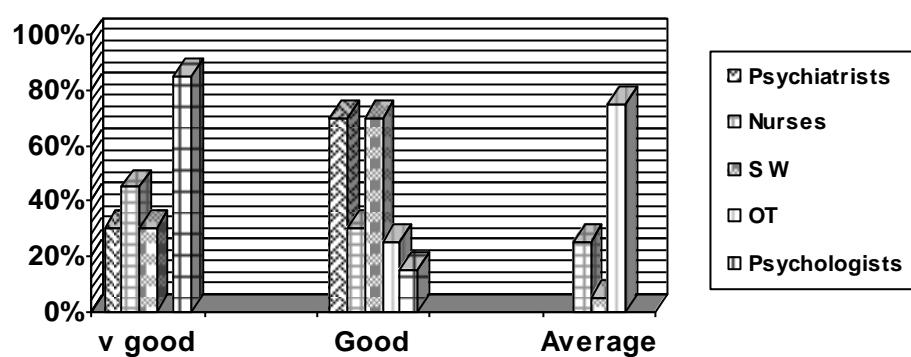
Target sample & responders

SAS: Staff Grade & Ass specialist doctor, SHO: senior house officer

SW: social worker, OT: occupational therapist

T: targeted, A: answered

Fig 1: Clinicians' self rated ability to diagnose/identify BPD



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Fig 2: Preferred Diagnostic System

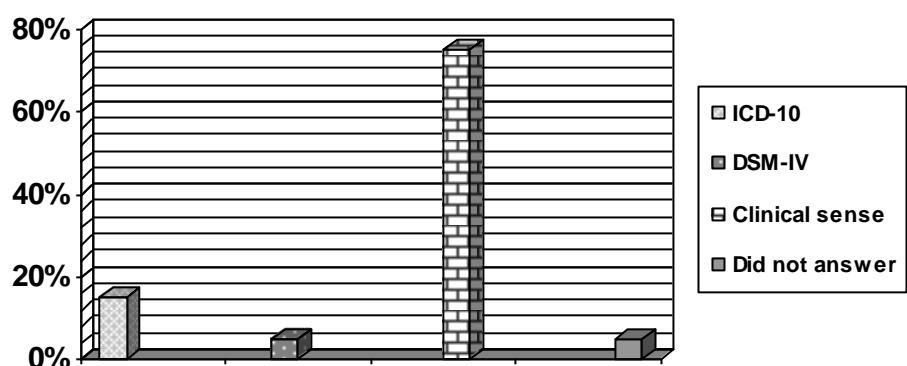
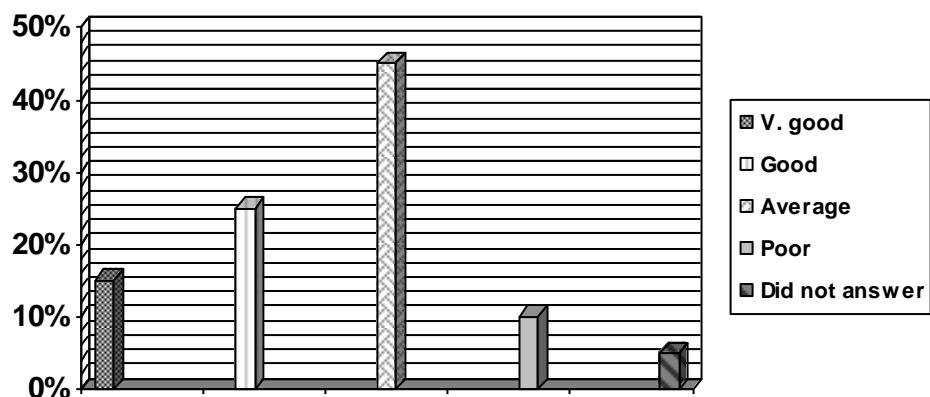


Fig 3: Clinicians' self rated ability to manage BPD

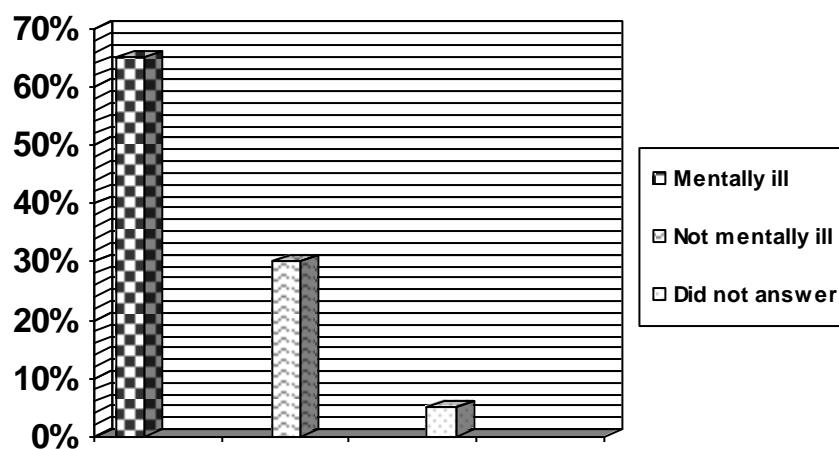


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Fig 4: Clinicians experience of working with BPD



Fig 5: Clinicians's view of individuals with BPD



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The use of psycho-pharmaceuticals to control boys' behaviour: A tale of badly behaving drug companies and doctors

Sami Timimi

إِسْتَعْمَالُ الْأَدْوَيَةِ النُّفْسِيَّةِ لِلْسَّيْطِرَةِ عَلَى سُلُوكِ الْأَطْفَالِ

قصة سوء تصرف شركات الأدوية والأطباء

سامي تيميمي

Abstract

There has been a rapid rise in rates of diagnosis of, and prescription of psycho-pharmaceuticals for, behavioural disorders in children in general, and boys in particular, in North American, North European and Australasian countries. This article concentrates on the evidence base for the prescription of psycho-pharmaceuticals for the two most common of these disorders: ADHD and Autism. The practice of widespread prescribing is based more on successful marketing than scientific evidence. Arab and other non-Western societies can learn from these mistakes and take a more cautious approach before accepting the validity of these diagnoses and the benefits of prescribing medication to 'treat' them.

There is a long history in the field of psychiatry of exorbitant claims being made for a variety of practices from inducing insulin comas to performing radical brain surgery such as lobotomies. Each new wave brought enthusiastic claims of 'miracle' cures, which over time, when subjected to rigorous objective research showed that these new treatments were not as effective as first claimed with risks having been unduly minimized. In recent decades, waves of optimism about 'curing' and 'treating' mental illness through modern psychopharmacology has popularised the use of psycho-pharmaceuticals changing use of psycho-pharmaceuticals changing

the prescribing habits of doctors and the health seeking behaviour of patients. Sadly, closer scrutiny of the scientific evidence reveals that the new age of the mass use of psycho-pharmaceuticals is the result more of good marketing than good science, through a confluence in the interests of neo-liberal policies, the profit motive of pharmaceutical companies, and 'guild' interests of psychiatrists¹. Closer scrutiny of the science shows that, as in previous era's physical treatments for psychiatric disorders, claims for psycho-pharmaceuticals curative properties have been exaggerated and their dangers minimised^{2,3}.

Childhood psychiatric disorder and the alliance between drug companies and doctors:

The treatment of children with psychiatric drugs is even more contentious as many of the drugs now being used on children are meant for, and have been researched in adults. In a context in which no objective tests exist to verify the 'diseases' being diagnosed, pharmaceutical companies realise that a bigger market for their product can be created by 'disease promotion'. Here the task of the pharmaceutical company becomes that of convincing the medical profession and the public that young people's emotional and behavioural problems are the result of under-diagnosed and under-treated 'brain' disorders, which of course sets the context for their products to then be marketed as 'treatments' for these alleged physical disorders. They do this by sponsoring or producing material for doctors' waiting rooms that alert the medical and lay community to the existence of these conditions, producing 'educational' material for parents and teachers, and funding parent support/campaigning groups.

One favoured means of promoting new illnesses is for pharmaceutical companies to invest in consumer support groups. For example, the US based National Alliance for the Mentally Ill received over US \$11 million from 18

pharmaceutical companies between 1996 and mid-1999⁴. It is cost-effective for pharmaceutical companies to invest in such groups without any direct promotion of their product, as support groups can increase the number of patients who present to doctors with ready-made diagnoses. This also allows them to present what they are doing as a 'service'. However, the problem is not just that of the profit motive of pharmaceutical companies, as the problem of professional identity, while making child psychiatry vulnerable to manipulation, must also be owned by the profession. Child psychiatry should sit at the confluence of many different systems of knowledge: medical, psychological, social, paediatric, anthropological, cultural and so on. The move towards favouring biological models and physical treatments has been attractive to sections of the profession that wish to carve out a clearer territory that bolsters a more 'doctor-like' image of what they do, rather than the more diffuse, hard to define role a more complex approach that spans several disciplines 'territories' provides.

The above dynamics (pharmaceutical company marketing and profiteering combined with some child psychiatrists' willing collusion with this) has subsequently distorted the evidence and ultimately practice for all psycho-pharmaceuticals currently used with

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children. The rest of this article deals with drug treatment for the two disorders that have become the most commonly diagnosed (mainly in the English speaking countries) child psychiatric disorders – ADHD (Attention Deficit Hyperactivity Disorder) and ASD (Autistic Spectrum Disorders). In both cases the diagnosis and prescriptions are given primarily to boys (in the region of about 4:1 boys: girls) and pharmaceutical treatments are aimed at modifying the child's unruly and non-conformist behaviour. I start with the example of the most widely used psycho-pharmaceutical in children.

Stimulants for ADHD

In November 2004, an article, containing several interviews, was published which highlighted the fact that questions about the scientific credibility of psychiatric drug research of stimulants were widespread⁵. Gene Haislip, the now retired director of the US Drug Enforcement Agency (DEA), set production quotas for controlled substances such as the federally restricted stimulant 'Methylphenidate'. During that time, he fought hard to raise public awareness about the drug's high rate of non-prescription use/misuse and about its long-term health impact on young patients. He notes that, "When I was at the DEA, we created Awareness about this issue. But the bottom line is we didn't succeed in

changing the situation because this – prescribing methylphenidate, for example – is spiralling", adding, "A few individuals in government expressing concern can't equal the marketing power of large companies"⁵.

Haislip suspects that the dubious marketing tactics of big pharmaceutical companies supported by a small group of prolific researchers in ADHD, whose work is funded by corporate producers of ADHD drugs, fuelled the spiralling use of stimulants. He also suspects that one or more ADHD patient advocacy groups that receive pharmaceutical company donations have essentially become fronts to push the prescribing of stimulants to children.

