

*Systematic Review of The Available Egyptian
Studies Done on
"Relatives of psychiatric patients"*

Essay

*Submitted for partial fulfillment of Master Degree
in Neuropsychiatry*

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2010**

مراجعة منهجية للدراسات المصرية المتاحة التي أُجريت على "أقارب المرضى النفسيين"

رسالة

توطئة للحصول على درجة الماجستير فى الأمراض النفسية والعصبية
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Acknowledgement

- First and foremost I would like to express my thanks and deep appreciation to ***Prof. Naglaa El Mahallawy***, professor of neuropsychiatry, Faculty of Medicine, Ain Shams University for her generous effort, continuous support, wise helpful guidance and motherly attitude. No words could describe my appreciation for her encouragement and support, which made the achievement of this work possible, and I will never be able to thank her sufficiently. It is great honor to work under her guidance and supervision.

- I am also deeply grateful and thankful to ***Dr. Eman Abo El-Elaa***, Assistant Professor of Neuropsychiatry, Faculty of Medicine, Ain Shams University for her helpful contributions, keen support and valuable instructions.

- I would like to express my deep thanks and appreciation to ***Dr. Marwa Abdel Rahman Sultan***, lecturer of neuropsychiatry, Faculty of Medicine, Ain Shams University, for her encouragement and advice throughout the work.

- Also, I would like to thank ***Prof. Afaf Hamed Khalil*** professor of neuropsychiatry, Faculty of Medicine, Ain Shams University and the head of the teamwork of these series of essays.

- Also, I would like to thank **all researchers** who work in the field of "Relatives of psychiatric patients" without their studies this work could not be done.

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Recently, the information center of Faculty of Medicine-Ain Shams University develops a medical site on the internet which contains every M.Sc (only the protocols) and M.D (the full text) thesis since year (2005), the web address is:

<http://med.shams.edu.eg> – academics – MD thesis (full text).

List of abbreviations

| | |
|-----------------------|--|
| ADDBD | : Attention Deficit and Disruptive Behavior Disorder. |
| AD | : Autistic disorder. |
| ADHD | : Attention Deficit Hyperactivity. |
| A.F.C. | : Affective Communication. |
| BAD | : Bipolar Affective Disorder. |
| BAS | : Burden assessment schedule. |
| BC | : Behavior Control. |
| CARS | : Childhood Autism Rating Scale. |
| CAMI | : Community Attitudes toward the Mentally ill. |
| CBCL | : Child Behavior Checklist. |
| C_mD | : Communication disorders. |
| COM | : communication. |
| CRS | : Conner's Rating Scale. |
| C.R.R. | : Conflict over Childbearing. |
| D.M. | : Diabetes Mellitus. |
| DSM-III | : Diagnostic and Statistical Manual of Mental Disorders-Third Edition. |
| DSM-IV | : Diagnostic and Statistical Manual of Mental Disorders – fourth edition (1994). |
| DSC | : Dissatisfaction with Children. |
| ECI | : Experience of Caregiving Inventory. |
| EPQ | : Eysenk Personality Questionnaire. |
| ERP | : Event-Related Potential. |
| FABI | : Fear and Behavioral Intentions Inventory. |
| FDR | : First-degree relatives. |
| FGD | : focal group discussion. |
| FHD | : Family History of Distress. |

| | |
|---------------|--|
| FIN | : disagreement about finances. |
| GAF | : Global Assessment of Functioning. |
| GAD | : Generalized Anxiety Disorder. |
| G.D.S. | : Global Distress. |
| GF | : General Functioning. |
| GHQ | : General Health Questionnaire. |
| G.N.V | : Conventionalization. |
| HAM-D | : Hamilton Rating Scale for Depression. |
| HDRS | : Hamilton depression rating scale. |
| HS | : highly significant. |
| ICD-10 | : International Classification of Diseases -10. |
| IQ | : Intelligence Quotient. |
| J-TCI | : Junior Temperament and Character Inventory. |
| KASI | : Knowledge about Schizophrenia Interview. |
| K-SADS | : Kiddie Schedule for affective Disorders and Schizophrenia. |
| LD | : Learning disorders. |
| LQLI | : Lehman Quality Of Life Interview. |
| MINI | : Mini International Neuropsychiatric Interview. |
| MSI | : Marital satisfaction inventory. |
| NDD | : Neurotic disorders and depressive disorders. |
| NES | : Neurological Evaluation Scale. |
| NS | : Non Significant. |
| OCD | : Obsessive Compulsive Disorder. |
| PANS | : positive and negative scale. |
| PD | : Personality Disorder. |
| PDD | : Pervasive Developmental Disorders. |
| PE | : Psychomotor epilepsy. |
| PSI | : Parenting Stress Index. |
| P.S.C. | : Problem Solving Communication. |
| PS | : Problem Solving. |

| | |
|---------------|--|
| QOL | : Quality Of Life. |
| RRR | : Relative Risk Ratio. |
| ROR | : role orientation. |
| S | : significant. |
| SCID | : Structured Clinical Interview. |
| SCB | : Screen for Caregiver Burden. |
| SDQ | : Strengths And Difficulty Questionnaire. |
| S.E.X. | : Sexual Dissatisfaction. |
| SRRS | : Social Readjustment Rating Scale. |
| TCI-R | : Temperament and character inventory-revised. |
| TDT | : transmission disequilibrium test. |
| T.T.O. | : Time Together. |
| WAIS-R | : Wechsler Adult Intelligence Scale-Revised. |
| WCST | : Wisconsin Card Sorting Test. |
| WHO | : World Health Organization. |
| WISC | : Wechsler Intelligence Scale for Children. |
| Y-BOCS | : Yale-Brown Obsessive Compulsive Scale. |

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Introduction

This work is considered as the 13th essay of master degree among series of essays that discusses "***Systematic review of Egyptian studies done on different psychiatric disorders***", whereas ***Professor Afaf Hamed*** is the head of the teamwork of these series. The previous M.Sc essays are:

- 1) Systematic review of the Egyptian studies on "substance abuse". By *Dr. Mohamed Khaled (2006)*.
- 2) Systematic review of the Egyptian studies on "mood disorders". By *Dr. Magdy Ahmed (2006)*.
- 3) Systematic review of the Egyptian studies on "schizophrenia". By *Dr. Naser Zahran (2006)*.
- 4) Systematic review of the Egyptian studies on "old age psychiatric disorders". By *Dr. Ahmed Farouk (2008)*.
- 5) Systematic review of the Egyptian studies on "neurotic disorders". By *Dr. Heba Fakher (2008)*.
- 6) Systematic review of the Egyptian studies on "biological studies". By *Dr. Nevin Ahmed (2008)*.
- 7) Systematic review of the Egyptian studies on "psychiatric disorders in women". By *Dr. Suzy Mohamed (2008)*.
- 8) Systematic review of the Egyptian studies on "liaison psychiatry". By *Dr. Al Shaymaa Aly (2008)*.
- 9) Systematic review of the Egyptian studies on "child psychiatric disorders". By *Dr. Sherif Helal (2008)*.
- 10) Systematic review of the Egyptian studies on "personality disorders". By *Dr. Rehab Naguib (2009)*.

11) Systematic review of the Egyptian studies on "epidemiology of psychiatric disorders". By *Dr. Madiha Lotfi* (2009).

12) Systematic review of the Egyptian studies on "Sexual and gender identity disorders". By *Dr. Sameh Ibrahim* (2009).

The caregiver role is very demanding, frequently distressing and harmful to health and quality of life (*Struening et al, 2001*). Caregivers who are available and responsible foster representations of self as worthy and lovable and relationships as supportive whereas, caregivers who are unavailable, unresponsive, and abusive foster impressions of the self as unworthy, and relationships as unsupportive. (*Joseph & Kathy, 2003*).

The caregiver burden has been defined as physical, psychological or emotional, social and financial problems that can be experienced by family members caring for impaired old adults. (*Schulz & Martire, 2004*). Addition of the caregiving role to already existing family roles may become more stressful both psychologically and economically. (*Miller B., 1990*).

Kam-shing (2005) identified three types of burdens faced by family caregivers:

1-objective burden in coping with mental illness; for example financial burden, time and effort in caregiving, disruption of daily routine and social life.

2-Subjective burden in facing the mental illness; for example feelings of loss, shame, worry , anger and hopelessness toward client with mental illness.

3-Burdens in management of problem behavior of clients with mental illness; for example assault, mood swings , unpredictability and negative symptoms.

Caring of psychiatrically ill patients may be associated with increasing risk of psychiatric illness like caregivers of Alzheimer patients whom caregiving is associated with negative outcomes such as deteriorating health, depression, dramatic life style change and burden of caring of afflicted persons. (*Hermann, 2001*).

Different studies done on mentally ill persons and their caregivers have investigated relationships involving many antecedents' variables. These include demographics of the caregivers (age, gender, socioeconomic status, occupation, and education), caregiver personality variable, patient characteristics, positive and negative social support, the caregiver's coping style, the type and quality of the patient-caregiver relationship prior to disease onset. For example studies done on bipolar patients and their caregivers showed that bipolar disorder not only affects the patients but also the relatives who suffer the consequences of the episodes and who usually adopt the role of the caregivers. (*Reinares et al., 2006*).

As regards the systematic review, *Greenhalgh (2001)* summarizes its methodology into the following points:

- 1) State objectives of the review and outline eligibility criteria.
- 2) Search for studies that seem to meet eligibility criteria.
- 3) Tabulate characteristics of each study identified and assess its methodological quality.
- 4) Apply eligibility criteria, and justify any exclusion.
- 5) Assemble the most complete dataset feasible, with assistance from investigators, if possible.
- 6) Analyze results of eligible studies, using statistical synthesis of data (meta-analysis) if appropriate and possible.
- 7) Compare alternative analyses if appropriate and possible.
- 8) Prepare a critical summary of the review, stating aims, describing materials and methods and preparing reports.

Rationale of the Work:

As there are many previous researches discussing the topic of "Relatives of psychiatric patients" in Egypt from different aspects, this effort deserves not to go in vain. This accentuates the importance of having a clear system for reviewing these studies & planning for future researches. There is increased need for having the criteria for critical appraisal to determine the value of published researches & to decide their applicability to clinical practice. So, this work will be done to make use of this effort to identify the missing points in Egyptian researches to overcome the defects in the future. This will enable us to know what is needed to be done further.

Aim of the work

The aim of the work is:

1. To systematically review and appraise the available Egyptian studies on "Relatives of psychiatric patients".
2. To generate recommendations which help further studies.
3. To provide a summary of available Egyptian studies done on "Relatives of psychiatric patients."

Methodology (Procedures)

In order to fulfill the aim of the work;

First: we will collect all the available Egyptian studies done on "Relatives of psychiatric patients" from the following databases:

- 1) Library of Faculty of Medicine, Ain Shams University.
- 2) Library of Faculty of Medicine, Al-Azhar University.
- 3) Library of Faculty of Medicine, Al-Azhar University, girls.
- 4) Library of Faculty of Medicine, Cairo University.
- 5) Library of Faculty of medicine, Suez Canal University.
- 6) Database of Egyptian journal of psychiatry, current psychiatry and any available Egyptian journals.

Second: We will summarize all the available Egyptian studies done on "Relatives of psychiatric patients" and a systematic review will be done according to the following categories;

- 1) Epidemiology.
- 2) Etiology.
- 3) Clinical description.
- 4) Management.
- 5) Outcome.
- 6) Knowledge and opinion of family about psychiatric illness.

Third: These studies will be critically appraised and important findings will be discussed. Following these steps, recommendations which help further studies will be reported.

After exploring the following databases: 1- Library of faculty of medicine- Ain Shams University. 2- Library of faculty of medicine- Cairo University. 3- Library of faculty of medicine- El Azhar University. 4- Library of faculty of medicine- El Azhar University, girls. 5- Library of faculty of medicine- Suez Canal University. 6- Databases of Egyptian Journal of Psychiatry and Current Psychiatry Journal. We obtained the following Egyptian studies done on "Relatives of psychiatric patients" which were listed in the following table:

| Appendix | Article Title | Researcher/s & supervisors | Year | Source |
|-----------------|---|--|-------------|--|
| 1- | Knowledge & opinions of families about mental illness & mental patients | EL-Sherbini A.F., EL-Gueneidy M., Reda S., and Abd EL-Aziz S. | 1981 | Egy.J.of psych. Vol.4, pp120-128. |
| 2- | Psychiatric morbidity in the families of mentally ill patients. | Mansour M., Supervised by prof. Okasha A., Prof. Bishry Z. and Dr. Ghanem M. | 1993 | MD thesis Faculty of medicine, Ain Shams University. |
| 3- | Event related potential in schizophrenia | Essawy H., supervised by prof. Okasha A., prof. Rafaat M., and dr. Ghanem M. | 1995 | MD thesis Faculty of medicine, Ain Shams University. |
| 4- | Event related evoked potential in offspring at high risk for schizophrenia & depression. | Abd-El Azim K, supervised by; prof. Bishry Z, prof. Raafat M. and DR. Sayed M. | 1997 | MD thesis Faculty of medicine, Ain Shams University. |

| Appendix | Article Title | Researcher/s & supervisors | Year | Source |
|-----------------|---|---|-------------|---|
| 5- | Event related potentials in Schizophrenics & their 1st degree relatives. | Bassiouny MM., Abdel-Aal I., and Owida M. | 1998 | Current psychiatry; Vol.5, No.3 pp294-301. |
| 6- | Attention impairment in 1st degree relatives of schizophrenic patients; neuropsychological & neurophysiologic evidence. | Madkour O., Kamal S.A., Hashem A. & Raslan M.R. | 1998 | Egy.J.of psych. Vol.21, pp 101-106. |
| 7- | Maternal depression: The risk for children's psychopathology. | Fouad M., Supervised by prof. Okasha A., prof. Bishry z, prof. Hamid A., dr. Effat S. & dr. EL Kholi S. | 1999 | MD thesis Faculty of medicine, Ain Shams University. |
| 8- | Evaluation of marriage in families of schizophrenic patients. | Seleem M, supervised by prof. EL-Gindy T, prof. Sarhan Z, and prof. Abdel-Latif A. | 1999 | M.Sc thesis faculty of medicine, Cairo University. |
| 9- | Marital satisfaction in parents living with a schizophrenic offspring. | Sarhan, Z., EL Gindy, T., Abdel Latif, A.M., EL Batrawi, M. & Ezat, M. | 2000 | Egy.J.of psych. Vol.23 pp253-260. |
| 10- | The impact of relapse of schizophrenia on patient's functions & their families | Shama G. & Gad E. | 2000 | Egy.J.of psych. Vol.23 pp179-186. |
| 11- | Stress of geriatric patient caregivers. | Abido R. supervised by prof. Ashour A., dr. Assad T., and Dr. EL-Nahas G. | 2000 | M.Sc thesis, faculty of medicine, Ain Shams University. |

| Appendix | Article Title | Researcher/s & supervisors | Year | Source |
|-----------------|--|--|---------------|--|
| 12- | Molecular & family study in the schizophrenic spectrum. | Ibiary N., Supervised by prof. Kamel M., Prof. Sadek A., prof. Abdel Sawi M. & Dr. Zaghloul M. | 2001 | MD thesis Faculty of medicine, Ain Shams University. |
| 13- | A Family Based Association Study OF Genes Of Bipolar Mood Disorder in an Egyptian sample using T.D.T. design. | Fikry M., Sadek A., EL Missiry A.G., Khalil A.H., EL Fikky M.R., Saad A. and Ramy H. | 2002 March | Current psychiatry; Vol.9, No.1 pp80-95. |
| 14- | An educational program for knowledge & Attitude change in families of patients with schizophrenia. | EL-Shafei A., Supervised by prof. Kamel M., Prof. Craig, prof. Effat S., Dr. Omar A. & Dr. EL Nahas G. | 2002 | MD thesis Faculty of medicine, Ain Shams University. |
| 15- | Spouse role in the problem of drug abuse. | Emara E., supervised by prof. Abdel-Wahab M., prof. Abdel-gawad T., and assist. Prof. Abolmagd S. | 2002 | M.Sc Thesis, Faculty of medicine, Cairo University |
| 16- | Psychiatric morbidity in 1st degree relatives of a sample of ADHD children. | EL Sheikh M., supervised by Prof. Sadek A., Dr. Omar A. & Dr. EL Nahas G. | 2003 | MD thesis Faculty of medicine, Ain Shams University. |
| 17- | A family study of Autism; Psychiatric morbidity & cognitive pattern in parents. | Azzam H., Supervised by prof. Bishry z, prof. Effat S., prof. EL Sayed N. & Dr. EL Kholy S. | 2003 | MD thesis Faculty of medicine, Ain Shams University. |

| Appendix | Article Title | Researcher/s & supervisors | Year | Source |
|-----------------|--|---|---------------|--|
| 18- | Patterns of psychiatric morbidity & cognitive style in parents of autistic children; the correlation with the symptoms profile of their autistic children. | Bishry Z., EL-Sayed N., Sayed M. , , EL-Nahas G., Effat S. , Azzam H. & EL-Kholi S. | 2004 march | Current psychiatry; Vol.11 No.1 pp63-74. |
| 19- | First degree relatives of ADHD children I: psychiatric morbidity & personality profiles. | Sadek A., EL- Nahas G., Sayed M. , EL-Sheikh M. & A. Omar. | 2004 | Current psychiatry; Vol.11, No.1 pp75-99. |
| 20- | A group of Egyptian addicts; Users view for addiction, causes & its impact on self & family. | Abulmagd S., Nasr A.A. , Mamdouh R. & EL-Lawendi M. | 2004 June | Egy.J.of psych. Vol.23, NO.2, pp145-158. |
| 21- | Family caregivers burden of patients with Alzheimer dementia; psychological & economic perspective. | Ramy H., Abulmagd S., Fekry M. , Erfan S., Mansour O. & Shabara H. | 2004 Nov. | Current psychiatry; Vol.11 No.3 pp396-404. |
| 22- | 1st degree relatives of ADHD children II; The impact of their psychiatric morbidity & personality profiles on severity, co-morbidity& adaptability of ADHD children. | Sadek A. , Sayed M. , EL- Nahas G. , Omar A., and EL-Sheikh M.M.. | 2004 Nov. | Current psychiatry; Vol.11 No.3 pp354-369. |

| Appendix | Article Title | Researcher/s & supervisors | Year | Source |
|-----------------|--|--|-------------|---|
| 23- | Schizophrenic patients' families' psycho-education: outcomes on patients' quality of life & disease relapse rate. | Abulmagd S. , EL-Raay L. , Akram A. , Amin M. , Abdel Aziz H. & M. EL-Lawindi . | 2004 | Egy.J.of psych. Vol. 23, NO.1 Pp59-74. |
| 24- | Role of spouse in addiction: Is there a contribution. | Abolmagd S., Erfan SM., Abdel Wahab M., and Abdel Gwad T.M.S. | 2004 | Egy.J.of psych. Vol. 23, NO.1 Pp95-102. |
| 25- | Assessment of attention and hyperactivity symptoms in offsprings of parents with Bipolar disorder. | Gomaa M., supervised by prof. El-Batrawy M., prof. El-Bakry A. and dr. Khowiled A. | 2004 | M.Sc thesis, faculty of medicine, Cairo University. |
| 26- | Caregiver burden among schizophrenic & obsessive compulsive disorder families: A comparative study. | Abou Zeid M., EL Taweel M., Abdelazim Kh and Essawy H. | 2005 March | Current psychiatry; Vol.12 No.1 pp180-187. |
| 27- | Change in knowledge & attitude of families of patient with schizophrenia: A preliminary Egyptian educational program. | Kamel M. , EL- Nahas G. , Craig T., Shafei A. , Omar A. , and Effat S. . | 2005 July | Current psychiatry; Vol.12 No.2 pp300-316. |

| Appendix | Article Title | Researcher/s & supervisors | Year | Source |
|-----------------|--|---|-------------|--|
| 28- | Psychiatric morbidity, cognitive dysfunction & neurological soft signs in bipolar patients & their 1st degree relatives in an Egyptian sample. | Rabie M., Supervised by Sadek A., Dr. Soliman A. & Dr. Ramy H. | 2005 | MD thesis Faculty of medicine, Ain Shams University. |
| 29- | Impact of family relations on psychiatric patients. | EL-Shafei T., Supervised by prof. Ragheb K., prof. Demerdash A., dr. Khalil A., and dr. Seif A. | 2006 | MD thesis, Faculty of medicine of girls, AL-Azhar University. |
| 30- | Psychiatric morbidity in wives of substance users in an Egyptian sample. | Afifi M., Supervised by prof. Ghaneim M., Prof. Saad A., prof. EL Sayed N. & dr. EL Shahawy H. | 2007 | MD thesis Faculty of medicine, Ain Shams University. |
| 31- | Burden of mother and wife caregivers of psychiatric and non-psychiatric patients and its relation to psychiatric disorders. | Abdel-Maksoud A., supervised by Prof. Kamel F., and Prof. AL- Mahdi M. | 2007 | M.Sc thesis, faculty of medicine, Al-Azhar university, Boys |
| 32- | Obsessive compulsive disorder & personality disorders among 1st degree relatives of obsessive compulsive disorder patients. | Tantawy A., Raya Y., Al-Yahya and Al-Sayed Zaki A. | 2008 | Current psychiatry; Vol.15 No.2 pp215-229. |

| Appendix | Article Title | Researcher/s & supervisors | Year | Source |
|-----------------|--|--|-------------|---|
| 33- | Effect of educational intervention on caregiver burden & quality of life in dementia in an Egyptian sample. | Waly A., supervised by prof. Ashour A., prof. Soliman A., dr. EL-Sayed N., and dr. Hewedi D. | 2008 | MD thesis, faculty of medicine, Ain Shams University. |
| 34- | The psychological impact of children's mental health problems on their parents. | Bastawy M., Supervised by prof. EL Mahallawy N., EL Sutohy M., Dr. Abu EL Ela I. & Sadek H. | 2009 | MD thesis Faculty of medicine, Ain Shams University. |

Systematic review is a scientific investigation in itself, with pre-planned methods and an assembly of original studies as their subjects. They synthesize the results of multiple primary investigations by using strategies that limit bias and random error. When the results of primary studies are summarized but not statistically combined the review is called a "qualitative systematic review". A quantitative systematic review or meta-analysis is a systematic review that uses statistical methods to combine the results of two or more studies. The term "overview" is sometimes used to denote a systematic review whether quantitative or qualitative, summary of research that lack explicit descriptions of systematic methods are often called narrative reviews (*Greenhalgh, 2001*).

Oxman and Guyatt (1993) summarize the advantages of systematic reviews into the following points:

- 1) Explicit methods limit bias in identifying and rejecting studies.
- 2) Conclusion hence is more accurate and reliable.
- 3) Large amounts of information can be assimilated quickly by health care providers, researchers, and policymakers.
- 4) Delay between research discoveries and implementation of effective diagnostic and therapeutic strategies is potentially reduced.

- 5) Results of different studies can be formally compared to establish generalizability of findings and consistency of results.
- 6) Reasons for heterogeneity can be identified and new hypothesis generated about particular subgroups.
- 7) Quantitative systematic reviews increase the precision of the overall results.

(A) Prevalence:**(I) Relatives (mothers and wives) of psychiatric patients:**

By studying 150 female caregivers (Mothers and wives) of psychiatric patients. (Appendix 31) *Abd El-maksoad (2007)* reported that 92.7% (139/150) of the caregivers have psychiatric disorders. (See table 1).

Table (1): Prevalence of psychiatric disorders among relative caregivers (mothers and wives) of psychiatric patients.

| Psychiatric disorders | Relative caregiver of psychiatric patients N (%) |
|--|---|
| depression | 32 (21.3) |
| Generalized anxiety disorder | 31 (20.7) |
| Adjustment disorder with anxious mood | 22 (14.7) |
| Adjustment disorder with depressed mood | 24 (16) |
| Mixed depression and anxiety disorders | 11 (7.3) |
| no mental disorders | 19 (12.7) |
| Adjustment disorder with depressive mood and anxiety | 11 (7.3) |

Abd El-maksoad (2007)

(II) Relatives of chronic GAD patients:

By studying the psychiatric morbidity among the relatives of 20 patients having chronic GAD. (Appendix 2). *Mansour (1993)* found that about half of the wives and half of the children have GAD. (See table 2).

Table (2): Prevalence of psychiatric morbidity in relatives of patients with chronic generalized anxiety disorder.

| Psychiatric symptoms & disorders | Relatives of | | | |
|----------------------------------|---------------|----------|-----------------|----------|
| | Male patients | | Female patients | |
| | Wife | Children | Husband | Children |
| Depressive symptoms | 20% | 30% | 20% | 30% |
| Anxiety symptoms | 70% | 50% | 30% | 60% |
| Psychotic symptoms | 0% | 0% | 0% | 0% |
| Psychosomatic symptoms | 60% | 30% | 20% | 50% |
| Obsessive rituals | 0% | 0% | 0% | 0% |
| Obsessive ruminations | 0% | 0% | 0% | 0% |
| Major depression | 10% | 20% | 10% | 20% |
| Generalized anxiety disorder | 40% | 40% | 30% | 70% |

*Mansour (1993)***(III) Relatives of OCD patients:**

By studying the psychiatric morbidity among the relatives of 20 patients having chronic OCD. (Appendix 2). *Mansour (1993)* found that anxiety symptoms and generalized anxiety disorder are common morbidity among spouses and children. (See table 3).

Table (3): Prevalence of psychiatric morbidity in relatives of patients having chronic OCD.

| Symptom & disorder | Relatives of | | | |
|------------------------|---------------|----------|-----------------|----------|
| | Male patients | | Female patients | |
| | wife | Children | husband | Children |
| Depressive symptoms | 40% | 40% | 40% | 60% |
| Anxiety symptoms | 70% | 50% | 50% | 70% |
| Psychotic symptoms | 0% | 0% | 0% | 0% |
| Psychosomatic symptoms | 30% | 0% | 0% | 70% |
| Obsessive rituals | 0% | 30% | 0% | 20% |
| Obsessive ruminations | 0% | 50% | 0% | 60% |
| Major depression | 30% | 20% | 20% | 40% |
| GAD | 50% | 50% | 40% | 70% |

Mansour (1993)

Whereas, *Tantawy et al (2008)* Studied 50 adult OCD patients and 129 first-degree relatives, (appendix 32). They found that the prevalence of OCD in first degree relatives is (22.48%) (29/129). (See table 4).

Table (4): Prevalence of OCD and its subtypes among 1st degree relatives of OCD patients.

| OCD Subtypes | 1 st degree Relatives (n= 129) N (%) | OCD patients (n= 50) N (%) |
|--------------|---|----------------------------------|
| Obsessive | 9 (6.98) | 13 (26.00) |
| Compulsive | 4 (3.10) | 8 (16.00) |
| Combined | 16 (12.40) | 29 (58.00) |
| Total OCD | 29 (22.48) | 50 (100.00) |

Tantawy et al (2008)

Tantawy et al (2008) (appendix 32) reported that 1st degree relatives of OCD patients have high prevalence of any cluster C personality disorder especially Obsessive compulsive personality disorder. (See table 5).

Table (5): Prevalence of personality disorders among 1st degree relatives of OCD.

| Personality Disorders | 1 st degree relatives (n= 129) N (%) | OCD patients (n= 50) N (%) |
|--------------------------|---|----------------------------------|
| Schizotypal | 0 (0.00) | 0 (0.00) |
| Schizoid | 0 (0.00) | 0 (0.00) |
| Paranoid | 2 (1.55) | 2 (4.00) |
| Any Cluster A Disorder | 2 (1.55) | 2 (4.00) |
| Antisocial | 0 (0.00) | 0 (0.00) |
| Borderline | 2 (1.55) | 1 (2.00) |
| Histrionic | 0 (0.00) | 1 (2.00) |
| Narcissistic | 0 (0.00) | 1 (2.00) |
| Any Cluster B Disorder | 2 (1.55) | 3 (6.00) |
| Avoidant | 21 (16.28) | 9 (18.00) |
| Dependent | 0 (0.00) | 2 (4.00) |
| Obsessive Compulsive | 29 (22.48) | 15 (30.00) |
| Any Cluster C Disorder | 50 (38.76) | 26 (52.00) |
| Any Personality Disorder | 54 (41.68) | 31 (62.00) |

Tantawy et al (2008)

(IV) Relatives of schizophrenic patients:

By studying 20 chronic schizophrenics and their relatives. (Appendix 2). **Mansour (1993)** found that the relatives of chronic schizophrenics are more liable to suffer from both depressive symptoms and major depression. (See table 6).

Table (6): Prevalence of psychiatric morbidity in relatives of chronic schizophrenics.

| Psychiatric Symptoms and disorders | Relatives of | | | |
|------------------------------------|---------------|----------|-----------------|----------|
| | Male patients | | Female patients | |
| | wife | Children | husband | Children |
| Depressive symptoms | 70% | 40% | 40% | 70% |
| Anxiety symptoms | 40% | 40% | 30% | 50% |
| Psychotic symptoms | 20% | 20% | 10% | 10% |
| Psychosomatic symptoms | 40% | 0% | 30% | 80% |
| Obsessive rituals | 0% | 0% | 0% | 0% |
| Obsessive ruminations | 0% | 0% | 0% | 0% |
| Major depression | 60% | 50% | 30% | 40% |
| GAD | 20% | 30% | 30% | 40% |

Mansour (1993)

By studying 40 schizophrenic patients and their 124 first degree relatives, and 23 healthy controls and their 75 first degree relatives, (see appendix 12), **El-Ibiary (2001)** reported a significant higher rates of psychiatric disorders among the first degree relatives of schizophrenics compared to first degree relatives of healthy controls. (See table 7).

Table (7): Prevalence of psychiatric morbidities among the 1st degree relatives of schizophrenics and healthy controls.

| Psychiatric disorders | FDR of patients (n=124) N (%) | FDR of controls (n=75) N (%) |
|---------------------------------|-------------------------------------|------------------------------------|
| Dementia | 1(0.8%) | 0(0%) |
| Drug dependence | 1(0.8%) | 0(0%) |
| Paranoid schizophrenia | 3(2.4%) | 0(0%) |
| Hebephrenic schizophrenia | 2(1.6%) | 0(0%) |
| Undifferentiated schizophrenia | 2(1.6%) | 0(0%) |
| Residual schizophrenia | 4(3.2%) | 1(1.3%) |
| Simple schizophrenia | 2(1.6%) | 2(2.7%) |
| Schizotypal disorder | 1(0.8%) | 0(0%) |
| Schizo-affective disorder | 1(0.8%) | 2(2.7%) |
| Neurotic disorders | 2(1.6%) | 0(0%) |
| Paranoid personality disorder | 1(0.8%) | 0(0%) |
| Compulsive personality disorder | 2(1.6%) | 7(5.3%) |

(X²=1984.94, P=0.000, HS)*El-Ibiary (2001)***(V) Relatives of chronic major depressive patients:**

By studying 20 patients with major depression (unipolar depression) and their relatives. (Appendix 2). *Mansour (1993)* found that depressive symptoms and major depression are the most frequent morbidity among relatives of patients with chronic major depression. (See table 8).

Table (8): Prevalence of psychiatric morbidity in relatives of chronic major affective patients (unipolar depression).

| Psychiatric symptom and disorders | Relatives of | | | |
|-----------------------------------|---------------|----------|-----------------|----------|
| | Male patients | | Female patients | |
| | wife | Children | Spouse | Children |
| Depressive symptoms | 80% | 80% | 20% | 80% |
| Anxiety symptoms | 40% | 30% | 40% | 20% |
| Psychotic symptoms | 0% | 0% | 0% | 0% |
| Psychosomatic symptoms | 20% | 60% | 0% | 40% |
| Obsessive rituals | 0% | 0% | 0% | 0% |
| Obsessive ruminations | 0% | 0% | 0% | 0% |
| Major depression | 60% | 60% | 20% | 60% |
| GAD | 0% | 0% | 20% | 20% |

*Mansour (1993)***(VI) Relatives of chronic BAD patients:**

By studying 20 patients with chronic BAD and their relatives. (Appendix 2). *Mansour (1993)* found that anxiety symptoms and GAD are frequent among the relatives of patients with currently manic episode, especially among the children and the wives of the male patients. (See table 9).

Table (9): Prevalence of psychiatric morbidity in relatives of BAD patients.

| Psychiatric symptom and disorder | Relatives of | | | |
|----------------------------------|---------------|----------|-----------------|----------|
| | Male patients | | Female patients | |
| | wife | Children | Husband | Children |
| Depressive symptoms | 60% | 80% | 20% | 40% |
| Anxiety symptoms | 80% | 80% | 100% | 80% |
| Psychotic symptoms | 0% | 0% | 0% | 0% |
| Psychosomatic sympt. | 20% | 60% | 0% | 60% |
| Obsessive rituals | 0% | 0% | 0% | 0% |
| Obsessive ruminations | 0% | 0% | 0% | 0% |
| Major depression | 80% | 40% | 40% | 20% |
| GAD | 60% | 60% | 80% | 60% |

Mansour (1993)

By studying 35 patients with Bipolar I disorder, and their 115 first degree relatives. (Appendix 28) **Rabie (2005)** Found that 26.5% (30 out of 115) first degree relatives have psychiatric disorders. (See table 10).

