

Concentration Difficulties in Female: Clinical Study of a Sample of Egyptian Female

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ABSTRACT

Introduction:	Concentration symptoms may or may not be associated with memory symptoms such as forgetfulness. Psychological conditions that may impair concentration include depression, certain anxiety disorders, and stress. Sleep disorders such as insomnia or sleep apnea can also impair concentration ability.
Aim of the Study:	To assess the relation of concentration difficulties complaint with depression and anxiety in sample of middle age Egyptian females of middle social class with emphases on stressors they faced and general functions.
Subjects and Methods:	Consecutive patient aged between 25-45 years old with chief complaint of concentration difficulties. All patients were subjected to clinical assessment, physical examination, psychiatric evaluation and laboratory investigation including complete blood picture, liver function test and kidney function test. Cases with physical or neurological positive finding were subjected to further investigation; CT or MRI in order to confirm organic disorders and to be excluded from the study. During the second assessment session the subjects completed the Beck Depression Inventory (BDI), Hamilton Anxiety Rating Scale and Global Assessment Functioning Scale (GAF).
Results:	From 315 patients with complaint of difficulty in concentration only 122 patients with psychiatric symptoms were divided into 2 groups. Group of depression showed about 88.9% of patients' problems with their primary support group, about 24.5% who had social environment, 80% had occupational problems and 45.07% had problems with educational system, while housing and economic problems presented in 12.59% and 11.81%. Patients with problem with health care were about 23.56%, while the percentage of patients with problems in legal system was about 3% only. Anxiety group about 33.20% showed minimal symptoms and good functioning in all area of their life, about 12.7% with slight impairment in social and occupational, 28.61% with mild symptoms and some difficulty in social and occupational, while 25.44% with moderate symptoms and moderate difficulty in social and occupational and about 19.84% with serious impairment in social and occupational.
Conclusion:	The 2 groups were complaining of concentration difficulties with a lot of stressors in their life showing marked impairment in their life which made their accomplished tasks more stressful and put them in highly criticizing environment.

Key words:	Concentration Difficulties, depression, anxiety, Egypt.
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INTRODUCTION

Epidemiological studies conducted since the beginning of the 20th century have shown an inverse relationship between socio-economic status and the occurrence of a variety of mental disorders¹. Social class has been shown to affect both skills and time spent at parenting work. Co-parenting, in which parenting responsibilities are shared more or less equally by parents, appears to occur predominately in middle and middle-upper class families.^{2,3}

There is considerable evidence from animal studies that maternal antenatal stress can cause behavioral disturbances

in the offspring, one mechanism underlying this association in animal models is that the stress experienced by the mother has a direct influence on the development of hypothalamic-pituitary-adrenal axis in the foetus.^{4,5}

Many occupational and environmental health hazards present as an increased reporting of non-specific symptoms such as headache, backache, eye and respiratory irritation, tiredness, memory problems, and poor concentration. The pattern and number of such symptoms is surprisingly constant from hazard to hazard suggesting that common psychological and

social factors, not directly related to the exposure may be involved.⁶

Concentration difficult is a symptom that can arise from both physical and psychological or emotional problems. Concentration symptoms may or may not be associated with memory symptoms such as forgetfulness. Physical medical conditions that affect concentration include; Lyme disease, whiplash, and various others. Psychological conditions that may impair concentration include depression, certain anxiety disorders, and stress. Sleep disorders such as insomnia or sleep apnea can also impair concentration ability. Any concentration or memory symptom needs prompt professional medical diagnosis.⁷

The major problem is often the lack of concentration. Several studies reported loss of concentration and their causes as the deficiency in the body or the brain⁸. Women don't always recognize the signs of iron deficiency anemia, which include shortness of breath, palpitations, ice craving, headaches, dizziness, nervousness, lack of concentration, forgetfulness, fatigue, sexual dysfunction and decreased job performance.⁹

Motherhood is the central of all women's live whether or not they become, or even want to become, mothers, and the socially constituted practices which define mothering similarly define women.¹⁰