William Pelham, a prominent ADHD researcher and former member of the scientific advisory board for McNeil Pharmaceuticals, was also interviewed for the article⁵. Between 1997 and 1999, he was paid by McNeil to conduct one of three studies used to get US Food and Drug Administration (FDA) approval for a long-acting slow-release version of methylphenidate and, according to Hearn, the company now uses these three studies to claim that 96% of children taking this drug experience no problems with appetite, growth, or sleep. But Pelham says the studies were flawed and this claim is misleading because his study started with children who had already been taking the

drug and who had experienced no significant side-effects-children who exhibited side-effects were not included in the study to begin with. Pelham mentions that the company pressured him to change the final article, saying, “It was intimidating to be one researcher and have all these people pushing me to change the text”⁵.

In the world of ADHD advocacy, Children and Adults with Attention Deficit Hyperactivity Disorder (CHADD), a large US-based ‘parent support group’, engages in lobbying and claims to provide science-based, evidence-based information about ADHD to parents and the public. Pharmaceutical companies donated to CHADD nearly \$700,000 in the fiscal year 2002–2003⁵. Pelham, listed by CHADD as a member of its professional advisory board, came face to face with what he says are the group’s glaring conflicts of interest. In 2002, after he received the CHADD Hall of Fame Award, he was subsequently interviewed for ‘Attention!’ the organisation’s magazine. In the interview, Pelham said, among other things, that stimulant drugs have serious limitations. Eight months later, ‘Attention!’ published Pelham’s interview but with a large part cut out, particularly his comments about the limitations of the stimulants. Commenting on this Pelham says, “In recent years, I have come to

believe that the individuals who advocate most strongly in favour of medication – both those from the professional community, including the National Institutes of Mental Health, and those from advocacy groups, including CHADD – have major and undisclosed conflicts of interest with the pharmaceutical companies that deal with ADHD products”⁵.

In a world run by those with the power to buy media attention, it is not uncommon for single studies to become the basis on which practice develops. One such study was the Multimodal Treatment Study of ADHD (MTA), a large multicentre trial in the USA testing the efficacy of the stimulant methylphenidate⁶. This publication led to widespread publicity claiming that the results show that we should be treating children who have ADHD with stimulant medication as the first line and possibly only treatment. In the years since the publication and popularisation of this study there has been a sharp rise in the rates of stimulant prescription in all over North America, Northern Europe, Australasia, and beyond⁷. In the UK this had resulted in a prescription rate for stimulants of over 550 000 per annum by 2006⁸ a staggering rise of over 7000% in a decade.

The MTA study⁶ compared four groups of children who were given: medication only; intensive behavioural therapy only;

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combined behavioural therapy and medication; and standard community care. The study lasted 14 months and concluded that the medication-only and combined behavioural therapy and medication groups had the best outcome, with the ‘combined’ group having only a marginally better outcome than the medication-only group. A closer look inevitably brings up important questions of methodology and the hidden question of conflict of interest as many of the researchers were found to have extensive links with the pharmaceutical industry^{9,10}. Methodologically this was not a placebo-controlled double-blind clinical trial, and the parents and teachers who participated were exposed to pro-drug literature at the start of the study, thus potentially putting them in a mindset of positive expectation for change in the children receiving medication. There are also many question marks with regard to the selection and recruiting process, the behavioural interventions used, the placebo effect of the active medication arm continuing until the end of the 14 months but the behaviour therapy component finishing many months prior to 14 months, the lack of attention to the number of children experiencing side-effects, and the dismissal of some reported side-effects as probably being due to non-medication factors¹⁰. In addition, two-thirds of the community-care group were also receiving stimulant

medication during the study, yet the community-care group was the poorest outcome category¹¹. The 3-year outcome for the MTA study was finally published in 2007¹² – 8 years after the results of the study at 14 months were published. All the advantages with regard to symptoms of ADHD for the medication-only and ‘combined’ groups had been lost, whereas the improvements in the behavioural therapy-only group had remained stable. At the end of the original 14 month long study, participants had been free to pursue whatever treatment they wanted. Some children had started taking medication and others on medication had stopped. The therapy-only group remained the group with the lowest use of medication. When the researchers analysed outcomes for those who had used medication in the previous year they found that they had a worse outcome than those who had not. Furthermore, those who had taken medication continuously had higher rates of delinquency at 3 years, and were significantly shorter (by an average of over 4 cm) and lighter (by an average of over 3 kg) than those who had not taken medication. The likelihood of ending up being prescribed medication was not related to initial severity of symptoms. The 3-year outcome data, therefore shows that the study that is repeatedly quoted as providing the scientific basis

for prescribing stimulants to children⁶, actually demonstrates that there is little advantage (compared to behaviour therapy) associated with its use, but considerable risks. According to Pelham, who is on the steering committee for the MTA studies:

"No drug company in its literature mentions the fact that 40 years of research says there is no long-term benefit of medications [for ADHD]. That is something parents need to know" (Pelham, quoted in Hearn, 2004)⁶.

The children in the MTA study have been followed up for 8 years. Although details for these outcomes have not been published, it seems that outcomes for the 'medication management' group continued to deteriorate. Reporting on a recent conference presentation by James Swanson (another member of the steering committee for the MTA studies), Mytas (2009) notes that Swanson reports that:-

"The medication management group functioned better at 14-24 months, but was associated with worse functioning and greater need of additional school services at 36, 48, 72, and 96 months"¹³ Thus we come back full circle. The study that was most widely quoted as the study that 'proved' that ADHD should be treated with medication as a first line treatment has found that such a treatment (when compared to non-medication based first line treatments) is associated

with the worst outcomes and highest level of needing extra support. This adds to the accumulating evidence on stimulants for ADHD, which, despite being the most researched drug treatment for a child psychiatric disorder, has failed to find long term benefits accruing from their use. Systematic reviews of ADHD medication treatment ^{14,15,16,17,18}, have noted the inadequate reporting of study methodology, possible publication bias, limited reliability of results, inadequate data regarding adverse events, and the lack of Randomised Control Trial evidence of any long term benefit from taking stimulants. In the face of such findings it is impossible to continue to claim that using stimulants for treatment of ADHD is evidence based with the benefits outweighing the risks. Unfortunately practice is already so strongly established in some countries that reversing this trend is proving very difficult to achieve. Hopefully, preventing the uptake of such non-evidence based approaches will be easier to achieve in parts of the world where such practice has yet to take root, although the might of the drug companies still means this is an uphill battle.

The above example shows the extent to which the so-called scientific literature on the use of psycho-pharmaceuticals for childhood behavioural and emotional problems has demonstrated that it is

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unreliable and compromised in particular by conflict of interest issues. Psychiatry appears to be the top ‘offender’ amongst medical specialities with regards use of and sponsorship from drug companies. Perhaps this is not surprising given the enormous potential markets that can be (and have been) developed if psychiatry is successful in medicalising peoples’ emotional responses and behaviour, in a field so reliant on subjective interpretations of normalcy and deviance. Child psychiatry seems particularly vulnerable¹⁹, with, most recently, an influential group of child psychiatrists at Harvard, extensively involved in research promoting the use of psycho-pharmaceuticals (particularly for ADHD and paediatric bipolar disorder), found to have received millions of dollars of income from pharmaceutical companies most of which they had not disclosed²⁰. These types of problems have resulted in a growing distrust of the claims made for the use of psycho-pharmaceuticals with children, not only in the general public, but within the medical profession more generally. For example, an editorial in 2008 in one of the world’s oldest and most respected medical journals concluded:

“We know little about the long-term effects of psychiatric drugs in children. Side-effects of anti psychotics include shaking, damaged bones, reduced

fertility, obesity, and increased risk of heart attack, diabetes, and stroke. Stimulants can damage the heart and stunt growth. Antidepressants can increase the risk of suicide in children. Do these drugs work? Evidence is often scant – and, where it exists, is largely discouraging... Many patients have argued for years that psychiatric drugs are often more harmful, and less effective, than doctors believe. Increasingly, these patients are seen to be right. If psychiatry is to retain its claim to rationality, it must allow patients, including children, to be heard, and not merely drugged.”²¹

Anti-psychotics for autism

As far back as 1973, Ornitz commented that:

“Almost every conceivable psychotropic medication has been used with autistic children. The classes of medication have included sedatives, anti-histamines, stimulants, major and minor tranquilizers, anti-depressants, psychomimetics and anti-Parkinsonism drugs... As with psychotherapy, behaviour modification, special modification and speech therapy, no single medication or class of modification has made an autistic child any less autistic. Nor has any medication or class of medication proven successful in removing any particular symptom of the autistic syndrome.”²².

These decades' old observations are as true today as they were then, despite his comments referring to a much narrower group of children, as this was prior to the broader concept of 'Autistic Spectrum Disorder' (ASD) taking root. However, this is not the impression you get if you observe current practice in child and adolescent psychiatry. A good example of this comes from an editorial entitled '*Antipsychotic drugs in children with autism*' that appeared in 2007 in the world's most read medical journal; the *British Medical Journal*. Use of antipsychotics, particularly Risperidone, for 'treating' children with autism who have concurrent behavioural problems has become popular in recent years and well before any evidence for the safety and efficacy of such practice was available. Studies in this area appear to have the purpose of trying to justify an already established practice.