Table (10): Prevalence of psychiatric morbidity among 1st degree relatives of bipolar patients.

| Psychiatric disorder | N (%) |
|---------------------------|------------|
| Major depressive disorder | 8 (6.9%) |
| Anxiety disorders | 5 (4.3%) |
| Adjustment disorders | 5 (4.3%) |
| Schizophrenia | 4 (3.5%) |
| Bipolar I disorder | 3 (2.6%) |
| Bipolar II disorder | 2 (1.7%) |
| Schizo-affective disorder | 1 (0.9%) |
| Substance use disorder | 2 (1.7%) |
| Total | 30 (26.5%) |

Rabie (2005)

(VII) Parents of psychiatric ill children:

1- Mothers of psychiatric ill children:

Bastawy (2009) studied 200 mothers of psychiatric ill children (Appendix 34) and he found 62% (124/200) have bad mental health and about half of them 32% (64/200) have psychiatric disorders (depression and anxiety). The burden on the mother and the families is rated in 68.5% (137/200) of the mothers, also there's high maternal stress among 87% (174/200) of the mothers. **Bastawy (2009)** also found that mothers of psychiatric children have high prevalence of bad quality of life among 84% (168/200) of the mothers.

2- Parents of PDD children:

Azzam (2003) studied 25 child with different types of PDD and their parents and 20 healthy children with their parents (appendix 17); and the researcher found that depression is diagnosed among 12% (3/25) of fathers. (See table 11).

Table (11): Prevalence of psychiatric disorders among fathers of PDD children.

| Psychiatric disorders | Fathers of | |
|-----------------------|------------|---------------|
| | PDD child | Healthy child |
| Depression | 3(12%) | 2(10%) |
| Personality disorder | 2(8%) | 0(0%) |
| Social phobia | 2(8%) | 0(0%) |
| Total | 7 (28%) | 2 (10%) |

(P=0.1, NS)

Azzam (2003)

Azzam (2003) (appendix 17) found that psychiatric disorders are higher in mothers of children with PDD compared to mothers of healthy children, yet not reaching statistical significance. (See table 12).

Table (12): Prevalence of psychiatric disorders among mothers of PDD children.

| | Mothers of | |
|---------------|------------|---------------|
| | PDD child | Healthy child |
| Depression | 7(28%) | 2(10%) |
| OCD | 1(4%) | 0(0%) |
| Social phobia | 1(4%) | 0(0%) |

(P=0.07, NS)

Azzam (2003)

Whereas, *Bastawy (2009)* studied 17 autistic child and their mothers (Appendix 34), and he found that Adjustment disorder

with depressed mood is the commonest disorder (3/4, 75%). (See table 13).

Table (13): Prevalence of psychiatric disorders among mothers of autistic children.

| Psychiatric disorder of the mother | Mothers of autistic children n=17 N (%) |
|---|---|
| Generalized anxiety disorder | 1(25) |
| Dysthymic disorder | 0(0) |
| Adjustment disorder with depressed mood | 3(75) |
| Total | 4(100) |

Bastawy (2009)

3- Parents of ADHD children:

By studying 48 ADHD children and their mothers and 14 healthy children and their 29 mothers. (appendix 16); *Elsheikh (2003)* found more prevalence of psychiatric disorders in ADHD mothers than controls. (See table 14).

Table (14): Prevalence of psychiatric disorders among mothers of ADHD children.

| Psychiatric disorders | Mothers of | | |
|-----------------------|--------------------------------|-----------------------------------|---------|
| | ADHD children n=48 N (%) | Healthy children n=14 N (%) | P value |
| Present | 18(37.5) | 2(14.3) | 0.04 S |
| Substance abuse | 12(25) | 1(7.1) | 0.14 NS |
| Anxiety disorders | 2(4.2) | 0(0.0) | 0.16 NS |
| Adjustment disorders | 3(6.3) | 1(7.1) | 0.92 NS |
| schizophrenia | 1(2.1) | 0(0.0) | 0.38 NS |
| Somatisation | 1(2.1) | 0(0.0) | 0.38 NS |
| Combined | 1(2.1) | 0(0.0) | 0.38 NS |
| Absent | 30(62.5) | 12(85.7) | 0.05 S |

Elsheikh (2003)

Elsheikh (2003) (appendix 16) found more prevalence of psychiatric disorders in ADHD mothers compared to ADHD fathers. (See table 15).

Table (15): Prevalence of psychiatric disorders among parents of ADHD children.

| Psychiatric disorders | ADHD children | | P-value |
|-----------------------|------------------|------------------|----------|
| | mothers N (%) | fathers N (%) | |
| Present | 18(37.5) | 3(8.4) | 0.002 HS |
| Absent | 30(62.5) | 33(91.6) | 0.002 HS |

Elsheikh (2003)

Whereas, By studying 36 ADHD children and their fathers, and 15 healthy children and their fathers. (Appendix 19); *Elsheikh (2003)* and *Sadek et al (2004)* found that 8.4% (3/36) of fathers of ADHD children have psychiatric disorders. (See table 16).

Table (16): Prevalence of psychiatric disorders among fathers of ADHD children.

| Psychiatric disorders | ADHD fathers (n=36) N% | Control fathers (n=15) N% | P |
|-----------------------|------------------------------|---------------------------------|------|
| Present | 3(8.4%) | 0(0.0%) | 0.02 |
| Substance abuse | 2(5.6%) | 0(0.0%) | 0.05 |
| Anxiety disorders | 1(2.8%) | 0(0.0%) | 0.5 |
| Absent | 33(91.7%) | 15(100%) | 0.2 |

Elsheikh (2003)- Sadek et al (2004)

Bastawy (2009) studied 89 ADHD child and their mothers (Appendix 34). And he found that 40.4% (36/89) mothers have psychiatric disorders and adjustment disorder with depressed

mood is the commonest disorder. (See table 17).

Table (17): Prevalence of psychiatric disorders among mothers of ADHD children.

| Psychiatric disorder of the mother | Mothers of children (n=89) N (%) |
|---|--|
| Generalized anxiety disorder | 13(36) |
| Dysthymic disorder | 4(11) |
| Adjustment disorder with depressed mood | 19(53) |
| Total | 36(100) |

Bastawy (2009)

Bastawy (2009) studied 64 psychiatric ill children and their mothers who suffer from psychiatric disorders (appendix 34) and he found that mothers having children with abnormal hyperactivity have significantly high prevalence of adjustment disorder with depressed mood (22/43, 51%). (See table 18).

Table (18): Prevalence of psychiatric disorders among psychiatric ill mother in relation to hyperactivity of their children.

| Psychiatric disorders of the mother | Hyperactivity Symptoms | | |
|---|------------------------|---------------------|-------------------|
| | Normal N (%) | Borderline N (%) | Abnormal N (%) |
| Generalized anxiety disorder | 6(60) | 5(46) | 16(37) |
| Dysthymic disorder | 1(10) | 3(27) | 5(12) |
| Adjustment disorder with depressed mood | 3(30) | 3(27) | 22(51) |
| Total | 10(100) | 11(100) | 43(100) |

($X^2=21.1$, $P=0.007$, **HS**)

Bastawy (2009)

4- Mothers of neurotic and depressive children:

By studying 31 neurotic and depressive child and their mothers (Appendix 34). **Bastawy (2009)** found that 19.3% (6/31) mothers have psychiatric disorders. (See table 19).

Table (19): Prevalence of psychiatric disorders of the mothers in relation to child's psychiatric disorder.

| Psychiatric diagnosis of the mother | Mothers of NDD children (n=31) N (%) |
|---|--|
| Generalized anxiety disorder | 3 (50) |
| Dysthymic disorder | 2 (23) |
| Adjustment disorder with depressed mood | 1 (17) |
| Total | 6 (100) |

N.B.: NDD: Neurotic disorders and depressive disorders.

5- Mothers of psychiatric children having conduct symptoms:

By studying 64 child and their mothers who suffer from psychiatric disorder (Appendix 34). **Bastawy (2009)** found that no significant relation between the psychiatric disorders of the mothers and the conduct symptoms of their psychiatric ill children. (See table 20).

Table (20): Prevalence of psychiatric disorders of the mothers in relation to the conduct symptoms of their children.

| Psychiatric disorders | Conduct Symptoms | | |
|---|------------------|---------------------|-------------------|
| | Normal N (%) | Borderline N (%) | Abnormal N (%) |
| Generalized anxiety disorder | 1(50) | 2(33.3) | 24(43) |
| Dysthymic disorder | 1(50) | 2(33.3) | 6(11) |
| Adjustment disorder with depressed mood | 0(0) | 2(33.3) | 26(46) |
| Total | 2(100) | 6(100) | 56(100) |

($X^2=14.1$, $P=0.07$, NS).

Bastawy (2009)

6- Mothers of children having different psychiatric disorders:

Bastawy (2009) (Appendix 34) found that non of the mothers of the children with communication (0/9) or LD (0/8) have psychiatric disorders. Only one mother (1/4-25%) of children either with PD or with PE has psychiatric disorders. As regards the MR children 42% (16/38) of their mothers have psychiatric disorders. (See table 21).

Table (21): Prevalence of psychiatric disorders of the mothers in relation to child's psychiatric disorder.

| Psychiatric disorder of the mother | Child's psychiatric disorders | | | | |
|---|-------------------------------|------------------|--------------|-------------|-------------|
| | PD | C _m D | MR | LD | PE |
| | n=4 N(%) | n=9 N(%) | n=38 N(%) | n=8 N(%) | n=4 N(%) |
| GAD | 0(0) | 0(0) | 9 (56) | 0(0) | 1(100) |
| Dysthymic disorder | 0(0) | 0(0) | 3(19) | 0(0) | 0(0) |
| Adjustment disorder with depressed mood | 1(100) | 0(0) | 4(25) | 0(0) | 0(0) |
| Total | 1(100) | 0(0) | 16(100) | 0(0) | 1(100) |

($X^2=44$, $P=0.02$, S)

Bastawy (2009)

N.B.:

PD: Psychotic disorders

C_mD: Communication disorders

LD: Learning disorders

PE: Psychomotor epilepsy

(VIII) wives of addicts:

By studying 30 addicts and their wives and 30 healthy persons and their wives (appendix 24); *Abolmagd et al (2004c)* found that the wives of addicts have higher level of depression and anxiety than wives of healthy persons. (See table 22 & 23).

Table 22: Prevalence of anxiety among wives of addicts (Hamilton anxiety scale).

| Hamilton anxiety | Wives of | | p-value | Chi-square |
|------------------|----------|-----------------|---------|------------|
| | addicts | Healthy control | | |
| pathological | 63.3% | 33.3% | <0.0005 | 23.2 |
| Non pathological | 6.7% | 66.7% | | |

Abolmagd et al (2004)

Table 23: Prevalence of depression among wives of addicts (Hamilton depression scale).

| Hamilton depression | Wives of | | p-value | Chi-square |
|---------------------|----------|-----------------|---------|------------|
| | addicts | Healthy control | | |
| pathological | 66.7% | | <0.0005 | 30.0 |
| Non pathological | 33.3% | 100% | | |

Abolmagd et al (2004)

Whereas by studying 120 wives of substance users and 120 wives of non-substance users (Appendix 30). *Afifi (2007)* reported that psychiatric morbidity in addicts' wives and non addicts' wives shows no significant difference. (See table 24).

Table (24): Prevalence of psychiatric morbidity among wives of addicts (GHQ-28).

| GHQ-28 | Addicts' wives N (%) | Non addicts' wives N (%) |
|---|---------------------------------|-------------------------------------|
| Without Psychiatric morbidity (score<7) | 40 (33.6) | 32 (26.7) |
| With Psychiatric morbidity(score≥7) | 79 (66.4) | 88 (73.3) |
| Total | 119 (100) | 120 (100) |

P= 0.242, NS.**Afifi (2007)**

Afifi (2007) (Appendix 29) found that personality disorders are more prevalent in the addicts' wives than the non addicts' wives. (See table 39). But **Afifi (2007)** found no relation between the type of personality of the wife and the type of substance used by her husband. (See table 25).

Table (25): Prevalence of personality disorders among wives of addicts.

| personality disorders | Addict's wives N (%) | Non addicts' wives N (%) |
|------------------------------|---------------------------------|-------------------------------------|
| Borderline PD | 35 (29.2) | 6 (5) |
| Histrionic PD | 10 (8.3) | 0 (.0) |
| Narcissistic PD | 7 (5.8) | 0 (.0) |
| Dependent PD | 6 (5) | 0 (.0) |
| Avoidant PD | 4 (3.3) | 8 (6.7) |
| Obsessive PD | 1 (0.8) | 2 (1.7) |
| Passive aggressive PD | 0 (.0) | 4 (3.3) |
| Depressive PD | 0 (.0) | 2 (1.6) |
| Paranoid PD | 0 (.0) | 2 (1.7) |
| None | 57 (47.5) | 96 (80) |
| Total | 120 (100) | 120 (100) |

(p=0.000, HS)**Afifi (2007)**

Afifi (2007) (Appendix 29) reported that the psychiatric disorders according to the MINI Plus are more prevalent among the addicts' wives than the non addicts' wives. (See table 26).

Table (26): Prevalence of Psychiatric disorders among wives of addicts.

| | Addicts' wives N (%) | Non addicts' wives N (%) |
|---|-------------------------|-----------------------------|
| Adjustment disorder | 22 (18.3) | 10 (8.3) |
| Major depressive disorder | 17 (14.2) | 2 (1.7) |
| Panic attacks | 8 (6.7) | 4 (3.3) |
| Social phobia | 7 (5.8) | 0 (0) |
| Premenstrual tension syndrome | 6 (5) | 12 (10) |
| Depression with suicidality | 5 (4.2) | 0 (0) |
| Mixed anxiety-depression | 3 (2.5) | 16 (13.3) |
| Suicidality | 3 (2.5) | 0 (0) |
| Premenstrual and mixed anxiety depression | 2 (1.7) | 8 (6.7) |
| Dysthymia | 0 (0) | 2 (1.7) |
| No axis I diagnosis | 47 (39.2) | 66 (55) |
| Total | 120 (100) | 120 (100) |

Afifi (2007)

(B) Age distribution:

- Mothers of psychiatric-ill children:

Bastawy (2009) studied 200 psychiatric ill child and their mothers (Appendix 34) and he found that 81/200 (40.5%) of the mothers present in the age group from 33 to < 41 years, 80/200 (40%) are present in the age group from 25 to < 33 years, and 39/200 (19.5%) are present in the age group from 41 to 49 years.

(C) Sex distribution:**1- Relatives of OCD patients:**

Tantawy et al (2008) Studied 50 adult OCD patients and 129 first-degree relatives, and 30 health controls (Appendix 32). They found that females represent the common sex among FDR of OCD patients (80/129, 62.02%), while males represent 49/129 (37.98%). (See table 27).

Table (27): Sex distribution among FDR of OCD patients.

| Sex | FDR of OCD patients (n= 129) N (%) | Healthy controls (n= 30) N (%) |
|--------|--|--------------------------------------|
| Male | 49 (37.98) | 13 (43.33) |
| Female | 80 (62.02) | 17 (56.66) |

*Tantawy et al (2008)***2- Relatives of demented patients:**

Waly (2008) studied 100 demented patients and their principle caregivers. Educational intervention program is applied to 50 caregivers, and the other 50 caregivers are controls. Evaluation of the program is done after 3 months. (Appendix 34), the researcher found that female caregivers of demented patients represent the main sex 54/100 (54%), while males represent 46/100 (46%). (See table 28).

Table (28): Sex distribution among caregivers of demented patients.

| Sex | Total |
|--------|---------|
| Male | 46 (46) |
| Female | 54 (54) |

Waly (2008)

(D) Marital status distribution:

1- Relatives of OCD patients:

Tantawy et al (2008) (Appendix 31) found that never married FDR of OCD patients represent the common marital status (91/129, 70.54%), while ever married FDR represent 38/129 (29.46%). (See table 29).

Table (29): Marital status distribution among FDR of OCD patients.

| Marital status | FDR of OCD patients (n= 129) N (%) | Healthy controls (n= 30) N (%) |
|----------------|--|--------------------------------------|
| Ever married | 38 (29.46) | 17 (56.66) |
| Never married | 91 (70.54) | 13 (44.33) |

Tantawy et al (2008)

2- Mothers of psychiatric ill children:

Bastawy (2009) (Appendix 34) found that 177/200 (88.5%) of the mothers are married, and only 23/200 (11.5%) mothers are divorced.

3- Relatives of demented patients:

Waly (2008) (Appendix 34) found that 80/100 (80%) of the caregiver family members of demented patients are married, 1/100 (1%) widow, and 19/100 (19%) are single. (See table 30).

Table (30): Marital status distribution among caregivers of dementia patients.

| Marital status | Total N (%) |
|----------------|----------------|
| Married | 80 (80) |
| Widow | 1 (1) |
| Single | 19 (19) |

Waly (2008)

(E) Educational level distribution:

1- Relatives of schizophrenics:

El-Ibiary (2001) studied 40 schizophrenics and their 124 first degree relatives, and 23 healthy controls and their 75 first degree relatives, (Appendix 12) and found that the commonest educational level among the FDR of schizophrenics is high school 36/124 (29.03%) and the lowest educational level is postgraduate 2/124 (1.61%). (See table 31).

Table (31): Educational level distribution of the 1st degree relatives of schizophrenics.

| Educational level | FDR of schizophrenics (n=124) N (%) | Healthy controls (n=75) N (%) |
|--------------------------|--|--|
| • Illiterate | 19(15.32%) | 1(1.33%) |
| • Read & write | 7(5.64%) | 4(5.33%) |
| • Primary school | 26(20.69%) | 9(12%) |
| • High school | 36(29.03%) | 31(41.33%) |
| • College | 34(27.41%) | 24(32%) |
| • postgraduate | 2(1.61%) | 6(8%) |
| Total | 124(100%) | 75(100%) |

($X^2 = 18.42$, $P=0.002$, S)

El-Ibiary (2001)

2- Mothers of psychiatric ill children:

Bastawy (2009) studied 200 psychiatric ill child and their mothers (Appendix 34) and he found that mothers received secondary school or diploma education are the most common group 117/200 (58%), and the illiterate mothers are the least group 4/200 (2%), others include college graduate mothers 42/200 (21%), mothers that can read and write 29/200 (14.5%), and postgraduate mothers 8/200 (4%).

(F) Occupation distribution:

1- Relatives of schizophrenics:

El-Ibiary (2001) (Appendix 12) found that professionals represent the commonest occupational degree among the FDR of schizophrenics (35/124, 28.22%), while unskilled are the least group representing 6/124 (4.83%). (See table 32).

Table (32): Occupation distribution among the 1st degree relatives of schizophrenics.

| | FDR of schizophrenics (n=124) N (%) | Healthy controls (n=75) N (%) |
|----------------|--|--|
| • professional | 35(28.22%) | 29(38.66%) |
| • skillful | 12(9.67%) | 18(24%) |
| • semiskilled | 12(9.67%) | 2(2.66%) |
| • unskilled | 6(4.83%) | 1(1.33%) |
| • unemployed | 10(8.06%) | 0(0%) |
| • student | 17(13.70%) | 9(12%) |
| • housewife | 32(25.80%) | 16(21.33%) |

($X^2=19.38$, $p=0.03$, S)

El-Ibiary (2001)

2- Mothers of psychiatric ill children:

Bastawy (2009) studied 200 psychiatric ill child and their mothers (Appendix 34) and he found that 151/200 (75.5%) of the mothers don't work, while 49/200 (24.5%) have a work.

3- Relatives of demented patients:

Waly (2008) (Appendix 34) found that 66/100 (66%) of the caregiver family members of demented patients are employed,

34/100 (34%) are housewives, with statistical significant difference between both groups. (See table 33).

Table (33): Occupation distribution among caregivers of demented patients.

| Occupation | Total N (%) |
|---------------|----------------|
| Employed | 66 (66) |
| Non- employed | 0 (0) |
| housewives | 34 (34) |

Waly (2008)

4- Wives of addicts:

By studying 30 addicts and their wives and 30 healthy males and their spouses (appendix 15); *Emara (2002)* found that 60% of wives of addicts are workers, 30% are skilled, while 30% are professionals. (See table 34).

Table (34): Occupational level distribution among wives of addicts.

| Occupation | Wives of addicts | Controls |
|----------------|------------------|----------|
| Professional | 30% | 63.3% |
| Skilled worker | 10% | 6.7% |
| House wife | 60% | 30% |
| Not working | --- | --- |

$(X^2=6.771, p=0.034, S)$

Emara (2002)

(G) Religion distribution:

- Mothers of psychiatric ill children:

Bastawy (2009) (Appendix 34) found that 188/200 (94%) of the mothers are Muslims, while 12/200 (6%) are Christians.

(H) Socioeconomic status:

a) Relatives of OCD patients:

Tantawy et al (2008) Studied 50 adult OCD patients and 129 first-degree relatives, and 30 health controls (Appendix 32). They found that most of the FDR of OCD patients 90/124 (69.77%) are present in the middle socioeconomic status. (See table 35).

Table (35): Socioeconomic status distribution among FDR of OCD patients.

| Socioeconomic Status | FDR of OCD patients (n= 129) N (%) | Healthy controls (n= 30) N (%) |
|-----------------------------|---|---|
| Low | 32 (24.81) | 6 (20.00) |
| Moderate | 90 (69.77) | 19 (63.33) |
| High | 7 (5.42) | 5 (16.67) |

Tantawy et al (2008)

(I) Number of children:

- Mothers of psychiatric ill children:

Bastawy (2009) (Appendix 34) found that the number of children per month ranges from 1 to 7 children and 3 children is the most frequent number of children for each mother.

(I) Socio-demographic risk factors:

1- Age of the patient:

a) Mothers of psychiatric ill children:

By studying 200 psychiatric ill child and their mothers (Appendix 34). **Bastawy (2009)** found no relation between the age of the psychiatric ill child and the mental health, psychiatric disorders, psychiatric diagnosis, mother's and family burden, maternal stress and quality of life of their mothers except in the independent quality of life which is worst among the younger age group, this is because the younger the age of the child, the more care needed from the mother, so, the load on the mother increase and the independent quality of life decrease. (See table 36, 37, 38, 39, 40, and 41).

Table (36): Age of the children in relation to mental health of the mothers (GHQ-28).

| Mental health of the mother (GHQ-28) | Child's age group | | |
|--------------------------------------|---------------------------------|----------------------------------|----------------------------------|
| | 3 years to <6 years N (%) | 6 years to <13 years N (%) | 13 years to 16 years N (%) |
| Good (Scored <5) | 26(42.6) | 39(36.4) | 11(34.4) |
| Bad (Scored ≥5) | 35(57.4) | 68(63.6) | 21(65.6) |
| Total | 61(100) | 107(100) | 32(100) |

($\chi^2=0.84$, $P=0.65$, NS)

Bastawy (2009)

Table (37): Age group of the children in relation to psychiatric disorders of the mothers (GHQ 28).

| Psychiatric disorders of the mother | Child's age group | | |
|-------------------------------------|------------------------------|-------------------------------|-------------------------------|
| | 3 years to <6 years N (%) | 6 years to <13 years N (%) | 13 years to 16 years N (%) |
| Absent (DSM-IV) | 26(42.6) | 39(36.4) | 11(34.4) |
| subclinical (GHQ-28) | 18(29.5) | 28(26.2) | 14(43.8) |
| Present (DSM-IV) | 17(27.9) | 40(37.4) | 7(21.9) |

($X^2 = 5.3$, $P=0.25$, NS)

Bastawy (2009)

Table (38): Age group of the children in relation to psychiatric diagnosis of the mothers.

| Psychiatric diagnosis of the mother | Child's age group | | |
|---|------------------------------|-------------------------------|-------------------------------|
| | 3 years to <6 years N (%) | 6 years to <13 years N (%) | 13 years to 16 years N (%) |
| GAD | 8 (47) | 18 (45) | 1 (14) |
| Dysthymic disorder | 2 (12) | 5 (12) | 2 (29) |
| Adjustment disorder with depressed mood | 7 (41) | 17 (43) | 4 (57) |

($X^2 = 7.5$, $P=0.48$, NS)

Bastawy (2009)

Table (39): Age of the children in relation to mother's and family's burden (SDQ).

| Mother's & family's burden | Child's age group | | |
|----------------------------|--------------------------|------------------------------|------------------------------|
| | 3 years to <6 y N (%) | 6 years to <13 year N (%) | 13 years to 16 year N (%) |
| No burden | 3 (4.9) | 3 (2.8) | 2 (6.3) |
| Only a little | 7 (11.5) | 11 (10.3) | 4 (12.5) |
| Quite a lot | 5 (8.2) | 23 (21.5) | 5 (15.6) |
| A great deal | 46 (75.4) | 70 (65.4) | 21 (65.6) |
| Total | 61 (100) | 107(100) | 32 (100) |

($X^2=5.8$, $P=0.44$, NS)

Bastawy (2009)

Table (40): Age of the children in relation to mother's stress (PSI).

| Mother's stress (PSI) | Child's age group | | |
|-----------------------|-------------------|--------------|----------------------|
| | 3 y to <6 y | 6 y to <13 y | 13 years to 16 years |
| | N (%) | N (%) | N (%) |
| Absent | 1 (1.6) | 0 (.0) | 0 (.0) |
| Average | 5 (8.2) | 13 (12.1) | 7 (21.9) |
| High | 55 (90.2) | 94 (87.9) | 25 (78.1) |
| Total | 61 (100) | 107 (100) | 32 (100) |

($X^2=5.8$, $P=0.21$, NS)

Bastawy (2009)

Table (41): Age of the children in relation to mother quality of life (WHO QOL-100).

| Mother's quality of life (WHO QOL-100) | | Child's age group | | |
|---|--------------|---------------------|----------------------|----------------------|
| | | 3 years to <6 years | 6 years to <13 years | 13 years to 16 years |
| | | N (%) | N (%) | N (%) |
| Physical ($X^2=2.6$, $P=0.27$,) | Good | 12 (19.7) | 12 (11.2) | 6 (18.8) |
| | Bad | 49 (80.3) | 95 (88.8) | 26 (81.3) |
| | Total | 61 (100) | 107 (100) | 32 (100) |
| Psychological ($X^2=5.2$, $P=0.07$,) | Good | 8 (13.1) | 8 (7.5) | 7 (21.9) |
| | Bad | 53 (86.9) | 99 (92.5) | 25 (78.1) |
| | Total | 61 (100) | 107 (100) | 32 (100) |
| Independent ($X^2=10.5$, $P=0.005$,) | Good | 11 (18.0) | 23 (21.5) | 15 (46.9) |
| | Bad | 50 (82) | 84 (78.5) | 17 (53.1) |
| | Total | 61 (100) | 107 (100) | 32 (100) |
| Social ($X^2=3.1$, $P=0.2$,) | Good | 10 (16.4) | 11 (10.3) | 7 (21.9) |
| | Bad | 51 (83.6) | 96 (89.7) | 25 (78.1) |
| | Total | 61 (100) | 107 (100) | 32 (100) |
| Environment ($X^2=1.5$, $P=0.46$,) | Good | 5 (8.2) | 4 (3.7) | 2 (6.3) |
| | Bad | 56 (91.8) | 103 (96.3) | 30 (93.8) |
| | Total | 61 (100) | 107 (100) | 32 (100) |
| Spiritual ($X^2=1.5$, $P=0.47$,) | Good | 10 (16.4) | 14 (13.1) | 7 (21.9) |
| | Bad | 51 (83.6) | 93 (86.9) | 25 (78.1) |
| | Total | 61 (100) | 107 (100) | 32 (100) |
| Overall ($X^2=4.2$, $P=0.12$,) | Good | 9 (14.8) | 14 (13.1) | 9 (28.1) |
| | Bad | 52 (85.2) | 93 (86.9) | 23 (71.9) |
| | Total | 61 (100) | 107 (100) | 32 (100) |

Bastawy (2009)

2- Age of the relatives:

a) Mothers of psychiatric ill children:

Bastawy (2009) (Appendix 34) found no relation between the maternal age and the mental health, psychiatric disorders, psychiatric diagnosis, mother's and family burden, maternal stress and quality of life of the mothers of the psychiatric ill child. (See table 42, 43, 44, 45, 46, and 47)

Table (42): Mental health of the mothers (GHQ-28) in relation to the mother's age group.

| Mother's age group | Mental health of the mother (GHQ-28) | | |
|-----------------------|--------------------------------------|--------------------|---------|
| | Good (Scored <5) | Bad (Scored ≥5) | Total |
| 25y to < 33y N (%) | 30(37.5) | 50(62.5) | 80(100) |
| 33y to < 41y N (%) | 31(38.3) | 50(61.7) | 81(100) |
| 41y to 49y N (%) | 15(38.5) | 24(61.5) | 39(100) |

($\chi^2=1.9$, $P=0.38$, NS)

Bastawy (2009)

Table (43): Psychiatric disorders of the mothers in relation to the mother's age group.

| Mother's age group | psychiatric disorders of the mothers | | |
|-----------------------|--------------------------------------|-------------------------|---------------------|
| | Absent (DSM-IV) | Subclinical (GHQ-28) | Present (DSM-IV) |
| 25y to < 33y N (%) | 30(37.5) | 24(30) | 15(38.5) |
| 33y to < 41y N (%) | 31(38.3) | 23(28.4) | 13(33.3) |
| 41y to 49y N (%) | 15(38.5) | 27(33.3) | 11(28.2) |

($\chi^2=0.54$, $P=0.9$, NS)

Bastawy (2009)

Table (44): Psychiatric diagnosis of the mothers in relation to the mother's age group.

| Mother's age group | psychiatric diagnosis of the mothers | | |
|-----------------------|--------------------------------------|--------------------|---|
| | GAD | Dysthymic disorder | Adjustment disorder with depressed mood |
| 25y to < 33y N (%) | 8(31) | 5(19) | 13(50) |
| 33y to < 41y N (%) | 13(48) | 4(15) | 10(37) |
| 41y to 49y N (%) | 6(54.5) | 0(0) | 5(45.5) |

($\chi^2=4.2$, $P=0.8$, NS)

Bastawy (2009)

Table (45): Mother's and family burden in relation to the mother's age group.

| Mother's age group | mother's and family burden | | | |
|-----------------------|----------------------------|---------------|-------------|--------------|
| | No burden | Only a little | Quite a lot | A great deal |
| 25y to < 33y N (%) | 4(5) | 4(5) | 16(20) | 56(70) |
| 33y to < 41y N (%) | 2(2.5) | 10(12.3) | 13(16) | 56(69.1) |
| 41y to 49y N (%) | 2(5.1) | 8(20.5) | 4(10.3) | 25(64.1) |

($\chi^2=0.84$, $P=0.2$, NS)

Bastawy (2009)

Table (46): Mother's stress in relation to the mother's age group.

| Mother's age | Mother's stress | | |
|--------------------|-----------------|----------|----------|
| | Absent | Average | High |
| 25y to < 33y N (%) | 1(1.3) | 9(11.3) | 0(0) |
| 33y to < 41y N (%) | 0(0) | 9(11.1) | 7(17.9) |
| 41y to 49y N (%) | 0(0) | 72(88.9) | 32(82.1) |

($\chi^2=2.7$, $P=0.5$, NS)

Bastawy (2009)

Table (47): Mother quality of life (WHO QOL-100) in relation to the mother's age group.

| Mother's quality of life | | Mother's age group | | |
|---|--------------|-----------------------|-----------------------|------------------------|
| | | 25y to < 33y N (%) | 33y to < 41y N (%) | 41y to 49y N (%) |
| Physical ($X^2=2.6$, P=0.27,) | Good | 15 (18.8) | 10 (12.3) | 5 (12.8) |
| | Bad | 65 (81.3) | 71 (87.7) | 34 (87.2) |
| | Total | 80 (100) | 81 (100) | 39 (100) |
| Psychological ($X^2=5.2$, P=0.07,) | Good | 11 (13.8) | 19 (23.5) | 5 (12.8) |
| | Bad | 69 (86.3) | 62 (76.5) | 34 (87.2) |
| | Total | 80 (100) | 81 (100) | 39 (100) |
| Independent ($X^2=10.5$, P=0.005,) | Good | 21 (26.3) | 9 (11.1) | 9 (23.1) |
| | Bad | 59 (73.8) | 72 (88.9) | 30 (76.9) |
| | Total | 80 (100) | 81 (100) | 39 (100) |
| Social ($X^2=3.1$, P=0.2,) | Good | 14 (17.5) | 2 (2.5) | 5 (12.8) |
| | Bad | 66 (82.5) | 79 (97.5) | 34 (87.2) |
| | Total | 80(100) | 81 (100) | 39 (100) |
| Environment ($X^2=1.5$, P=0.46, ,) | Good | 7 (8.8) | 12 (14.8) | 2 (5.1) |
| | Bad | 73 (91.3) | 69 (85.2) | 37 (94.9) |
| | Total | 80(100) | 81 (100) | 39 (100) |
| Spiritual ($X^2=1.5$, P=0.47,) | Good | 13(16.3) | 12 (14.8) | 6 (15.4) |
| | Bad | 67(83.8) | 69 (85.2) | 33 (84.6) |
| | Total | 80(100) | 81 (100) | 39 (100) |
| Overall ($X^2=4.2$, P=0.12,) | Good | 15 (18.8) | 10 (12.3) | 7 (17.9) |
| | Bad | 65 (81.3) | 71 (87.7) | 32 (82.1) |
| | Total | 80 (100) | 81 (100) | 39 (100) |

Bastawy (2009)

b) Relatives of demented patients:

Waly (2008) studied 100 demented patients and their principle caregivers. Educational intervention program is applied to 50 caregivers, and the other 50 caregivers are controls. Evaluation of the program is done after 3 months. (Appendix 34), and he found a positive significant correlation between the caregiver burden and age of the caregiver of dementia patients.