It is the motherhood role though which is most characteristic of 'femininity'. It is indeed true that women, and only women, are biologically capable of conceiving, giving birth and breast-feeding infants. However, this biological capacity is constantly translated into a psychological and social prescription in that women's live are defined according to their ability to reproduce.¹⁰

Fatigue is also seen as a major cause for the loss of Concentration. Working longer hours/day can result into not only physical fatigue but also mental tiredness. This tiredness distracts the concentration level of our brain.⁹

Distributed concentration is also another cause of concentration loss which is oftenly seen when taking multiple tasks in hand and so unable to concentrate completely over one area. This is more common with working mothers. They often try to do many tasks at a time that divides their concentration and so are unable to concentrate over a topic with complete strength. Even in offices we try to finish several tasks at a time and in that we divert our Concentration.

SUBJECTS AND METHODS

The subjects of this study were female patients attending the outpatient clinic of Heliopolis General Military Hospital for families, a part of military services to families of military officers which delivered services for free (May 2008 to December 2008).

Consecutive patient aged between 25-45 years old with chief complaint of poor concentration associated with

other symptoms whether mental or physical were recruited. Patients (n=315) agreed to participate in the study after explaining its purpose. All patients were subjected to clinical assessment, physical examination, psychiatric evaluation and routine laboratory investigation including complete blood picture, liver function test and kidney function test. Patients with physical or neurological positive finding were subjected to further investigation; CT or MRI in order to confirm organic disorders to be excluded from the study. About 193 patients were excluded for organic causes, 122 patients were identified and deemed eligible for the study. During the second assessment session patients (n=122) completed the following psychometric Scales.

Beck Depression Inventory (BDI): This 21 item scale assesses the presence and severity of affective, cognitive, motivational, vegetative and psychomotor components of depression. The questionnaire rates the severity of symptoms observed in depression such as low mood, insomnia, agitation, anxiety and weight loss. The questionnaire is presently one of the most commonly used scales for rating depression in medical research.^{11,12}

The Hamilton Anxiety Scale (HAMA): is a rating scale developed to quantify the severity of anxiety symptoms consisting of 14 items, each defined by a series of symptoms. Each item is rated on a 5-point scale, ranging from 0 (not present) to 4 (severe)^{13,14}. The questionnaire is meant to rate the severity of symptoms such as mood, tension, physical symptoms and fears. The doctor interviewed patients and recorded the answers on the test, giving them a rating from 0-4. Upon completion of the test, the results are added up and based on the total giving a general idea on the severity of anxiety.

The Global Assessment of Functioning (GAF): is a numeric scale (0-100) used by mental health clinicians and physicians to subjectively rate the social, occupational, and psychological functioning of adults, e.g., how well or adaptively one is meeting various problems-in-living. The scale is presented and described in the DSM-IV-TR¹⁵. Global Assessment of Functioning is for reporting the clinician's judgment of the individual's overall level of functioning and carrying out activities of daily living. This information is useful in planning treatment and measuring its impact, and in predicting outcome.¹⁵

RESULTS

Patient with chief complaint of lack of concentration without clinical diagnosis showed some psychiatric morbidity.

Group Characteristics:

The age criterion for patients was 25-45 years. The mean age was 38.44±0.101 years. Regarding the marital status: 42 (34.42%) were married, 25(20.49%) divorced and 18 (14.75%) widows. Most of the patients were educated between undergraduate and postgraduate only about 19 (15.57%) were illiterate and all were in the middle to high social standard. They were classified

according to their results on Psychometric Scales into 2 groups; depressive group (n=68) with high score for depression and anxiety group (n=54) with high score in anxiety scale (44.26%). The demographic data of both groups is presented in table (1) showing that most of patients were married working women in regular jobs and responsible of their families. Patient in the anxiety group were older in age (40.33±11.34), while depressive group was (37.35±10.9).

As regard education level anxiety group showed more postgraduate patients (n=29, 62.5%) While the high percentage for undergraduate were in the depressive group (n=37, 70%). Patients in both group showed high significant number of employment with higher percent in anxiety group (n=49, 87.5%) and in depression group (n=39, 80%).

Table 1: Demographic data of the two studied groups.