In this article, 'opinion leaders'²³ take an apparently moderate stance suggesting that antipsychotic drugs should not be used indiscriminately in children with autism but reserved for those with more 'serious' behaviour problems. This apparent moderate position is possibly more dangerous than a more overtly stated position, as it effectively sanctions the use of anti-psychotics for 'aggressive' behaviours in those diagnosed with autism and without presenting sufficient evidence that such

practice is either safe or effective, yet it is written in a style that suggests they are being evidence based and cautious. They

state "We consider off label use [of anti-psychotics] is justified when other approaches fail or are unfeasible"²³. This effectively leaves the door open for the continued increase in the use of (off-label) anti-psychotics as the reading doctor is left to wonder what other approaches to use and for how long before deciding they have failed (an important point, particularly bearing in mind what Ornitz, above, had to say about the lack of efficacy for any treatment in autism). Furthermore, unfeasibility of other approaches is near universal as the increasing popularity of the diagnosis of autism, together with this diagnosis becoming more often than not the responsibility of busy community paediatricians, means 'other approaches' are thin on the ground. They further recommend "Diagnosis should distinguish between aggression and other seriously challenging behaviours (which may justify an antipsychotic agent) and lesser levels of irritability (which may not)"²³. However, they don't explain how a clinician is supposed to differentiate between what one should consider 'seriously' challenging behaviour and 'irritability'. Not only is the conceptual basis of the article shaky, in addition the

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authors fail to approach the evidence with anything like sufficient rigour. In support of their recommendation to use anti-psychotics for challenging behaviour they refer to 2 studies only^{24, 25}. A more critical review of these 2 studies reveals anything but encouraging news for this practice. Firstly, both studies were of only 8 weeks in duration, far off the many years that drugs' prescribed to pacify behaviour are usually used for. Secondly, one of the studies²⁴ reviewed their subjects at 6 months and found a familiar pattern seen with drug treatment for behavioural problems – that of diminishing returns, with less than half of the group that had received Risperidone (the antipsychotic) now rated as 'improved' (interestingly they do not provide the data for how the placebo group were doing after 6 months). Thirdly, a decrease in challenging behaviour in those receiving an antipsychotic at a sufficient dose is really a foregone conclusion, after all anti-psychotics are not classified as 'major tranquillisers' for nothing. Whether this is viewed as a therapeutic effect or side effect depends on your perspective. Reflecting this fact, both studies rated high levels of somnolence (sleepiness or drowsiness), for example, Shea et al (2004) recorded a 72% rate of somnolence in the group receiving Risperidone, leading to the rather peculiar scenario where arguably the

same pharmacological effect is simultaneously rated as therapeutic (decrease in aggressive behaviours) and an adverse effect (somnolence) - after all you can't get up to much mischief if you're drowsy. What is most shocking however, is Morgan and Taylor's minimising of the serious adverse effects of the antipsychotics, which were prevalent in both studies. To give just one example, both studies found the group receiving Risperidone put on more weight than the group with the placebo; in McCracken et al (2002) this was an average of 2.7 v 0.8 Kg, and in the Shea et al (2004) study this was an average of 2.7 v 1.0 Kg. Remember this was after only 8 weeks of 'treatment'. Thus these children were being put at a greatly increased risk of serious illnesses such as cardiovascular disease and diabetes.

The article revealed that Morgan and Taylor are most certainly not the moderates they wished to present themselves as. Indeed they note that Janssen-Cilag withdrew their application for Risperidone to be licensed in the UK for use in behavioural problems associated with autism. As a result they actually outdo a drug company in their keenness for the use of psychopharmaceuticals in controlling autistic children's behaviour and go on to suggest doctors should carry on using anti-psychotics for this (off licence) indication. As influential clinicians and

researchers writing in an influential journal, their position effectively encourages the use of powerful, risky and largely ineffective medicines to control the behaviour of a group of citizens (children) who have never really had a say in what is being imposed upon them and with scant evidence to back up the validity or utility of such practice, but sufficient evidence to demonstrate that such practice exposes children to significant risks.

Conclusion

There has been a rapid increase in diagnosis of psychiatric disorders in children and adolescents in most Western societies, particularly for behavioural problems and, amongst these, particularly for boys. Childhood problems are increasingly medicalized resulting in an apparent 'epidemic' of several psychiatric disorders in children in the West and a rapid rise in the prescription of psychotropics to the young. I have summarized the problematic nature (in terms of lack of evidence for a biological substrate, high co-morbidity, lack of cross-cultural validity, boundary issues, marginalization of certain types of evidence, and lack of evidence for effectiveness of medications used) of current popular child psychiatric diagnoses elsewhere^{26, 27,11,28,19,29,7}. In this paper I have concentrated on the way evidence (or rather lack of it) for the safety and

efficacy of using psychotropics for children diagnosed with ADHD or ASD, has been distorted to increase the potential market and bolster a more 'doctor-like' image for child psychiatrists.

Figures for prescriptions of psychotropic medication to children and adolescents both illustrate the depth of this problem and the peculiar cultural style of responding to it. For example, researchers analyzing prescribing trends in nine countries between 2000 and 2002, found significant rises in the number of prescriptions for psychotropic drugs in children were evident in all countries – the lowest being in Germany where the increase was 13%, and the highest being in the UK where an increase of 68% was recorded³⁰. Of particular concern is the increase in rates of stimulant prescription to children. By 1996 over 6% of school-aged boys in America were taking stimulant medication³¹ with children as young as two being prescribed stimulants in increasing numbers³². Surveys in the late 90s showed that in some schools in the United States over 17% of boys were taking stimulant medication and recent estimates suggest that about 10% of school boys in the United States have been or are being prescribed a stimulant³³. In the UK prescriptions for stimulants have increased from about 6,000 prescriptions a year in 1994 to

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over 450,000 by 2004; a staggering 7,000+% rise in one decade³⁴. Rates of diagnosis of ASDs have gone from about 4 per 10,000 children³⁵ a few decades back – with Kanner's criteria being used and identifying almost exclusively children with moderate to severe learning difficulties – whereas now it is thought to affect about 1% of children³⁶. Both ADHD and ASD are diagnoses that target boys and their behaviour.

The increasing popularity of certain diagnoses, in this case ADHD and ASD, owes more to social, political, and

economic processes than to scientific breakthroughs. The popularity of these diagnoses can act as a barometer for the cultural attitudes toward boys and how to deal with them. Those countries with high rates of diagnoses of these conditions and high rates of using medication for essentially social control purposes, demonstrate their lack of tolerance for 'boyishness'. Countries that have yet to take up this practice could do well by not following this example of bad behaviour by the elite toward their society's children.

الخلاصة:

في بلدان أمريكا الشمالية ، أوربا الشمالية وأستراليا حدث إرتقاب سريع في معدلات التشخيص والوصفات الطبية للمستحضرات الصيدلانية النفسية فيما يتعلق بالإضطرابات السلوكية في الأطفال عموماً وفي الأولاد بشكل خاص. وتركز هذه المقالة على قاعدة الأدلة التي يستند إليها في الوصفات الطبية الصيدلانية النفسية لإثنين من أكثر الإضطرابات النفسية شيوعاً وهما اضطراب فرط الحركة ونقص الانتباه والتوحد . فالمارسة الواسعة الإنتشار في كتابة الوصفات الطبية مبنية هي في أكثر ما يكون على التسويق الناجح وليس على الأدلة العلمية. وبإمكان المجتمعات العربية والأخرى غيرـ الغربيـه التعلم من هذه الأخطاء وأن تتحـوـ منـحـىـ أكثرـ حـزـراـ قبلـ أنـ تـتـقـبـلـ صـحةـ مثلـ هـذـهـ التـشـخـيـصـاتـ وـالـفـوـائـدـ المـزـعـومـهـ المـتـأـتـيهـ منـ إـصـدـارـ الـوـصـفـاتـ الطـبـيـهـ "ـالـعـالـجـهـ".

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The Heart, Mind and Brain

Mohamed Omar Salem

القلب والنفس والدماغ

محمد عمر سالم

Abstract:

It has been a general observation that in many cultures throughout history, the heart has been considered the source of emotions, passion and wisdom. However, scientists in the past emphasized the role of the brain in the head, to be responsible for such experiences. Interestingly, recent studies explored physiological mechanisms by which the heart communicates with the brain, thereby influencing information processing, perceptions, emotions and health. These studies provided the scientific basis to explain how and why the heart affects mental clarity, creativity and emotional balance. Also research indicates that the heart is far more than a simple pump. The heart is, in fact a highly complex, self-organizing information processing centre with its own functional “brain” that communicates with and influences the cranial brain via the nervous system, hormonal system and other pathways. These influences profoundly affect brain function and most of the body’s major systems.

In this review, I shall try to summarize and integrate the interesting findings in this area.

Introduction:

The concept of mind is of central importance for psychiatrists and psychologists. However, little attention has been paid in most formal textbooks to this important issue, which is usually studied under the section of “Philosophical aspects of psychiatry / psychology”. The practicing psychiatrist should have some working model of the mind to help him/her understanding his patient’s problems¹. In the few available models, the main components of the mind are the Intellect and the affect². However, the central role of the heart as

a component of the mind has been emphasized by various cultures and religions across the world's history including the Islamic model³.

This review tries to discuss some aspects of the components of the mind, with a particular reference to the role of the heart on the light of new interesting neurophysiological and parapsychological discoveries.

The heart in the world cultures:

It is a general observation that in many cultures throughout history, the heart has been considered the source of emotions,

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passion and wisdom. Also, people used to feel that they experience the feeling or sensation of love and other emotional states in the area of the heart. However, scientists in the past emphasized the role of the brain in the head, to be responsible for such experiences. Interestingly, recent studies explored physiological mechanisms by which the heart communicates with the brain, thereby influencing information processing, perceptions, emotions and health. These studies provided the scientific basis to explain how and why the heart affects mental clarity, creativity and emotional balance. In this review, I shall try to summarize and integrate the interesting findings in this area.

The heart and emotions:

It was long believed that changes in emotions are accompanied by predictable changes in the heart rate, blood pressure, respiration and digestion. So when we are aroused, the sympathetic division of the autonomic nervous system energizes us for fight or flight, and in more quiet times, the parasympathetic component cools us down. In this view it was assumed that the autonomic nervous system and the physiological responses moved in concert with the brain's response to a given stimulus⁴.

The heart and brain:

However, following several years of research, it was observed that, the heart

communicates with the brain in ways that significantly affect how we perceive and react to the world. It was found that, the heart seemed to have its own peculiar logic that frequently diverged from the direction of the autonomic nervous system. The heart appeared to be sending meaningful messages to the brain that it not only understood, but also obeyed⁵. Later, neurophysiologists discovered a neural pathway and mechanism whereby input from the heart to the brain could inhibit or facilitate the brain's electrical activity⁶.

The Brain in the Heart:

After extensive research, Armour (1994) introduced the concept of functional "HEART BRAIN"⁷. His work revealed that the heart has a complex intrinsic nervous system that is sufficiently sophisticated to qualify as a "little brain" in its own right. The heart's brain is an intricate network of several types of neurons, neurotransmitters, proteins and support cells like those found in the brain proper. Its elaborate circuitry enables it to act independently of the cranial brain – to learn, remember, and even feel and sense. The heart's nervous system contains around 40,000 neurons, called sensory neurites⁸. Information from the heart –including feeling sensations- are sent to the brain through several afferents. These afferent nerve pathways enter the brain at the area of the medulla, and cascade up into the

higher centres of the brain, where they may influence perception, decision making and other cognitive processes⁹.

Thus, it was revealed that the heart has its own intrinsic nervous system that operates and processes information independently of the brain or nervous system. This is what allows a heart transplant to work; normally, the heart communicates with the brain via nerve fibres running through the vagus nerve and the spinal column. In a heart transplant, these nerve connections do not reconnect for an extended period of time; however, the transplanted heart is able to function in its new host only through the capacity of its intact, intrinsic nervous system¹⁰.