3- Sex of the patient:

a) Mothers of psychiatric ill children:

Bastawy (2009) (Appendix 34) found no significant relation between the sex of the psychiatric ill child and the mental health, psychiatric disorders, psychiatric diagnosis, mother's and family burden, maternal stress and quality of life of their mothers. (See table 48, 49, 50, 51, 52, and 53).

Table (48): Gender difference in relation to mental health of the mothers (GHQ-28).

| Mental health of the mother (GHQ-28) | Child's sex | |
|---|-----------------------|---------------------|
| | Female child N (%) | Male Child N (%) |
| Good (Scored <5) | 25 (36.2) | 51 (38.9) |
| Bad (Scored ≥5) | 44 (63.8) | 80 (61.1) |
| Total | 69 (100) | 131 (100) |

($\chi^2=0.14$, $P=0.7$, NS)

Bastawy (2009)

Table (49): Gender difference in relation to psychiatric disorders of the mothers (GHQ 28).

| Psychiatric disorders of the mother | Child's sex | |
|-------------------------------------|-----------------------|---------------------|
| | Female child N (%) | Male Child N (%) |
| Absent (DSM-IV) | 25 (36.2) | 51 (38.9) |
| subclinical (GHQ-28) | 22 (31.9) | 38 (29) |
| Present (DSM-IV) | 22 (31.9) | 42 (32.1) |

($\chi^2= 2.1$, $P=0.9$, NS)

Bastawy (2009)

Table (50): Age group of the children and its relation to psychiatric diagnosis of the mothers.

| Psychiatric diagnosis of the mother | Child's sex | |
|---|-----------------------|---------------------|
| | Female child N (%) | Male Child N (%) |
| GAD | 10 (45.5) | 17 (40.5) |
| Dysthymic disorder | 4 (18.2) | 5 (11.9) |
| Adjustment disorder with depressed mood | 8 (36.3) | 20 (47.6) |

($X^2 = 1.1$, $P = 0.98$, NS)

Bastawy (2009)

Table (51): Gender difference in relation to mother's quality of life (WHO QOL-100).

| Mother's quality of life (WHOQOL-100) | | Child's sex | |
|---|--------------|-----------------------|---------------------|
| | | Female child N (%) | Male Child N (%) |
| Physical ($X^2 = 0.07$, $P = 0.7$, NS) | Good | 11 (15.9) | 19 (14.5) |
| | Bad | 58 (84.1) | 112 (85.5) |
| | Total | 69 (100) | 131 (100) |
| Psychological ($X^2 = 0.92$, $P = 0.33$, NS) | Good | 10 (14.5) | 13 (9.9) |
| | Bad | 59 (85.5) | 118 (90.1) |
| | Total | 69 (100) | 131 (100) |
| Independent ($X^2 = 0.52$, $P = 0.46$, NS) | Good | 19 (27.5) | 30 (22.9) |
| | Bad | 50 (72.5) | 101 (77.1) |
| | Total | 69 (100) | 131 (100) |
| Social ($X^2 = 1$, $P = 0.31$, NS) | Good | 12 (17.4) | 16 (12.2) |
| | Bad | 57 (82.6) | 115 (87.8) |
| | Total | 69 (100) | 131 (100) |
| Environment ($X^2 = 2$, $P = 0.15$, NS) | Good | 6 (8.7) | 5 (3.8) |
| | Bad | 63 (91.3) | 126 (96.2) |
| | Total | 69 (100) | 131 (100) |
| Spiritual ($X^2 = 3$, $P = 0.07$, NS) | Good | 15 (21.7) | 16 (12.2) |
| | Bad | 54 (78.3) | 115 (87.8) |
| | Total | 69 (100) | 131 (100) |
| Overall ($X^2 = 0.6$, $P = 0.42$, NS) | Good | 13 (18.8) | 19 (14.5) |
| | Bad | 56 (81.2) | 112 (85.5) |
| | Total | 69 (100) | 131 (100) |

Bastawy (2009)

Table (52): Gender difference in relation to mother's & family's burden (SDQ).

| Mother's & family's burden | Child's sex | |
|----------------------------|-----------------------|---------------------|
| | Female child N (%) | Male Child N (%) |
| No burden | 2 (2.9) | 6 (4.6) |
| Only a little | 10 (14.5) | 12 (9.2) |
| Quite a lot | 14 (20.3) | 19 (14.5) |
| A great deal | 43 (62.3) | 94 (71.8) |
| Total | 69 (100) | 131 (100) |

($X^2=2.9$, $P=0.39$, NS)

Bastawy (2009)

Table (53): Gender difference in relation to mother's stress.

| mother's stress(PSI) | Child's sex | |
|----------------------|-----------------------|---------------------|
| | Female child N (%) | Male Child N (%) |
| Absent | 1 (1.4) | 0 (0) |
| Average | 9 (13) | 16 (12.2) |
| High | 59 (85.5) | 115 (7.8) |
| Total | 69 (100) | 131 (100) |

($X^2=1.9$, $P=0.3$, NS)

Bastawy (2009)

b) Parents of PDD children:

Azzam (2003) studied 25 child with different types of PDD and their parents (appendix 17) and the researcher found that psychiatric disorders among the parents either fathers (See table 54, and 55) or mothers (See table 56, and 57) have no statistically significant in relation to the sex of the child.

Table (54): Gender difference of the child in relation to psychiatric disorders in fathers.

| sex | Psychiatric disorders among fathers of PDD | | |
|-------|--|-----------|-----------|
| | Present | Absent | Total |
| Boys | 5 (35.7%) | 9 (64.3%) | 14 (100%) |
| Girls | 2 (18.2%) | 9 (81.8%) | 11 (100%) |
| Total | 7 (28%) | 18 (72%) | 25 (100%) |

($P=0.3325$, NS)

Azzam (2003)

Table (55): Gender difference of the child in relation to psychiatric diagnosis in fathers.

| sex | Psychiatric diagnosis among fathers of PDD | | | |
|-------|--|------------|----------|---------------|
| | No illness | Depression | P.D. | Social phobia |
| Boys | 9(50%) | 2(66.7%) | 1(50%) | 2(100%) |
| Girls | 9(50%) | 1(33.3%) | 1(50%) | 0 (0%) |
| Total | 18/25(72%) | 3/25(12%) | 2/25(8%) | 2/25(8%) |

(P=0. 57, NS)

Azzam (2003)

Table (56): Gender difference of the child in relation to psychiatric disorders in mothers.

| | Psychiatric disorders among fathers of PDD | | |
|-------|--|------------|-----------|
| Sex | Present | Absent | Total |
| Boys | 4 (28.6%) | 10 (71.4%) | 14 (100%) |
| Girls | 5 (45.5%) | 6 (54.5%) | 11 (100%) |
| Total | 9 (36%) | 16 (64%) | 25 (100%) |

(P=0.3827, NS)

Azzam (2003)

Table (57): Gender difference of the child in relation to psychiatric diagnosis of mothers.

| sex | Psychiatric diagnosis among mothers of PDD | | | |
|-------|--|------------|----------|---------------|
| | No illness | Depression | OCD | Social phobia |
| Boys | 10(62.5%) | 3(42.9%) | 0 (0%) | 1(100%) |
| Girls | 6(37.5%) | 4(57.1%) | 1(100%) | 0 (0%) |
| Total | 16/25(64%) | 7/25(28%) | 1/25(4%) | 1/25(4%) |

(P=0. 33, NS)

Azzam (2003)

4- Sex of the relatives:

a) children of depressed mothers:

By studying 30 depressed mothers with one of their children (Appendix 7), *Fouad (1999)* found no significant difference between boys and girls as regards any of the CDI, Child Anxiety Scale, and Neurotic Subscale of J-EPQ. (See table 58).

Table (58): Gender difference in children of depressed mothers as regards results of CDI, Child Anxiety Scale, and Neurotic Subscale of J-EPQ.

| Variable | Children of depressed mothers | |
|----------------------------|-------------------------------|--------------------------|
| | Male Mean \pm S.D | Female Mean \pm S.D |
| Child depression inventory | 46.77 \pm 9.84 | 42.83 \pm 8.34 |
| Child anxiety scale | 53.0 \pm 12.11 | 54.16 \pm 7.46 |
| Neurotic subscale (J-EPQ) | 42.11 \pm 23.06 | 43.91 \pm 19.38 |

Fouad (1999)

Fouad (1999) (Appendix 7) found a very high significant difference between boys and girls as regards Reaction Time for Discrimination of Train The Brain, and no significant difference in the other scales. (See table 59).

Table (59): Gender difference in children of depressed mothers as regards results of Intellectual Processing Subscale of Luria Nebraska Scale.

| Variable | Male M \pm S.D | Female M \pm S.D |
|--|---------------------|-----------------------|
| | | |
| Intellectual Processing Subscale of Luria Nebraska Scale | 61.33 \pm 13.52 | 61.08 \pm 9.66 |
| Reaction Time for Attention | 386.5 \pm 98.49 | 469.5 \pm 139.7 |
| Reaction Time for Discrimination | 600.3 \pm 86.75 | 714.6 \pm 131.8 |

Fouad (1999)

b) Relatives of demented patients:

Waly (2008) (Appendix 33) reported insignificant correlation between the caregiver burden and the sex of the caregiver of dementia patients.

5- Religion:

a) Mothers of psychiatric ill children:

By studying 200 psychiatric ill child and their parents (Appendix 34). *Bastawy (2009)* found that the type of religion

has no role in the impact of children's mental health problems, on their mothers. (See table 60, 61, and 62).

Table (60): Mental health of the mothers (GHQ 28) in relation to their religion.

| mental health of mothers | Mother's religion | |
|--------------------------|-------------------|--------------------|
| | Muslim N (%) | Christian N (%) |
| Good (scored<5) | 72 (38.3) | 4 (33.3) |
| Bad (scored≥5) | 116 (61.7) | 8 (66.7) |
| Total | 188 (100) | 12 (100) |

($X^2 = 0.11$, $P=0.73$, NS)

Bastawy (2009)

Table (61): Psychiatric disorders of the mothers (GHQ 28) in relation to their religion.

| Psychiatric disorders | Mother's religion | |
|-----------------------|-------------------|--------------------|
| | Muslim N (%) | Christian N (%) |
| Absent (DSM-IV) | 72 (38.3) | 4 (33.3) |
| subclinical (GHQ-28) | 54 (28.7) | 6 (50) |
| Present (DSM-IV) | 62 (33) | 2 (16.7) |

($X^2 = 2.7$, $P=0.28$, NS)

Bastawy (2009)

Table (62): Psychiatric diagnosis of the mothers in relation to their religion.

| Psychiatric diagnosis | Mother's religion | |
|---|-------------------|--------------------|
| | Muslim N (%) | Christian N (%) |
| GAD | 26 (41.9) | 1 (50) |
| Dysthymic disorder | 8 (12.9) | 1 (50) |
| Adjustment disorder with depressed mood | 28 (45.2) | 0(0) |

($X^2 = 4.2$, $P=0.37$, NS)

Bastawy (2009)

6- Educational level:

a) Relatives of schizophrenics:

Seleem (1999) studied 51 parents of schizophrenic patients with 40 parents of healthy offsprings (appendix 8) and reported that the university educated parents are more satisfied than the parents with less than university degree as regards Affective Communication. (See table 63).

Table (63): Marital satisfaction inventory (MSI) among educated parents of single schizophrenics.

| | Parents of schizophrenics | | P |
|---------------|---|---|----------|
| | university education (n=25) mean +/- SD | Less than university (n=28) mean +/- SD | |
| G.N.V | 50.52+/-9.10 | 53.46+/-8.44 | 0.237 NS |
| G.D.S | 54.88+/-11.22 | 51.31+/-7.01 | 0.182 NS |
| A.F.C | 62.60+/-9.59 | 55.69+/-5.99 | 0.003 HS |
| P.S.C. | 54.24+/-9.23 | 52.88+/-7.40 | 0.567 NS |
| T.T.O | 63.40+/-9.50 | 63.27+/-8.59 | 0.959 NS |
| F.I.N. | 59.56+/-7.68 | 61.15+/-8.87 | 0.492 NS |
| S.E.X. | 48.80+/-9.51 | 47.38+/-7.88 | 0.564 NS |
| R.O.R | 35.56+/-7.31 | 33.19+/-6.47 | 0.225 NS |
| F.H.D | 42.48+/-8.68 | 39.69+/-5.48 | 0.176 NS |
| D.S.C | 55.20+/-11.50 | 55.05+/-8.60 | 0.953 NS |
| C.R.R | 63.56+/-9.14 | 61.85+/-9.30 | 0.521 NS |

Seleem (1999)

b) Mothers of psychiatric ill children:

Bastawy (2009) (Appendix 34) found no relation between the mother's education and the impact of children's mental health problems, on their mothers. (See table 64, 65, and 66).

Table (64): Mental health of the mothers (GHQ 28) in relation to their level of education.

| mental health of the mothers | Mother's education | | | | |
|------------------------------|---------------------|-----------------------|---|---------------------------|------------------------|
| | Illiterate N (%) | Read & write N (%) | 2 ^{ry} school/ diploma N (%) | College graduate N (%) | Post-graduate N (%) |
| Good (scored<5) | 1 (25) | 7 (24.1) | 44 (37.6) | 19 (45.2) | 5 (62.5) |
| Bad (scored≥5) | 3 (75) | 22 (75.9) | 73 (62.4) | 23 (54.8) | 3 (37.5) |
| Total | 4 (100) | 29 (100) | 117 (100) | 42 (100) | 8 (100) |

($X^2 = 8.5$, $P=0.3$, NS)

Bastawy (2009)

Table (65): Psychiatric disorders of the mothers (GHQ 28) in relation to their level of education.

| Psychiatric disorders | Mother's education | | | | |
|-----------------------|---------------------|-----------------------|---|---------------------------|------------------------|
| | Illiterate N (%) | Read & write N (%) | 2 ^{ry} school/ diploma N (%) | College graduate N (%) | Post-graduate N (%) |
| Absent (DSM-IV) | 1 (25) | 7 (24.1) | 44 (37.6) | 19 (45.2) | 5 (62.5) |
| subclinical (GHQ-28) | 1 (25) | 12 (41.4) | 34 (29.1) | 10 (23.8) | 3 (37.5) |
| Present (DSM-IV) | 2 (50) | 10 (34.5) | 39 (33.3) | 13 (31) | 0 (0) |

($X^2 = 8.5$, $P=0.3$, NS)

Bastawy (2009)

Table (66): Psychiatric diagnosis of the mothers in relation to their level of education.

| Psychiatric diagnosis | Mother's education | | | | |
|---|---------------------|-----------------------|---|------------------------------|------------------------|
| | illiterate N (%) | Read & write N (%) | 2 ^{ry} school/ diploma N (%) | College graduate N (%) | Post-graduate N (%) |
| GAD | 2 (100) | 2 (20) | 16 (41) | 7 (54) | 0 (0) |
| Dysthymic disorder | 0 (0) | 4 (40) | 5 (13) | 0 (0) | 0 (0) |
| Adjustment disorder with depressed mood | 0 (0) | 4 (40) | 18 (46) | 6 (46) | 0 (0) |

($X^2 = 8.5$, $P = 0.3$, NS)

Bastawy (2009)

c) Relatives of demented patients:

Waly (2008) (Appendix 33) reported a negative correlation between caregiver burden and education of the caregiver of demented patients with statistical significant difference.

7- Occupation:

a) Mothers of psychiatric ill children:

Bastawy (2009) (Appendix 34) found that 66.2% of the non working mothers have bad mental health more than working mothers (49%), with significant difference. (See table 67).

Table (67): Mental health of the mothers (GHQ 28) in relation to their occupation:

| mental health of mothers | Mother's occupation | |
|--------------------------|----------------------|------------------|
| | Not working N (%) | Working N (%) |
| Good (scored<5) | 51 (33.8) | 25 (51) |
| Bad (scored≥5) | 100 (66.2) | 24 (49) |
| Total | 151 (100) | 49 (100) |

($X^2 = 5.8$, $P=0.2$, NS)

Bastawy (2009)

Bastawy (2009) (Appendix 34) found that non working mothers have higher rate of bad mental health (33.1%) than working mothers, yet without significant difference. (See table 68).

Table (68): Psychiatric disorders of the mothers (GHQ 28) in relation to their occupation.

| Psychiatric disorders | Mother's occupation | |
|-----------------------|----------------------|------------------|
| | Not working N (%) | Working N (%) |
| Absent (DSM-IV) | 51 (33.8) | 25 (51) |
| subclinical (GHQ-28) | 50 (33.1) | 10 (20.4) |
| Present (DSM-IV) | 50 (33.1) | 14 (28.6) |

($X^2 = 1.2$, $P=0.7$, NS)

Bastawy (2009)

Bastawy (2009) (Appendix 34) found that Adjustment disorder with depressed mood is the highest psychiatric disorders among working mothers, while dysthymic disorder is the highest psychiatric disorders among non working mothers. (See table 69).

Table (69): Psychiatric diagnosis of the mothers in relation to their occupation.

| Psychiatric diagnosis | Mother's occupation | |
|---|----------------------|------------------|
| | Not working N (%) | Working N (%) |
| GAD | 21 (42) | 6 (43) |
| Dysthymic disorder | 8 (16) | 1 (7) |
| Adjustment disorder with depressed mood | 21 (42) | 7(50) |

($X^2 = 5.8$, $P=0.2$, NS)

Bastawy (2009)

b) Relatives of demented patients:

Waly (2008) (Appendix 33) reported a negative correlation between caregiver burden and occupation of the caregiver of demented patients with statistical significant difference.

8- Marital status:

a) Relatives of psychiatric and organic patients:

Mansour (1993) studied 80 patients (40 patients with neurotic disorder & 40 with chronic psychotic disorder) (Appendix 2) and reported that divorce is more frequent when the ill-partner is the female. (See table 70).

Table (70): Marital status in different groups.

| | Male patients | | Female patients | |
|---------------------|---------------|----------|-----------------|----------|
| | Married | Divorced | Married | Divorced |
| OCD patients (20) | 8 | 2 | 6 | 4 |
| GAD patients (20) | 8 | 2 | 6 | 4 |
| Schizophrenics(20) | 8 | 2 | 5 | 5 |
| Depressed (10) | 4 | 1 | 4 | 1 |
| Manic patients (10) | 4 | 1 | 2 | 3 |
| Chronic DM (20) | 9 | 1 | 9 | 1 |

Mansour (1993)

b) Mothers of psychiatric ill children:

Bastawy (2009) (Appendix 34) found that divorced mothers have worst mental health (18/23, 78.3%) than married mothers, yet without significant difference. (See table 71).

Table (71): Mental health of the mothers (GHQ 28) in relation to their marital status.

| mental health of the mothers | Mother's marital status | |
|------------------------------|-------------------------|-------------------|
| | Married N (%) | Divorced N (%) |
| Good (scored<5) | 71 (40.1) | 5 (21.7) |
| Bad (scored≥5) | 106 (59.9) | 18 (78.3) |
| Total | 177 (100) | 23 (100) |

Bastawy (2009)

c) Relatives of demented patients:

Waly (2008) (Appendix 33) reported a negative correlation between caregiver burden and marital status of the caregiver of demented patients with insignificant difference.

9- Number of children:

a) Mothers of psychiatric ill children:

Bastawy (2009) (Appendix 34) found no relation between the number of children per month and the impact of children's mental health problems, on their mothers. (See table 72 and 73) Adjustment disorder with depressed mood is more presented among mothers having 3 or 4 child (23/47, 48.9%), while GAD is more presented among mothers having 1 or 2 child (7/15, 44%), and among those having > 4 child (100%) (See table 74).

Table (72): Mental health of the mothers (GHQ 28) in relation to their number of children.

| mental health of mothers | number of children / month | | |
|--------------------------|----------------------------|-----------------------|--------------------|
| | 1 or 2 child N (%) | 3 or 4 child N (%) | > 4 child N (%) |
| Good (scored<5) | 26 (43.3) | 48 (36.1) | 2 (28.6) |
| Bad (scored≥5) | 34 (56.7) | 85 (63.9) | 5 (71.4) |
| Total | 60 (100) | 133 (100) | 7 (100) |

($X^2 = 1.1$, $P=0.5$, NS)

Bastawy (2009)

Table (73): Psychiatric disorders of the mothers (GHQ 28) in relation to their number of children.

| Psychiatric disorders | number of children / month | | |
|-----------------------|----------------------------|-----------------------|--------------------|
| | 1 or 2 child N (%) | 3 or 4 child N (%) | > 4 child N (%) |
| Absent (DSM-IV) | 26 (43.3) | 48 (36.1) | 2 (28.6) |
| subclinical (GHQ-28) | 18 (30) | 38 (28.6) | 4 (57.1) |
| Present (DSM-IV) | 16 (26.7) | 47 (35.3) | 1 (100) |

($X^2 = 4.2$, $P=0.3$, NS)

Bastawy (2009)

Table (74): Psychiatric diagnosis of the mothers in relation to their number of children:

| Psychiatric diagnosis | number of children / month | | |
|---|----------------------------|-----------------------|--------------------|
| | 1 or 2 child N (%) | 3 or 4 child N (%) | > 4 child N (%) |
| GAD | 7 (44) | 19 (40) | 1 (100) |
| Dysthymic disorder | 4 (25) | 5 (11.1) | 0 (0) |
| Adjustment disorder with depressed mood | 5 (31) | 23 (48.9) | 0 (0) |

($X^2 = 7.2$, $P=0.5$, NS)

Bastawy (2009)

(II) Psychiatric risk factors:

a) Age of onset of psychiatric disorders:

By studying children of 30 bipolar patients and children of 30 healthy parents. (Appendix 25), **Gomaa (2004)** found no relation between age of onset of bipolar disorder among parents and behavioral problems in their children either by using CRS or CBCL. (See table 75 and 76).

Table (75): Age of onset of BAD among parents and behavioral problems in their children (CRS).

| | | Age of onset of BAD | | | | | P |
|---------------------|------------------|---------------------|---------|---------|---------|--------|-------|
| Behavioral problems | | <20y | 20-5y | 25-30y | 30-35y | >35y | |
| Conduct | absent N(%) | 3(25) | 2(16.7) | 5(41.7) | 1(8.3) | 1(8.3) | 0.496 |
| | present N(%) | 6(33.3) | 6(33.3) | 4(22.2) | 2(11.1) | 0(0) | |
| Learning | Normal N(%) | 4(23.5) | 4(23.5) | 5(29.4) | 3(17.6) | 1(5.9) | 0.44 |
| | Abnormal N(%) | 5(38.5) | 4(30.8) | 4(30.8) | 0(0) | 0(0) | |
| Somatic | Normal N(%) | 3(30) | 2(20) | 3(30) | 2(20) | 0(0) | 0.69 |
| | Abnormal N(%) | 6(30) | 6(30) | 6(30) | 1(5) | 1(5) | |
| Impulsivity | Normal N(%) | 4(23.5) | 3(17.6) | 6(35.3) | 3(17.6) | 1(5.9) | 0.27 |
| | abnormal N(%) | 5(38.5) | 5(38.5) | 3(23.1) | 0(0) | 0(0) | |
| Anxiety | Normal N(%) | 4(28.6) | 4(28.6) | 4(28.6) | 2(14.3) | 0(0) | 0.84 |
| | abnormal N(%) | 5(31.3) | 4(25) | 5(31.3) | 1(6.3) | 1(6.3) | |
| hyperactivity | Normal N(%) | 4(30.8) | 3(23.1) | 3(23.1) | 2(15.4) | 1(7.3) | 0.65 |
| | abnormal N(%) | 5(29.4) | 5(29.4) | 6(35.3) | 1(5.9) | 0(0) | |

Gomaa (2004)

Table (76): Age of onset of bipolar disorder among parents and behavioral problems in their children (CBCL).

| Behavioral problems | | Age of onset of bipolar disorder | | | | | p |
|------------------------|-----------------|----------------------------------|---------------|----------------|----------------|--------------|------|
| | | <20y N(%) | 20-5y N(%) | 25-30y N(%) | 30-35y N(%) | >35y N(%) | |
| Internalizing problems | Non significant | 5(27.8) | 4(22.2) | 5(27.8) | 3(16.7) | 1(5.6) | 0.70 |
| | Serious problem | 1(16.7) | 3(50) | 2(33.3) | 0(0) | 0(0) | |
| | Severe problem | 3(50) | 1(16.7) | 2(33.3) | 0(0) | 0(0) | |
| Externalizing problems | Non significant | 7(35) | 5(25) | 5(25) | 2(10) | 1(5) | 0.75 |
| | Serious problem | 1(11.1) | 3(33.3) | 4(44.4) | 1(11.1) | 0(0) | |
| | Severe problem | 1(100) | 0(0) | 0(0) | 0(0) | 0(0) | |
| Other problems | Non significant | 5(27.8) | 5(27.8) | 4(22.2) | 3(16.7) | 1(5.6) | 0.81 |
| | Serious problem | 3(30) | 3(30) | 4(40) | 0(0) | 0(0) | |
| | Severe problem | 1(50) | 0(0) | 1(50) | 0(0) | 0(0) | |

Gomaa (2004)

b) Psychiatric disorders of the patients:

Gomaa (2004) studied children of 30 patients with **BAD** (Appendix 25) and he reported that there's no significant difference between different types of bipolar patients regarding different psychiatric disorders of their children. (See table 77).

Table (77): Psychiatric disorders among children of bipolar patients.

| Bipolar patients | Psychiatric diagnoses of children | | | |
|------------------|-----------------------------------|---------|--------|------------------------|
| | ADHD | Conduct | Others | No psychiatric illness |
| | N (%) | N (%) | N (%) | N (%) |
| Manic | 5(62.5) | 3(50) | 3(50) | 6(35) |
| Depressed | 1(12.5) | 1(16.7) | 3(50) | 9(52.9) |
| Mixed | 2(25) | 2(33.3) | 0(0) | 2(11.8) |
| Total | 8(100) | 6(100) | 6(100) | 17(100) |

($\chi^2=16.12$, $p=0.329$, NS)

Gomaa (2004)

Whereas, *Bastawy (2009)* studied 200 **psychiatric ill child** and their mothers (Appendix 34) and he reported that the serious child disorders as mental retardation, autistic disorder, attention disorder and disruptive behavior disorders, and psychotic disorder have the worst impact on the mothers' mental health. (See table 78).

Table (78): Mental health of the mothers in relation to the child's psychiatric disorders.

| Mental health of the mother | Child's psychiatric disorders | | | | | | | |
|-----------------------------|-------------------------------|--------------|-------------|------------------|--------------|--------------|-------------|-------------|
| | ADDBD | AD | PD | C _m D | MR | NDD | LD | PE |
| | n=89 N(%) | n=17 N(%) | n=4 N(%) | n=9 N(%) | n=38 N(%) | n=31 N(%) | n=8 N(%) | n=4 N(%) |
| Good (<5) | 26(29.2) | 8(47.1) | 1(25) | 7(77.8) | 8(21) | 17(55) | 8(100) | 1(25) |
| Bad (>=5) | 63(70.8) | 9(52.9) | 3(75) | 2(22.2) | 30(79) | 14(45) | 0(0) | 3(75) |
| Total | 89(100) | 17(100) | 4(100) | 9(100) | 38(100) | 31(100) | 8(100) | 4(100) |

Bastawy (2009)

c) Symptomatology among the psychiatric ill child:**1- Conduct symptoms:**

Bastawy (2009) (Appendix 34) found that conduct symptoms of the psychiatric ill child have significant bad impact on maternal mental health, maternal psychiatric disorders, maternal stress, and bad quality of life (independent, overall, and psychological).

2- Abnormal emotional symptoms:

Bastawy (2009) (Appendix 34) found that abnormal emotional symptoms of the psychiatric ill child have significant bad impact on maternal mental health, maternal psychiatric disorders, maternal stress, and bad quality of life (independent, physical, environmental, overall, and psychological).

3- Hyperactivity:

Bastawy (2009) (Appendix 34) found that hyperactivity of the psychiatric ill child have significant bad impact on maternal mental health, maternal psychiatric disorders, maternal stress, adjustment disorder with depressed mood, mother's and family burden, and bad quality of life (in all domains except spiritual).

4- Peer problems:

Bastawy (2009) (Appendix 34) found that peer problems of the psychiatric ill child have significant bad impact on maternal mental health, maternal psychiatric disorders, maternal stress, and bad quality of life (in all domains except spiritual).

d) Comorbidity:

Azzam (2003) studied 28 children with different types of PDD with their both parents (Appendix 17); the researcher found that presence of psychiatric disorders among fathers has no relation with the IQ of their children. (See table 79).

Table (79): psychiatric disorders among fathers in relation to IQ of their PDD children.

| IQ of children | Psychiatric disorders of the father | | |
|----------------|-------------------------------------|--------|-------|
| | Present | Absent | Total |
| No MR | 0 | 3 | 3 |
| Mild MR | 4 | 11 | 15 |
| Moderate MR | 3 | 2 | 5 |
| Severe MR | 0 | 2 | 2 |
| Total | 7 | 18 | 25 |

($P=0.212$, NS)

Azzam (2003)

Azzam (2003) (Appendix 17) found no relation between the different psychiatric diagnosis among the fathers and the I.Q. of their PDD children. (See table 80).

Table (80): psychiatric diagnosis in fathers in relation to IQ of their PDD children.

| IQ of children | Psychiatric diagnosis of the father | | | |
|----------------|-------------------------------------|---------------|----------------------|--------------------------|
| | Depression | Social phobia | Personality disorder | No psychiatric disorders |
| | N (%) | N (%) | N (%) | N (%) |
| No MR | 0(0) | 0(0) | 0(0) | 3(16.6) |
| Mild MR | 1(33.3) | 2(100) | 1(50) | 11(61.1) |
| Moderate MR | 2(66.6) | 0(0) | 1(50) | 2(11.1) |
| Severe MR | 0(0) | 0(0) | 0(0) | 2(11.1) |

($P=0.84$, NS)

Azzam (2003)

Azzam (2003) (Appendix 17) found no relation between the psychiatric disorders in mothers has with the IQ of their PDD children. (See table 81).

Table (81): psychiatric disorders in mothers in relation to IQ of their children.

| | Psychiatric disorders of the mother | | |
|-------------|-------------------------------------|--------|-------|
| | Present | Absent | Total |
| No MR | 0 | 3 | 3 |
| Mild MR | 7 | 10 | 17 |
| Moderate MR | 2 | 3 | 5 |
| Total | 9 | 16 | 25 |

($P=0.382$, NS)

Azzam (2003)

(III) Hereditary factors:

In an attempt to study the biological causes of psychiatric disorders, many researchers did different studies among the relatives of the patients to prove the hereditary factors of the disorders.

a) Genetic study:

1- Relatives of schizophrenics:

El-Ibiary (2001) (Appendix 12) tried to prove the change in the pattern and frequency of both genotypes and alleles in the first degree relatives. (See table 82).

Table (82): Allele frequencies and genotypes of the families of schizophrenics.

| | Families of schizophrenics (n=25) N (%) | Families of healthy controls (n=5) N (%) |
|-----------------------|--|---|
| Allele A1 | 37(74%) | 1(1.33%) |
| Allele A2 | 13(26%) | 4(5.33%) |
| Homozygotes: | 12(48%) | 3 (60%) |
| Genotype A1A1 | | |
| Genotype A2A2 | | |
| Heterozygotes: | 0(0%) | 0(0%) |
| Genotype A1A2 | 13(52%) | 2(40%) |

($X^2=0.24$, $P=0.62$,)

El-Ibiary (2001)

2- Relatives of BAD patients:

Fikry et al (2002) studied 116 BAD patients and their parents. (Appendix 13) and tried to prove the trend for a preferential transmission of longer alleles among parents of BAD patients using (TDT). (See table 83, 84, and 85).