	Depression (n=68)		Anxiety (n=54)		Significance
Age	37.35± 10.9		40.33±11.34		T=1.1.19 P=0.235
Educational status					
Illiterate	11	5%	8	7.5%	X ² =0.5 P=0.48
Undergraduate	37	70%	17	30%	
Postgraduate	19	25%	29	62.5%	
Marital Status					
Single	19	30%	18	37.05%	X ² =1.47 P=0.48
Married	22	37.5%	20	42.5%	
Divorced	17	25%	8	10%	
Widow	10	7.5%	8	10%	
Residence					
Rural	27	32.5%	23	40%	X ² =0.49 P=0.5
Urban	41	67.5%	31	60%	
Employment					
Employed	49	87.5%	39	80%	X ² =0.83 P=0.36
Unemployed	19	12.5%	15	20%	

Females were recruited according to their complaint of lack of concentration which is apart of cognitive functions. Table (2) represents the result of other cognitive functions of the studied sample.

There was significant correlation between anxiety group and depression group as regard registration which was 26.47% for the depression group and 9.26% for the anxiety group, a significant difference between the 2 groups. On the other hand

anxiety group showed more affection as regard their judgment which was 4.4% for depression group and 18.5% for anxiety group.

Depression group showed marked affection of thinking (66.18%) and least percent for judgment (4.4%), while anxiety group showed marked affection of thinking also with least percent for construction (3.7%).

Table 2: Other cognitive symptoms in both groups.

Cognitive Symptoms	Depression (n=68)		Anxiety (n=54)		P Value
Orientation	0	0%	0	0%	0.012*
Registration	18	26.47%	5	9.26%	
Recall	22	32.35%	8	14.8	0.05
Language test	5	7.3%	3	5.5%	0.71
Construction	9	13.23%	2	3.7%	0.15
Thinking	45	66.18%	23	42.59%	0.14
Abstraction	4	5.9%	0	0%	1.0
Insight	10	14.7%	19	35.19%	0.42
Judgment.	3	4.4%	10	18.5	0.012*

Most of patients in both groups suffered continuous stresses concerning their families. Nevertheless, social environmental problem and educational stressors were seen in anxiety group while depression group suffered stressors concerning occupational more than anxiety group. Table (3) shows the psychosocial and environmental problems of both groups. Depression group showed problems with; primary support

group (88.9%), social environment (24.5%), occupational (80%), educational (45.07%) and health care (23.56%). While housing and economic problems presented in 12.59% and 11.81%. While patient with problems in legal system were 3%.

Problems of anxiety group were; primary support group (85.23%), social environment (55.80%), educational (67.64%),

occupational (35.70%) and housing (4.31%). The results showed higher percent with health care (87.23%), economic problems (64.30%), and legal problems (43.23%).

Table 3: Psychosocial and Environmental problems of the two studied groups.

Problems	Depression (n=68)	Anxiety (n=54)
Primary support group	88.91%	85.23%
The social environment	24.5%	55.80%
Educational	45.07%	67.64%
Occupational	80.00%	35.70%
Housing	12.59%	4.31%
Economic	11.81%	64.30%
Health care	23.56%	87.50%
Legal system	2%	43.23%

Both groups complained of lack of concentration with a lot of stressors in their life showing marked impairment in their life which made their accomplished tasks more stressful and put them in highly criticizing environment. Their results of global assessment of functioning are presented in table (4).

Table 4: Global Assessment of Functioning (GAF).

GAF	Depression (n=68)	Anxiety (n=54)
100-91	0%	0%
90-81	0%	33.20%
80-71	14.67%	12.7%
70-61	54.20%	28.61%
60-51	23.62%	25.44%
50-41	3.52%	19.84%
40-31	0%	0%
30-21	0%	0%
20-11	0%	0%
10-0.		

Depression group showed slight impairment in social and occupational in 14.67%, mild symptoms and some difficulty in social and occupational in 54.20%, moderate symptoms and moderate difficulty in social and occupational in 23.62% and had serious impairment in social and occupational in only 4.52%.