The heart's magnetic field:

Research revealed also that the heart communicates information to the brain and throughout the body via electromagnetic field interactions. The heart generates the body's most powerful and most extensive rhythmic electromagnetic field. The heart's magnetic component is about 500 times stronger than the brain's magnetic field and can be detected several feet away from the body. It was proposed that, this heart field acts as a carrier wave for information that provides a global synchronizing signal for the entire body.¹¹

Heart field interactions between individuals: There is now evidence that a subtle yet influential electromagnetic

or "energetic" communication system operates just below our conscious awareness. Energetic interactions possibly contribute to the "magnetic" attractions or repulsions that occur between individuals, and also affect social relationships. It was also found that one person's brain waves can synchronize to another person's heart¹².

Communication via hormones; the heart as a hormonal gland:

Another component of the heart-brain communication system was provided by researchers studying the hormonal system. The heart was reclassified as an endocrine gland, when in 1983 a hormone produced and released by the heart called atrial natriuretic factor (ANF) was isolated. This hormone exerts its effect on the blood vessels, on the kidneys, the adrenal glands, and on a large number of regulatory regions in the brain. It was also found that the heart contains a cell type known as "intrinsic cardiac adrenergic" (ICA) cells. These cells release Noradrenaline and Dopamine neurotransmitters, once thought to be produced only by neurons in the CNS. More recently, it was discovered that the heart also secretes oxytocin, commonly referred to as the "love" or bonding hormone. In addition to its functions in childbirth and lactation, recent evidence indicates that this hormone is also involved in cognition, tolerance, adaptation, complex sexual and maternal

behaviours, learning social cues and the establishment of enduring pair bonds. Concentrations of oxytocin in the heart were found to be as high as those found in the brain¹³.

Increasing Psychophysiological Coherence:

Data indicate that, when the heart rhythm patterns are coherent, the neural information sent to the brain facilitates cortical function. This effect often experienced as heightened mental clarity, improved decision making and increased creativity. Additionally, coherent input from the heart tends to facilitate the experience of positive feeling states. This may explain why most people associate love and other positive feelings with the heart and why many people actually feel or sense these emotions in the area of the heart. So, the heart seems to be intimately involved in the generation of Psychophysiological coherence^{14,15}.

The heart and amygdala:

Also, research has shown that the heart's afferent neurological signals directly affect activity in the amygdala and associated nuclei, an important emotional processing centre in the brain. The amygdala is the key brain centre that coordinates behavioural, immunological, and neuroendocrine responses to environmental threats. It compares incoming emotional signals with stored emotional memories, and accordingly

makes instantaneous decisions about the level of perceived threat. Due to its extensive connections to the limbic system, it is able to take over the neural pathways, activating the autonomic nervous system and emotional response before the higher brain centres receive the sensory information^{16,17}.

The Heart and Intuition:

One of the very interesting research findings was that, the heart is involved in the processing and decoding of intuitive information¹⁸. Previous data suggests that the heart's field was directly involved in intuitive perception, through its coupling to an energetic information field outside the bounds of space and time¹⁹. Using a rigorous experimental design; there was evidence that both the heart and brain receive and respond to information about a future event before the event actually happens. Even more surprising was that the heart appeared to receive this intuitive information before the brain²⁰.

Discussion:

It has been long believed that conscious awareness originates in the brain alone. Recent scientific studies suggest that consciousness in reality emerges from the brain and body acting together²¹. As it has been shown, a growing body of evidence now suggests that the heart plays a particularly significant role in this process. The above research findings indicate that, the heart is far

more than a simple pump. The heart in fact is seen now as a highly complex, self-organizing information processing centre with its own functional “brain” that communicates with and influences the cranial brain via the nervous system, hormonal system and other pathways. The involvement of the heart with intuitive functions was another interesting piece of information. However, as persons with transplanted hearts can function normally, the heart can be considered here as a medium or a physical tool serving for an underlying more sophisticated integrating system that has the capacity to carry the personal identity of the individual. These new visions, an addition to the acknowledged precognitive dreaming ability of the mind might give better understanding to the concept of mind as

a multi-component unit that is not only interacting with the physical environment through demonstrable means, but also has the capacity to communicate with the cosmic universe through non physical, pathways^{22,23}. Also, this gives space to the concept of the spirit as the non physical element, or the field of the mind that can communicate with the cosmos outside the constraints of space and time. The evidence for such communication comes from the reported phenomena of extra-sensory perception, psycho-kinesis, and religious experiences^{24,25}.

Possibly further advancement in quantum physics might give us one day more insights into how we can formulate this new model of the heart, mind and spirit.

الملخص

من الملاحظ أن معظم الثقافات البشرية عبر التاريخ اعتبرت أن القلب هو مصدر الإنفعالات والعواطف والحكمة ، وبالرغم من ذلك كان الباحثون في الماضي يصررون على أن الدماغ الذي في الرأس هو وحده المسئول عن مثل هذه الخبرات والتجارب ، ومما هو مثير للإهتمام أن بعض الدراسات الحديثة اكتشفت أن القلب يتواصل مع الدماغ من خلال آليات وظيفية فسيولوجية متعددة ، ومن خلالها يؤثر على عمليات معالجة المعلومات وإدراك وإنفعالات ، وقد وفرت هذه الدراسات الأساس العلمي لتفصير كيفية أن حالة القلب من الممكن أن تؤثر على الصفاء الذهني والإبداع والتوازن الإنفعالي ، كما اتضح من هذه الأبحاث أن القلب أكبر بكثير من مجرد مضخة بسيطة ، فالقلب في الحقيقة يبدو كمركز على درجة عالية من التعقيد والتنظيم الذاتي لمعالجة المعلومات ، وله دماغ وظيفي خاص به قوامه أربعون ألف خلية عصبية ، ومن خلاله يتصل ويوثر مع الدماغ الذي في الرأس من خلال الجهاز العصبي والهرمونات ووسائل أخرى ، وهذه اإتصالات تؤثر بشدة على وظائف الدماغ ومعظم أجهزة الجسم الرئيسية ، وسأحاول في هذه الورقة المرجعية استعراض وبيان بعض الإكتشافات المثيرة في هذا المجال .

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Book Review

Electroconvulsive and Neuro-modulation Therapies

Edited by Conrad M Swartz

Review by: Mamdouh EL-Adl^{1*} & Sameh Hassan²

This book was first published by Cambridge University Press in 2009 and edited by Conrad Swartz, MD, PhD who is an Affiliate Associate Professor, Department of Psychiatry, Oregon Health and Science University and Professor Emeritus, Department of Psychiatry, Southern Illinois University. Its ISBN 978-0-521-88388-7 with hard cover and its price is £ 50.00

A total of **52 Scholars** and clinicians contributed to this book's with its **609 pages, 4 parts and 38 chapters**.

This is a reference on Electroconvulsive and Neuro-modulation Therapies that provides a comprehensive cover to the scientific basis and clinical practice of ECT as well as comparisons between ECT and medication therapies including the new generation of antipsychotic drugs. It also provides the readers of with administrative perspectives and specific details for the management of this modality in clinical practice. The new forms of non-convulsive electrical and magnetic stimulation therapy are also covered in detail. The chapters' authors are leading scholars and clinicians.

Part I (chapters 1–8): Scientific and experimental basis of electroconvulsive therapy.

Chapter 1: Electricity and electroconvulsive therapy authored by Conrad M Swartz. He addressed basic electrical facts and safety, seizure generation, brief-pulse stimulus dose, sine wave stimulus dose and stimulus efficiency. He also compares sine wave versus brief-pulse stimuli and discusses efficiency of brief-pulse stimuli and ultrabrief pulse.

Chapter 2: Nonelectrical convulsive therapies by Nial McCare. He reviewed nonelectrical convulsive therapy (non-ECT) procedures including pentylenetetrazol (PTZ) and cyclohexylethyltriazol, flurothyl inhalation and insulin coma therapy, which have epileptogenic effects. **Chapter 3:** Neurochemical effects of electrically induced seizures: Relevance to the antidepressant mechanism of electroconvulsive therapy authored by Renana Eitan, Gail Ladshut and Bernard Lerer who discussed the mechanisms of action of ECT.

They discussed the effect of ECT on different neurochemical pathways including the serotonergic, noradrenergic, dopaminergic pathway, and GABA pathways as well as the glutamatergic systems. They discussed the effect of ECT on neuropeptides, gene transcription and neurotrophic factors. They also discussed the effect of ECT on synaptic plasticity and neurogenesis which has recently been the focus of a great deal of interest. Some other factors which include environmental, physiologic and pathologic variables that influence neurogenesis were also covered.

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Chapter 4: Hypothesized mechanisms and sites of action of electroconvulsive therapy by Nikolaus Michael who postulated that any theory of ECT mechanism of action is hypothetical. **Chapter 5:** Brain imaging and electroconvulsive therapy by Kathy Peng and Hal Blumenfeld. Neuroimaging has greatly enhanced our understanding of what ECT does to the brain, how it may treat depression and the mechanism by which it causes cognitive side effects. **Chapter 6:** Evidence for electroconvulsive therapy efficacy in mood disorders by Keith G Rasmussen. **Chapter 7:** Clinical evidence for the efficacy of electroconvulsive therapy in the treatment of catatonia and psychosis by Gabor Gazdag, Stephan C Mann, Gabor S Ungvari and Stanley N. Caroff. **Chapter 8:** Hormonal effects of electroconvulsive therapy by Conrad M Swartz. Conrad states that ideally hormone testing should help assess the adequacy of the ECT course for individual patients and those prescribed maintenance ECT in order to determine if the frequency of treatment is adequate. This seems to be based on resting cortisol levels and ECT-induced cortisol release after pretreatment with 1.5–2mg of dexamethasone at least 8 hours prior. Perhaps 1 mg dexamethasone can be used if nonbarbiturate ECT anaesthesia (e.g. etomidate) is given. Adequacy of single ECT treatments can be measured by Benchmark Method.

Part II (Chapter 9–12): Historical, societal and geographic perspectives. **Chapter 9:** History of electroconvulsive therapy by Edward Shorter. **Chapter 10:** Electroconvulsive therapy in biographical books and movies by Andrew Mc Donald and Garry Walter.