Table (83): Transmission disequilibrium test (TDT) (alleles from heterozygous parents).

| Allele | A | B | C | D | E | Test |
|-----------------|----|----|----|----|----|------------|
| Transmitted | 34 | 26 | 17 | 47 | 15 | $X_2= 9.1$ |
| Non transmitted | 33 | 42 | 13 | 30 | 21 | |

($0.01 < P < 0.05$)

Fikry et al (2002)

Table (84): B-allele from heterozygous parents.

| Allele | B | Others | Test used | P |
|-----------------|----|--------|----------------------|--------|
| Transmitted | 26 | 113 | $X_2=4.98$ df = 1 | < 0.05 |
| Non-transmitted | 42 | 97 | | |

Fikry et al (2002)

Table (85): D-allele from heterozygous parents.

| Allele | D | Others | Test used | P |
|-----------------|----|--------|----------------------|--------|
| Transmitted | 47 | 92 | $X_2=5.19$ df = 1 | < 0.05 |
| Non-transmitted | 30 | 109 | | |

Fikry et al (2002)

Fikry et al (2002) (Appendix 13) performed genotyping and tried to prove the association between the 11 alleles of tryptophan hydroxylase gene and relatives of BAD patients. (See table 86).

Table (86): The 11 alleles of the tryptophan hydroxylase gene from heterozygous parent.

| Allele | 1-2-3 | 4-5-6-7 | 8-9-10-11 | Test used |
|------------------|-------|---------|-----------|----------------------|
| Transmitted | 14 | 26 | 13 | $X_2=0.66$ df = 1 |
| Non- transmitted | 17 | 22 | 14 | |

($P > 0.1$)

Fikry et al (2002)

Fikry et al (2002) (Appendix 13) performed genotyping and tried to prove the association between allele 1 and 2 of dopamine transporter gene and relatives of BAD patients by using TDT. (See table 87).

Table (87): Alleles 1, 2, and 3 of dopamine transporter gene from heterozygous parents:

| Allele | 1-2 | 3 | Test used |
|------------------|-----|----|-----------------------|
| Transmitted | 28 | 13 | $X_2=10.97$ df = 1 |
| Non- transmitted | 13 | 28 | |

($P < 0$)

Fikry et al (2002)

Fikry et al (2002) (Appendix 13) performed genotyping and tried to prove the association between the 4 alleles of serotonin transporter gene and bipolar disorder by using TDT. (See table 88).

Table (88): The 4 alleles of serotonin transporter gene from heterozygous parents:

| Allele | 1-2 | 3-4 | Test used | P |
|------------------|-----|-----|------------------------|--------|
| Transmitted | 26 | 42 | $X_2=3.58$ $df = 1$ | > 0.05 |
| Non- transmitted | 37 | 31 | | |

Fikry et al (2002)

b) Family history of psychiatric illness:

1- Relatives of schizophrenics:

El-Ibiary (2001) studied 40 schizophrenics and their 124 first degree relatives (Appendix 12) and he tried to prove the strong genetic load in first degree relatives of schizophrenics by the presence of higher rates of family history of psychiatric disorders. (See table 89).

Table (89): Family history of Psychiatric disorders in first degree relatives of schizophrenics.

| Family history of psychiatric disorders | patients n=40 N (%) | controls n=23 N (%) |
|---|---------------------------|---------------------------|
| Positive family history for schizophrenia in first degree relatives | 16(40) | 22(95.6) |
| Positive family history for schizophrenia | 15(37.5) | 0(0) |
| Positive family history for other conditions | 9(22.5) | 1(4.35) |
| Negative family history | 13(32.5) | 0(0) |

($X^2=20.63$, $P=0.0001$)

El-Ibiary (2001)

c) Assessment of personality disorders and traits:

1- Relatives of OCD patients:

Tantawy et al (2008) studied 50 adult OCD patients and their 129 first-degree relatives and 30 healthy controls,

(appendix 32), and he found that OCD patients and relatives score much higher on neuroticism than do controls, while extraversion and psychoticism score is lower in OCD patients than their relatives. (See table 90).

Table (90): Personality traits of relatives of OCD patients (EPQ).

| Personality Domains | Relatives Group (n= 129) (Mean ± SD) | Probands Group (n= 50) (Mean ± SD) | Control Group (n= 30) (Mean ± SD) |
|----------------------------|---|---|--|
| Neuroticism Scale | 13.5 ± 8.1 | 19.1 ± 9.2 | 6.9 ± 3.9 |
| Extraversion Scale | 11.3 ± 8.6 | 9.9 ± 5.3 | 10.4 ± 9.9 |
| Psychoticism Scale | 9.1 ± 6.3 | 7.2 ± 3.3 | 8.9 ± 4.7 |
| Lie Scale | 5.1 ± 5.5 | 5.5 ± 4.6 | 4.8 ± 5.2 |

Tantawy et al (2008)

2- Relatives of schizophrenics:

Seleem (1999) studied 51 parents of schizophrenics with 40 parents of healthy offsprings (appendix 8) and he found that extroversion of EPQ is higher among mothers of single schizophrenics. (See table 91).

Table (91): Personality traits of parents of single schizophrenics.

| EPQ | Mothers of the patients N=28 N (%) | Fathers of the patients N=23 N (%) | P |
|--------------|---|---|-----------------|
| psychoticism | 16 (57.14%) | 13 (56.52%) | 0.959 NS |
| neuroticism | 7 (25%) | 7 (30.43%) | 0.484 NS |
| extroversion | 3 (10.71%) | 0(0%) | 0.002 HS |
| Lie scale | 4 (14.28%) | 8(34.78%) | 0.001 HS |
| criminality | 8 (28.57%) | 10 (43.47%) | 0.04 S |

Seleem (1999)

Whereas, *El-Ibiary (2001)* studied 40 schizophrenics and their 124 first degree relatives, compared to 23 healthy controls and their 75 first degree relatives (Appendix 12) and tried to prove the genetic susceptibility of the first degree relatives of schizophrenics by the presence of paranoid personality disorder or even traits. (See table 92).

Table (92): personality disorders among 1st degree relatives of schizophrenics and healthy controls.

| Personality disorder | 1 st degree relatives of | |
|---------------------------------|-------------------------------------|--------------------------|
| | Schizophrenics N (%) | healthycontrols N (%) |
| No disorder | 63(50.8) | 66(88) |
| Paranoid personality disorder | 6(4.8) | 0(0) |
| Paranoid personality traits | 9(7.3) | 0(0) |
| Schizoid personality disorder | 2(1.6) | 0(0) |
| Schizoid personality traits | 7(5.6) | 0(0) |
| Antisocial traits | 2(1.6) | 0(0) |
| Impulsive traits | 1(0.8) | 1(1.3) |
| Histrionic traits | 1(0.8) | 2(2.7) |
| Compulsive personality disorder | 1(0.8) | 0(0) |
| Compulsive personality traits | 6(4.8) | 2(2.7) |
| Anxious traits | 1(0.8) | 0(0) |
| Other neurotic traits | 25(20.2) | 0(0) |
| Dependent traits | 0(0) | 7(5.3) |
| total | 124(100) | 75(100) |

($X^2=946.5$, $P=0.000$,)

El-Ibiary (2001)

d) Auditory Evoked Potential:

1- Relatives of schizophrenics:

Essawy (1995) compared between 27 FDR of schizophrenics and 23 healthy controls, and the researcher found that latency of p300 is prolonged at left and right

parietal, high N100 amplitude at right central region, P200 amplitude is reduced over right parietal area and P300 amplitude is reduced at frontal, central and parietal regions in the relative group. (See table 93).

Table (93): Evoked potential in FDR of schizophrenics.

| Evoked potential | FDR of schizophrenics Mean \pm SD | Healthy controls Mean \pm SD | p |
|-------------------------|---|--|----------|
| Amp N100 C4 | -0.996 \pm 1 | -2.408 \pm 2 | 0.013 |
| Amp P200 P3 | 1.628 \pm 1 | 0.526 \pm 1 | 0.021 |
| Amp P200 P4 | 0.396 \pm 1 | 1.315 \pm 0 | 0.01 |
| Lat of P200 Fz | 179 \pm 17 | 162 \pm 24 | 0.007 |
| Lat of P200 Cz | 179 \pm 17 | 162 \pm 24 | 0.008 |
| Lat of P200 Pz | 179 \pm 17 | 162 \pm 24 | 0.007 |
| Lat of P200 F3 | 185 \pm 18 | 166 \pm 32 | 0.009 |
| Lat of P200 F4 | 187 \pm 19 | 165 \pm 28 | 0.002 |
| Lat of P200 C3 | 180 \pm 16 | 163 \pm 26 | 0.006 |
| Lat of P200 C4 | 180 \pm 17 | 166 \pm 27 | 0.027 |
| Lat of P200 P3 | 184 \pm 18 | 168 \pm 34 | 0.043 |
| Lat of P200 P4 | 183 \pm 18 | 166 \pm 28 | 0.016 |
| Lat of P200 T5 | 182 \pm 18 | 171 \pm 26 | 0.04 |
| Lat of P200 T6 | 184 \pm 19 | 164 \pm 28 | 0.004 |
| Amp of P300 Fz | 1.619 \pm 1 | 2.759 | 0.01 |
| Amp of P300 Cz | 1.619 \pm 1 | 2.799 \pm 2 | 0.01 |
| Amp of P300 Pz | 1.622 \pm 1 | 2.481 \pm 1 | 0.03 |
| Amp of P300 P3 | 345 \pm 38 | 337 \pm 37 | 0.04 |

(**Lat**=latency, **Amp**=Amplitude)

Essawy (1995)

Essawy (1995) compared 60 schizophrenics and their 27 FDR, and the researcher found that 72% of the FDR have prolonged P200 and P300 latencies. (See table 94).

Table (94): Evoked potential in FDR of schizophrenics.

| Evoked potential | FDR of schizophrenics Mean + SD | Healthy controls Mean + SD | p |
|------------------|------------------------------------|-------------------------------|-------|
| Amp N100 F3 | -1.22±23 | -2.142±2 | 0.05 |
| Amp P200 C3 | 1.82±13 | 1.124±1 | 0.05 |
| Amp P200 P4 | 1.214±13 | 0.39±1 | 0.03 |
| Amp of N200 C3 | -0.912±2.3 | 0.355±3.3 | 0.04 |
| Amp of N200 P3 | -0.84±2.9 | 0.427±2.2 | 0.02 |
| Amp of P200 T5 | -0.645±2.3 | 0.251±1.4 | 0.02 |
| Amp of P300 F3 | 1.762±2.9 | 3.06±2.3 | 0.01 |
| Amp of P300 C3 | 2.58±2.7 | 3.67±2.1 | 0.04 |
| Amp of P300 T6 | 1.55±1.2 | 2.77±2.7 | 0.03 |
| Lat of P300 Fz | 354±32 | 335±29 | 0.01 |
| Lat of P300 Cz | 355±32 | 335±29 | 0.008 |
| Lat of P300 Pz | 354±32 | 336±29 | 0.021 |
| Lat of P300 T5 | 347±31 | 339±29 | 0.05 |
| Lat of P300 T6 | 350±32 | 329±32 | 0.003 |

(Lat=latency, Amp=Amplitude)

Essawy (1995)

Whereas, *Abd-El Azim (1997)* studied 5 schizophrenics and 18 individuals of their offsprings (Appendix 4) and tried to prove the change in frequent stimuli of auditory evoked potential in the offsprings of schizophrenics. (See table 95)

Table (95): Frequent stimuli of auditory evoked potential in offspring of schizophrenics.

| Frequent stimuli | | | Offsprings of | | P-value |
|-------------------|------|----|-------------------------------|-------------------------------|----------|
| Latency (msec) | | | schizophrenics (mean+/-SD) | healthycontrol (mean+/-SD) | |
| | | | | | |
| | N100 | FZ | 138.6+/-8.7 | 107.6+/-6.6 | 0.003 HS |
| | | CZ | 134+/-5.9 | 102.8+/-5.9 | 0.001 HS |
| | | PZ | 124.6+/-33.4 | 106.6+/-12.7 | 0.03 S |
| | P200 | FZ | 264.6+/-34.3 | 212.6+/-18.7 | 0.03 S |
| | | CZ | 291.4+/-45.2 | 216.6+/-18.2 | 0.02 S |
| | | PZ | 291+/-17 | 215+/-16.7 | 0.000 HS |

Abd-El Azim (1997)

Bassiouny et al (1998) studied the auditory evoked potential of 40 schizophrenics and their 28 FDR, compared to 22 healthy controls (Appendix 5), and tried to prove the decrease in amplitude and prolonged latency of p300 in first degree relatives of schizophrenics. (See table 96).

Table (96): P₃₀₀ amplitude and latency in first degree relatives of schizophrenics.

| P ₃₀₀ | relatives of schizophrenics (n=28) M ± SD | Healthy controls (n=22) M ± SD | t | p- value |
|------------------|--|---|------|--------------|
| Amplitude (UV) | 9.4 ± 6.04 | 13.4 ± 8.73 | 1.81 | > 0.05 NS |
| Latency (ms) | 357.8 ± 103.7 | 338.4 ± 78.3 | 0.75 | > 0.05 NS |

Bassiouny et al (1998)

Bassiouny et al (1998) (Appendix 5) reported insignificant difference between schizophrenics and their first degree relatives as regards P₃₀₀ amplitude and latency. (See table 97).

Table (97): Auditory Evoked Potential in schizophrenics compared to their first degree relatives.

| P ₃₀₀ | Schizophrenics (n=40) Mean ± SD | FDR of schizophrenics (n=28) Mean ± SD | t |
|-------------------|---------------------------------------|--|------------|
| Amplitude (UV) | 7.3 ± 4.9 | 9.4 ± 6.04 | 1.52 NS |
| Latency (ms) | 368.4 ± 51.7 | 357.8 ± 103.7 | 0.5 NS |

Bassiouny et al (1998)

Madkour et al (1998) (Appendix 6) found that by using auditory evoked potential, FDR have longer latency and lower amplitude of P300 wave, while the Reaction time is longer and response stimulus percentage (R/S %) is lower in FDR compared to healthy controls. (See table 98).

Table (98): Results of P300 wave.

| P300 | FDR (N=55) Mean <u>±</u> S.D | Controls (N=30) Mean <u>±</u> S.D | t-test | P- value |
|-----------------|---|--|---------------|---------------------|
| Latency (msec.) | 375.9 +/- 60.7 | 382.1 +/- 33.2 | 4.638 | <0.001 |
| Amplitude (mv) | 5.5 +/- 4.6 | 9.54 +/- 5.6 | 3.328 | <0.001 |
| RT (msec.) | 467.4 +/- 98.4 | 394.9 +/- 74.1 | 3.776 | <0.001 |
| R/S % | 96.4 +/- 6.0 | 98.4 +/- 1.9 | 2.249 | <0.05 |

Madkour et al (1998)

2- Relatives of depressed patients:

Abd-El Azim (1997) studied 6 depressed patients and their 20 offsprings (Appendix 4), and tried to prove the reduction in p200 amplitude in offsprings of depressed mothers. (See table 94).

Table (99): Auditory evoked potential among offsprings of depressed mothers.

| | | | Depressed patients M_±SD | Offspring M_±SD | p- value |
|-------------------|------|----|---|--------------------------------------|---------------------|
| Amplitude (uv) | N100 | CZ | 5.1 _± 2.2 | 1.6 _± 4.2 | 0.02 |
| | | PZ | 4.2 _± 1.8 | 1.5 _± 3.6 | 0.03 |
| | P200 | PZ | 1.3 _± 0.5 | 4.0 _± 4.1 | 0.01 |

Abd-El Azim (1997)

e) Assessment of attention (Cancellation letters test):

Madkour et al (1998) studied 55 first-degree relatives (FDR) of schizophrenics and 30 healthy controls (Appendix 6) and tried to prove the impairment in selective attention among the FDR by neuropsychological assessment (Cancellation Letters Test). (See table 100).

Table (100): Attention among FDR of schizophrenics (cancellation tests).

| Parameters | FDR (N=55) M+S.D. | Controls (N=30) M+S.D | t-test | P- value |
|------------------------------|-------------------------|-----------------------------|--------|-------------|
| Cancellation Letters: | | | | |
| Time(min.) | 1.72 +/- 1.72 | 1.50 +/- 0.19 | 2.916 | <0.01 |
| Errors | 2.82 +/- 2.82 | 1.35 +/- 1.36 | 3.161 | <0.002 |
| Cancellation Digits: | | | | |
| Time(min.) | 4.44 +/- 4.44 | 4.46 +/- 1.33 | 0.059 | >0.10 |
| Errors | 9.00 +/- 9.00 | 5.08 +/- 3.72 | 2.275 | <0.05 |

Madkour et al (1998)

f) Soft neurological signs:

- Relatives of BAD patients:

Rabie (2005) tried to prove the genetic susceptibility in the relatives of BAD patients by the presence of soft neurological signs. (See table 101).

Table (101): Presence of neurological soft signs in the first degree relatives of BAD patients.

| | FDR of BAD (n=85) Freq (%) | Patients (n=35) Freq (%) | Controls (n=50) Freq (%) |
|--------------------------------|---|---|---|
| Sensory Integration impairment | 35(41.2) | 33 (94.3) | 12(24) |
| Motor Coordination impairment | 26(30.6) | 25(71.4) | 5(10) |
| Motor Sequencing impairment | 13(15.3) | 15(42.9) | 6(12) |
| Developmental Reflexes | 27(31.8) | 32(91.4) | 8(16) |
| Any NSS | 52(61.2) | 34(97.1) | 17(34) |
| No NSS | 33(38.8) | 1(2.9) | 33(66) |

Rabie (2005)

(I) Relatives of OCD patients:

1- Anxiety symptoms:

Mansour (1993) studied 20 patients with chronic OCD and their relatives (Appendix 2) and the researcher found that distress and anxiety symptoms are more among relatives of OCD patients with predominant compulsion than relatives of OCD patients with predominant or pure obsessions (ruminations). (See table 102).

Table (102): Anxiety symptoms among relatives of chronic OCD patients.

| | Anxiety in relatives of chronic OCD | | | |
|-------------------------|-------------------------------------|------|-----------------|------|
| | Male patients | | Female patients | |
| | Wives | Kids | husband | kids |
| Obsession rumination | 20% | 10% | 20% | 50% |
| compulsion rituals | 60% | 50% | 30% | 70% |

Mansour (1993)

2- OCD symptoms:

Tantawy et al (2008) studied 50 adult OCD patients and their 129 first-degree relatives and 30 healthy controls, (appendix 32) and reported that the most prevalent obsessive symptom among first degree relatives is the religious symptoms (70.59%), then sexual, then contamination, followed by aggressive symptoms, while the most prevalent compulsive symptom is cleaning/ washing (29.41%). (See table 103).

Table (103): OCD symptoms among first degree relatives of chronic OCD patients.

| OCD Symptoms | 1 st degree Relatives (n= 129) N (%) | OCD patients (n= 50) N (%) | Healthy controls (n= 30) N (%) |
|---------------------|---|----------------------------------|--------------------------------------|
| Obsession | | | |
| Contamination | 7 (41.18) | 16 (32.00) | 1 (100.00) |
| Sexual | 6 (35.29) | 24 (48.00) | 0 (0.00) |
| Hoarding | 3 (17.65) | 6 (12.00) | 0 (0.00) |
| Symmetry | 3 (17.65) | 7 (14.00) | 0 (0.00) |
| Aggression | 5 (29.41) | 17 (34.00) | 1 (100.00) |
| Religious | 12 (70.59) | 37 (74.00) | 1 (100.00) |
| Pathological doubt | 6 (35.29) | 5 (10.00) | 0 (0.00) |
| Others | 2 (11.76) | 7 (14.00) | 0 (0.00) |
| Compulsion | | | |
| Cleaning/ washing | 5 (29.41) | 22 (44.00) | 1 (100.00) |
| Repeating rituals | 3 (17.65) | 6 (12.00) | 1 (100.00) |
| Ordering/ arranging | 5 (29.41) | 9 (18.00) | 0 (0.00) |
| Checking | 2 (11.76) | 8 (16.00) | 0 (0.00) |
| Hoarding | 2 (11.76) | 4 (8.00) | 0 (0.00) |
| Others | 3 (17.65) | 21 (42.00) | 0 (0.00) |

*Tantawy et al (2008)***(II) Relatives of schizophrenic patients:****1-Psychological and physical symptoms:**

Shama & Gad (2000) studied 50 schizophrenic relapsed patients and 50 of their caregiver family members (Appendix 10). And found that the psychological or physical symptoms are common among caregiver family members of relapsed schizophrenics. (See table 104).

Table (104): Psychological and physical symptoms among the caregiver family members of relapsed schizophrenics.

| Symptoms | Caregiver family members (n= 50) N (%) |
|--------------------------------|--|
| Psychological symptoms: | |
| Anxiety | 20 (40%) |
| Sadness | 15 (30%) |
| Fear | 8 (16%) |
| Excitement | 6 (12%) |
| No effect | 3 (6%) |
| Physical symptoms: | |
| Headache | 20 (40%) |
| Insomnia | 17 (34%) |
| Loss of appetite | 9 (18%) |
| No effect | 6 (12%) |

*Shama & Gad (2000)***2- Caregiver's feeling:**

Shama & Gad (2000) (Appendix 10) found that 86% (43/50), 72% (36/50) and 44% (22/50) of the caregiver family members of the schizophrenics have grief, anger and shame respectively. Also, feeling shame is more prevalent among those caring schizophrenic relapsed more than three times than among those caring schizophrenics relapsed three times or less. (See table 105).

Table (105): The feelings of the caregiver family members of relapsed schizophrenics.

| feelings | Caregiver of schizophrenics | | X^2 | p |
|--------------|--------------------------------------|-----------------------------------|-------|-----------|
| | relapsed ≤ 3 (n=22) N (%) | relapsed > 3 (n=28) N (%) | | |
| Shame | | | | |
| Yes | 6 (27.3%) | 16(57.1%) | 4.46 | <0.05 |
| No | 16(72.7%) | 12(42.9%) | | S |
| Grief | | | | |
| Yes | 19(86.4%) | 24(85.7%) | 0.004 | >0.05 |
| No | 3(13.6%) | 4(14.3%) | | NS |
| Anger | | | | |
| Yes | 13(59.1%) | 23(82.1%) | 3.25 | >0.05 |
| No | 9(40.9%) | 5(17.9%) | | NS |

Shama & Gad (2000)

3- Caregiver's personality characteristics:

Seleem (1999) found that there's highly significant difference between fathers and mothers of single schizophrenics as regards the Extroversion of EPQ. (See table 106).

Table (106): E.P.Q. of parents of single schizophrenics.

| | Mothers of the patients n=28 N (%) | Fathers of the patients n=23 N (%) | P |
|--------------|--|--|-----------------|
| psychoticism | 16 (57.14%) | 13 (56.52%) | 0.959 NS |
| neuroticism | 7 (25%) | 7 (30.43%) | 0.484 NS |
| extroversion | 3 (10.71%) | 0(0%) | 0.002 HS |
| Lie scale | 4 (14.28%) | 8(34.78%) | 0.001 HS |
| criminality | 8 (28.57%) | 10 (43.47%) | 0.04 S |

Seleem (1999)

(III) Offsprings of depressed mothers:

1- Depressive and anxiety symptoms:

Fouad (1999) studied 30 depressed mothers, 25 diabetic mothers, and 32 healthy mothers and their offsprings (Appendix 7) and reported that on CDI, J-EPQ and Neurotic subscale (J-EPQ) there's a highly significant difference between the children of depressed mothers and the children of healthy mothers. (See table 107).

Table (107): Results of CDI, Child Anxiety Scale, and J-EPQ among children of depressed mothers.

| | Depressed vs diabetic mothers | | Depressed vs Healthy mothers | | Diabetic vs Healthy mothers | |
|---------------------------|-------------------------------|-------------|------------------------------|-------------|-----------------------------|-------------|
| | t-value | p | t-value | p | t-value | p |
| CDI | 0.07 | 0.941 NS | 2.67 | 0.01 S | 3.12 | 0.003 HS |
| Child anxiety scale | 0.72 | 0.473 NS | 3.30 | 0.002 HS | 2.54 | 0.014 S |
| Neurotic subscale (J-EPQ) | 0.35 | 0.731 NS | 2.8 | 0.006 HS | 2.34 | 0.023 S |

Fouad (1999)

Fouad (1999) (Appendix 7) reported also that on Intellectual Processing Subscale of Luria Nebraska Scale, there's significant difference between children of depressed and healthy mothers. (See table 108).

Table (108): Comparison of results of Intellectual Processing Subscale of Luria Nebraska Scale.

| | Children of | | | | | |
|--|-------------------------------|-------|------------------------------|-------|-----------------------------|-------|
| | Depressed vs diabetic mothers | | Depressed vs Healthy mothers | | Diabetic vs Healthy mothers | |
| | t-value | p | t-value | p | t-value | p |
| Reaction Time for Attention | -1.17 | 0.246 | 0.44 | 0.660 | 1.39 | 0.169 |
| Reaction Time for Discrimination | -0.47 | 0.638 | 0.04 | 0.968 | 0.41 | 0.683 |
| Intellectual Processing Subscale of Luria Nebraska Scale | 0.91 | 0.368 | 2.30 | 0.025 | 1.49 | 0.142 |

Fouad (1999)

Fouad (1999) studied 30 depressed mothers and 32 healthy mothers with one of their children (Appendix 7), and the researcher found no significant difference between boys and girls as regards any of the CDI, Child Anxiety Scale, and Neurotic Subscale of J-EPQ, but there's very highly significant difference between boys and girls as regards Reaction Time for Discrimination of Train the Brain. (See table 109).

Table (109): Comparison between male and female children of depressed.

| Variable | Male | Female |
|--|-------------|-------------|
| | M ± S.D | M ± S.D |
| Child depression inventory | 46.77±9.84 | 42.83±8.34 |
| Child anxiety scale | 53.0±12.11 | 54.16±7.46 |
| Neurotic subscale (J-EPQ) | 42.11±23.06 | 43.91±19.38 |
| Intellectual Processing Subscale of Luria Nebraska Scale | 61.33±13.52 | 61.08±9.66 |
| Reaction Time for Attention | 386.5±98.49 | 469.5±139.7 |
| Reaction Time for Discrimination | 600.3±86.75 | 714.6±131.8 |

Fouad (1999)

(IV) Relatives of BAD patients:

1- Behavioral symptoms:

By studying children of 30 BAD patients and children of 30 healthy parents. (Appendix 25); **Gomaa (2004)** found that children of BAD patients show higher scores on the Other problem subscale (attention-hyperactivity problems) than children of healthy parents. (See table 110).

Table (110): Behavioral problems in children of BAD patients (Child Behavior Checklist).

| Behavioral problems | | Children of | | X ² | p |
|------------------------|-----------------|--------------------------|--------------------------|----------------|-------------|
| | | Bipolar parents N (%) | Healthy parents N (%) | | |
| Internalizing problems | No problem | 24(64.9) | 23(74.2) | 0.83 | 0.65 NS |
| | Serious problem | 7(18.9) | 5(16.1) | | |
| | Severe problem | 6(16.2) | 3(9.7) | | |
| | Total | 37(100) | 31(100) | | |
| Externalizing problems | No problem | 25(67.6) | 22(71) | 2.10 | 0.34 NS |
| | Serious problem | 9(24.3) | 4(12.9) | | |
| | Severe problem | 3(8.1) | 5(16.1) | | |
| | Total | 37(100) | 31(100) | | |
| Other problems | No problem | 23(62.2) | 26(83.9) | 8.19 | 0.008 HS |
| | Serious problem | 11(29.7) | 1(3.2) | | |
| | Severe problem | 3(8.1) | 4(12.9) | | |
| | Total | 37(100) | 31(100) | | |

Gomaa (2004)

2- Psychosomatic and anxiety symptoms:

Gomaa (2004) (Appendix 25) found that children of BAD patients have significantly high psychosomatic, anxiety

and hyperactivity symptoms than children of healthy parents. (See table 111).

Table (111): Behavioral problems in children of BAD patients.

| Behavioral problems | | Children of | | X ² | p |
|---------------------|---------|--------------------------|--------------------------|----------------|-------------|
| | | Bipolar parents N (%) | Healthy parents N (%) | | |
| Anxiety | Absent | 18(48.6) | 22(71) | 3.47 | 0.05 NS |
| | Present | 19(51.4) | 9(29) | | |
| | Total | 37(100) | 31(100) | | |
| Somatic | Absent | 13(35.1) | 23(74.2) | 10.3 | 0.001 NS |
| | Present | 24(64.9) | 8(25.8) | | |
| | Total | 37(100) | 31(100) | | |
| Conduct | Absent | 17(45.9) | 18(58.1) | 0.99 | 0.22 NS |
| | Present | 20(54.1) | 13(41.9) | | |
| | Total | 37(100) | 31(100) | | |
| Learning | Absent | 23(62.2) | 25(80.6) | 2.78 | 0.8 NS |
| | Present | 14(37.8) | 6(19.4) | | |
| | Total | 37(100) | 31(100) | | |
| Impulsivity | Absent | 22(59.5) | 23(74.2) | 1.64 | 0.15 NS |
| | Present | 15(40.5) | 8(25.8) | | |
| | Total | 37(100) | 31(100) | | |
| hyperactivity | Absent | 16(43.2) | 24(77.4) | 8.13 | 0.004 NS |
| | Present | 21(56.8) | 7(22.6) | | |
| | Total | 37(100) | 31(100) | | |

Gomaa (2004)

Gomaa (2004) (appendix 25) reported that male and female children of bipolar parents show more liability to somatic, impulsivity and hyperactivity problems than male and female children of normal parents. (See table 112).

Table (112): Gender difference in behavioral problems of children (Conner's rating scale).

| Behavioral problems | | Children of | | | | X ² | p |
|---------------------|---------|-------------|---------|----------------|---------|----------------|-----------------|
| | | BAD parents | | Healthy parent | | | |
| | | Boys | Girls | Boys | Girls | | |
| | | N (%) | N (%) | N (%) | N (%) | | |
| Conduct | Absent | 6(17.1) | 11(31) | 13(37) | 5(14.3) | 4.3 | 0.23 NS |
| | Present | 12(36.4) | 8(24.2) | 7(21.2) | 6(18.2) | | |
| | Total | 18(26.5) | 19(27) | 20(29) | 11(16) | | |
| Learning | Absent | 9(18.8) | 14(29) | 17(35) | 8(16.7) | 5.78 | 0.01 2 S |
| | Present | 9(45) | 5(25) | 3(15) | 3(15) | | |
| | Total | 18(26.5) | 19(28) | 20(29) | 11(16) | | |
| Somatic | Absent | 6(16.7) | 7(19.4) | 15(41) | 8(22.2) | 10.38 | 0.01 S |
| | Present | 12(37.5) | 12(37) | 5(15.6) | 3(9.4) | | |
| | Total | 18(26.5) | 19(28) | 20(29) | 11(16) | | |
| Impulsivity | Absent | 5(11.1) | 17(38) | 13(28) | 10(22) | 19.48 | 0.00 HS |
| | Present | 13(56.5) | 2(8.7) | 7(30.4) | 1(4.3) | | |
| | Total | 18(26.5) | 19(28) | 20(29) | 11(16) | | |
| Anxiety | Absent | 8(20) | 10(25) | 15(37) | 7(17.5) | 4.1 | 0.25 NS |
| | Present | 10(35.7) | 9(32.1) | 5(17.9) | 4(14.3) | | |
| | Total | 18(26.5) | 19(28)) | 20(29) | 11(16) | | |
| hyperactivity | Absent | 5(12.5) | 11(27) | 16(40) | 8(20) | 11.75 | 0.00 8 NS |
| | Present | 13(46.4) | 8(28.6) | 4(14.3) | 3(10.7) | | |
| | Total | 18(26.5) | 19(28) | 20(29) | 11(16) | | |

Gomaa (2004)

3- Psychometric studies:

a) Wechsler Adult Intelligence Scale (WAIS):

Rabie (2005) studied 35 patients with Bipolar I disorder and their 115 first degree relatives and 50 healthy controls (Appendix 28) and reported a highly significant differences between the scores of Block design and similarities subtests of WAIS of the BAD patients, first degree relatives and the controls. (See table 113).