In anxiety group 33.20% showed minimal symptoms and good functioning in all area of their life, 12.7% with slight impairment in social and occupational, 28.61% with mild symptoms and some difficulty in social and occupational, 25.44% with moderate symptoms and moderate difficulty in social and occupational and 19.84% had serious impairment in social and occupational.

DISCUSSION

The condition of women in Arab countries varies depending on the country, its policy and extent of opening towards universal human values. This variation can be found in the same country depending on the area (rural or urban) and it can change in the same city from one neighborhood to another.¹⁶

Our study is designed to evaluate middle aged female patients (n=122) seeking for medical advices concerning their concentration difficulties with or without other cognitive symptoms. Our results showed that most of the patients were complaining of depression (n=68, 55.74%) and anxiety (n=54, 44.26%).

Women, in developed or under developed countries, have frequent and various occasions of stress, because of different roles and tasks as they have to assume in the society as mothers, spouses, daughters, employees and because of their unequal status as compared to men¹⁷. Results showed that anxiety group of older age women were 40.33+11.34, while depressive group was 37.35+10.9. As regard education level anxiety group showed more postgraduate patients (n=29, 62.5%) While the high percentage for undergraduate were found in depressive group (n=37, 70%).

Patients of both groups showed high significant correlation for number of employed patients with higher percent in the anxiety group (n=49, 87.5%) and in depression group (n=39, 80%). High percent of both groups were married, so experienced high level of different stressors specially anxiety group which mean that poor concentration is a symptom of cognitive impairment present almost equal with both anxiety and depression. These results are compatible with previous results on psychiatric morbidity in working environment in middle aged women.¹⁸

These results show that patients in anxiety group had higher percentage in cognitive symptoms specially thinking and insight comparing to the depressive group which showed high percent with thinking and recall meaning that both groups had thinking problems. These results can be explained by that fear is a common emotional reaction that includes psychological discomfort and physical arousal. Stress can also lead to feelings of sadness or depression and another common emotional reaction to stress is anger, particularly when the person perceives the situation as harmful or frustrating. It can produce aggressive behavior for instance¹⁹. Cognitive difficulties like poor concentration can be major stressors in patient's life causing decrease in their responses to medical and psychological treatment.²⁰

These results are compatible with a done on sample of middle age patient with depression^{21,22} were depressed participants made more consecutive errors than did controls. Also these results are compatible with previous study on female patients

attending Al-Zahra University Hospital which evaluating single mothers.²²

Women in this study showed high percentage of undergraduate in depression group and high percentage of postgraduate in anxiety group that can be explained by the social class of the studied sample beside that education itself can be more stressful on patient pushing towards anxiety. These results are compatible with the study done to evaluate somatic symptom in patient with depression and anxiety.²³

High positive correlations have been found between the stressful experiences currently occurring in a person's life and their physical and psychological well-being: tuberculosis; cancer; blood pressure; heart disease; schizophrenia; depression.²⁴

Both groups showed high percentage with problem concerning their family, society, education and occupation. This sample represented middle social class women whom are married or daughters of military officer who used to spend much of his time out of home so women in this case act as single mothers.

Although single-parent families are widely spread among all cultures, prevalence and causes of lone families differ across different culture and societies, with tendency to increase over the last decades¹⁰. Those families represent 21% of all families in Britain, and even higher percentage (28%) in the United States.

Depression group showed slight impairment in social and occupational in 14.67%, mild symptoms and some difficulty in social and occupational in 54.20%, moderate symptoms and moderate difficulty in social and occupational in 23.62%, and only 4.52% had serious impairment in social and occupational.

As regard Anxiety group about 33.20% showed minimal symptoms and good functioning in all area of their life, 12.7% with slight impairment in social and occupational, 28.61% with mild symptoms and some difficulty in social and occupational, 25.44% with moderate symptoms and moderate difficulty in social and occupational and 19.84% had serious impairment in social and occupational.

CONCLUSION

There was significant association between depression and reduced cognitive function. The inverse association between anxiety and reduced cognitive performance was explained by adjustment for co-morbid depression. The inverse association between depressive symptoms and cognitive function was found to be close to linear, and was also present in the sub-clinical symptom range.

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