Chapter 11: Professional barriers to providing electroconvulsive therapy authored by William H. Reid. **Chapter 12:** Legislation that regulates, limits or bans electroconvulsive therapy by Alan R. Felthous. **Abou Saleh & Christodoulou** have published an important statement in the Arab Journal of Psychiatry vol.20 (1) May 2009 about the WPA position statement on the ethics of the use of unmodified ECT. Unfortunately unmodified ECT is still used in many developing countries. It is highly important that the **Arab Federation of Psychiatry** together with the **National Psychiatric Associations** in every Arab state do every effort to put an end to the use of unmodified ECT in the Arab World.

Part III (chapters 13–18): International perspectives. **Chapter 13:** Electroconvulsive therapy availability in the United States by Michelle Magid and Barbara M Rohland who noted concerns raised about the patterns of ECT use in USA including regional, socioeconomic and demographic factors related to its utilization. **Chapter 14:** Electroconvulsive therapy in Scandinavia and the United Kingdom by Susan Mary Benbow and Tom G. Bolwig. This chapter examines the history and present state of ECT therapy practice in Scandinavia and the UK, considers recent changes and looks to the future of treatment provision. **Chapter 15:** Electroconvulsive therapy in continental Western Europe: A literature review by Pascal Sienaert and Walter W. van den Broek. **Chapter 16:** Electroconvulsive therapy in Asia by Sidney S Chang who noted that ECT use rates are much lower in Asia than in Western countries (Approximately 5–10/100,000).

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persons/year compared with 20–40/ 100,000 persons/year respectively) which I found very interesting. **Chapter 17:** history of electroconvulsive therapy in the Russian Federation by Alexander I. Nelson and Nataliya Giagou who noted that USSR was one of the first countries to adopt ECT as a therapeutic option. **Chapter 18:** Electroconvulsive therapy in Latin America by Moacyt Alejandro Rosa and Maria Odebrecht Rosa state that no accurate figures about the use of ECT in Latin America. However in 2002 the Federal Medical Council issued a decree prohibiting ECT without general anaesthesia and muscle relaxation.

Part IV (Chapters 19–21): Administrative perspectives. **Chapter 19:** Electroconvulsive therapy hospital policy and quality assurance by Barry Alan Kramer; **Chapter 20:** Staff management and physical layout for electroconvulsive therapy by Jerry Lewis and **chapter 21:** Electroconvulsive therapy forms authored by Jerry Lewis. The three chapters focus on hospital policy, staff and forms.

Part V (Chapter 22–34): The clinical manual. **Chapter 22:** Patient selection and electroconvulsive therapy indications by Conrad M. Swartz who reviews the American Psychiatric Association (APA) Task Force Report on ECT (APA, 2001). The latter did not limit the use of ECT within the group of patients who are diagnosed with major depression. **Chapter 23:** Electroconvulsive therapy or antipsychotic drugs (or benzodiazepines for catatonia) by Conrad M Swartz. **Chapter 24:** Informed consent by Peter B. Rosenquist who discussed the definition of informed consent and its historical development, competency and obstacles to informed consent with a competent patient. It is very important for psychiatrists in the Arab World to pay special care to taking patient's valid consent and develop a legal framework to address the patients who are unable to give a valid consent. **Chapter 25:** Electroconvulsive therapy in the medically ill authored by Keith G. Rasmussen and Paul S. Mueller. **Chapter 26:** Anaesthesia for electroconvulsive therapy by Charles H. Kellner, Dongehen Li and Limore Maron. **Chapter 27:** Stimulus electrode placement by Conra M Swartz who describes different electrode placements in bilateral and unilateral (left or right sided). **Chapter 28:** Stimulus dosing by W. Vaughn McCall who discusses important issues including the relationship between seizures induced by lidocaine-modified ECT were shorter than those induced by routine ECT and an inverse relationship between seizure duration and antidepressant effect. Stimulus dose producing seizures longer than 25–30 seconds had an antidepressant effect (American Psychiatric Association Task Force on Electroconvulsive Therapy, 1978). He also discussed the cognitive side effects and the stimulus dose and stimulus dosing in continuation/maintenance ECT which are very important. **Chapter 29:** Electroencephalogram monitoring and implications by Hideki Azuma which is a recent and useful technical development in more modern ECT machines. **Chapter 30:** Heart rate and electroconvulsive therapy by Conrad M Swartz and how peak heart rate reflects brain activity and function. **Chapter 31:** Cognitive side

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effects and psychological testing by James Stuart Lawson who states that subjective memory complaints can represent symptoms of dissatisfaction from an undertreated anxiety or personality disorders. He expects that advances in clinical ECT methods will further reduce cognitive effects while preserving efficacy. **Chapter 32:** Electroconvulsive therapy in children and adolescents by Garry Walter, Colleen Loo and Joseph m Rey. **Chapter 33:** Postelectroconvulsive therapy evaluation and prophylaxis by T.K. Birkenhäger and Walter W. van den Broek. **Chapter 34:** Ambulatory and maintenance electroconvulsive therapy by Charles H kellner and Unnati D. Patel.

Part VI (Chapter 35–38): Neuromodulation treatment. **Chapter 35:** Transcranial magnetic stimulation (TMS) by Oded Rosenberg and Pinhas N. Dannon who discuss neurobiological background and uses of TMS particularly in depression. They compared TMS with ECT and discussed safety issues in TMS. **Chapter 36:** Vagus nerve stimulation (VNS): Indications, efficacy and methods by Shawn M McClintock, Kenneth Trevino and Mustafa M. Hussain who present VNS therapy as a new antidepressant modality. **Chapter 37:** Deep brain stimulation (DBS): Methods, indications, locations and efficacy by Thomas E. Schläpfer and Bettina Heike Bewernick who highlighted the problems in target selection and speak about the use of DBS in depression and OCD. They also discussed ethical considerations and quality standards in DBS research. **Chapter 38:** Transcranial direct current stimulation by Julie A. Williams and Felipe Fregni who discuss mode of action, indications and adverse events.

This book is a very welcome addition to the reference library on ECT. On the international scale it did not seem to address the use of ECT in the Arab World or Africa. This may be due to lack of research and publication from both areas or lack of reliable reports and statistics. This should stimulate the new generations of Arab psychiatrists to rectify this. We should endeavour to present our experience in this field. I am calling upon the Arab Federation of Psychiatry to have a section or special interest group on ECT use, research and Ethics. Psychiatric Departments in Arabic Universities and the expertise among Arab Psychiatrists practicing in the West have an important role to play in this field for the best interest of our patients, profession and nations.

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Letter to the Editor

Letter to the Editor

Dear editor

The article by Prof. Sami Tamimi, published in this issue, with the title (The use of Psycho-Pharmaceuticals to control boy's behavior. A tale of badly behaving drug companies and doctors).

Prof. Tamimi can be assured that the tale is not taking place in the Arab countries, but I would like to know what Prof. Tamimi thinks of the proper management of severe behavioral problems in Autistic child, and severe ADHD not responding to behavioral therapy.

Walid Sarhan - Jordan

Dear editor

The article by Dr. Mohamad Omar Salem. With the title (The Heart, Mind and Brain). The Idea of the Heart having some share in Psychological functions and dysfunctions is very interesting, but Dr. Mohamad mentioned briefly the magnetic field of the heart, the heart has its own brain and the heart working as hormonal gland, as well as mentioning psychophysiological coherence and the role of the heart and intuition, I think every one of these concepts worth an article to explain it, I will be looking forward for these articles,

Walid Sarhan - Jordan

Important notice

The following article: “**Karam EG, Mneimneh ZN, Dimassi H, Fayyad JA, Karam AN, Nasser SC, Chatterji S, Kessler RC. Lifetime Prevalence of Mental Disorders in Lebanon: First Onset, Treatment and Exposure to War**” published in the Arab Journal of Psychiatry May 2009, Vol. 20, No. 1; pp: 1-17 after agreement with the main author was originally published in PLoS Medicine as:

“**Karam EG, Mneimneh ZN, Dimassi H, Fayyad JA, Karam AN, Nasser SC, Chatterji S, Kessler RC. Lifetime Prevalence of Mental Disorders in Lebanon: First Onset, Treatment and Exposure to War. PLoS Med 2008; 5(4):e61. doi:10.1371/journal.pmed.0050061**”.

فعالية الصورة الأردنية المعدلة من برنامج علاج الاضطراب في الوعي الزماني الناشئ عن الإصابة الدماغية

الدكتور عبد الرحيم يوسف عطية ، الدكتور زيدان عبد الصمد الخامسة

The Effectiveness of an Adapted Version of the Temporal Orientation Therapy Program for Brain Injured Jordanians

Abdelrahim Y. Attieh, Zaidan A. Khamayseh,

Abstract

The effectiveness of an adapted version of the Temporal Orientation Therapy (a subdivision of the Cognitive-Linguistic Improvement Program - CLIP) in treating temporal orientation disturbances following brain injury is tested. Thirty brain-injured Jordanian adults served as subjects, 15 as an experimental group and 15 as a matched control group. Pre and Post test was held to all subjects using an original, valid and reliable scale. Statistical analysis included ANCOVA, ETA factor, and Repeated Measures. Results showed significant differences in favor of the experimental group, suggesting a noticeable improvement of the subjects' performances after being trained using the adapted version of the Temporal Orientation Therapy Program.

المقدمة

لقد اسهمت محاولات علماء الأعصاب في فهم الأساس العصبي لعمل الدماغ وقدرته على فهم وتقسيم الأحداث وال العلاقات في زيادة المعرفة الآلية لعملية التفكير في الدماغ البشري وعلى معرفة الآلية التي تربط بين القدرات المعرفية المختلفة.