Table (113): Block design and similarities subtests scores of the patients, first degree relatives and control subjects.

| WAIS | First degree relatives (n=85) | Bipolar patients (n=35) | Healthy Subjects (n=50) | t | P |
|--------------|-------------------------------|-------------------------|-------------------------|------|----------|
| | Mean \pm SD | Mean \pm SD | Mean \pm SD | | |
| Block design | 9.079 \pm 1.951 | 8.34 \pm 1.54 | 8.42 \pm 0.72 | 5.79 | 0.006 HS |
| Similarities | 11.47 \pm 2.443 | 10.51 \pm 1.931 | 10.84 \pm 0.35 | 4.72 | 0.002 HS |

Rabie (2005)

Whereas, *Rabie (2005)* (Appendix 28) found no significant difference between male and female first degree relatives on the subtests of the WAIS. (See table 114).

Table (114): Gender difference among 1st degree healthy relatives of BAD (Block design and Similarities scores).

| WAIS subscales | First degree relatives | | t | P |
|----------------|-------------------------------|---------------------------------|--------|----------|
| | Males (n=42) Mean \pm SD | Females (n=43) Mean \pm SD | | |
| Block design | 9.02 \pm 1.867 | 9.12 \pm 2.049 | -2.217 | 0.829 NS |
| Similarities | 11.4 \pm 2.131 | 11.53 \pm 2.737 | -0.244 | 0.808 NS |

*Rabie (2005)***b) Wechsler Memory Scale (WMS):**

Rabie (2005) (Appendix 28) found that on comparing the scores of the WMS-R between the bipolar patients, first degree relatives and the controls, there is a highly significant differences in all the categories tested. (See table 115).

Table (115): WMS-R scores of patients, first degree relatives and control subjects.

| WMS-R | First degree relatives (n=85) | BAD patients (n=35) | Healthy controls (n=50) | P |
|---|-------------------------------|---------------------|-------------------------|---------|
| | Mean \pm SD | Mean \pm SD | Mean \pm SD | |
| Digit span | 11.39 \pm 2.837 | 10.26 \pm 2.914 | 19.7 \pm 6.9 | 0.00 HS |
| Visual memory span | 12.28 \pm 3.561 | 10.63 \pm 3.161 | 23.6 \pm 6.5 | 0.00 HS |
| Verbal paired associates (immediate recall) | 17.06 \pm 4.235 | 13.77 \pm 4.25 | 20.1 \pm 4.5 | 0.00 HS |
| Verbal paired associates (delayed recall) | 6.85 \pm 1.384 | 4.54 \pm 2.267 | 12.1 \pm 4.9 | 0.00 HS |

*Rabie (2005)***Table (116): Gender difference among 1st degree healthy relatives of BAD (WMS).**

| WMS-R subscales | Male relatives (n=42) Mean \pm SD | Female relatives (n=43) Mean \pm SD | t | P |
|---|--|--|--------|----------|
| Digit span | 11.57 \pm 2.786 | 11.21 \pm 2.908 | 0.586 | 0.559 NS |
| Visual memory span | 13.38 \pm 3.231 | 11.21 \pm 3.576 | 2.936 | 0.004 S |
| Verbal paired associates (immediate recall) | 16.74 \pm 4.144 | 17.37 \pm 4.348 | -0.688 | 0.493 NS |
| Verbal paired associates (delayed recall) | 6.69 \pm 1.334 | 7 \pm 1.431 | -1.031 | 0.306 NS |

Rabie (2005)

Rabie (2005) (Appendix 28) found that the female FDR have significantly lower scores in the visual memory span than the male first degree relatives. (See table 116).

c) **Wisconsin Card Sorting Test (WCST):**

Rabie (2005) Found that there's highly significant differences between all the groups in all the scores of the Wisconsin card sorting test except for the categories completed which show a significant difference. (See table 117).

Table (117): WCST scores of BAD patients, first degree relatives and healthy controls.

| WCST | First degree relatives (n=85) | BAD patients (n=35) | Healthy control (n=50) | P |
|---|----------------------------------|------------------------|---------------------------|-------------|
| | Mean \pm SD | Mean \pm SD | Mean \pm SD | |
| Trials administered | 83.95 \pm 20.41 | 84.66 \pm 20.96 | 73.7 \pm 4.3 | 0.00 HS |
| Total correct | 67.36 \pm 8.04 | 65.14 \pm 6.001 | 67.4 \pm 3.07 | 0.002 HS |
| Total errors | 14.65 \pm 13.85 | 20.43 \pm 19.68 | 9.5 \pm 3 | 0.00 HS |
| Preservative errors | 7.93 \pm 8.378 | 12.14 \pm 13.64 | 5.5 \pm 2.06 | 0.00 HS |
| Categories completed | 5.81 \pm 0.681 | 5.43 \pm 1.501 | 6 \pm 0 | 0.01 S |
| Trials to complete 1 st category | 12.42 \pm 4.096 | 12.66 \pm 4.439 | 11.3 \pm 0.8 | 0.004 HS |
| Failure to maintain set | 0.94 \pm 2.744 | 1.17 \pm 3.101 | 0.15 \pm 0.36 | 0.005 HS |
| Conceptual level response | 63.99 \pm 8.204 | 61.37 \pm 7.72 | 64.7 \pm 3.1 | 0.002 HS |

Rabie (2005)

Rabie (2005) (Appendix 28) reported a significantly lower female scores in the trials administered, the total errors, the

total correct and preservative errors, while significantly lower male scores in the categories completed. (See table 118).

Table (118): Gender difference among 1st degree relatives of BAD (scores).

| WCST subscales | First degree relatives of BAD patient | | P |
|---|---------------------------------------|------------------------------------|-------------|
| | Males (n=42) Mean \pm SD | Females (n=43) Mean \pm SD | |
| Trials administered | 91.81 \pm 24.422 | 76.28 \pm 11.386 | 0.00 HS |
| Total correct | 69.33 \pm 9.899 | 65.44 \pm 5.105 | 0.027 S |
| Total errors | 20.07 \pm 12.17 | 12.4 \pm 4.077 | 0.00 HS |
| Preservative errors | 10.24 \pm 11.021 | 5.67 \pm 2.67 | 0.014 S |
| Categories completed | 5.62 \pm 0.536 | 6 \pm 0 | 0.012 S |
| Trials to complete 1 st category | 12.05 \pm 3.364 | 12.79 \pm 4.668 | 0.408 NS |
| Failure to maintain set | 1.33 \pm 2.236 | 0.56 \pm 2.13 | 0.195 NS |
| Conceptual level response | 63.43 \pm 11.307 | 64.53 \pm 3.881 | 0.537 NS |

Rabie (2005)

d) Neurological evaluation scale:

Rabie (2005) (Appendix 28) found no significant difference between the healthy male and female relatives on the scores of the Neurological Evaluation Scale (NES). (See table 119).

Table (119): Gender difference among 1st degree healthy relatives of (NSS).

| NES | Male relatives (n=42) Mean \pm SD | | Female relatives (n=43) Mean \pm SD | | t | P |
|---------------------------|--|-------|--|-------|-------|-------------|
| Total score | 3.29 | 3.33 | 2.21 | 2.587 | 1.66 | 0.99 NS |
| Sensory Integration | 0.62 | 0.795 | 0.88 | 0.981 | -1.36 | 0.176 NS |
| Motor Coordination | 0.76 | 1.265 | 0.37 | 0.787 | 1.701 | 0.094 NS |
| Motor Sequencing | 0.45 | 1.152 | 1.12 | 1.391 | -1.79 | 0.079 NS |
| Developmental Reflexes | 0.67 | 1.052 | 0.47 | 0.855 | 0.96 | 0.336 NS |

*Rabie (2005)***(V) Parents of psychiatric ill children:****1- Mothers of psychiatric ill children:****a) Mother's and family burden:**

Bastawy (2009) (Appendix 34) reported that mothers having children with mental health problems show a great deal burden in 68.5% (137/200), quite a lot burden in 16.5% (33/200), only a little burden in 5.5% (22/200), and no burden in 8% (8/200).

b) Parental stress:

- **Stress on the mother due to parental factors:**

Bastawy (2009) (Appendix 34) found that mothers suffer from high stress due to parental factors which includes bad attachment to their children (87.5%, 175/200), bad mother's

health (65%,130/200), depression (49%,98/200), social isolation (46%, 92/200), and restrictions of mother's other roles because of her child (44%, 89/200).

- **Stress on the mother due to factors related to the child:**

Bastawy (2009) (Appendix 34) found that mothers suffer from high stress due to factors related to their children which includes unaccepted behaviors of the children (93.5%, 187/200), child with irritable mood (89%,178/200), high child demandingness (88%, 176/200), child with low adaptability (85%,170/200), and highly distractable child (71%, 142/200).

c) **Mother's quality of life:**

- **Psychological quality of life:**

Bastawy (2009) (Appendix 34) found that mothers have bad psychological quality of life which includes bad self esteem (95%,190/200), absence of positive feelings (95%,190/200), impaired thinking, memory and concentration (92.5%,185/200), unaccepted bodily image and appearance (90%,180/200), and negative feelings (75.5%,151/200).

- **Physical quality of life:**

Bastawy (2009) (Appendix 34) found that mothers have bad physical quality of life which includes energy and fatigue (89.5%, 179/200), sleep and rest (89.5%, 179/200), and pain and discomfort (83.5%, 167/200).

- **Independent quality of life:**

Bastawy (2009) (Appendix 34) found that mothers have bad dependent quality of life which includes bad mobility quality (97%,194/200), bad activity quality (73%,146/200), bad working capacity (70.5%,141/200), and dependence on medication (20%,40/200).

- **Social quality of life:**

Bastawy (2009) (Appendix 34) found that mothers have bad social quality of life which includes bad social support (95%,190/200), bad sexual activity (92%, 184/200), and bad personal relationships (89.5%, 179).

- **Overall quality of life:**

Bastawy (2009) (Appendix 34) found that mothers have bad overall quality of life (84%, 168/200).

2- Parents of PDD children:

a) Wechsler Adult Intelligence Scale:

Azzam (2003) studied 28 children with different types of PDD and 20 healthy children with both parents of each child included (Appendix 17); the researcher found that fathers of PDD child have statistically significant lower scores on comprehension and picture completion subtests. (See table 120).

Table (120): Comparison between fathers of PDD child and healthy child on WAIS-R.

| WAIS Subscale | Fathers of PDD child Mean± SD | Fathers of healthy child Mean± SD | P | S |
|--------------------|----------------------------------|--------------------------------------|------|-----|
| Verbal | 119± 11.3 | 119± 5.8 | 0.95 | N.S |
| Performance | 114± 10.3 | 110± 5.9 | 0.3 | N.S |
| Total I.Q. | 114± 19.1 | 120± 10.6 | 0.3 | N.S |
| Comprehension | 14.5± 2.2 | 16.4± 0.9 | 0.01 | S |
| Digit span | 10.7± 3 | 9.4± 1.4 | 0.3 | N.S |
| Arithmetic problem | 10.9± 2.8 | 10.6± 1.1 | 0.4 | N.S |
| Similarities | 12.5± 2.5 | 12.8± 1.6 | 0.8 | N.S |
| Picture completion | 11.5± 2.5 | 12.4± 0.7 | 0.03 | S |
| Block design | 9.9± 2.4 | 9.7± 2.9 | 0.4 | N.S |
| Digit symbol | 13.8± 6.5 | 11.9± 1.9 | 0.5 | N.S |

*Azzam (2003)***Table (121): Comparison between mothers of cases and control on WAIS-R.**

| WAIS Subscale | Mothers of PDD child Mean± SD | Mothers of healthy child Mean± SD | P | S |
|--------------------|----------------------------------|--------------------------------------|------|-----|
| Verbal | 119± 10.2 | 119± 5.9 | 0.5 | N.S |
| Performance | 128± 12.2 | 116± 5.7 | 0.04 | S |
| Total I.Q. | 106± 12.2 | 120± 10.8 | 0.8 | N.S |
| Comprehension | 14.3± 2.4 | 16.2± 16.4 | 0.04 | S |
| Digit span | 11.3± 3.4 | 10.7± 1.4 | 0.05 | S |
| Arithmetic problem | 9.3± 2.8 | 10.7± 1.1 | 0.3 | N.S |
| Similarities | 11± 1.9 | 12.8± 1.6 | 0.1 | N.S |
| Picture completion | 11.7± 1.1 | 12.5± 1 | 0.01 | S |
| Block design | 11.1± 4.5 | 9.5± 2.6 | 0.02 | S |
| Digit symbol | 15.7± 2.9 | 11.9± 1.7 | 0.05 | N.S |

Azzam (2003)

Azzam (2003) reported that mothers of PDD child have higher performance, lower comprehension, lower scores in arithmetic problems, picture completion and block design all of which are statistically significant. (See table 121).

Whereas, *Bishry et al (2004)* studied parents of 28 child with different types of PDD and parents of 20 healthy children. (appendix 18); and the researcher found that mothers show higher performance IQ, lower total I.Q., better block design and lower arithmetics compared to fathers with statistical significant difference. (See table 122).

Table (122): WAIS-R scores of fathers and mothers of PDD children.

| WAIS-R | PDD children's | | P | S |
|--------------------|---------------------|---------------------|------|-----|
| | Fathers Mean± SD | Mothers Mean± SD | | |
| Verbal | 119± 11.3 | 119± 10.2 | 0.95 | N.S |
| Performance | 116± 10.3 | 128± 12.2 | 0.01 | S |
| Total I.Q. | 114± 30.1 | 106± 31.9 | 0.02 | S |
| Comprehension | 14.5± 2.2 | 14.3± 2.6 | 0.6 | N.S |
| Digit span | 10.7± 2.4 | 10.3± 2.7 | 0.2 | N.S |
| Arithmetic problem | 10.9± 2.8 | 10.1± 2.1 | 0.05 | S |
| Similarities | 12.5± 2.5 | 11.5± 2.1 | 0.5 | N.S |
| Picture completion | 11.5± 2.3 | 10.3± 1.9 | 0.3 | N.S |
| Block design | 9.9± 2.4 | 10.5± 4.5 | 0.01 | S |
| Digit symbol | 13.8± 6.5 | 15.1± 2.9 | 0.06 | N.S |

Bishry et al (2004)

Azzam (2003) found that WAIS-R deficits are numerically more prevalent among fathers of severely autistic children than

fathers of mild to moderate autistic children, but the difference is insignificant. (See table 123).

Table (123): The relation between WAIS-R of fathers and severity of autism in their PDD children.

| WAIS-R Severity Of autism | Comprehension | Picture completion |
|---------------------------------|---------------|--------------------|
| Mild-moderate CARS \leq 36 | 9 (42.9%) | 9 (40.9%) |
| Severe CARS > 36 | 12 (57.1%) | 13 (59.1%) |

P=0.89, NS

Azzam (2003)

Azzam (2003) found that WAIS-R deficits are more prevalent among mothers of severely autistic children, but the difference is insignificant. (See table 124).

Table (124): The relation between WAIS of mothers and the severity of autism in their PDD children.

| WAIS Severity Of autism | Perfor mance | Compre hension | Arith metic | Picture completion | Block design |
|---------------------------------|-----------------|-------------------|----------------|-----------------------|-----------------|
| Mild-moderate CARS \leq 36 | 9(34.6) | 9(36) | 9(36) | 9(34.6) | 9(36) |
| Severe CARS > 36 | 17(65) | 17(64) | 16(64) | 17(65.4) | 16(46) |

(P=0.99, NS)

Azzam (2003)

b) Wisconsin Card Sorting Test:

Azzam (2003) found that deficits in WCST are more in fathers of severely autistic children, but the difference is insignificant. (See table 125).

Table (125): The relation between WCST of fathers and the severity of autism in their PDD children.

| WCST Severity Of autism | Total errors | Perseverated errors | Trials to complete 1 st category | Failure to maintain set |
|-------------------------------|-----------------|------------------------|--|-------------------------------|
| Mild- moderate N (%) | 8(44.4) | 3(25) | 8(34.8) | 9(34.6) |
| Severe N (%) | 10(55.6) | 9(75) | 15(65.2) | 17(65.4) |

(P=0.22, NS)**Azzam (2003)**

Azzam (2003) found that deficits in WCST are more in mothers of severely autistic children, but the difference is statistically insignificant. (See table 126).

Table (126): The relation between WCST of mothers and the severity of autism in their PDD children.

| WCST Severity Of autism | Trials administere d | Total Correct | Total Errors | Perseverat ed errors | Failure to maintain set |
|----------------------------------|----------------------------|------------------|-----------------|-------------------------|-------------------------------|
| Mild- moderate N (%) | 8(38.1) | 9(34.6) | 9(42.9) | 8(38.1) | 8(38.4) |
| Severe N (%) | 13(61.9) | 17(65.4) | 12(57.1) | 13(61.9) | 13(61.9) |

P=0.74**Azzam (2003)**

Bishry et al (2004) (appendix 18); found that the fathers of PDD child have significantly more total error scores on WCST than fathers of controls, They need less trials to

Complete first category, and less failure to maintain set. (See table 127).

Table (127): WCST scores of fathers of PDD child and fathers of controls.

| WCST | Fathers of | | | |
|---|------------|-----------|-------|----|
| | PDD child | Controls | | |
| | Mean± S.D | Mean± S.D | P | S |
| Trials administered: | 74.9± 7.06 | 74.2± 8.6 | 0.1 | NS |
| Total correct | 64.4± 3.3 | 64.4± 3.6 | 0.5 | NS |
| Total error | 10.3± 4.3 | 8.9± 5.7 | 0.01 | S |
| Perseverative Errors | 6.1± 3.1 | 5.2± 3.4 | 0.05 | S |
| Conceptual level | 65.3± 7.3 | 64.2± 2.2 | 0.01 | NS |
| Categories completed | 6± 0 | 6± 0 | 0.9 | NS |
| Trials to complete 1 st category | 11.7± 1.8 | 12.6± 2.6 | 0.05 | S |
| Failure to maintain set | 0.03± 0.2 | 0.3± 0.4 | 0.008 | S |

Bishry et al (2004)

Table (128): WCST scores of mothers of PDD children.

| WCST | Mothers of | | | |
|---|------------|------------------|-------|----|
| | PDD child | Healthy controls | | |
| | Mean± SD | Mean± SD | P | S |
| Trials Administered | 78.8±15.2 | 73.5± 6,6 | 0.009 | S |
| Total correct | 66.9± 5.2 | 64.8± 4.2 | 0.03 | S |
| Total error | 11.2± 10.7 | 8.1± 2.5 | 0.03 | S |
| Perseverative Errors | 11.7± 16.8 | 5± 2.3 | 0.04 | S |
| Conceptual level | 63.1± 16.7 | 64.5± 0 | 0.01 | S |
| Categories completed | 6.2± 11.3 | 6± 2.6 | 0.6 | NS |
| Trials to complete 1 st category | 11.9± 3.3 | 12.6± 2.6 | 0.4 | NS |
| Failure to maintain set | 0.7± 1.5 | 0.3± 0.4 | 0.01 | S |

Bishry et al (2004)

Bishry et al (2004) also found that mothers of PDD child need more trials administered more perseverated errors, less conceptual level, and higher failure to maintain set than mothers of controls. (See table 128).

Bishry et al (2004) reported that the mothers of PDD children have more total errors and they need more trials to complete 1st category and there's more failure to maintain set than fathers of PDD children. (See table 129).

Table (129): WCST scores of fathers and mothers of PDD children.

| WCST | PDD children's | | | |
|---|----------------|------------|------|----|
| | Fathers | Mothers | | |
| | Mean± S.D | Mean± S.D | P | S |
| Trials Administered | 74.9± 7.06 | 78.8± 15.2 | 0.8 | NS |
| Total correct | 64.4± 3.3 | 66.9± 5.2 | 0.6 | NS |
| Total error | 10.3± 4.3 | 11.2± 10.7 | 0.03 | S |
| Persevative Errors | 6.1± 3.1 | 11.7± 16.8 | 0.08 | NS |
| Conceptual level | 65.3± 7.3 | 63.1± 16.7 | 0.4 | NS |
| Categories completed | 6± 0 | 6.2± 11.3 | 0.5 | NS |
| Trials to complete 1 st category | 11.7± 1.8 | 11.9± 3.3 | 0.01 | S |
| Failure to maintain set | 0.03± 0.2 | 0.7± 1.5 | 0.05 | S |

Bishry et al (2004)

3- Parents of ADHD children:

Sadek et al (2004) studied 50 ADHD children and their parents (36 fathers and 48 mothers) (Appendix 19) and he found that ADHD mothers score highly significant difference in low self-directedness. (See table 130).

Table (130): The percentages of ADHD parents having variations in TCI scoring.

| TCI Personality Trait | | ADHD Fathers (N=36) N (%) | ADHD Mothers (N=48) N (%) | P |
|-----------------------|------|---------------------------------|---------------------------------|-------|
| Novelty seeking | High | 15(47.1) | 31(64.6) | 0.03 |
| | Low | 16(44.1) | 13(27.1) | 0.09 |
| Harm avoidance | High | 14(41.2) | 18(37.5) | 0.8 |
| | Low | 17(50.5) | 20(41.7) | 0.5 |
| Reward dependence | High | 15(44.1) | 24(50.0) | 0.4 |
| | Low | 16(47.1) | 18(37.5) | 0.5 |
| Persistence | High | 8(23.5) | 17(35.4) | 0.1 |
| | Low | 25(73.5) | 26(54.2) | 0.1 |
| Self directedness | High | 19(55.9) | 23(47.9) | 0.6 |
| | Low | 12(35.3) | 24(50.0) | 0.05 |
| Co-operativeness | High | 28(82.4) | 23(47.9) | 0.005 |
| | Low | 5(14.7) | 18(37.5) | 0.1 |
| Self transcendenc | High | 10(29.4) | 23(48.9) | 0.06 |
| | Low | 23(67.6) | 18(38.3) | 0.01 |

Sadek et al (2004)

(VI) Wives of addicts:

1- Aggression:

By studying 30 addicts and their wives and 30 healthy males and their wives (appendix 24); *Abolmagd et al (2004)* found that wives of addicts express more severe aggression than wives of healthy controls. (See table 131).

Table (131): Comparison between spouses of addicts and controls on Guilford aggression scale.

| Guilford aggression | wives of addicts | wives of controls | X² | p-value |
|----------------------------|-------------------------|--------------------------|----------------------|----------------|
| Mild < 20 | 50% | 67.7% | 4.593 | 0.032 S |
| Moderate(20-25) | 50% | 23.3% | | |
| Severe >26 | 0% | 0% | | |

Abolmagd et al (2004)

(I) Psycho-educational program to the relatives of the patients:

a) Relatives of schizophrenics:

The effect of educational program on caregiver burden:

EL-Shafei (2002) reported that after application of the educational program to the relatives, there's a very highly significant decrease in burden of caring of a mentally ill patient as measured by (ECI Total Negative scale) and on the problems with services subscale in favor of educated relatives than not educated. Also a highly significant decrease is detected in the Negative symptoms subscale. This indicates that the educational program results in decreased caregiving burden of the relatives. (See table 132).

Table (132): The effect of educational program on caregiver burden.

| | Relatives of schizophren. | Baseline scores | End of study scores | P |
|------------------------|---------------------------|-----------------|---------------------|-------------|
| | | Mean+/-S.D. | Mean+/-S.D. | |
| ECI Total Negative | educated | 81.35 +/-22.46 | 71.18 +/-28.97 | 0.000 HS |
| | not educated | 83.73 +/-23.01 | 85.93 +/-22.86 | |
| ECI Total Positive | educated | 30.77 +/- 8.81 | 32.95 +/-8.58 | 0.322 NS |
| | not educated | 31.47 +/- 8.42 | 32.43 +/-8.77 | |
| Negative symptoms | educated | 14.38 +/- 6.68 | 12.25 +/-7.5 | 0.007 HS |
| | not educated | 12.83 +/- 5.31 | 13.23 +/-5.63 | |
| Problems with services | educated | 5.43 +/- 5.15 | 2.39 +/- 1.7 | 0.000 HS |
| | not educated | 7.6 +/- 7.02 | 7.37 +/-6.74 | |

EL-Shafei (2002)

The effect of educational program on attitude and relation of relatives to patients:

EL-Shafei (2002) found a significant association as regards the relation of relatives to patients in the fear and behavioral intentions as scored by FABI where brothers have lower scores (less fear and behavioral intentions) than the other groups. (See table 133).

Table (133): Association between the effect of the program on attitudes and relation of relatives to patients.

| | | Baseline scores | End of study scores | p |
|---------------------------|--------------|-----------------|---------------------|-------------|
| | | Mean+/-S.D. | Mean+/-S.D. | |
| CAMI Total | Fathers(8) | 128.38+/-16.06 | 140.38+/-24.63 | 0.172 NS |
| | Mothers18 | 140+/-19.6 | 152.39+/-14.49 | |
| | Brother(12) | 132.25+/-11.42 | 145.5+/-11.56 | |
| | Sisters (12) | 126.83+/-13.08 | 145.5+/-9.58 | |
| | Wives (8) | 134+/-13.61 | 151+/-17.32 | |
| | Others (2) | 148+/-7.07 | 163+/-0.00 | |
| FABI Total | Fathers | 41.38+/-5.40 | 44.13+/-5.17 | 0.034 S |
| | Mothers | 43.39+/-6.64 | 45.78+/-4.6 | |
| | Brothers | 34.58+/-7.75 | 39.42+/-6.96 | |
| | Sisters | 37.17+/-7.94 | 43.42+/-4.89 | |
| | Wives | 36.63+/-6.95 | 42.13+/-9.52 | |
| | Others | 43 +/- 9.9 | 46 +/- 5.66 | |
| KASI Total | Fathers(8) | 12.75+/-3.37 | 16.5+/-5.58 | 0.21 NS |
| | Mothers18 | 12.33+/-3.45 | 16.06+/-4.22 | |
| | Brother(12) | 14.17+/-2.48 | 20.33+/-3.45 | |
| | Sisters (12) | 12.5+/-2.02 | 19.25+/-3.22 | |
| | Wives (8) | 13.63+/-2.62 | 18.63+/-4.03 | |
| | Others (2) | 13.5+/-3.54 | 18 +/-8.49 | |
| ECI Total Negative | Fathers | 90.25+/-25.57 | 79.38+/-32.88 | 0.655 NS |
| | Mothers | 84.5+/-24.07 | 67.94+/-28.41 | |
| | Brothers | 78.5+/-22.66 | 73.67+/-23.54 | |
| | Sisters | 75.08+/-27.56 | 67.92+/-29.77 | |
| | Wives | 85.38+/-30.46 | 77.63+/-36.81 | |
| | Others | 56 +/- 22.63 | 46.5+/-20.51 | |

EL-Shafei (2002)

The effect of educational program on attitude, knowledge, and education of relatives:

EL-Shafei (2002) found a very highly significant association between educational level of relatives and knowledge about schizophrenia as measured by (KASI) and a significant association between educational level of relatives and attitudes toward mentally ill patients as measured by FABI. (See table 134).

Table (134): Association between the effect of the program on Attitudes, knowledge and in relation to education of relatives.

| | | Baseline scores Mean+/-S.D. | End of study scores Mean+/-S.D. | p |
|---------------------------|---------------------|--------------------------------|------------------------------------|-------------|
| CAMI total | It./Pm./Pp. (50) | 135.3 +/- 49.65 | 148 +/- 19.45 | 0.682 NS |
| | Sc./Tc. (16) | 130.44 +/- 12.5 | 146.1 +/- 11.5 | |
| | High(14) | 134.14 +/-9.31 | 151 +/- 7.52 | |
| FABI Total | It./Pm./Pp. | 42.13 +/- 7.13 | 44.97 +/-6.63 | 0.022 S |
| | Sc./Tc. | 35 +/- 8.7 | 42.06+/-6.27 | |
| | High | 37.71 +/- 4.81 | 41.29+/-4.84 | |
| KASI Total | It./Pm./Pp. | 11.87 +/- 2.56 | 16.03+/-4.41 | 0.000 HS |
| | Sc./Tc. | 13.44 +/- 2.9 | 19.06+/-3.55 | |
| | High | 14.93 +/- 2.43 | 21.07+/-2.84 | |
| ECI Total Negative | It./Pm./Pp. | 78.63 +/-29.68 | 68.9+/-35.11 | 0.549 NS |
| | Sc./Tc. | 82.19 +/-25.31 | 67.94+/-26.24 | |
| | High | 86.21 +/- 13.89 | 79.79+/-12.64 | |

EL-Shafei (2002)

Abolmagd et al (2004b) studied two groups of schizophrenics each consisting of 30 patients. The parents of the first group (trial group) are subjected to a psycho-educational program while those of the second group (control group) are not. (Appendix 23). And he found significant improvement in compliance to treatment and the disease

relapse rate (during 18 months period of follow up) in the trial group compared to control group. (See table 135).

Table (135): The effect of Psycho-educational program on treatment compliance and disease relapse rates among the schizophrenics.

| Parameter | Trial group | Control group | t | P |
|---------------------|-------------|---------------|-------|-------------------|
| | N (%) | N (%) | | |
| Compliance | | | | |
| Compliant | 26 (86.7%) | 18 (60%) | 4.176 | >0.05 S |
| Non-compliant | 4 (13.3%) | 12 (40%) | | |
| Relapse rate | | | | |
| No relapse | 26 (86.7%) | 18 (60%) | 4.176 | >0.05 S |
| Relapse | 4 (13.3%) | 12 (40%) | | |

Abolmagd et al (2004)

Table (136): The effect of Psycho-educational program on QOL domains among the schizophrenics.

| QOL Domains | Trial group | control group | t | P |
|---------------|---------------|---------------|------|---------------------|
| | Mean +/- S.D. | Mean +/- S.D | | |
| Physical QOL | 19.6 +/- 4.3 | 17.7 +/- 5.3 | 1.32 | >0.05 NS |
| Cognitive QOL | 22.9 +/- 3.3 | 14.1 +/- 2.8 | 9.87 | <0.0001 S |
| Mood QOL | 21.7 +/- 7.6 | 14.2 +/- 3.8 | 3.89 | <0.001 S |
| Social QOL | 22.8 +/- 9.5 | 13.9 +/- 3.6 | 4.11 | <0.001 S |
| Financial QOL | 17.9 +/- 2.6 | 2.5 +/- 14.7 | 1.67 | <0.05 NS |
| Self QOL | 22.9 +/- 8.9 | 4.3 +/- 13.6 | 4.31 | <0.001 S |
| Total QOL | 127.6 +/- 22 | 8.9 +/- 88.2 | 6.29 | <0.001 S |

Abolmagd et al (2004)

Abolmagd et al (2004b) (appendix 23) found also that parents subjected to psycho-educational program (trial group) show significantly better Quality Of Life (QOL) in all the items, except physical and financial domains than parents not subjected to psycho-educational program (control group). (See table 136).

Table (137): The effect of Psycho-educational program on the change in knowledge among the schizophrenics.

| Parameters | Trial group | control group | t | P |
|---|---------------|---------------|-------|-------------|
| | Mean +/- S.D. | Mean +/- S.D | | |
| Cause of illness | 1.6 +/- 0.4 | 2.3 +/- 0.6 | 3.633 | <0.001 S |
| Symptoms/ signs | 6.2 +/- 3.3 | 8.3 +/- 4.1 | 6.360 | <0.001 S |
| Treatment side effects | 2.1 +/- 1.2 | 3.6 +/- 1.9 | 6.416 | <0.001 S |
| Management of side-effects | 1.9 +/- 0.6 | 1.4 +/- 0.7 | 3.751 | <0.001 S |
| Expectations | 1.0 +/- 0.2 | 1.2 +/- 0.4 | 1.542 | >0.05 NS |
| Opinion about psychiatric illness | 1.6 +/- 0.9 | 2.0 +/- 0.8 | -1.77 | >0.05 NS |
| Opinion about psychiatric pt | 1.2 +/- 0.6 | 1.2 +/- 0.4 | -0.27 | >0.05 |
| Dealing with patient | 1.1 +/- 0.4 | 1.2 +/- 0.6 | 0.441 | >0.05 NS |
| Causes of relapse | 1.4 +/- 0.7 | 1.3 +/- 0.5 | 2.618 | <0.01 S |
| Early signs/ Symptoms of relapse | 3.6 +/- 1.1 | 5.8 +/- 2.1 | 4.709 | >0.001 S |
| Dealing with signs/symptoms | 1.5 +/- 0.3 | 1.7 +/- 0.8 | 1.490 | <0.05 S |

Abolmagd et al (2004)

Abolmagd et al (2004b) (appendix 23) reported that parents subjected to psycho-educational program (trial group) show significantly higher knowledge scores in the post assessment as compared to the pre-assessment in the majority of its aspects than parents not subjected to psycho-educational program (control group). (See table 137).

b) Relatives of demented patients:

The effect of educational program on Caregiver Burden Interview:

Waly (2008) studied 100 demented patients and their principle caregivers. Educational intervention program is applied to 50 caregivers, and the other 50 caregivers are controls. Evaluation of the program is done after 3 months. (Appendix 34), he reported a significant decrease in the caregiver burden of demented patients in the study group. (See table 138).