يُعتبر إصابات الرأس بأنواعها : المفتوح منها
عَنِ الْعِيَارَاتِ النَّارِيَّةِ أَوْ حَوَادِثِ السِّيرِ الَّتِي تَؤَدِّي إِلَى
كَسُورٍ فِي الْجَمِيعَةِ وَقَدْ تَنَسَّبُ بِتَلْفِ الْخَلَايَا وَالْأَنْسُجَاتِ
الْعَصِيبِيَّةِ الدَّمَاغِيَّةِ ، أَوْ الْمُغْلَقِ مِنْهَا
كَسُورٍ فِي الْجَمِيعَةِ ، كَتَلَكَ النَّاتِجَةُ عَنْ وُجُودِ الْأُورَامِ
الْدَّمَاغِيَّةِ ، أَوْ تَلَكَ النَّاتِجَةُ عَنِ الْجَلْطَاتِ الدَّمَاغِيَّةِ

على أقصى طاقات المريض في الحقل الذي يخضع فيه للعلاج والتأهيل¹³. إن التقدم في مكونات القدرات المعرفية واللغوية مرتبط بالتحسن في الجوانب الأخرى مثل الحالة الإنفعالية والعاطفية والإجتماعية والقدرات الحركية وغيرها¹⁴. ومع ذلك فإن التحسن في القدرات الذهنية والمعرفية العليا (مثل عمليات التفكير وحل المعضلات) يستغرق وقتاً أطول¹⁵ ، علماً أن غالبية الإصابات الدماغية الشديدة تترك اضطرابات وظيفية طويلة المدى¹⁶. كذلك فإن التحسن في الوظائف الحركية يسبق التحسن في الوظائف المعرفية والذهنية¹⁷. ولذلك ينصح الباحثان القيام برصد وتسجيل التطورات السلوكية في جميع القدرات وذلك من أجل فهم أوسع لдинامية عملية تأهيل الإصابات الدماغية. لهذا فإن عملية التبويب (mapping) هذه تساعد على وضع إطار محدد للقدرات المختلفة مما يساعد (مع تكرار عملية الرصد هذه) على تحديد إطار لمدى التقدم مع البرامج التأهيلية¹⁸⁻¹⁹. إن تأهيل غالبية الإصابات الدماغية الشديدة (خصوصاً التلف المحوري المنتشر Diffuse Axonal Injury) ليس له معالم محددة من الناحية الطبيعية أو أساساً للتتحديد المسبق لمسار التحسن، كما أنه ليس من السهل تبويبها وقياسها من الناحية الكمية²⁰⁻²¹. ومن الجدير ذكره أن الاستمرار في عملية التأهيل ومهما كان بسيطاً وتدريجياً فإنه يؤدي إلى نتائج دائمة نظراً لمرنة الدماغ²².

ومع أن معظم الدراسات اعتمدت فترة فقدان الوعي (coma) إذا كانت لمدة زمنية أطول من ستة شهور أو فقدان الذاكرة لمدة يوم إلى سبعة أيام كمعايير سلبية للتقدم في برامج التأهيل²³ ، إلا أن بعض الدراسات التي قامت بمتابعة وتبويب التحسن بفعل البرنامج التأهيلي لعدة سنوات، وجدت أن هذه القاعدة لا تطبق على جميع الحالات^{24,25}. لذلك، فإنه مع أن مسار التحسن للإصابات الدماغية قد يتشابه في جميع الحالات، إلا أن سرعة ودرجة التحسن تختلف من فرد لآخر وحسب شدة ونوع الإصابة، لذلك فإن تبويب (mapping) الخطة التأهيلية يبقى الأمل في

والحركات الإرادية، بحيث أن تعرض هذا الجزء من الدماغ يؤدي إلى مشاكل في تلك الوظائف. حددت جمعية النطق واللغة والسمع الأمريكية American Speech, Language and Hearing Association - ASHA) عدداً من الجوانب المعرفية التي تؤثر على اللغة⁴ وهي:
1 - الخلل في الانتباه، الإدراك، والذاكرة.
2 - عدم المرونة، والاندفاعية، والتفكير غير المنظم.
3 - عدم فعالية المعلومات من حيث (محتواها، كميتها، تعقيداتها).
4 - صعوبة التعامل مع المعلومات المجردة.
5 - صعوبة تعلم معلومات جديدة أو قواعد أو إجراءات.
6 - صعوبة استدعاء وتنكّر المعلومات.
7 - صعوبة حل المسائل والحكم على الأشياء.
8 - السلوك الاجتماعي غير المناسب.
9 - وجود خلل في جوانب الوعي بالذات، وصعوبة في تحديد الأهداف، وضعف في المبادأة وضعف التحكم بالذات، وضعف تقييم الشخص لنفسه.

يعتمد تأهيل المصابين دماغياً والذين تأثرت لديهم وظائف الوعي الزمني على عدة مباديء مثل خبرة فريق التأهيل وعمل الفريق متعدد الاختصاصات، وفهم المشكلة الواسع والمتعمق بطبيعة الإصابات الدماغية وحدها، وكذلك وضع الحالة الصحي وال عمر الزمني وكافة الجوانب الأخرى. حيث أثبتت العديد من الدراسات الآخر الإيجابي للتأهيل المعرفي و اللغوي لحالات الإصابات الدماغية¹²⁻¹⁵.

تعتبر عملية معالجة المشاكل المعرفية اللغوية الناتجة عن الإصابات الدماغية، عملية دينامية تبدأ بتقدير المريض، وجمع المعلومات حول قدراته ومهاراته، ولاحظة سلوكاته وتسجيل استجاباته، كما أنه يجب أن يتم اختيار المواد المستعملة في العلاج مثل البرامج والمهمات والمؤثرات بشكل دقيق ومناسب، للحصول

فعالية برنامج علاج الإضطراب في الوعي الزماني الناشيء عن الإصابة الدماغية

عدد قليل من الدراسات التي توبّع مراحل عملية التأهيل للإصابات الدماغية في الدول النامية¹⁴ على عكس المنشور في الدول المتقدمة^{21,24,25,28,29}.
مشكلة الدراسة وأهدافها:

تهدف هذه الدراسة إلى معرفة فعالية البرنامج الفرعي الخاص بالوعي الظاهري من برنامج التطوير المعرفي اللغوي المطور إلى اللغة العربية¹¹ – انظر الملحق-. في تحسين جوانب الوعي الظاهري عند الأشخاص والذين عانوا من وجود خلل في تلك الوظيفة بسبب الإصابة الدماغية.
وعليه تكون مشكلة الدراسة كما يلي :-
ما هي فعالية الصورة الأردنية المعدلة من برنامج الوعي الظاهري في علاج الصعوبات في ذلك الجانب والناتجة عن الإصابة الدماغية؟
فرضية الدراسة:

هناك فروق ذات دلالة إحصائية على كل من المهارات المعرفية المتمثلة في جانب الوعي الظاهري قبل وبعد تطبيق برنامج التطوير المعرفي اللغوي (برنامج الوعي الظاهري) على أفراد الدراسة وذلك لصالح المجموعة التجريبية.

أهمية الدراسة: تتضح أهمية الدراسة فيما يلي:

- 1 - التعرف على فعالية البرنامج المطور على البيئة الأردنية¹¹ بغية تعليم الفائدة لأكبر قدر ممكن من المرضى ذوي الإصابة الدماغية.
 - 2 - إبراز دور التركيز على جانب الوعي الظاهري كأحد جوانب التأهيل المعرفي – اللغوي بمعزل عن تعاطي الأدوية، في تأهيل حالات الإصابة الدماغية.
 - 3 - تزويد العيادات النفسية وعيادات العلاج النطقي واللغوي في العالم العربي بمثل هذه البرامج التي تعنى بتحسين القدرات المعرفية اللغوية عند الأفراد بعد إصابتهم الدماغية.
- أدوات الدراسة:**

القدم ويساعد في التخطيط العملي لعملية التأهيل¹⁷. وما يساعد في ذلك معرفة العوامل المختلفة التي تؤثر على عملية التحسن بعد الإصابة خصوصاً أن الإصابات الدماغية تختلف من فرد لآخر وعلىه فإن عملية التأهيل يجب أن تكون فردية²⁶. وبالإضافة إلى عوامل العمر والحالة الصحية وشدة ونوع الإصابة، فإن درجة الذكاء قبل الإصابة والحالة الاقتصادية والدرجة الاجتماعية للمصاب وذويه وجدها تؤثر على درجة التأهيل ويجب أن تؤخذ بالاعتبار عند وضع الخطة التأهيلية¹⁷.
هذا وقد تم تطوير العديد من البرامج العلاجية من قبل الإختصاصيين في هذا المجال مثل برنامج التطوير المعرفي اللغوي¹³ حيث يزود هذا البرنامج العاملين في مجال التأهيل بإطار مفاهيمي منظم بشكل هرمي للمهام، التي تتيح إمكانية اختيار المهام العلاجية بدقة للخلل الذي يستهدفه المعالج عند المريض. هذا وتختلف حاجات كل مريض من المهام التي يتضمنها البرنامج وذلك وفقاً للصور المعرفية اللغوية الذي حدث لديه نتيجة للإصابة الدماغية التي تعرض لها، لذلك فإن برنامج التطوير المعرفي اللغوي (CLIP) وضع بشكل منظم ومرتب وفقاً لأقسامه، وكذلك لمستوى الصعوبة في مهماته، مما يتيح أمام المعالج فرصه انتقاء البعد والمهمة التي يريد تحقيقها عند المريض الذي يعني من إصابة دماغية حسب المجال المعرفي اللغوي الذي تأثر لديه.
أكدت معدة برنامج التطوير المعرفي اللغوي¹³ أن جميع الجوانب المعرفية الواردة أعلاه في تقرير الجمعية الأمريكية للنطق واللغة والسمع (ASHA) تؤثر وتنتأثر بشكل مباشر بالجوانب المعرفية، وأضافت أن القراءة على التذكر والاختلاف، والتعميم، والتكامل والتكييف للمعلومات تُعد من أساسيات المهارات المعرفية اللغوية، مثلها في ذلك مثل القدرة على التنظيم والتصنيف، والتفكير المجرد وحل المشكلات والنشاطات الاستقلالية، والوعي الظاهري والمكاني كذلك. ومن الجدير ذكره أنه لا توجد دراسات منشورة بعد حول فاعلية هذا البرنامج في الولايات المتحدة أو خارجها. علماً أنه لا يوجد سوى

صُممَت بذمة لتحسين الخلل في تلك المهمات والناتج عن الإصابات الدماغية، وذلك انطلاقاً من أنَّ الإصابات الدماغية بأنواعها تفضي غالباً إلى مشاكل معرفية لغوية متباينة الشدة من البسيطة إلى الشديدة والشديدة جداً، والتي غالباً ما تؤثر على حياة الفرد اليومية. تمَّ إعداد البرنامج بصورةه الأصلية من قبل الدكتورة ديبوره سوين¹³.

الطريقة والإجراءات:

خضع أفراد المجموعة التجريبية للمعالجة المعرفية اللغوية للتدريب باستخدام برنامج علاج الخلل في الوعي الزماني، وذلك من خلال جلسات علاجية فردية، حيث تلقى كل فرد من أفراد المجموعة التجريبية (24) جلسة علاجية غطت جوانب الوعي الزماني وذلك بواقع ثلاثة جلسات أسبوعياً بدأت بعد الأسبوع الثامن من الإصابة وذلك لتحييد أثر التحسن التلقائي، وبالمثل تم تطبيق البرنامج العلاجي على أفراد المجموعة الضابطة وذلك بعد الإنتهاء من معالجة المجموعة التجريبية.