Table (138): The effect of educational intervention program on the caregiver burden.

| Burden Interview | Before intervention | After 3 month |
|-------------------------|---------------------------------|---------------------------------|
| | Mean \pm SD | Mean \pm SD |
| Study group | 46.7 \pm 10 | 41.2 \pm 10.32 |
| Control group | 51.52 \pm 12.91 | 55.1 \pm 14.56 |
| p-value | 0.072 NS | 0.001 HS |

Waly (2008)

(II) Improving the psychiatric condition of the patient:

Bastawy (2009) (Appendix 34) found that after 6 month duration of management of the psychiatric conditions of the children, the mothers of psychiatric ill children showed decreased incidence of the followings; bad mental health (See table 139), maternal stress (See table 140), and mother's and family burden (See table 141), while the maternal quality of life significantly improved in all the domains except the environmental and physical quality of life (See table 142).

Table (139): The effect of improving the psychiatric conditions of the child on mental health of the mother.

| Mental health of the mother (GHQ-28) | Child's psychiatric condition | |
|--------------------------------------|-------------------------------|--------------------------|
| | Before improving N (%) | After improving N (%) |
| Bad (Scored ≥ 5) | 117 (64) | 97 (53) |
| Good (Scored < 5) | 67 (36) | 87 (47) |
| Total | 184 (100) | 184 (100) |

($X^2=16.7$, $P=0.0001$, HS)

Bastawy (2009)

Table (140): The effect of improving the psychiatric conditions of the child on mother's stress (PSI).

| mother's stress | Child's psychiatric condition | |
|-----------------|-------------------------------|--------------------------|
| | Before improving N (%) | After improving N (%) |
| Absent | 1 (0.5) | 0 (0) |
| Average | 17 (9) | 30 (16) |
| High | 166 (90.5) | 154 (84) |
| Total | 184 (100) | 184 (100) |

($X^2=7.6$, $P=0.02$, S)

Bastawy (2009)

Table (141): The effect of improving the psychiatric conditions of the child on mother's & family's burden.

| Mother's & family's burden | Child's psychiatric condition | |
|----------------------------|-------------------------------|--------------------------|
| | Before improving N (%) | After improving N (%) |
| No burden | 7 (4) | 15 (8) |
| Only a little | 20 (11) | 53 (29) |
| Quite a lot | 30 (16) | 81 (44) |
| A great deal | 127 (69) | 35 (19) |
| Total | 184 (100) | 184 (100) |

($X^2=75.1$, $P=0.0002$, HS)

Bastawy (2009)

Table (142): The effect of improving the psychiatric conditions of the child on mother's quality of life.

| Mother's quality of life (WHOQOL-100) | | Child's psychiatric condition | |
|---|-------|-------------------------------|--------------------------|
| | | Before improving N (%) | After improving N (%) |
| Physical ($X^2=0.07$, $P=0.7$, NS) | Good | 162 (88) | 164 (89) |
| | Bad | 22 (12) | 20 (11) |
| | Total | 184 (100) | 184 (100) |
| Psychological ($X^2=0.92$, $P=0.33$, NS) | Good | 167 (91) | 164 (89) |
| | Bad | 17 (9) | 20 (11) |
| | Total | 184 (100) | 148 (100) |
| Independent ($X^2=0.52$, $P=0.46$, NS) | Good | 146 (79) | 133 (72) |
| | Bad | 38 (21) | 51 (28) |
| | Total | 184 (100) | 184 (100) |
| Social ($X^2=1$, $P=0.31$, NS) | Good | 162 (88) | 159 (86) |
| | Bad | 22 (12) | 25 (14) |
| | Total | 184 (100) | 184 (100) |
| Environment ($X^2=2$, $P=0.15$, NS) | Good | 175 (95) | 169 (92) |
| | Bad | 9 (5) | 15 (8) |
| | Total | 184 (100) | 184 (100) |
| Spiritual ($X^2=3$, $P=0.07$, NS) | Good | 157 (85) | 129 (70) |
| | Bad | 27 (15) | 55 (30) |
| | Total | 184 (100) | 184 (100) |
| Overall ($X^2=0.6$, $P=0.42$, NS) | Good | 161 (87) | 153 (83) |
| | Bad | 23 (13) | 31 (17) |
| | Total | 184 (100) | 184 (100) |

Bastawy (2009)

(III) Family cooperation:

Abolmagd et al (2004a) studied 37 addicts followed for 6 months and subjected to a combination of in-depth interviews, focal group discussions, in addition to a quantitative pre-coded screening questionnaire. (Appendix 20), he found that strong family cooperation (spouse and parents) significantly decrease the incidence of relapse among addicts. (See table 143).

Table (143): Family cooperation in relation to addict's relapse.

| Treatment related success factors | | Abstinent N (%) | Relapsed N (%) | X ² | P |
|-----------------------------------|-----------------------|--------------------|-------------------|----------------|------------|
| Family cooperation | Strong cooperation=11 | 8(72.7) | 3(27.3) | 4.5 | <0.05 S |
| | Weak cooperation=26 | 9(34.6) | 17(65.4) | | |

Abolmagd et al (2004a)

Psychiatric disorders may lead to bad outcome on the patients' families such as:

a) Divorce:

Mansour (1993) studied 80 patients (40 patients with neurotic disorder and 40 with chronic psychotic disorder) (Appendix 2) and the researcher found that divorce is more common among the husband of the psychiatric ill patients than the wives of the psychiatric ill husbands. (See table 144).

Table (144): Marital status in psychiatric patients.

| | spouses of psychiatric patients | | | |
|--------------------|---------------------------------|----------|----------|----------|
| | Wives | | Husbands | |
| | Married | Divorced | Married | Divorced |
| OCD patients | 8 | 2 | 6 | 4 |
| GAD patients | 8 | 2 | 6 | 4 |
| Schizophrenics | 8 | 2 | 5 | 5 |
| Depressed patients | 4 | 1 | 4 | 1 |
| Manic patients | 4 | 1 | 2 | 3 |
| Controls | 9 | 1 | 9 | 1 |

Mansour (1993)

b) Marital unsatisfaction:

1- Relatives of schizophrenics:

Seleem (1999) studied 51 parents of schizophrenics and 40 parents of healthy offsprings (Appendix 8), he found that parents of schizophrenics show less marital satisfaction than the parents of healthy offsprings with high significant difference between the two groups in almost all subscales of the MSI (except in disagreement about finances, role orientation and family history of distress). (See table 145).

Table (145): Marital satisfaction by using (MSI) among parents of schizophrenics and healthy offsprings.

| | Scores of MSI among parents of | | p |
|---------------|---|---|-------|
| | schizophrenics (n=51) mean +/- SD | Healthy offsprings (n=40) mean +/- SD | |
| G.N.V | 49.93+/-8.81 | 59.05+/-6.58 | 0.004 |
| G.D.S. | 53.05+/-9.40 | 42.62+/-8.16 | 0.002 |
| A.F.C. | 59.08+/-8.62 | 48.35+/-7.93 | 0.005 |
| P.S.C. | 53.55+/-8.30 | 45.20+/-7.68 | 0.003 |
| T.T.O. | 63.33+/-8.95 | 52.5+/-9.17 | 0.002 |
| F.I.N. | 60.37+/-8.26 | 58.15+/-7.55 | 0.185 |
| S.E.X. | 48.09+/-8.68 | 41.00+/-9.24 | 0.004 |
| R.O.R. | 34.53+/-6.93 | 31.00+/-7.53 | 0.087 |
| F.H.D. | 41.05+/-7.29 | 43.20+/-7.58 | 0.177 |
| D.S.C. | 55.12+/-10.03 | 47.00+/-8.03 | 0.005 |
| C.R.R. | 61.68+/-9.17 | 51.95+/-7.84 | 0.004 |

Seleem (1999)

NB.:G.N.V= Conventionalization

G.D.S.= Global Distress

A.F.C.= Affective Communication

P.S.C.= Problem Solving Communication

T.T.O.= Time Together

FIN= disagreement about finances

S.E.X.= Sexual Dissatisfaction

ROR= role orientation

DSC= Dissatisfaction with Children

C.R.R.= Conflict over Childbearing

Seleem (1999) (Appendix 8) reported that fathers of schizophrenics have significant worse scores in all the subscales of MSI except in: disagreement about finances (FIN), role orientation (ROR) and family history of distress (FHD) where they are statistically insignificant. (See table 146).

able (146): Marital satisfaction by using (MSI) among fathers of schizophrenics.

| | Fathers of | | P |
|---------------|------------------------|----------------------------|----------|
| | schizophrenics N=23 | Healthy offsprings N=20 | |
| | mean +/- SD | mean +/- SD | |
| G.N.V | 54.87+/-9.33 | 60.30+/-6.22 | 0.028 S |
| G.D.S. | 52.69+/-11.97 | 41.80+/-7.01 | 0.001 S |
| A.F.C. | 62.74+/-9.80 | 52.15+/-10.58 | 0.002 S |
| P.S.C. | 51.17+/-9.75 | 44.35+/-8.11 | 0.015 S |
| T.T.O. | 62.60+/-10.61 | 50.35+/-9.92 | 0.001 S |
| F.I.N. | 58.52+/-9.02 | 75.45+/-8.04 | 0.682 NS |
| S.E.X. | 45.26+/-7.99 | 39.90+/-8.19 | 0.011 S |
| R.O.R | 33.00+/-6.87 | 43.55+/-7.08 | 0.331 NS |
| F.H.D. | 42.52+/-8.07 | 48.55+/-7.65 | 0.67 NS |
| D.S.C. | 59.04+/-9.87 | 48.55+/-7.66 | 0.001 S |
| C.R.R | 62.69+/-9.03 | 55.30+/-7.31 | 0.005 S |

*Seleem (1999)***Table (147): Marital satisfaction by using (MSI) among Mothers of schizophrenics.**

| | Scores of MSI among | | P-Value |
|---------------|------------------------|----------------------------|----------|
| | schizophrenics N=23 | healthy offsprings N=20 | |
| | mean +/- SD | mean +/- SD | |
| G.N.V | 50.91+/-7.54 | 57.80+/-6.84 | 0.504 NS |
| G.D.S. | 53.17+/-7.44 | 43.45+/-9.28 | 0.738 NS |
| A.F.C. | 55.48+/-6.44 | 44.55+/-7.21 | 0.094 NS |
| P.S.C. | 55.52+/-6.92 | 46.05+/-7.34 | 0.679 NS |
| T.T.O. | 63.78+/-7.26 | 54.65+/-8.03 | 0.357 NS |
| F.I.N. | 61.95+/-6.88 | 58.85+/-7.16 | 0.728 NS |
| S.E.X. | 49.52+/-9.85 | 42.3+/-10.56 | 0.644 NS |
| R.O.R | 34.43+/-7.16 | 32.50+/-8.06 | 0.713 NS |
| F.H.D. | 39.65+/-3.36 | 41.85+/-7.68 | 0.868 NS |
| D.S.C. | 53.34+/-8.48 | 45.45+/-8.3 | 0.495 NS |
| C.R.R | 62.57+/-10.38 | 48.60+/-7.01 | 0.101 NS |

Seleem (1999)

Seleem (1999) compared the scores of MSI among mothers of schizophrenics and mothers of healthy offsprings, and he found insignificant difference in all the subscales of Marital satisfaction inventory (MSI). (See table 147).

Seleem (1999) studied 28 mothers of single schizophrenics, and he found significant difference between housewives mothers and working mothers as regards results of Time Together (TTO), and Role Orientation, with high score for working mothers. (See table 148).

Table (148): Marital satisfaction by using (MSI) among mothers of single schizophrenics.

| | Scores of MSI among mothers of schizophrenics | | p |
|---------------|---|-------------------------|----------|
| | Housewives N=18 | Working mothers N=10 | |
| | mean +/- SD | mean +/- SD | |
| G.N.V | 51.16+/-6.85 | 47.00+/-8.90 | 0.218 NS |
| G.D.S. | 54.05+/-7.82 | 52.10+/-4.60 | 0.412 NS |
| A.F.C. | 55.22+/-5.09 | 57.60+/-7.91 | 0.407 NS |
| P.S.C. | 54.72+/-6.55 | 56.90+/-6.93 | 0.427 NS |
| T.T.O. | 61.72+/-6.85 | 67.90+/-7.18 | 0.039 S |
| F.I.N. | 61.16+/-5.98 | 63.20+/-9.67 | 0.556 NS |
| S.E.X. | 48.91+/-10.68 | 50.70+/-5.39 | 0.568 NS |
| R.O.R. | 33.38+/-6.71 | 39.20+/-5.75 | 0.025 S |
| F.H.D. | 40.33+/-6.65 | 39.00+/-6.41 | 0.608 NS |
| D.S.C. | 53.78+/-0.21 | 48.50+/-11.63 | 0.213 NS |
| C.R.R. | 62.11+/-0.69 | 63.70+/-10.18 | 0.688 NS |

Seleem (1999)

Seleem (1999) reported that Parents above 50 years old are more dissatisfied than those below 50 years as regards Dissatisfaction with Children (DSC). (See table 149). There is insignificant difference between the parents of single

schizophrenics either have or haven't positive family history of psychotic disorder as regards the marital satisfaction. (See table 150).

Table (149): Marital satisfaction by using (MSI) in relation to the age of the parents of the single schizophrenics.

| | Scores of MSI among parents | | P |
|---------------|------------------------------------|------------------------------------|----------|
| | above 50y (n=37) mean +/- SD | below 50y (n=14) mean +/- SD | |
| G.N.V | 52.32+/-9.34 | 50.74+/-11.90 | 0.663 NS |
| G.D.S. | 53.03+/-10.69 | 50.80+/-10.12 | 0.959 NS |
| A.F.C. | 59.41+/-9.52 | 56.37+/-10.85 | 0.592 NS |
| P.S.C. | 53.24+/-8.97 | 51.76+/-10.37 | 0.626 NS |
| T.T.O. | 63.49+/-9.40 | 62.06+/-12.49 | 0.833 NS |
| F.I.N. | 60.08+/-2.43 | 59.20+/-12.01 | 0.682 NS |
| S.E.X. | 46.38+/-8.68 | 48.38+/-10.17 | 0.614 NS |
| R.O.R. | 33.59+/-6.64 | 34.73+/-8.80 | 0.240 NS |
| F.H.D. | 40.43+/-6.62 | 40.06+/-9.29 | 0.393 NS |
| D.S.C. | 56.78+/-10.11 | 50.93+/-11.51 | 0.041 S |
| C.R.R. | 63.81+/-9.95 | 60.74+/-13.66 | 0.173 NS |

Seleem (1999)

Table (150): Marital satisfaction by using (MSI) in relation to family history of psychotic disorder.

| MSI | Scores of MSI among parents with | | P |
|---------------|--|--|----------|
| | +ve F.H. of psychosis (n=30) mean +/- SD | -ve F.H. of psychosis (n=21) mean +/- SD | |
| G.N.V | 52.77+/-7.136 | 48.76+/-6.868 | 0.081 NS |
| G.D.S. | 53.13+/-6.912 | 49.97+/-7.027 | 0.082 NS |
| A.F.C. | 58.87+/-8.622 | 59.09+/-6.437 | 0.678 NS |
| P.S.C. | 53.33+/-9.396 | 56.43+/-7.438 | 0.871 NS |
| T.T.O. | 62.43+/-8.954 | 65.24+/-7.265 | 0.753 NS |
| F.I.N. | 59.77+/-8.263 | 61.14+/-6.878 | 0.405 NS |
| S.E.X. | 50.73+/-8.678 | 46.34+/-9.852 | 0.480 NS |
| R.O.R. | 33.97+/-6.930 | 34.14+/-7.159 | 0.497 NS |
| F.H.D. | 41.72+/-7.292 | 39.52+/-6.364 | 0.453 NS |
| D.S.C. | 55.50+/-10.025 | 59.01+/-8.477 | 0.151 NS |
| C.R.R. | 61.30+/-9.170 | 62.87+/-10.378 | 0.997 NS |

Seleem (1999)

Whereas, *Sarhan et al (2000)* compared parents of 30 single schizophrenics and 20 parents of healthy offsprings (appendix 9), and he found that fathers of schizophrenics have significant worse scores in all the subscales except in; disagreement about finances (FIN), role orientation (ROR) and family history of distress (FHD) where they are statistically insignificant. (See table 151).

Table (151): Marital satisfaction inventory (MSI) (fathers of schizophrenics and healthy offsprings.

| | Fathers of | | P |
|--------|---|---|----------|
| | schizophrenics (n=23) mean +/- SD | Healthy offsprings (n=20) mean +/- SD | |
| G.N.V | 54.87+/-9.33 | 60.30+/-6.22 | 0.028 S |
| G.D.S. | 52.69+/-11.97 | 41.80+/-7.01 | 0.001 S |
| A.F.C. | 62.74+/-9.80 | 52.15+/-10.58 | 0.002 S |
| P.S.C. | 51.17+/-9.75 | 44.35+/-8.11 | 0.015 S |
| T.T.O. | 62.60+/-10.61 | 50.35+/-9.92 | 0.001 S |
| F.I.N. | 58.52+/-9.02 | 75.45+/-8.04 | 0.682 NS |
| S.E.X. | 45.26+/-7.99 | 39.90+/-8.19 | 0.011 S |
| R.O.R. | 33.00+/-6.87 | 43.55+/-7.08 | 0.331 NS |
| F.H.D. | 42.52+/-8.07 | 48.55+/-7.65 | 0.67 NS |
| D.S.C. | 59.04+/-9.87 | 48.55+/-7.66 | 0.001 S |
| C.R.R. | 62.69+/-9.03 | 55.30+/-7.31 | 0.005 S |

Sarhan et al (2000)

Sarhan et al (2000) (appendix 9) compared scores of MSI among mothers of schizophrenics and mothers of healthy offsprings, and he found insignificant difference in all the subscales of Marital satisfaction inventory (MSI) (See table 152).

Table (152): Marital satisfaction by using (MSI) among mothers of schizophrenics.

| | Scores of MSI among mothers of | | P |
|--------|---|---|----------|
| | schizophrenics (n=23) mean +/- SD | Healthy offsprings (n=20) mean +/- SD | |
| G.N.V | 50.91+/-7.54 | 57.80+/-6.84 | 0.504 NS |
| G.D.S. | 53.17+/-7.44 | 43.45+/-9.28 | 0.738 NS |
| A.F.C. | 55.48+/-6.44 | 44.55+/-7.21 | 0.094 NS |
| P.S.C. | 55.52+/-6.92 | 46.05+/-7.34 | 0.679 NS |
| T.T.O. | 63.78+/-7.26 | 54.65+/-8.03 | 0.357 NS |
| F.I.N. | 61.95+/-6.88 | 58.85+/-7.16 | 0.728 NS |
| S.E.X. | 49.52+/-9.85 | 42.3+/-10.56 | 0.644 NS |
| R.O.R. | 34.43+/-7.16 | 32.50+/-8.06 | 0.713 NS |
| F.H.D. | 39.65+/-3.36 | 41.85+/-7.68 | 0.868 NS |
| D.S.C. | 53.34+/-8.48 | 45.45+/-8.3 | 0.495 NS |
| C.R.R. | 62.57+/-10.38 | 48.60+/-7.01 | 0.101 NS |

*Sarhan et al (2000)***Table (153): Marital satisfaction by using (MSI) among fathers and Mothers of schizophrenics.**

| | Scores of MSI among | | P |
|--------|---|---|----------|
| | Fathers of schizophrenics (n=23) mean +/- SD | Mothers of schizophrenics (n=20) mean +/- SD | |
| G.N.V | 54.87+/- 9.3 | 50.91+/- 7.54 | 0.038 S |
| G.D.S. | 52.70+/- 11.97 | 53.17+/- 7.44 | 0.815 NS |
| A.F.C. | 62.73+/- 9.80 | 55.47+/- 6.44 | 0.007 S |
| P.S.C. | 51.17+/- 9.57 | 55.52+/- 6.93 | 0.074 NS |
| T.T.O. | 62.61+/- 10.61 | 63.78+/- 7.27 | 0.618 NS |
| F.I.N. | 58.52+/- 9.03 | 61.95+/- 6.88 | 0.157 NS |
| S.E.X. | 46.26+/- 7.99 | 49.52+/- 9.8 | 0.172 NS |
| R.O.R. | 33.00+/- 6.87 | 34.43+/- 7.16 | 0.209 NS |
| F.H.D. | 42.52+/- 8.07 | 39.65+/- 6.36 | 0.207 NS |
| D.S.C. | 59.04+/- 9.87 | 53.34+/- 8.48 | 0.01 S |
| C.R.R. | 62.70+/- 9.04 | 62.56+/- 10.38 | 0.994 NS |

Sarhan et al (2000)

Sarhan et al (2000) compared fathers and mothers of schizophrenics (appendix 9), and they found that the fathers scored significantly higher scores as regards Affective communication (AFC), Dissatisfaction with children (DSC), whereas the mothers scored significantly higher scores as regards Conventionalization (CNV). (See table 153).

2- Wives of addicts:

By studying 30 addicts and their spouses and 30 healthy males and their spouses (appendix 24); *Abolmagd et al (2004c)* found significant differences between spouses of addicts and healthy controls where spouses of addicts have more marital dissatisfaction in all items of MSI except in family history of distress. (See table 154).

Table (154): Marital satisfaction inventory spouses versus controls.

| MSI | | Spouses of addicts % | Control % | X ² | p |
|-------------------------|--------------------------|----------------------|-----------|----------------|--------|
| Conventionalization | dissatisfaction | 60% | 33.3% | 9.326 | <0.05 |
| | Neutral | 40% | 43.3% | | |
| | False satisfaction | | 23.3% | | |
| Global distress | Satisfaction | 10% | 83.3% | 34.54 | <0.005 |
| | Moderate dissatisfaction | 46.7% | 16.7% | | |
| | Severe dissatisfaction | 43.3% | | | |
| Affective communication | Satisfaction | 16% | 80% | 24.98 | <0.005 |
| | Moderate dissatisfaction | 66.7% | 20% | | |
| | Severe dissatisfaction | 16.7% | | | |
| Problem solving | Satisfaction | 3.3% | 26.7% | 15.66 | <0.005 |
| | Moderate dissatisfaction | 63.3% | 73.3% | | |
| | Severe | 33.3% | | | |

| | | | | | |
|-------------------------------|------------------------------|-------|-------|-------|--------------|
| | dissatisfaction | | | | |
| Time together | Satisfaction | | 23.3% | 26.58 | <0.005 |
| | Moderate dissatisfaction | 26.7% | 66.7% | | |
| | Severe dissatisfaction | 73.3% | 10% | | |
| Disagreement over finance | Satisfaction | | 6.7% | 42.85 | <0.005 |
| | Moderate dissatisfaction | | 76.7% | | |
| | Severe dissatisfaction | 100% | 16.7% | | |
| Sexual dissatisfaction | Satisfaction | 26.7% | 100% | 34.73 | <0.005 |
| | Moderate dissatisfaction | 70% | | | |
| | Severe dissatisfaction | 3.3% | | | |
| Dissatisfaction with children | Satisfaction | 30% | 80% | 29.52 | <0.005 |
| | Moderate dissatisfaction | 63.3% | 20% | | |
| | Severe dissatisfaction | 6.7% | | | |
| Conflict over children | Satisfaction | 3.3% | 66.7% | 4.28 | <0.005 |
| | Moderate dissatisfaction | 66.7% | 33.3% | | |
| | Severe dissatisfaction | 30% | | | |
| Role orientation | dissatisfaction | 100% | 86.7% | 5.014 | <0.05 |
| | Moderate dissatisfaction | | 13.3% | | |
| Family history of distress | No distress | 76.7% | 70% | 1.24 | <0.082 NS |
| | Moderate history of distress | 13.3% | 30% | | |
| | Severe history | 10% | | | |

Abolmagd et al (2004)

Abolmagd et al (2004c) also found significant agreement and disagreement differences between couples of drug abusing husbands and couples of controls in global distress, sexual dissatisfaction and role orientation. (See table 155).

Table (155): Marital satisfaction inventory agreement among addict couples versus control group.

| MSI | Couples of addicts % | Control couples | X ² | p |
|---|----------------------|-----------------|----------------|---------------|
| Conventionalization Agreement disagreement | 33% 67% | 30% 70% | 0.7 | 0.78 NS |
| Global distress Agreement disagreement | 50% 50% | 87% 13% | 9.3 | 0.002 S |
| Affective communication Agreement disagreement | 40% 60% | 33% 67% | 0.3 | 0.59 NS |
| Problem solving Agreement disagreement | 33% 67% | 50% 50% | 1.7 | 0.19 NS |
| Time together Agreement disagreement | 37% 63% | 43% 57% | 0.3 | 0.60 NS |
| Disagreement over finance Agreement disagreement | 40% 60% | 63% 37% | 0.3 | 0.07 NS |
| Sexual dissatisfaction Agreement disagreement | 50% 50% | 100% | 20 | <0.0005 HS |
| Dissatisfaction with children Agreement disagreement | 60% 40% | 73% 27% | 1.2 | 0.27 NS |
| Conflict over children Agreement disagreement | 37% 73% | 43% 57% | 0.3 | 0.6 NS |
| Role orientation Agreement disagreement | 100% | 87% 13% | 4.3 | 0.04 S |

*Abolmagd et al (2004)***c) Marital and sexual problems:**

Afifi (2007) also found that the marital problems present 25 times more among addicts' wives than among the non

addicts' wives, while sexual problems are present 37.50 times more among addicts' wives. (See table 156).

Table (156): Marital and sexual problems among addict's wives.

| | Addicts' wives N (%) | Non addicts' wives N (%) | Relative risk ratio (RRR) |
|-------------------------|-------------------------|-----------------------------|-------------------------------|
| Marital separation | 50 (42) | 2 (2) | 25.00 |
| Marital reconciliation | 80 (67) | 4 (3) | 20.00 |
| Sexual difficulties | 36 (30) | 0 (0.0) | 37.50 |
| Minor violations of law | 21 (18) | 0 (0.0) | 21.88 |

Afifi (2007)

d) Learning problems among children of psychiatric patients:

Table (157): Behavioral problems in children of BAD patients (Conner's rating scale).

| Behavioral problems in children | | Bipolar parents N (%) |
|---------------------------------|---------|--------------------------|
| Conduct | present | 20 (54) |
| | absent | 17 (46) |
| Learning | present | 14 (38) |
| | absent | 23 (62) |
| Somatic | present | 24 (65) |
| | absent | 13 (35) |
| Impulsivity | present | 15 (40) |
| | absent | 22 (60) |
| Anxiety | present | 19 (51) |
| | absent | 18 (49) |
| hyperactivity | present | 21 (57) |
| | absent | 16 (43) |

Gomaa (2004)

Gomaa (2004) studied children of 30 BAD patients. (Appendix 25), and he found 14 / 37 (38%) of the children suffer from learning problems. (See table 157).

Gomaa (2004) found that Children who don't have family history of psychiatric illnesses are significantly less liable to learning problems than children who don't have family history of psychiatric illness. (See table 158).

Table (158): Relation of behavioral problems to family history of psychiatric disorders (Conner's rating scale).

| Behavioral problems | | Family history | | | t | p |
|---------------------|---------|-----------------|------------------|--------------|-------|-------|
| | | No F.H N (%) | Bipolar N (%) | MDD N (%) | | |
| Conduct | present | 8(26.7) | 5(16.7) | 6(20) | 6.71 | 0.06 |
| | absent | 16(53.3) | 5(16.7) | 1(3) | | |
| | Total | 24(40) | 10(16.7) | 7(11.7) | | |
| Learning | present | 3(15.8) | 6(31.6) | 4(21.1) | 9.88 | 0.01 |
| | absent | 21(51.2) | 4(9.8) | 3(7.3) | | |
| | Total | 24(40) | 10(16.7) | 7(11.7) | | |
| Somatic | present | 9(32.1) | 6(21.4) | 3(10.7) | 1.84 | 0.54 |
| | absent | 15(46.9) | 4(12.5) | 4(12.5) | | |
| | Total | 24(40) | 10(16.7) | 7(11.7) | | |
| Impulsivity | present | 7(33.3) | 4(19) | 4(19) | 2.08 | 0.57 |
| | absent | 17(43.6) | 6(15.4) | 3(7.7) | | |
| | Total | 24(40) | 10(16.7) | 7(11.7) | | |
| Anxiety | present | 8(33.3) | 6(25) | 4(16.7) | 3.53 | 0.32 |
| | absent | 16(44.4) | 4(11.1) | 3(8.3) | | |
| | Total | 24(40) | 10(16.7) | 7(11.7) | | |
| hyperactivity | present | 3(12.5) | 5(20.8) | 6(25) | 15.34 | 0.001 |
| | absent | 21(58.3) | 5(13.9) | 1(2.8) | | |
| | Total | 24(40) | 10(16.7) | 7(11.7) | | |

MDD= major depressive disorder.

Gomaa (2004)

Gomaa (2004) found that there's statistically significant relation between presence of past history of hyperactivity symptom or misconduct behavior in parents and presence of learning problems in their children. (See table 159).

Table (159): The relation between the presence of past history of hyperactivity or misconduct behavior in parents and behavioral problems in children of bipolar parents using Conners' rating scale.

| Behavioral problems | | past history of hyperactivity or misconduct behavior | | t | p |
|---------------------|---------|--|-------------------|------|------|
| | | No P.H. N (%) | +ve P.H. N (%) | | |
| Conduct | present | 19(63.3) | 11(36.7) | 0.07 | 0.5 |
| | absent | 20(66.7) | 10(33.3) | | |
| Learning | present | 8(42.1) | 11(57.9) | 6.41 | 0.01 |
| | absent | 31(75.6) | 10(24.4) | | |
| Somatic | present | 16(57.1) | 12(42.9) | 1.43 | 0.17 |
| | absent | 23(71.9) | 9(28.1) | | |
| Impulsivity | present | 11(52.4) | 10(47.6) | 2.27 | 0.1 |
| | absent | 28(71.8) | 11(28.2) | | |
| Anxiety | present | 14(58.3) | 10(41.7) | 0.78 | 0.27 |
| | absent | 25(69.4) | 11(30.6) | | |
| hyperactivity | present | 12(50) | 12(50) | 3.96 | 0.04 |
| | absent | 27(75) | 9(25) | | |

Gomaa (2004)

e) Occupational difficulties:

1- Relatives of psychiatric patients:

Mansour (1993) found that families of patients with BAD (currently manic) are the highest to have occupational difficulties, followed by relatives of chronic schizophrenics, while relatives of other groups have minimal or no work

function problems (See table 160). On the other hand, some relatives may stop work to look after the patient especially during the time of relapse, where the highest incidence is found also among relatives of manic patients (40%), followed by relatives of chronic schizophrenia (20%). (See table 161).

Table (160): time off-work to look after the patient among the families of psychiatric patients.

| Families of patients with | Relatives of psychiatric patients | |
|-------------------------------|-----------------------------------|---------|
| | Males | Females |
| Obsessive compulsive disorder | 10% | 10% |
| Generalized anxiety disorder | 0% | 0% |
| Chronic schizophrenia | 30% | 40% |
| Affective disorder(depressed) | 20% | 20% |
| Manic | 50% | 70% |
| Chronic DM (controls) | 0% | 0% |

Mansour (1993)

Table (161): Relatives of psychiatric patients Stopped work to look after the patients.

| patients with | Relatives of psychiatric patients stopped work | |
|--------------------------------|--|---------|
| | males | females |
| Obsessive compulsive disorder | 0% | 0% |
| Generalized anxiety disorder | 0% | 0% |
| Chronic schizophrenia | 20% | 20% |
| Affective disorder (depressed) | 10% | 10% |
| Manic | 40% | 40% |
| Controls (chronic DM) | 0% | 0% |

Mansour (1993)

2- Relatives of schizophrenics:

Shama & Gad (2000) studied 47 schizophrenic relapsed patients and 47 of their caregiver family members (Appendix 10) and they reported that the work of the caregiver family members may be affected as shown in (table 162).

Table (162): Work record among the family caregivers of schizophrenics.

| Work record | caregiver family members (n= 47) N (%) |
|-----------------------------------|--|
| Difficulty in performance of work | 19 (40.5) |
| Loss of interest in work | 16 (34) |
| Work as before | 12 (25.5) |

Shama & Gad (2000)

f) Family burden:

1- Relatives of psychiatric patients:

Table (163): Social restriction (due to the patients' condition) among relatives of psychiatric patients.

| patients with | Relatives of psychiatric patients having social restriction | |
|-------------------------------|---|---------|
| | males | females |
| Obsessive compulsive disorder | 20% | 30% |
| Generalized anxiety disorder | 10% | 20% |
| Chronic schizophrenia | 50% | 60% |
| Affective disorder(depressed) | 20% | 30% |
| Manic | 70% | 80% |
| Controls (chronic DM) | 0% | 0% |

Mansour (1993)

Mansour (1993) found that relatives of female manic patients are the most socially restricted, followed by relatives

of male manic patients. The relatives of organic patients shows no impaired social function that is attributed to the patient's illness. (See table 163).

Mansour (1993) found that legal problems that occur due to patient's illness are found only in two cases. The first is the male manic patients, followed by the chronic schizophrenic male patients. (See table 164).

Table (164): Legal problems (due to the patient's condition) among relatives of psychiatric patients.

| Families of patients with | Relatives of psychiatric patients having legal problems | |
|-------------------------------|---|---------|
| | males | females |
| Obsessive compulsive disorder | 0% | 0% |
| Generalized anxiety disorder | 0% | 0% |
| Chronic schizophrenia | 40% | 20% |
| Affective disorder(depressed) | 0% | 0% |
| Manic | 50% | 20% |
| Controls(chronic DM) | 0% | 0% |

Mansour (1993)

2- Wives of addicts:

Abolmagd et al (2004a) studied 37 addicts followed for 6 months and subjected to a combination of in-depth interviews, focal group discussions, in addition to a quantitative pre-coded screening questionnaire. (Appendix 20), and he found that 40.6% have disturbed relation with family. Addicts put an extra burden on the family due to repeated academic failures (59.4%). Marriages are greatly affected in the majority of addicts (59.4%). Also, drug abuse has deleterious effects on sexual functioning (32.4%). (See table 165).

Table (165): Family burden as a result of addiction.

| Impact of addiction | Present | Absent | Total |
|-----------------------------|------------|------------|-----------|
| | N (%) | N (%) | N (%) |
| Repeated failure (academic) | 22 (59.4%) | 15 (40.6%) | 37 (100%) |
| Marital disturbance | 22 (59.4%) | 15 (40.6%) | 37 (100%) |
| Sexual disturbance | 12 (32.4%) | 25 (67.6%) | 37 (100%) |

Abolmagd et al (2004)

g) Caregiver's burden:

1- Objective burden of the caregiver family member of psychiatric patients:

Abd El-maksoad (2007) studied 150 mothers or wives caregivers of psychiatric patients and 150 mothers or wives caregivers for non-psychiatric chronic patients. (Appendix 31), he found insignificant differences between mothers and wives as regards the objective burden in the caregivers of psychiatric patients, also found statistical significant differences among caregivers (mothers) of psychiatric patients and non-psychiatric patients for the benefit of the caregivers (mothers) of non-psychiatric patients. (See table 144).

Table (166): Objective burden among mothers and wives caregivers of psychiatric patients.

| group | Degree of the burden | Caregiver family member | | p |
|--------------------------|----------------------|-------------------------|------------|------------|
| | | Mother N (%) | Wife N (%) | |
| psychiatric patients | Low | 47 (38.8) | 14 (48.3) | 0.35 NS |
| | High | 74 (61.2) | 15 (51.7) | |
| non-psychiatric patients | Low | 2 (10.5) | 2 (1.5) | 0.023 S |
| | High | 17 (19.5) | 129 (98.5) | |

Abd El-maksoad (2007)

also *Abd El-maksoad (2007)* found that 100% (38/38) women caregivers of schizophrenics have objective burden, while in the BAD the objective burden on the caregivers is simple in 11 women and severe in 27 women. The total burden is simple in 65 women and high in 235 women. (See table 167).

Table (167): Objective burden among female caregivers of patients with different psychiatric diagnoses.

| | Simple burden N (%) | Heavy burden N (%) |
|--|------------------------|-----------------------|
| Schizophrenia | 0 (0.0) | 38 (100) |
| Bipolar affective disorder | 11 (28.9) | 27 (71.1) |
| Attention Deficit hyperactivity Disorder | 22 (59.5) | 15 (40.5) |
| Substance abuse | 22 (59.5) | 9 (24.3) |
| Chronic liver failure | 2 (4.0) | 48 (96) |
| Chronic renal failure | 2 (4.0) | 48 (96) |
| Disability after stroke | (0,0) | 50 (100) |
| Total | 65 (21.7) | 235 (78.3) |

Abd El-maksoad (2007)

2- Subjective burden of the caregiver family member of psychiatric patients:

Table (168): The subjective burden among caregivers of psychiatric patients.

| | Psychiatric patients N (%) | Non psychiatric patients N (%) |
|------------------------------------|-------------------------------|-----------------------------------|
| Does not have a burden or a simple | 16 (10.7) | 0 (0) |
| Simple to Moderate | 47 (31.3) | 18 (12) |
| Moderate to severe | 56 (37.3) | 71 (47.3) |
| severe | 31 (20.7) | 61 (40.7) |
| total | 150 (100) | 150 (100) |

Abd El-maksoad (2007)

Abd El-maksoad (2007) reported that the subjective burden is severe in 61 female caregivers (40.6%), compared to 31 women (20.7%) among the caregivers of psychiatric patients. (See table 168).

Abd El-maksoad (2007) found that the burden is severe in schizophrenia, followed by stroke and renal disease, while the burden is medium to severe in bipolar mania. (See table 169).

Table (169): the subjective burden among the caregiver of patients with different psychiatric diagnoses.

| | Mild burden N (%) | Mild to moderate N (%) | Moderate to severe N (%) | Severe N (%) |
|---------------------------------|------------------------------|-----------------------------------|-------------------------------------|-------------------------|
| Schizophrenia | 0 (0) | 2 (3.1) | 9 (7.1) | 27 (29.3) |
| Bipolar affective disorder | 1 (6.3) | 12 (18.2) | 22 (17.3) | 3 (3.3) |
| Attention Deficit hyperactivity | 14 (27.3) | 12 (18.5) | 11 (16.7) | 0 (0) |
| Substance abuse | 1 (6.3) | 21 (32.2) | 14 (11) | 1 (1.1) |
| Chronic liver failure | 0 (0) | 9 (13.8) | 25 (19.7) | 16 (17.4) |
| Chronic renal failure | 0 (0) | 6 (9.2) | 22 (17.3) | 22 (23.9) |
| Disability after stroke | 0 (0) | 3 (4.6) | 24 (18.9) | 23 (25) |
| Total | 16 (100) | 65 (100) | 127 (100) | 92 (100) |

Abd El-maksoad (2007)

3- Caregiver burden of OCD patients (BAS):

Abou Zeid et al (2005) compared 30 relatives of OCD patients and 41 relatives of schizophrenics as regards the caregiver burden. (Appendix 26). He found that caregivers of OCD patients have significantly high mean scores than that of schizophrenia group as regards the spouse related domain, and the caregiver's strategy domain suggesting greater burden in the key relatives of patients with OCD. (See table 170).

Table (170): Caregiver burden (Burden Assessment Scale) (BAS) among relatives of OCD and schizophrenics.

| BAS | Scores of BAS in Relatives of | |
|----------------------------|-----------------------------------|---------------------------------|
| | OCD Mean \pm SD | schizophrenics Mean \pm SD |
| Spouse-related | 4.46 \pm 3.82 | 0.95 \pm 2.64 |
| | $Z^a = -3.990$; $p = 0.000$ (HS) | |
| Physical and mental health | 11.40 \pm 3.42 | 10.80 \pm 3.23 |
| | $Z^a = -0.755$; $p = 0.450$ (NS) | |
| External support | 9.00 \pm 2.26 | 9.00 \pm 2.04 |
| | $Z^a = -0.041$; $p = 0.134$ (NS) | |
| Caregiver's routines | 8.10 \pm 1.63 | 8.58 \pm 1.72 |
| | $Z^a = -0.590$; $p = 0.555$ (NS) | |
| Taking responsibility | 6.70 \pm 1.51 | 6.82 \pm 1.80 |
| | $Z^a = -0.303$; $p = 0.762$ (NS) | |
| Other relatives | 6.57 \pm 1.977 | 6.04 \pm 1.66 |
| | $Z^a = -1.130$; $p = 0.259$ (NS) | |
| Patient's behaviour | 8.43 \pm 2.15 | 7.73 \pm 2.156 |
| | $Z^a = -1.290$; $p = 0.197$ (NS) | |
| Caregiver's strategy | 8.20 \pm 1.42 | 7.56 \pm 1.32 |
| | $Z^a = -2.068$; $p = 0.039$ (S) | |
| Total burden | 68.87 \pm 7.61 | 36.29 \pm 9.49 |
| | $Z^a = -1.164$; $p = 0.244$ (NS) | |

Abou Zeid et al (2005)

Abou Zeid et al (2005) found that the relatives of OCD patients reveal high burden among spouses than other relatives. There is no significant differences in total burden score among the relatives as regards the other demographic variables. (table 171).

Table (171): Caregiver burden (Total BAS) scores among relatives of OCD patients.

| relatives of OCD patients | Mean \pm SD | p |
|----------------------------------|---------------------------------|----------|
| Parents | 62.81 \pm 8.49 | 0.048 |
| Spouse | 69.48 \pm 6.93 | |
| Others | 66.05 \pm 10.89 | |
| Age(yrs): | | |
| < 20 | 66.00 \pm 12.76 | 0.195 |
| 21-40 | 66.93 \pm 8.76 | |
| >41 | 63.09 \pm 9.27 | |
| Sex: | | |
| Male | 65.71 \pm 9.65 | 0.838 |
| Female | 65.44 \pm 7.56 | |
| Education: | | |
| 6 years | 63.26 \pm 9.42 | 0.092 |
| 6-12 years | 64.26 \pm 9.15 | |
| University | 68.45 \pm 8.37 | |
| Occupation: | | |
| Unemployed | 70.00 \pm 0.00 | 0.081 |
| Employed | 67.89 \pm 8.53 | |
| Other | 61.17 \pm 8.88 | |
| Income status | | |
| Middle | 63.89 \pm 8.23 | 0.063 |
| Low | 65.12 \pm 10.18 | |
| High | 68.89 \pm 9.12 | |

Abou Zeid et al (2005)

4- financial problems of the family caregiver:

Shama & Gad (2000) (Appendix 10) reported that caregiver family members may have financial problems as shown in (table 172).

Table (172): Financial problems among family caregivers of schizophrenics.

| Financial state | caregiver family members (n= 50) N (%) |
|-------------------------------------|--|
| Financial problem related to | 37 (74) |
| Costs of treatment | 21 (42) |
| Loss of patient's productivity | 14 (28) |
| Loss of caregiver's work | 2 (4) |
| No financial problem | 13 (26) |

Shama & Gad (2000)

5- Global functioning of the family caregiver:

El-Ibiary (2001) studied 40 schizophrenics and 124 individuals of their FDR, compared to 23 healthy controls and 75 individuals of their FDR, and the researcher found highly significant difference between the families of both schizophrenics and healthy controls as regards the scores of global functioning scale. (See table 173).

Table (173): Global functioning of the family caregiver of the schizophrenics.

| | N | Mean+/-SD | t | p |
|----------------------------|-----|---------------|-----|-------|
| families of schizophrenics | 124 | 84.19+/-12.41 | 3.2 | 0.002 |
| families of controls | 75 | 89.17+/-6.69 | | |

El-Ibiary (2001)

6- Maternal caregiver burden (great deal burden):

Bastawy (2009) (Appendix 34) found that the presence of great deal burden is more present among mothers of children with attention-deficit and disruptive behavior disorders (67/89, 75.3%), mental retardation (28/38, 73.7%), and autistic disorders (11/17, 64.7%). The great deal burden is less common in mothers of children with neurotic and depressive disorders (18/31, 58.1%), with significant difference. (See table 174).

Table (174): Mother's burden in relation to child's psychiatric disorders.

| Burden | Child's psychiatric disorders | | | | | | | |
|---------------|-------------------------------|--------------------|-------------------|---------------------------------|--------------------|---------------------|-------------------|-------------------|
| | ADDBD n=89 N(%) | AD n=17 N(%) | PD n=4 N(%) | C _m D n=9 N(%) | MR n=38 N(%) | NDD n=31 N(%) | LD n=8 N(%) | PE n=4 N(%) |
| No burden | 2(2.2) | 0(0) | 0(0) | 2(22.2) | 0(0) | 4(12.9) | 0(0) | 0(0) |
| Only a little | 4(4.5) | 2(11.8) | 1(25) | 1(11.1) | 5(13.2) | 5(16.1) | 2(25) | 2(50) |
| Quite a lot | 16(18) | 4(23.5) | 1(25) | 1(11.1) | 5(13.2) | 4(12.9) | 2(25) | 0(0) |
| A great deal | 67(75.3) | 11(64) | 2(50) | 5(55.6) | 28(73) | 18(58.1) | 4(50) | 2(50) |
| Total | 89(100) | 17(100) | 4(100) | 9(100) | 38(100) | 31(100) | 8(100) | 4(100) |

($X^2=33$, $P=0.03$, S)

Bastawy (2009)

Bastawy (2009) found that the great deal burden on mother is insignificantly more present among mothers of children with abnormal conduct symptoms (113/156, 72.4%). (See table 175).

Table (175): Mother's burden in relation to conduct symptoms of their child.

| Mother's & family's burden | Conduct symptoms | | |
|----------------------------|------------------|---------------------|-------------------|
| | Normal N (%) | Borderline N (%) | Abnormal N (%) |
| No burden | 1(6.7) | 1(3.4) | 6(3.8) |
| Only a little | 1(6.7) | 5(17.2) | 16(10.3) |
| Quite a lot | 4(26.7) | 8(27.6) | 21(13.5) |
| A great deal | 9(60) | 15(51.7) | 113(72.4) |
| Total | 15(100) | 29(100) | 156(100) |

(X²=7.3, P=0.29, NS)*Bastawy (2009)*

Bastawy (2009) found that the presence of great deal burden is significantly high among mothers having children with abnormal hyperactivity (85/110, 77.3%). (See table 176).

Table (176): Mother's burden in relation to hyperactivity of her child.

| Mother's & family's burden | Hyperactivity symptoms | | |
|----------------------------|------------------------|---------------------|-------------------|
| | Normal N (%) | Borderline N (%) | Abnormal N (%) |
| No burden | 6(10.3) | 1(3.1) | 1(0.9) |
| Only a little | 13(22.4) | 3(9.4) | 6(5.5) |
| Quite a lot | 10(17.2) | 5(15.6) | 18(16.4) |
| A great deal | 29(50.0) | 23(71.9) | 85(77.3) |
| Total | 58(100) | 32(100) | 110(100) |

(X²=22.7, P=0.001, HS)*Bastawy (2009)*

Bastawy (2009) found that great deal plus quite a lot burden on mother is significantly high (93/128, 72.7% - 23/128, 18%) among mothers of children with social difficulties. (See table 177).

Table (177): Mother's burden in relation to the social difficulties of their psychiatric ill children.

| Mother's & family's burden | Social difficulties of the child | | |
|----------------------------|----------------------------------|---------------------|------------------|
| | Absent N (%) | Borderline N (%) | Present N (%) |
| No burden | 5(10.4) | 1(4.2) | 2(1.6) |
| Only a little | 10(20.8) | 2(8.3) | 10(7.8) |
| Quite a lot | 8(16.7) | 2(8.3) | 23(18.0) |
| A great deal | 25(52.1) | 19(79.2) | 93(72.7) |
| Total | 48(100) | 24(100) | 128(100) |

(X²=16.1, P=0.01, S)*Bastawy (2009)***7- Family Caregiver burden of Alzheimer and dementia patients:**

Ramy et al (2004) studied 30 patients with Alzheimer Disease, 30 patients with metastatic cancer and 30 patients with Rheumatoid Arthritis and their primary caregivers, (Appendix 21); and he found that the caregivers of Alzheimer disease group show the highest level of burden followed by the caregivers of the rheumatoid arthritis patients, while the caregivers of the metastatic cancer patients obtained the lowest score. (See table 178).

Table (178): Caregivers Burden as evident by SCB.

| | Dementia | Cancer | RA | F | p |
|-----|--------------|-----------------|-----------------|------|-------------|
| SCB | 15.96 ± 6.94 | 10.73 ± 4.66 | 11.63 ± 4.93 | 7.47 | 0.001 HS |

Ramy et al (2004)

Ramy et al (2004) also found that the caregivers of the Alzheimer disease patients obtain the lowest score in QOL followed by the caregivers of the metastatic patients, and then

the caregivers of the rheumatoid arthritis patients. There is a highly significant statistical difference between the three groups as regards the previous results. (See table 179).

Table (179): Caregiver's Quality of Life.

| | Dementia | Cancer | RA | F | p |
|-----------------|------------------|------------------|------------------|----------|-------------|
| PCASEE (QOL) | 51.73 ± 21.94 | 71.96 ± 27.19 | 89.63 ± 15.19 | 22.29 | 0.000 HS |

NB. PCASEE stands for:

Ramy et al (2004)

P= physical problems, C= cognitive problems, A= affective problems, S= social problems, E= economic problems and E ego problems.

(h) Maternal stress:

Bastawy (2009) studied 200 psychiatric ill child and their parents (Appendix 34) and found that all mothers of children with psychotic disorder (4/4, 100%) and with autistic disorders (17/17, 100%), have high stress followed by mothers of children with mental retardation (37/38, 97.4%), and finally mothers of children with learning disorders (4/8, 50%), with high significant difference. (See table 180).

Table (180): Mother's stress (PSI) in relation to the child's psychiatric disorders.

| Mothe r's stress | Child's psychiatric disorders | | | | | | | |
|---------------------------------|--------------------------------------|-----------------------------|----------------------------|--|-----------------------------|------------------------------|----------------------------|----------------------------|
| | ADDBD n=89 N(%) | AD n=17 N(%) | PD n=4 N(%) | C_mD n=9 N(%) | MR n=38 N(%) | NDD n=31 N(%) | LD n=8 N(%) | PE n=4 N(%) |
| Absent | 0(0) | 0(0) | 0(0) | 1(11.1) | 0(0) | 0(0) | 0(0) | 0(0) |
| Average | 3(3.4) | 0(0) | 0(0) | 2(22.2) | 1(2.6) | 14(45.2) | 4(50) | 1(25) |
| High | 86(96.6) | 17(100) | 4(100) | 6(66.7) | 37(97.4) | 17(54.8) | 4(50) | 3(75) |
| Total | 89(100) | 17(100) | 4(100) | 9(100) | 38(100) | 31(100) | 8(100) | 4(100) |

($X^2=76$, $P=0.001$, HS)

Bastawy (2009)

Bastawy (2009) (Appendix 34) found that the mothers suffer from high stress due to parental factors, most of which is due to attachment to their children (175/200, 87.5%), other factors are related to their children, most of which is due to unaccepted behaviors of the children (187/200, 93.5%).

Bastawy (2009) found a high stress in 89.7% (140/156) of mothers who have children with abnormal conduct symptoms, with high significant difference with the other groups. (See table 181).

Table (181): Mother's stress (PSI) in relation to conduct symptoms of their child.

| mother's stress | Conduct Symptoms | | |
|-----------------|------------------|---------------------|-------------------|
| | Normal N (%) | Borderline N (%) | Abnormal N (%) |
| Absent | 1(.7) | 0(0) | 0(0) |
| Average | 4(26.7) | 5(17.2) | 16(10.3) |
| High | 10(66.7) | 24(82.8) | 140(89.7) |
| Total | 15(100) | 29(100) | 156(100) |

($X^2=16.7$, $P=0.002$, HS)

Bastawy (2009)

Table (182): Mother's stress (PSI) in relation to the child's hyperactivity.

| mother's stress | Hyperactivity Symptoms | | |
|-----------------|------------------------|---------------------|-------------------|
| | Normal N (%) | Borderline N (%) | Abnormal N (%) |
| Absent | 1(1.7) | 0(0) | 0(0) |
| Average | 18(31.0) | 2(6.3) | 5(4.5) |
| High | 39(67.2) | 30(93.8) | 105(95.5) |
| Total | 58(100) | 32(100) | 110(100) |

($X^2=28.6$, $P=0.0003$, HS)

Bastawy (2009)

Bastawy (2009) found that 95.5% (105/110) of mothers having children with abnormal hyperactivity have significantly high stress. (See table 182).

Bastawy (2009) found that 96.9% (124/128) of mothers having children with social difficulties have significantly high stress. Table (100) shows that no significant correlation between the mother's stress and the social difficulties of her child. (See table 183).

Table (183): Mother's stress (PSI) in relation to social difficulties of their psychiatric ill children

| Mother's stress | Social difficulties of the child | | |
|-----------------|----------------------------------|---------------------|------------------|
| | Absent N (%) | Borderline N (%) | Present N (%) |
| Absent | 1(2.1) | 0(.0) | 0(.0) |
| Average | 18(37.5) | 3(12.5) | 4(3.1) |
| High | 29(60.4) | 21(87.5) | 124(96.9) |
| Total | 48(100) | 24(100) | 128(100) |

($X^2=41.1$, $P=0.0002$, **HS**)

Bastawy (2009)

Knowledge and attitude of the family about psychiatric illness

(I) Knowledge of relatives of psychiatric patients about:

1- Patients' behavior necessitating hospital admission:

EL-Sherbini et al (1981) studied families of 60 psychiatric patients, 2 family members for each patient subjected to an interview schedule questionnaire (Appendix 1), he found that family member's opinion about patient's behavior necessitating hospital admission includes excitement (73.33% of the concerned and 71.05% of the responsible family members), Insomnia and refusal of food are the next mentioned causes of hospitalization. The behavior least mentioned by both groups is sexual deviation. The variations noticed between the concerned and the responsible family members are not statistically significant. (See table 184).

Table (184): Family members' opinion about the patients' behavior that necessitates hospital admission.

| Patients' behavior | Family members | |
|--------------------------------|------------------------------|--------------------------------|
| | Concerned (n=80) N (%) | Responsible (n=38) N (%) |
| Excitement | 44 (73.33) | 27 (71.05) |
| Lack of sleep and food refusal | 38 (63.33) | 26 (68.41) |
| Bizarre behavior | 33 (55.00) | 20 (52.63) |
| Suicide | 10 (16.67) | 3 (7.89) |
| Sexual deviation | 4 (6.67) | 3 (7.89) |
| Wandering | 10 (16.67) | 7 (18.42) |

EL-Sherbini et al (1981)

2-Definition of psychiatric patients:

EL-Sherbini et al (1981) also found that family members tend to view the psychiatric patient as a person with bizarre and irresponsible behavior and one who is excited and dangerous to others. Difference between concerned and responsible views is statistically significant in relation to bizarre behavior and mental retardation. (See table 185).

Table (185): Family members' opinion about the psychiatric patients.

| View about psychiatric patients | Family members | |
|---------------------------------|------------------------------|--------------------------------|
| | Concerned (n=60) N (%) | Responsible (n=38) N (%) |
| Excitement and hurts others | 40 (66.67) | 10 (26.32) |
| Suicide | 11 (18.33) | 13 (34.21) |
| Lack of sleep | 15 (25.00) | 30 (78.95) |
| Bizarre behavior | 45 (75.00) | 6 (15.78) |
| Sexual deviation | 3 (5.00) | 14 (36.84) |
| Wandering | 2 (3.33) | 35 (92.10) |
| Mentally retarded | 8 (13.33) | 1 (2.63) |
| Very intelligent & thinks a lot | 2 (3.33) | 1 (2.63) |
| Any of the previous | 31 (51.67) | 12 (31.58) |
| Do not know | 21 (35.00) | 1 (2.63) |

EL-Sherbini et al (1981)

3- Nature of their patient's illness:

EL-Sherbini et al (1981) found that the family members explain the nature of their patients' illness to be due to psychological troubles by 43.34% of the concerned and 42.11% of the responsible, while only 23.33% of the concerned and 21.05% of the responsible viewed their patient's illness as

psychosis. No statistical significance found between the 2 opinions. (See table 186).

Table (186): Family members' opinion about the nature of their patients illness.

| Nature of the patients' illness | Family members | | Total N (%) |
|-----------------------------------|------------------------------|--------------------------------|----------------|
| | Concerned (n=60) N (%) | Responsible (n=38) N (%) | |
| Mental illness (psychosis) | 14 (23.33) | 8 (21.05) | 22 (22.45) |
| Psychological troubles (neurosis) | 26 (43.34) | 16 (42.11) | 42 (42.86) |
| Neurological disturbances | 5 (8.33) | 2 (5.26) | 7 (7.14) |
| Magical condition | 6 (10.00) | 5 (13.16) | 11 (11.22) |
| Do not know | 9 (15.00) | 7 (18.42) | 16 (16.33) |
| Total | 60 (100) | 88 (100) | 98 (100) |

EL-Sherbini et al (1981)

4- Causes of mental illness:

EL-Sherbini et al (1981) found that 73.33% of the concerned and 84.21% of the responsible family members believe that disturbed family relationship is a direct cause of mental illness. Figures are much lower when talking about their own patient with 8.33% and 10.58% respectively. It also appears that certain causes as magical causes, sudden trauma are mentioned by the family members as causes of mental illness of their own patients and not as general causes of mental illness. (See table 187).

Table (187): Family members' opinion about causes of mental illness.

| Opinion about causes of mental illness | Causes of mental illness | | | |
|--|--------------------------|-------------|-------------------------|-------------|
| | General | | Related to their own pt | |
| | Concerned | Responsible | Concerned | Responsible |
| Heredity | 66.67 | 57.84 | 2.33 | 0.00 |
| Financial & work problem | 55 | 60.53 | 21.66 | 12.16 |
| Disturbed family relationship | 73.33 | 84.21 | 8.33 | 10.58 |
| Physical reasons | 0 | 0 | 0 | 0 |
| Magical causes | 0 | 0 | 0 | 0 |
| Sudden trauma | 0 | 0 | 15.00 | 10.53 |
| Addiction | 73.33 | 84.21 | 33.33 | 39.47 |
| Others | 0 | 0 | 0 | 0 |

EL-Sherbini et al (1981)

(II) Knowledge and attitude of relatives of schizophrenics:

1-Knowledge and attitude concerning relation of the relatives to their patients:

EL-Shafei (2002) compared 60 educated relatives of 34 schizophrenics and 30 uneducated relatives of 16 schizophrenics as regards the knowledge and attitude about the schizophrenia. (Appendix 14). he found insignificant difference between relatives living with the patients in the same place and relatives not living with the patients as regards the attitude toward mentally ill patients (CAMI and FABI), the knowledge about schizophrenia (KASI) and burden of caring a mentally ill patient (ECI). (See table 188).

Table (188): Association between nature of the relation of relatives to patients and baseline Scores.

| Baseline Scores | Relatives of schizophrenics | | t | P |
|-----------------------|--|---|--------|-------------|
| | Living with (n=74) Mean+/- S.D. | Not living with (n=16) Mean+/-S.D. | | |
| CAMI Total | 134.5 +/- 15.01 | 133.56 +/- 12.07 | 0.234 | 0.816 NS |
| FABI Total | 39.34 +/- 6.98 | 39.25 +/- 5.17 | 0.048 | 0.962 NS |
| KASI Total | 12.59 +/- 2.79 | 13.44 +/- 2.99 | -1.018 | 0.283 NS |
| ECI Total negative | 83.3 +/- 24.51 | 76.81 +/-24.88 | 0.957 | 0.341 NS |

EL-Shafei (2002)

2- Knowledge and attitude concerning education of the relatives:

Table (189): Association between education of relatives and baseline scores.

| Baseline Scores | Education of relatives of schizophrenics | | | P |
|-----------------------|---|--|-----------------------------------|-------------|
| | Illiterate, prim. / prep. n=44 Mean+/-S.D. | Secondary / technical n=24 Mean+/- SD | High school n=22 Mean+/-SD. | |
| CAMI Total | 134.61 +/- 17.39 | 133.21 +/- 12.76 | 135 +/- 9.39 | 0.903 NS |
| FABI Total | 41.11 +/- 6.61 | 36.67 +/- 7.48 | 38.64 +/- 4.74 | 0.025 HS |
| KASI Total | 11.68 +/-2.44 | 13.54 +/- 2.57 | 14 +/- 3.13 | 0.001 HS |
| ECI Total negative | 81.64 +/- 27.25 | 85.17 +/- 25.11 | 79.86 +/- 18.16 | 0.755 NS |

EL-Shafei (2002)

EL-Shafei (2002) (Appendix 14) compared the level of education of the relatives (illiterate, primary, preparatory, secondary technical grades, and high schools) and he found a highly significant differences on FABI total score (assess how much relative feared mentally ill people and how they would intend to behave), and KASI total score (assess knowledge about schizophrenia). (See table 189).

3- Knowledge and attitude concerning occupation of the relatives:

EL-Shafei (2002) categorized the relatives into 7 groups (unemployed, housewives, retired, clerical, technical, professionals, laborers, and students), and he found a statistically significant difference on total FABI and KASI scores. (See table 190).

Table (190): Association between occupation of relatives and baseline scores.

| Baseline Scores | | Unemp. n=44 | House wives n=37 | Retired n=5 | Cler. techn n=24 | Prof. n=16 | Labr n=12 | Stud n=2 | P |
|--------------------------|----|----------------|------------------------|----------------|------------------------|---------------|--------------|-------------|-------|
| CAMI Total | M | 119.6 | 138 | 139.2 | 129.6 | 134 | 130.2 | 138.5 | 0.188 |
| | SD | 15.01 | 16.3 | 8.29 | 15.44 | 8.7 | 13.19 | 12.02 | NS |
| FABI Total | M | 38.67 | 41.68 | 39 | 34.27 | 38 | 39.67 | 41 | 0.016 |
| | SD | 2.08 | 6.3 | 5.05 | 8.21 | 5.01 | 6.23 | 2.83 | S |
| KASI Total | M | 14 | 12.08 | 15.2 | 12.8 | 4.06 | 11.33 | 14.5 | 0.029 |
| | SD | 2.65 | 2.84 | 1.92 | 2.11 | 3.04 | 2.74 | 0.71 | S |
| ECI Total Negative | M | 109 | 81.57 | 80.6 | 81.27 | 77.8 | 86.17 | 73.5 | 0.593 |
| | SD | 20.42 | 26.98 | 31.82 | 22.22 | 16.9 | 27.65 | 12.02 | NS |

EL-Shafei (2002)

4- The educational program and its effect on knowledge and attitude of relatives:

Table (191): Comparison before education, End-of-educational Program and after 3 months on relatives of schizophrenics as regards attitudes and knowledge.

| | | Baseline Scores | End -of-Program Scores | After 3 months | P |
|--------------------|---------|-----------------|------------------------|----------------|-------|
| CAMI Total | M SD | 133.73 15.91 | 148.55 14.9 | 148.2 15.33 | 0.000 |
| Fear & exclusion | M SD | 38.43 8.14 | 42.63 6.12 | 42.48 6.84 | 0.000 |
| Social Control | M SD | 15.13 3.93 | 18.77 4.17 | 18.28 3.6 | 0.000 |
| Goodwill | M SD | 14 1.25 | 14.55 0.89 | 14.57 0.89 | 0.799 |
| FABI Total | M SD | 39.2 7.69 | 44.08 5.59 | 43.33 6.29 | 0.002 |
| KASI Total | M SD | 13 2.87 | 18.27 4.23 | 18.02 4.37 | 0.046 |
| Diagnosis | M SD | 2.02 0.87 | 2.92 1.05 | 2.93 1.06 | 0.000 |
| Symptomatology | M SD | 2.17 0.69 | 3.25 0.75 | 3.22 0.76 | 0.000 |
| Etiology | M SD | 1.6 0.69 | 2.83 0.99 | 2.75 1.04 | 0.000 |
| Medication | M SD | 2.57 0.98 | 3.13 0.85 | 3.03 0.86 | 0.033 |
| Course & Prognosis | M SD | 2.43 0.74 | 3.13 0.72 | 3.03 0.78 | 0.057 |
| Management | M SD | 2.22 0.67 | 3.02 0.87 | 3.05 0.89 | 0.000 |

EL-Shafei et al (2002) and Kamel et al (2005)

EL-Shafei et al (2002) and Kamel et al (2005) compared scores of before education, at the end of educational program and after 3 month among the 60 educated relatives, and found high to very high significant differences on all the scales in favor of education except for the Goodwill and the Medication

subscales. This indicates that education leads to improvement in attitudes and knowledge in relatives of the schizophrenics. The educational program has a positive effect on the attitudes and knowledge of relatives which maintains over time. (See table 191).

(III) The attitude of the family member caregiver of the elderly patient:

Abido (2000) studied 30 caregivers of 30 patients with various psychiatric and medical illnesses (17 male and 13 female). (appendix 11), and the researcher found that as regards the attitude of the caregiver to elderly caring 11 cases out of 30 (36.6%) didn't accept someone else or a community service to provide care for their elderly relative. On the other hand, others 4 cases out of 30 (13.3%) demonstrated that caring of elderly is out of their duties and that the government should be completely responsible for providing the elderly needs.