أفراد الدراسة: تألفت عينة الدراسة من ثلاثين فرداً بالغاً ومن كلا الجنسين (الجدول رقم 1)، تم اختيارهم وبشكل قصدي، وذلك بعد استبعاد الحالات الذين لم يتمكنوا من الانخراط في البرنامج العلاجي المعدل وذلك نظراً لأوضاعهم الصحية أو بعد أماكن سكناهم عن مركز التأهيل. وقد تم تقسيم أفراد الدراسية عشوائياً إلى مجموعتين ضابطة مكونة من (15) حالة وتجريبية مكونة من (15) حالة حيث تم ذلك باستخدام الطريقة النصفية المبنية على ترقيم أسماء العينة كل ثم تم اعتبار الحالات ذات الأرقام الفردية "عينة تجريبية" والحالات ذات الأرقام الزوجية "عينة ضابطة".

1 - اختبار المهارات المعرفية اللغوية الناتجة عن الإصابات الدماغية المطور (الوعي الزماني¹¹).

صدق المقاييس: تم عرض المقاييس المطور على عشرة محكمين من ذوي الاختصاص في مجالات علم النفس والقياس، والتربية الخاصة، والعلاج النطقي، والطب النفسي، واللغة، وذلك لاستخراج معامل الصدق، حيث تمت مراجعة ملاحظاتهم، ثم جرى تعديل بعض القرارات في ضوء ملاحظات المحكمين؛ حيث أعيد المقاييس المعدل لهم ثانية للتدقيق، وحصل المقاييس على صدق المحكمين بالإجماع بعد إجراء التعديلات اللازمة.

ثبات المقاييس: واستخراج معامل الثبات للمقاييس تم تطبيق المقاييس على عينة من ذوي الإصابات الدماغية (ن = 50)، ثم أعيد تطبيقه على نفس العينة بعد مرور ثلاثة أسابيع من تاريخ التطبيق الأول، والجدول رقم (2) يبيّن معلمات الثبات للمقاييس الفرعية بطريقة الإعادة.

2 - برنامج تطوير المهارات المعرفية اللغوية للأشخاص المصابين دماغياً المعدل/ برنامج علاج الخلل في الوعي الزماني.
يتضمن برنامج التطوير المعرفي اللغوي (Cognitive-Linguistic Improvement Program - CLIP) والمُؤلف من ثمانية برامج علاجية، منها برنامج علاج الخلل في الوعي بالزمن (أنظر الملحق)، مهمات ونشاطات معرفية لغوية

الجدول (1): توزيع أفراد الدراسة حسب نوع المجموعة ومتوسط الأعمار والجنس

المجموع	متوسط الأعمار	الجنس		المجموعة
		إناث	ذكور	
15	35.2	3	12	التجريبية
15	37.3	4	11	الضابطة

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على القياسين القبلي والبعدي وذلك للتحقق من صحة الفرضية. يلاحظ من الجدول رقم 2 أن متوسط أداء المجموعة التجريبية على القياس البعدى بلغ 17,53 (مقارنة مع المقياس القبلي البالغ 10,20) وأن متوسط أداء المجموعة الضابطة على القياس البعدى بلغ 9,46 (مقارنة مع المقياس القبلي البالغ 6,46). ولتحديد الفروق الدالة بين متوسط المجموعة التجريبية ومتوسط المجموعة الضابطة على القياس البعدى ، مع تثبيت اثر القياس القبلي ، تم استخدام تحليل التباين (ACNOVA). يلاحظ من الجدول رقم 3 أن هناك فرقاً على مقياس الوعي الزماني، حيث بلغت قيمة F (299.95) وهذه القيمة دالة عند مستوى (0.05) فأقل ، وذلك لصالح أفراد المجموعة التجريبية. ويوضح الجدول رقم 4 المتossedات المعدلة لتأثير القياس القبلي لكل من المجموعة التجريبية والضابطة. وقد بلغت قيمة معامل إيتا (ETA) 0.90، والذي يحدد حجم تأثير المعالجة التجريبية على الوعي الزماني.

تصميم الدراسة:

تعد الدراسة الحالية دراسة تجريبية اهتمت بأثر وفعالية البرنامج العلاجي (CLIP) والمعدل على البيئة الأردنية في تحسين القدرات المعرفية اللغوية لعينة من حالات الإصابات الدماغية، ومقارنة النتائج إحصائياً مع مجموعة ضابطة مطابقة.

متغيرات الدراسة:

المتغير المستقل: هو الصورة العربية المعدلة من برنامج التطوير المعرفي اللغوي (برنامج الوعي الزماني تحديداً) لحالات الإصابات الدماغية.

المتغير التابع : أداء أفراد الدراسة في مجال الوعي الزماني مقاساً باختبار الوعي الزماني.

المعالجة الإحصائية:

تم استخدام تحليل التباين_ ANCOVA لفحص فرضية الدراسة، كما تم تحديد اثر المتغير التابع من خلال معامل إيتا (ETA) وتحليل التباين للقياسات المتكررة (Repeated Measures).

نتائج الدراسة:

تم إحتساب المتossedات الحسابية والإنحرافات المعيارية لكل من المجموعة التجريبية والضابطة

الجدول رقم 2: المتossedات والإنحرافات المعيارية لكل من المجموعة التجريبية والضابطة على القياسين القبلي والبعدي لمقياس الوعي الزماني

المجموعة الضابطة		المجموعة التجريبية		المجموعة	
البعدي	القبلي	البعدي	القبلي	المتوسط	الانحراف المعياري
9.46	6.46	17.53	10.20		
3.22	3.13	3.41	5.31		

الجدول رقم 3: نتائج تحليل التباين لمقياس الوعي الزماني

مصدر التباين	مجموع المربعات	درجات الحرية	متوسط المرءات	الدالة (F)	معامل إيتا
القياس القبلي	147.90	1	147.90	77.23	0.000
المجموعة	408.97	1	408.97	299.95	0.000
الخطأ	45.55	27	1.68	-	-
المجموع	602.42	29	-	-	0.88

الجدول رقم (4): المتوسطات المعدلة لتأثير القياس القبلي للمجموعتين

المجموعة	المتوسط المعدل	الخطأ المعياري
التجريبية	17.22	0.30
الضابطة	9.77	0.30

يمكن فصلها عن القدرات والمهارات اللغوية، كما أن جميع هذه الوظائف متعلقة بأنشطة الدماغ فهي مترابطة من الناحية العصبية والبيولوجية إضافة إلى ترابطها الوظيفي، ومما سبق نجد أن هناك تداخلًا كبيراً بين الوظائف المعرفية عضوياً ووظيفياً حيث إن الخلل العضوي المتمثل في الإصابة الدماغية غالباً ما يفضي إلى مشاكل في وظائف الدماغ كالوعي بالزمن ومهارات حل المشكلات والجوانب اللغوية وغيرها. وعليه فإن البرنامج العلاجي الذي تم تقييمه للأشخاص الذين يعانون من خلل في تلك الوظائف يعمل بإتجاهين متكاملين هما:

- 1 - إعادة تأهيل الخلايا الدماغية المصادبة للعمل وذلك عن طريق تركيز (Restoration) البرنامج العلاجي على تنمية الوظائف المعرفية المتبقية، الأمر الذي يؤدي إلى حفز الخلايا والمراکز الدماغية، قدر الإمكان، للعودة إلى القيام بالوظائف التي كانت تقوم بها قبل الإصابة الدماغية.
 - 2 - قيام الخلايا الدماغية الأخرى بالوظائف المعرفية (Compensatory) عن طريق تأهيل خلايا دماغية أخرى قريبة من تلك التي تأثرت ولم تعد قادرة على أداء وظائفها بحيث يتم تدريب الخلايا والمراکز المحيطة للقيام بوظائف جديدة كانت مناطة بالخلايا والمراکز التالفة، وهذا يتطلب الإعادة والتكرار حتى تقوم بذلك الوظائف قدر الإمكان.
- هذا وقد يتدخل الإتجاهان في عملية التأهيل، وهو ما يعمل عليه البرنامج بالأصل.

مناقشة النتائج:

أظهرت الدراسة الحالية وبما لا يدع مجال للشك أن هناك أثراً هاماً وذو دلالة إحصائية لفقرات البعد الزمني من برنامج التطوير المعرفي اللغوي المعدل على البيئة الأردنية لصالح أفراد المجموعة التجريبية عند مستوى الدلالة (0.05) فأقل، يعزى لتطبيق هذا البرنامج ضمن وحدات الزمن من الدقائق فالساعات والأيام والأسابيع والأشهر والفصل والسنوات. وقد اتفقت نتائج هذا المجال مع عدد من نتائج الدراسات ذات الصلة، كالنتائج التي توصل إليها توركسترا وأخرون³⁰، والتي هدفت إلى التعرف على اثر برنامج تأهيلي معرفي يقوم على استراتيجية التعريض للمهارات المعرفية اللغوية، والذي تضمن بعد الوعي الزمني، والتي أشارت إلى وجود تحسن ملحوظ لدى 70% من أفراد المجموعة التجريبية. كما اتفقت نتائج هذه الدراسة كذلك مع النتائج التي توصل إليها دراسات أخرى³³⁻³¹، والتي تضمنت بعد الوعي الزمني في البرنامج التأهيلي الذي تمت دراسته فعاليته على المرضى من ذوي الإصابات الدماغية، حيث أشارت النتائج إلى وجود فروق ذات دلالة بين القياسات القبلية والبعديه، لصالح المجموعة التجريبية. هذا ومن الجدير ذكره أن الوظائف المعرفية ترتبط ارتباطاً كبيراً فيما بينها حيث لا يمكن فصل عمليات الوعي الزمني والمكاني والقدرة على التصنيف والتنظيم والعلاقات بين المفاهيم والذاكرة بأنواعها عن بعضها بعضاً، كذلك فإن جميع هذه الوظائف بحاجة إلى قدرات متعلقة بعملية الترميز والتصنيف والتحليل اللغوي، الأمر الذي يجعل من الصعوبة هذا وقد يتدخل الإتجاهان في عملية التأهيل، وهو ما ي العمل عليه البرنامج بالأصل.

الملخص

تحاول هذه الدراسة التعرف على مستوى الأداء الحالي في حقل الخل في الوعي الزماني الناتجة عن الإصابة الدماغية، كما تهدف إلى معرفة فعالية البرنامج الفرعي الخاص بالوعي الزماني من الصورة العربية المعدلة لبرنامج التطوير المعرفي اللغوي (Cognitive- Linguistic Improvement Program - CLIP) ، والذي يتضمن ثمانية برامج علاجية، والتي منها برنامج علاج الخل في الوعي بالزمن والذي يهدف إلى معالجة الضعف في استراتيجية الوعي الزماني عند الأشخاص البالغين بعد اصاباتهم الدماغية. تكونت عينة الدراسة من (30) فرداً بالغاً يعانون من مشكلات معرفية ولغوية (تتضمن الوعي بالزمن) ناتجة عن اصاباتهم الدماغية ، حيث قسمت عينة الدراسة إلى مجموعتين تجريبية وعدها (15) مريضاً ، وعينة ضابطة مطابقة تألفت من (15) مريضاً آخر، حيث خضعت كلتا العينتين للقياسين القبلي والبعدي باستخدام اختبار المهارات المعرفية اللغوية، كما تم استخدام تحليل التباين (ANCOVA) لفحص فرضية الدراسة، كما تم تحديد أثر المتغير التابع من خلال معامل إيتا (Eta) وتحليل التباين لقياسات المتكررة (Repeated Measures). توصلت الدراسة إلى وجود فروق ذات دلالة إحصائية لصالح المجموعة التجريبية عند مقارنة أدائهم قبل البرنامج العلاجي وبعده ، وهذا يعكس الأثر الواضح لبرنامج علاج الخل في الوعي الزماني، والذي يعتمد على منهجية تحسين وظائف الخلايا الدماغية المتأثرة وتأهيل خلايا أخرى للقيام بوظائف الخلايا الدماغية التي أتلفت بفعل الإصابة.

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**الملحق:
عينة من برنامج الخلل في الوعي الزماني**

المهمة : الذاكرة الفورية – اسئلة (نعم ، لا)
المستوى : الأول

التعليمات : سوف اسأل بعض الأسئلة ، وعليك الإجابة بنعم او لا .

1 - هل اليوم _____ (عين اليوم من الإسبوع)

2 - هل السنة _____ (عين السنة)

3 - هل الآن الصبح ؟

المهمة : الذاكرة الفورية – اسئلة (نعم ، لا)
المستوى : الثاني

التعليمات : سوف اسأل بعض الأسئلة ، وعليك الإجابة بنعم او لا .

1 - هل كان الأمس _____ (عين يوما) ؟

2 - هل سيكون اليوم بعد يومين _____ (عين يوما) ؟

3 - هل كانت الساعه _____ قبل ساعتين مضت ؟

المهمة : الذاكرة الفورية – اسئلة متعددة الاختبار
المستوى : الأول

التعليمات : سوف اسألك بعض الأسئلة ، واختر انت الإجابة الصحيحة

1 - هل اليوم _____ ام الأربعاء ؟

فعالية برنامج علاج الاضطراب في الوعي الزماني الناشيء عن الاصابة الدماغية

- 2 - هل السنة 1989 أم ____?
3 - هل هذا صباحاً أم ____?

المهمة : الذاكرة الفورية – اسئلة متعددة الاختبار

المستوى : الثاني

التعليمات : سوف اسألك بعض الأسئلة ، واختر انت الإجابة الصحيحة

- 1 - هل كان الأمس ____ ؟ ____?
2 - هل سيكون غداً ____ ؟ ____?
3 - هل كان الوقت قبل ساعتين مضت ____ ؟ ____?

المهمة : الذاكرة الفورية – اسئلة متعددة الاختبار

المستوى : الثالث

التعليمات : سوف اسألك بعض الأسئلة ، واختر انت الإجابة الصحيحة

- 1 - اذا كانت الساعة الآن ____ فهل كانت ____ أم هي ثلاثة ارباع الساعة ؟
2 - اذا كان الفصل الان فصل الصيف ؟ فهل كان الفصل الذي قبل الماضي خريف ام شتاء ؟
3 - اذا كانت الساعة ____ صباحاً ، فهل ستتناول العشاء بعد ____ ساعات ام ____ ساعات ؟

المهمة : الذاكرة الفورية – الاسئلة ذات الاجابة بكلمة واحدة

المستوى : الأول

التعليمات : سوف اسألك بعض الأسئلة ، وعليك الإجابة بكلمة واحدة .

- 1 - ما تاريخ اليوم؟
2 - ماهي السنة التي فيها حنـ؟
3 - ما هو الجزء من النهار الذي نحن فيه؟

المهمة : الذاكرة الفورية – الاسئلة

المستوى : الثاني

التعليمات : سوف اسألك بعض الأسئلة ، وعليك الإجابة بكلمة واحدة .

- 1 - ما هو يوم غد ؟
2 - ما هو التاريخ غداً ؟
3 - ماذا كان يوم امس؟

المهمة : الذاكرة الفورية – الاسئلة ذات الاجابة بكلمة واحدة

المستوى : الثالث

التعليمات : سوف اسألك بعض الأسئلة ، وعليك الإجابة بكلمة واحدة .

- 1 - اذا كانت الساعة الآن ____ ، ماذما سيكون الوقت بعد مرور ثلاثة ارباع الساعة من الان ؟
2 - اذا كان الان فصل الصيف ، ماذما كان الفصل الذي يسبق الماضي ؟
3 - اذا كانت الساعة ____ صباحاً ، كم ساعه بقي حتى ذهابك الى النوم؟

المهمة : الذاكرة الحالية - مفهوم الوقت - اسئلة نعم / لا
المستوى : الأول
التعليمات : سوف اسأل بعض الأسئلة ، وعليك الإجابة بنعم او لا .
1 - هل يتكون الأسبوع من سبع أيام ؟
2 - هل يتكون اليوم من 12 ساعه ؟
3 - هل تتكون الساعه من 60 دقيقة ؟

المهمة : الذاكرة الحالية - مفهوم الوقت - اسئلة نعم / لا
المستوى : الثاني والثالث
التعليمات : سوف اسأل بعض الأسئلة ، وعليك الإجابة بنعم او لا .
1 - هل تقاس الأيام بالأشهر ؟
2 - هل تقاس الساعات بالثواني ؟
3 - هل تعدد الساعات مقاييساً ليوم عمل ؟

المهمة : الذاكرة الحالية - اسئلة الاختيار من متعدد
المستوى : الأول
التعليمات : سوف اسألك بعض الأسئلة ، وعليك ان تختار الإجابة الصحيحة .
1 - كم يوم في الإسبوع 7 أم 8 ؟
2 - كم ساعه في اليوم 12 أم 24 ؟
3 - كم ثانية في الدقيقة 60 أم 30 ؟

المهمة : الذاكرة الحالية - اسئلة الاختيار من متعدد
المستوى : الثاني والثالث
التعليمات : سوف اسألك بعض الأسئلة ، وعليك ان تختار الإجابة الصحيحة .
1 - هل يعد الشهر مقاييساً للأيام والشهور ؟
2 - هل تقاس الساعات بالدقائق أم بالثواني ؟
3 - هل تقاس ايام العمل بالساعات أم بالأيام ؟

المهمة : الذاكرة الحالية - الأسئلة
المستوى : الأول
التعليمات : سوف اسألك بعض الأسئلة ، وعليك الإجابة عليها
1 - كم يوم في الإسبوع ؟
2 - كم ساعه في اليوم ؟
3 - كم ثانية في الدقيقة ؟

فعالية برنامج علاج الاضطراب في الوعي الذهاني الناشيء عن الاصابة الدماغية

المهمة : الذكرة الحالية - الأسئلة ذات الإجابة بكلمة واحدة

المستوى : الثاني والثالث

التعليمات : سوف أسألك بعض الأسئلة ، وعليك الإجابة عليها بكلمة واحدة

1 - بمأذا تقاس الأشهر ؟

2 - ما هو مقياس الساعه ؟

3 - كيف يقاس يوم عمل ؟

الوعي الذهني

المهمة : الذكرة البعيدة - الأسئلة نعم / لا

المستوى : الأول

التعليمات : سوف أسألك بعض الأسئلة ، وعليك الإجابة بنعم او لا .

1 - هل توجد عطلة في شهر كانون الاول ؟

2 - هل دائماً فصل الشتاء بارد ؟

3 - هل مضى يوم ميلادك ؟

المهمة : الذكرة البعيدة - الأسئلة نعم / لا

المستوى : الثاني

التعليمات : سوف أسألك بعض الأسئلة ، وعليك الإجابة بنعم او لا .

1 - هل ترسل الأزهار والحلوى في يوم العيد ؟

2 - هل الصيف احر من الربيع ؟

3 - هل حزيران من أشهر الربيع ؟

المهمة : الذكرة البعيدة - الأسئلة نعم / لا

المستوى : الثالث

التعليمات : سوف أسألك بعض الأسئلة ، وعليك الإجابة بنعم او لا .

1 - هل يبدأ موسم الزهور في فصل الربيع ؟

2 - هل العطل المدرسي في نفس العطل الجامعية ؟

3 - هل يتخرج طلاب الجامعات في فصل الخريف ؟

المهمة : الذكرة البعيدة - أسئلة اختيار من متعدد

المستوى : الأول

التعليمات : سوف أسألك سؤالاً مقدماً لك نموذجين من الإجابة ، وعليك اختيار الإجابة الصحيحة .

1 - هل توجد عطلة في كانون الأول ام في آب ؟

2 - هل يعد الشتاء بارداً ام الخريف ؟

3 - هل يوم ميلادك في — ام — ؟

A. Attieh and Z. Khamayseh

المهمة : الذاكرة البعيدة - أسئلة اختيار من متعدد

المستوى : الثاني

التعليمات : سوف أسألك سؤالاً مقدماً لك نموذجين من الإجابة ، وعليك اختيار الإجابة الصحيحة .

1 - هل عيد الفطر ام الصيفي يأتي بعد رمضان ؟

2 - هل الصيف احر ابرد من الربيع ؟

3 - هل حزيران شهر صيفي ام ربيعي ؟

المهمة : الذاكرة البعيدة - أسئلة اختيار من متعدد

المستوى : الثالث

التعليمات : سوف أسألك سؤالاً مقدماً لك نموذجين من الإجابة ، وعليك اختيار الإجابة الصحيحة .

1 - هل تحتاج كرة القدم الى مضرب أم إلى مرمى ؟

2 - هل تغلق المدارس في العطل الوطنية ام _____ ؟

3 - هل تبدأ الكلية في الخريف ام الشتاء ؟

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أخبار الأقـــاد

إمـــان

المؤتمر العاـــدي عـــشر لـــاتحاد الأطـــباء النفـــسيــين العربـــ
خدمـــات الصـــحة النفـــســـية في العـــالـــم العـــربـــي: تحـــديــات المستـــقبل

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