Jones (2002) put several standardized appraisal questions which should be asked for all research papers. The standardized appraisal questions are the following:

- 1) Was the aim of the study clearly stated?
- 2) Was there an explanation why the study was carried out (need for the study)?
- 3) What is the study design? Is it appropriate to the aim of the study proper?
- 4) Was the study preceded by a pilot study to justify the proper?
- 5) What is the sample size? Was it mentioned? Was it statistically calculated (power of the study)?
- 6) Was the sample representative?
- 7) How were cases selected?
- 8) What were the characters of the sample?
- 9) What were the methods of assessment and measurements? Were they mentioned and referenced? Are they valid and reliable?
- 10) What were the statistical methods used? Were they discussed?
- 11) Were results presented in a clear way (tables, figures, etc.)?
- 12) Were results compared with other researches whether supporting the same findings or establishing other findings with explanation of the different findings?
- 13) What were the limitations of the study?
- 14) Were significant recommendations generated?

Critical Appraisal

1- Subject: Knowledge and opinions of families about mental illness and mental patients. (EL-Sherbini et al, 1981).

1-Title: clear & to the point.

2-Aim of the study: clearly stated giving an explanation for why the study is carried out.

3-Study design: not mentioned.

4-Setting of the study: not mentioned.

5-Time of the study: not mentioned.

6-Study population: not mentioned.

7-Sample design: not mentioned.

8-Sample size: not calculated to choose an appropriate number.

9- Tools: not mentioned and not referenced.

10-Statistical methods: mentioned.

11-Consent: no consent is taken.

12-Pilot study: The study is not preceded by a pilot study.

13-Results: clearly mentioned and the results of the statistics mentioned using "z" test for comparison of the 2 proportions. In table 4, p 124, the header contains both number and percentage of concerned and responsible family members, yet the subsequent results included only the percentage.

14-Discussion: the results discussed and compared with previous studies.

15-Abstract: clearly mentioned.

16-Recommendations: not mentioned by the researcher.

17-Limitations of the study: not mentioned.

18-The general appearance of the study: good, the number of pages is 8.

(See appendix 1).

2- Subject: Psychiatric morbidity in the families of mentally- ill patients. (*Mansour, 1993*).

1- Title: clear and to the point.

2-Aim of the study: clearly stated giving an explanation for why the study is carried out.

3-Study design: not mentioned.

4-Setting of the study: mentioned.

5-Time of the study: mentioned.

6-Study population: mentioned.

7-Sample design: described.

8-Sample size: not calculated to choose an appropriate number.

9- Tools: mentioned in details and referenced.

10-Statistical methods: clearly stated.

11-Consent: no consent is taken.

12-Pilot study: The study is not preceded by a pilot study.

13-Results: not clearly mentioned, the researcher mentioned the percentage without mentioning the actual number in most of the tables.

14-Discussion: the results are discussed and compared with previous studies.

15-Abstract & conclusion: clearly mentioned.

16-Recommendations: helpful recommendations are mentioned

17-Limitations of the study: not mentioned.

18-The general appearance of the study: it is well organized.

(See appendix 2).

3- Subject: Event Related Potential in schizophrenia. (Essawy, 1995).

1- Title: clear and to the point.

2-Aim of the study: vague and not clear.

3-Study design: not mentioned, but we can describe it as cross-sectional, longitudinal study.

4-Setting of the study: clearly mentioned.

5-Time of the study: mentioned.

6-Study population: clearly described.

7-Sample design: not mentioned, but we can describe it as conventional sample.

8-Sample size: not calculated to choose an appropriate number. She didn't mention why she took 60 schizophrenics, 27 of their FDR and 23 healthy controls.

9- Tools: methods of assessment and measurements are mentioned and referenced.

10-Statistical methods: well described, used p-value to assess the statistical significance.

11-Consent: consent from the subjects is taken before the start of the study.

12-Pilot study: The study is not preceded by a pilot study.

13-Results: the results are not clearly mentioned, she didn't comment on tables (p129-136). And the results mention in p120 doesn't watch with the results in tables number 30 and 33.

14-Discussion: the results discussed and compared with previous studies.

15-Conclusio: mentioned.

16-Recommendations: they are not clearly generated.

17-Limitations of the study: not mentioned.

18-The general appearance of the study: it doesn't contain a table of contents, list of tables and abbreviations even aim of the work. There are no boundaries between the chapters and no appendix. It has small Arabic summery (one paper) and formed of 207 pages.

(See appendix 3).

4- Subject: Event Related Potential in offsprings at high risk for schizophrenia and depression. (*Abd-El Azim, 1997*).

1- Title: clear and to the point.

2-Aim of the study: clearly mentioned.

3-Study design: not mentioned.

4-Setting of the study: clearly mentioned.

5-Time of the study: not mentioned.

6-Study population: clearly mentioned.

7-Sample design: not mentioned, but we can describe it as conventional sample.

8-Sample size: small sample (5 schizophrenics and 6 depressed patients).

9- Tools: mentioned in details and referenced.

10-Statistical methods: well described, used p-value to assess the statistical significance.

11-Consent: informed consent is taken.

12-Pilot study: The study is not preceded by a pilot study.

13-Results: the results of the statistics are displayed in tables, yet, the analysis of variables is not clear as the researcher mentioned in P102 that $P > 0.05$ = non significant and in the next phrase he mentioned that it is significant. Also the findings of table 40 P166 are not consistent with the comment on the table.

14-Discussion: the results discussed and compared with previous studies.

15-Conclusio;; mentioned.

16-Recommendations: helpful recommendations mentioned.

17-Limitations of the study: mentioned.

18-The general appearance of the study: good and formed of 230 pages.

(See appendix 4).

5- Subject: Event Related Potentials (ERPS) in schizophrenics and their first degree relatives. (Bassiouny et al, 1998).

- 1-Title:** clear & to the point.
- 2-Aim of the study:** not mentioned.
- 3-Study design:** not mentioned.
- 4-Setting of the study:** mentioned.
- 5-Time of the study:** mentioned.
- 6-Study population:** mentioned.
- 7-Sample design:** not mentioned.
- 8-Sample size:** not calculated to choose an appropriate number.
- 9- Tools:** mentioned in details.
- 10-Statistical methods:** not mentioned.
- 11-Consent:** informed consent is taken.
- 12-Pilot study:** The study is not preceded by a pilot study.
- 13-Results:** the results are clear and displayed in tables although the percentage of p300 abnormalities are recorded in percentage without mentioning the real number and without mentioning the results among the controls. Also the results described unclearly in figure 1 with error in the number.
- 14-Discussion:** the results discussed and compared with previous studies.
- 15-Abstract:** mentioned.
- 16-Recommendations:** not mentioned.
- 17-Limitations of the study:** not mentioned.

18-The general appearance of the study: good, the number of pages is 8.

(See appendix 5).

6- Subject: Attention impairment in first-degree relatives of schizophrenic patients: neuropsychological and neurophysiological evidence. (*Madkour et al, 1998*).

1- Title: clear & to the point.

2-Aim of the study: clearly stated giving an explanation for why the study is carried out.

3-Study design: not mentioned.

4-Setting of the study: not mentioned.

5-Time of the study: not mentioned.

6-Study population: not mentioned.

7-Sample design: not described.

8-Sample size: not calculated to choose an appropriate number.

9- Tools: mentioned and referenced.

10-Statistical methods: not mentioned.

11-Consent: no consent is taken.

12-Pilot study: The study is not preceded by a pilot study.

13-Results: clearly mentioned and the results of the statistics mentioned using (t-test & p-value).

14-Discussion: the results discussed & compared with previous studies.

15-Abstract: clearly mentioned.

16-Recommendations: helpful recommendation is mentioned.

17-Limitations of the study: not mentioned.

18-The general appearance of the study: good, the number of pages is 6.

(See appendix 6).

7- Subject: Maternal depression: The risk for children's psychopathology. (Fouad, 1999).

1- Title: clear and to the point.

2-Aim of the study: clearly mentioned.

3-Study design: not mentioned.

4-Setting of the study: mentioned.

5-Time of the study: mentioned the time of the pilot study only.

6-Study population: described.

7-Sample design: not clearly described, the researcher used only one child and also the older one which may affect the results.

8-Sample size: not calculated to choose an appropriate number.

9-Tools: mentioned in details and referenced, the researcher translated some of the scales into Arabic where validity and reliability are carried out.

10-Statistical methods: well described, used p-value to assess the statistical significance.

11-Consent: informed consent is taken.

12-Pilot study: The study is preceded by a pilot study.

13-Results: the results of the statistics are displayed in tables.

14-Discussion: the results discussed and compared with previous studies.

15-Conclusion: mentioned.

16-Recommendations: helpful recommendations mentioned.

17-Limitations of the study: not mentioned.

18-The general appearance of the study: good.

(See appendix 7).

8- Subject: Evaluation of marriage in families of schizophrenic patients. (Seleem, 1999).

1-Title: clear & to the point.

2-Aim of the study: clearly stated giving an explanation for why the study is carried out.

3-Study design: not mentioned but it can be described as cross- sectional, case control study.

4-Setting of the study: mentioned.

5-Time of the study: mentioned.

6-Study population: not clearly mentioned.

7-Sample design: not mentioned.

8-Sample size: not calculated to choose an appropriate number.

9- Tools: mentioned in details & referenced.

10-Statistical methods: clearly stated.

11-Consent: no consent is taken.

12-Pilot study: The study is not preceded by a pilot study, but we can consider the study itself as a preliminary study.

13- Results: clearly mentioned using p-value, the researcher used the parents in the comparison and not the fathers and mothers alone.

14-Discussion: the results are discussed & compared with previous studies.

15-Conclusion: clearly mentioned.

16-Recommendations: helpful recommendations are mentioned

17-Limitations of the study: not mentioned.

18-The general appearance of the study: it is well organized.

(See appendix 8).

9- Subject: Marital satisfaction in parents living with a schizophrenic offspring; A neglected topic. (Sarhan et al, 2000).

1- Title: clear & to the point.

2-Aim of the study: clearly stated giving an explanation for why the study is carried out.

3-Study design: not mentioned but it can be described as cross- sectional, case control study.

4-Setting of the study: clearly mentioned.

5-Time of the study: mentioned.

6-Study population: not clearly mentioned.

7-Sample design: not mentioned.

8-Sample size: not calculated to choose an appropriate number.

9- Tools: mentioned in details & referenced.

10-Statistical methods: clearly stated.

11-Consent: no consent is taken.

12-Pilot study: The study is not preceded by a pilot study, but we can consider the study itself as a preliminary study.

13- Results: the researchers mentioned in page 257 that the parents of schizophrenics show significantly high incidence of high scores in lie scale yet the result in table (4) page 256 is controversy, also the title and the head of table (3), are incorrect whereas in page 257 the researchers mention that table (3) compares between fathers & mothers of schizophrenics. The researchers didn't mention the results of the statistics (x^2 & t-test), they mentioned only p value.

14-Discussion: the results are discussed & compared with previous studies.

15-Abstract & conclusion: clearly mentioned.

16-Recommendations: mentioned

17-Limitations of the study: not mentioned.

18-The general appearance of the study: it is well organized, The number of pages is 8.

(See appendix 9).

10- Subject: The impact of relapse of schizophrenia on patient's functions and their families (*Shama & Gad, 2000*).

1- Title: clear & to the point.

2-Aim of the study: clearly stated giving an explanation for why the study is carried out.

3-Study design: not mentioned.

4-Setting of the study: mentioned.

5-Time of the study: not mentioned.

6-Study population: not mentioned.

7-Sample design: not mentioned.

8-Sample size: not calculated to choose an appropriate number.

9- Tools: mentioned in brief & not referenced.

10-Statistical methods: not mentioned.

11-Consent: no consent is taken.

12-Pilot study: The study is not preceded by a pilot study.

13-Results: clearly mentioned and the results of the statistics mentioned using (x^2 & p-value). But the researchers mentioned that there is significant difference between patients who relapsed 3 times and less and those who relapsed more than 3 times regarding personality traits of the schizophrenics, yet there is controversy with the results displayed in table 2, p181.

14-Discussion: the results discussed & compared with previous studies.

15-Abstract: clearly mentioned.

16-Recommendations: not mentioned by the researcher.

17-Limitations of the study: not mentioned.

18-The general appearance of the study: good, the number of pages is 8. The print out of the paper is inconsistent.

(See appendix 10).

11- Subject: Stress of geriatric patient caregivers. (Abido, 2000).

1- Title: clear and to the point, but It concerns geriatric patients although one patient has 56 years.

2-Aim of the study: clearly stated giving an explanation for why the study is carried out.

3-Study design: mentioned.

4-Setting of the study: mentioned.

5-Time of the study: not mentioned.

6-Study population: the researcher studied the elderly patients with medical and psychiatric illness grouped together without separation.

7-Sample design: not clearly mentioned.

8-Sample size: the researcher studied caregivers of 30 elderly patients, whereas 3 elderly patients have more than one caregiver, but the net result of the number of the caregivers is 30.

9- Tools: mentioned in brief, without reference.

10-Statistical methods: not done.

11-Consent: no consent is taken.

12-Pilot study: The study is not preceded by a pilot study.

13-Results: raw data without statistics.

14-Discussion: the results are discussed & compared with previous studies.

15-Conclusion: clearly mentioned.

16-Recommendations: are mentioned

17-Limitations of the study: mentioned.

18-The general appearance of the study: average; the number of pages is 125.

(See appendix 11).

12- Subject: Molecular and family study in the schizophrenic spectrum. (*El-Ibiary, 2001*).

1- Title: clear & to the point.

2-Aim of the study: clearly stated giving an explanation for why the study is carried out.

3-Study design: not mentioned.

4-Setting of the study: mentioned.

5-Time of the study: mentioned.

6-Study population: mentioned.

7-Sample design: not mentioned.

8-Sample size: not calculated to choose an appropriate number.

9- Tools: mentioned in brief and referenced.

10-Statistical methods: clearly mentioned using (t-test, P-value, and Chi square).

11-Consent: consent is taken both oral and written.

12-Pilot study: The study is preceded by a pilot study.

13-Results: the results of the statistics displayed in tables, yet the results including p-value, chi-square are not clear, indeed the comment on tables is not consistent with the results of the tables.

14-Discussion: the results discussed and compared with previous studies.

15-Conclusion: clearly mentioned.

16-Recommendations: helpful recommendations are mentioned by the researcher.

17-Limitations of the study: mentioned.

18-The general appearance of the study: good.

(See appendix 12).

13- Subject: A Family Based Association Study of Genes in Bipolar Mood Disorder in An Egyptian Sample Using TDT Design. (*Fikry, 2002*).

1- Title: clear & to the point.

2-Aim of the study: clearly stated giving an explanation for why the study is carried out.

3-Study design: mentioned.

4-Setting of the study: mentioned.

5-Time of the study: not mentioned.

6-Study population: not mentioned.

7-Sample design: not described.

8-Sample size: not calculated to choose an appropriate number.

9- Tools: mentioned in details & referenced.

10-Statistical methods: stated.

11-Consent: written consent is taken.

12-Pilot study: The study is not preceded by a pilot study.

13-Results: All the data are collected and analyzed using T-test, Chi-square test (X^2), and p-value. The researcher didn't achieve part of the aim of the work which is probability that the genetic loci differ according to clinical presentation.

14-Discussion: the results are discussed & compared with previous studies.

15-Abstract: clearly mentioned.

16-Recommendations; not mentioned

17-Limitations of the study: not mentioned.

18-The general appearance of the study: it is well organized; the number of pages is 16.

(See appendix 13).

14- Subject: An educational program for knowledge and attitude change in families of patients with schizophrenia. (EL-Shafei, 2002).

1- Title: clear and to the point.

2-Aim of the study: clearly stated giving an explanation for why the study is carried out.

- 3-Study design:** not mentioned.
- 4-Setting of the study:** mentioned.
- 5-Time of the study:** mentioned.
- 6-Study population:** mentioned clearly.
- 7-Sample design:** described.
- 8-Sample size:** not calculated to choose an appropriate number.
- 9- Tools:** mentioned in details and referenced.
- 10-Statistical methods:** clearly stated using chi square, t-test and p-value.
- 11-Consent:** written consent is taken.
- 12-Pilot study:** The study is preceded by a pilot study.
- 13- Results:** clearly mentioned and the results are illustrated in tables.
- 14-Discussion:** the results are discussed and compared with previous studies.
- 15-Conclusion:** clearly mentioned.
- 16-Recommendations:** helpful recommendations are mentioned
- 17-Limitations of the study:** mentioned.
- 18-The general appearance of the study:** it is well organized.

(See appendix 14).

15- Subject: Spouse role in the problem of drug abuse. (*Emara, 2002*).

- 1- Title:** clear & to the point.

- 2-Aim of the study:** clearly stated giving an explanation for why the study is carried out.
- 3-Study design:** not mentioned, but it can be described as cross- sectional study.
- 4-Setting of the study:** mentioned.
- 5-Time of the study:** not mentioned.
- 6-Study population:** not clearly mentioned.
- 7-Sample design:** not mentioned or described.
- 8-Sample size:** not calculated to choose an appropriate number.
- 9- Tools:** mentioned in brief & referenced.
- 10-Statistical methods:** not stated.
- 11-Consent:** taken, but not mentioned if it is oral or written.
- 12-Pilot study:** The study is not preceded by a pilot study.
- 13-Results:** clearly mentioned and displayed in tables with the use of analytical tests; t-test, and p value.
- 14-Discussion:** the results are discussed & compared with previous studies.
- 15-Conclusion:** clearly mentioned.
- 16-Recommendations;** helpful recommendations mentioned
- 17-Limitations of the study:** not mentioned.
- 18-The general appearance of the study:** it is well organized.

(See appendix 15).

16- Subject: Psychiatric morbidity in First degree Relatives of a sample of ADHD Children. (Elsheikh, 2003).

- 1- Title:** clear & to the point.
- 2-Aim of the study:** clearly stated giving an explanation for why the study is carried out.
- 3-Study design:** mentioned.
- 4-Setting of the study:** mentioned.
- 5-Time of the study:** mentioned.
- 6-Study population:** mentioned.
- 7-Sample design:** mentioned.
- 8-Sample size:** not calculated to choose an appropriate number.
- 9- Tools:** mentioned in details & referenced.
- 10-Statistical methods:** stated.
- 11-Consent:** informed consent is taken from parents for their children's participation.
- 12-Pilot study:** The study is preceded by a pilot study.
- 13-Results:** All the data are collected and analyzed using Chi-square test (X^2), one way ANOVA (F), and Logistic regression analysis. The results are illustrated in tables.
- 14-Discussion:** the results are discussed & compared with previous studies.
- 15-conclusion:** clearly mentioned.
- 16-Recommendations;** helpful recommendations are mentioned.

17-Limitations of the study: not mentioned.

18-The general appearance of the study: good, the number of pages is 225.

(See appendix 16).

17- Subject: A family study of autism: psychiatric morbidity and cognitive pattern in parents. (Azzam, 2003).

1- Title: clear & to the point.

2-Aim of the study: clearly stated giving an explanation for why the study is carried out.

3-Study design: not mentioned.

4-Setting of the study: mentioned.

5-Time of the study: mentioned.

6-Study population: described.

7-Sample design: not described or mentioned, also not adequate in number (28 autistic child).

8-Sample size: not calculated to choose an appropriate number.

9- Tools: mentioned in details & referenced.

10-Statistical methods: stated.

11-Consent: no informed consent is taken.

12-Pilot study: The study is not preceded by a pilot study.

13-Results: All the data are collected and analyzed using T-test person, Chi-square test (X^2), Mean and Standard

Deviation and p-value. The head of some tables doesn't actually prescribe the contents in the table as in p139, table 23, also p147, and table 34. The researcher didn't mention p-value of all the tables.

14-Discussion: the results are discussed & compared with previous studies.

15-Conclusion: clearly mentioned.

16-Recommendations; helpful recommendations are mentioned

17-Limitations of the study: not mentioned.

18-The general appearance of the study: the word professor at cover page was written wrong, also word professor was used for assistant professor; the number of pages is 195.

(See appendix 17).

18- Subject: Patterns of psychiatric morbidity and cognitive styles in parents of autistic children: the correlation with the symptoms profile of their autistic children. (*Bishry et al, 2004*).

1- Title: clear & to the point.

2-Aim of the study: clearly stated giving an explanation for why the study is carried out.

3-Study design: not mentioned.

4-Setting of the study: mentioned.

5-Time of the study: not mentioned.

6-Study population: mentioned.

7-Sample design: not described.

8-Sample size: not calculated to choose an appropriate number.

9- Tools: mentioned in details & referenced.

10-Statistical methods: stated.

11-Consent: informed consent is taken.

12-Pilot study: The study is not preceded by a pilot study.

13-Results: The data are collected and analyzed but the the results of "psychiatric morbidity" is not illustrated in tables and the researcher only mentioned the incidence and p-value of the results.

14-Discussion: the results are discussed & compared with previous studies.

15-Abstract: clearly mentioned.

16-Recommendations; helpful recommendation is mentioned

17-Limitations of the study: not mentioned.

18-The general appearance of the study: it is well organized; the number of pages is 11.

(See appendix 18).

**19- Subject: First-degree relatives of ADHD children
I: Psychiatric morbidity and personality profiles.
(Sadek A. et al, 2004).**

1- Title: clear yet couldn't explain the whole work as the work includes 1st and 2nd degree relatives not 1st degree only.

2-Aim of the study: clearly stated giving an explanation for why the study is carried out.

3-Study design: mentioned.

4-Setting of the study: mentioned.

5-Time of the study: not mentioned.

6-Study population: described.

7-Sample design: not mentioned.

8-Sample size: not calculated to choose an appropriate number.

9- Tools: mentioned in details & referenced.

10-Statistical methods: stated.

11-Consent: taken from both groups.

12-Pilot study: The study is not preceded by a pilot study.

13-Results: All the data are collected and analyzed using T-test person, Chi-square test (X^2). The results are illustrated in tables. The results include both 1st and 2nd degree relatives not 1st degree only.

14-Discussion: the results are discussed & compared with previous studies.

15-Abstract: clearly mentioned.

16-Recommendations; not mentioned

17-Limitations of the study: not mentioned.

18-The general appearance of the study: the number of pages is too much; 24.

(See appendix 19).

20- Subject: A group of Egyptian addicts: Users view for addiction causes and its impact on self and family. (Abolmagd et al, 2004).

1- Title: doesn't explain the whole work done.

2-Aim of the study: clearly stated giving an explanation for why the study is carried out.

3-Study design: not mentioned.

4-Setting of the study: mentioned.

5-Time of the study: mentioned.

6-Study population: not mentioned.

7-Sample design: not mentioned.

8-Sample size: not calculated to choose an appropriate number.

9- Tools: not clear and not referenced.

10-Statistical methods: mentioned.

11-Consent: no consent is taken.

12-Pilot study: The study is not preceded by a pilot study.

13-Results: clearly mentioned, the researcher didn't mention the possible success factors of treatment that can decrease relapse.

14-Discussion: the results discussed and compared with previous studies.

15-Abstract: clearly mentioned.

16-Recommendations: mentioned by the researcher.

17-Limitations of the study: not mentioned.

18-The general appearance of the study: good, the number of pages is 14.

(See appendix 20).

21- Subject: Family caregivers burden of patients with Alzheimer dementia: Psychological and economic perspectives. (*Ramy et al, 2004*).

1- Title: clear & to the point.

2-Aim of the study: clearly stated giving an explanation for why the study is carried out.

3-Study design: not mentioned.

4-Setting of the study: clearly mentioned.

5-Time of the study: not mentioned.

6-Study population: mentioned.

7-Sample design: not mentioned.

8-Sample size: not calculated to choose an appropriate number.

9- Tools: mentioned in details & referenced.

10-Statistical methods: stated.

11-Consent: informed consent is taken.

12-Pilot study: The study is not preceded by a pilot study.

13- Results: clearly stated and displayed in tables using chi-square to compare the groups of the study.

14-Discussion: the results are discussed & compared with previous studies.

15-Abstract: clearly mentioned.

16-Recommendations; helpful recommendation is mentioned

17-Limitations of the study: not mentioned.

18-The general appearance of the study: it is well organized; the number of pages is 8.

(See appendix 21).

22- Subject: First degree Relatives of ADHD Children II: The impact of their psychiatric morbidity and personality profiles on the severity, comorbidity and adaptability of ADHD children. (Sadek et al, 2004).

1- Title: clear yet couldn't explain the whole work as the work includes 1st and 2nd degree relatives not 1st degree only.

2-Aim of the study: not clearly mentioned.

3-Study design: mentioned.

4-Setting of the study: mentioned.

5-Time of the study: not mentioned.

6-Study population: not well described.

7-Sample design: mentioned.

8-Sample size: not calculated to choose an appropriate number.

9- Tools: mentioned in details & referenced.

10-Statistical methods: stated.

11-Consent: not taken.

12-Pilot study: The study is not preceded by a pilot study.

13-Results: The results are illustrated in tables. There's text missing from page 360 to page 364, including from table 2 to table 4..

14-Discussion: the results are compared with previous studies.

15-Abstract: the Arabic abstract doesn't correspond to the English abstract.

16-Recommendations; not mentioned

17-Limitations of the study: not mentioned.

18-The general appearance of the study: there are empty pages from page 360 to page 364; the number of pages is 16.

(See appendix 22).

23- Subject: Schizophrenic patients' families psycho-education: outcomes on patients' quality of life and disease relapse rate. (Abulmagd et al, 2004).

1- Title: clear & to the point.

2-Aim of the study: clearly stated giving an explanation for why the study is carried out.

- 3-Study design:** not mentioned.
- 4-Setting of the study:** not mentioned.
- 5-Time of the study:** not mentioned.
- 6-Study population:** not clearly mentioned.
- 7-Sample design:** random sample but, not described..
- 8-Sample size:** not calculated to choose an appropriate number.
- 9- Tools:** mentioned in details using the Arabic version.
- 10-Statistical methods:** clearly stated.
- 11-Consent:** no consent is taken.
- 12-Pilot study:** The study is not preceded by a pilot study.
- 13-Results:** clearly mentioned and the results of the statistics mentioned using (chi-square test and p-value), the results are illustrated in tables.
- 14-Discussion:** the results are discussed & compared with previous studies.
- 15-Abstract & conclusion:** clearly mentioned.
- 16-Recommendations:** helpful recommendations are mentioned
- 17-Limitations of the study:** mentioned.
- 18-The general appearance of the study:** it is well organized. The number of pages is 16.

(See appendix 23).

24- Subject: Role of spouse in addiction: Is there a contribution. (*Abolmagd et al, 2004*).

- 1- Title:** clear & to the point.

- 2-Aim of the study:** clearly stated giving an explanation for why the study is carried out.
- 3-Study design:** not mentioned.
- 4-Setting of the study:** not mentioned.
- 5-Time of the study:** not mentioned.
- 6-Study population:** not clearly mentioned.
- 7-Sample design:** not mentioned or described.
- 8-Sample size:** not calculated to choose an appropriate number.
- 9- Tools:** mentioned in brief & referenced.
- 10-Statistical methods:** stated.
- 11-Consent:** written consent is taken.
- 12-Pilot study:** The study is not preceded by a pilot study.
- 13- Results:** clearly mentioned and displayed in tables with the use of analytical tests; t-test, and p value.
- 14-Discussion:** the results are discussed & compared with previous studies.
- 15-Abstract & conclusion:** clearly mentioned.
- 16-Recommendations;** helpful recommendations mentioned
- 17-Limitations of the study:** not mentioned.
- 18-The general appearance of the study:** it is well organized; the number of pages is 8.

(See appendix 24).

25- Subject: Assessment of attention and hyperactivity symptoms in offsprings of parents with Bipolar disorder. (*Gomaa, 2004*).

1- Title: clear & to the point.

2-Aim of the study: clearly stated giving an explanation for why the study is carried out.

3-Study design: mentioned.

4-Setting of the study: mentioned.

5-Time of the study: not mentioned.

6-Study population: described.

7-Sample design: not mentioned, but described as convenient sample.

8-Sample size: not calculated to choose an appropriate number.

9- Tools: mentioned in details & referenced.

10-Statistical methods: stated.

11-Consent: not taken.

12-Pilot study: The study is not preceded by a pilot study.

13-Results: All the data are collected and analyzed using t-test person, Chi-square test (X^2). The results are illustrated in tables, the researcher commented at the end of tables on t-score although it never mentioned in the tables' contents.

14-Discussion: the results are discussed & compared with previous studies.

15- Conclusion: clearly mentioned.

16-Recommendations; helpful recommendations mentioned.

17-Limitations of the study: not mentioned.

18-The general appearance of the study: good.

(See appendix 25).

26- Subject: Caregiver burden among schizophrenic and obsessive compulsive disorder families: A comparative study. (*Abou Zeid et al, 2005*).

1-Title: clear and to the point.

2-Aim of the study: clearly stated giving an explanation for why the study is carried out.

3-Study design: mentioned.

4-Setting of the study: mentioned.

5-Time of the study: mentioned.

6-Study population: not mentioned clearly.

7-Sample design: not described.

8-Sample size: not calculated to choose an appropriate number.

9-Tools: mentioned and referenced.

10-Statistical methods: clearly stated using chi-square and Mann-whitney "U" test.

11-Consent: informed consent is taken.

12-Pilot study: The study is not preceded by a pilot study.

13-Results: clearly mentioned and the results are illustrated in tables.

14-Discussion: the results are discussed and compared with previous studies.

15-Abstract: clearly mentioned.

16-Recommendations: mentioned

17-Limitations of the study: mentioned.

18-The general appearance of the study: it is well organized. The number of pages is 8.

(See appendix 26).

27- Subject: Change in knowledge and attitude of families of patients with schizophrenia: A preliminary Egyptian Educational Program. (*Kamel et al, 2005*).

1- Title: clear and to the point, but, it is long title.

2-Aim of the study: clearly stated giving an explanation for why the study is carried out, but, it includes many details.

3-Study design: not mentioned.

4-Setting of the study: mentioned.

5-Time of the study: not mentioned.

6-Study population: not mentioned clearly.

7-Sample design: random sample but, not described.

8-Sample size: not calculated to choose an appropriate number.

9- Tools: mentioned in details and referenced.

10-Statistical methods; clearly stated using chi square, t-test and p-value.

11-Consent: written consent is taken.

12-Pilot study; The study is preceded by a pilot study.

13-Results: clearly mentioned and the results are illustrated in tables.

14-Discussion: the results are discussed and compared with previous studies.

15-Abstract & conclusion: clearly mentioned.

16-Recommendations: not mentioned

17-Limitations of the study; not mentioned.

18-The general appearance of the study: it is well organized. The number of pages is 16.

(See appendix 27).

28- Subject: psychiatric morbidity, cognitive dysfunction and neurological soft signs in bipolar patients and their first degree relatives in an Egyptian sample. (*Rabie, 2005*).

1- Title: clear & to the point.

2-Aim of the study: clearly stated giving an explanation for why the study is carried out.

3-Study design: mentioned.

4-Setting of the study: mentioned.

5-Time of the study: mentioned.

6-Study population: mentioned.

7-Sample design: mentioned.

8-Sample size: not calculated to choose an appropriate number.

9- Tools: mentioned in details & referenced.

10-Statistical methods: stated.

11-Consent: informed consent is taken from ALL patients and their first degree relatives.

12-Pilot study: The study is preceded by a pilot study.

13-Results: All the data are collected and analyzed using Chi-square test (X^2), t-test, one way ANOVA(F), and spearman correlation (r).

14-Discussion: the results are discussed & compared with previous studies.

15-conclusion: clearly mentioned.

16-Recommendations; helpful recommendations are mentioned.

17-Limitations of the study: mentioned.

18-The general appearance of the study: good, the number of pages is 210.

(See appendix 28).

29- Subject: Impact of family relations on psychiatric patients. (EL-Shafei, 2006).

1- Title: clear and to the point.

2-Aim of the study: clearly stated giving an explanation for why the study is carried out.

3-Study design: not mentioned.

- 4-Setting of the study:** mentioned.
- 5-Time of the study:** not mentioned.
- 6-Study population:** described clearly.
- 7-Sample design:** described.
- 8-Sample size:** not calculated to choose an appropriate number.
- 9-Tools:** mentioned in details, but not referenced. Translated into Arabic where reliability and validity of the scales are carried out.
- 10-Statistical methods:** clearly stated using chi square, t-test and mean and standard deviation.
- 11-Consent:** no consent is taken.
- 12-Pilot study:** The study is preceded by a pilot study.
- 13- Results:** clearly mentioned and the results are illustrated in tables.
- 14-Discussion:** the results are discussed and compared with previous studies.
- 15-Conclusion:** clearly mentioned.
- 16-Recommendations:** helpful recommendations are mentioned
- 17-Limitations of the study:** not mentioned.
- 18-The general appearance of the study:** it is well organized.

(See appendix 29).

30- Subject: Psychiatric Morbidity in Wives of Substance Users in an Egyptian Sample. (Afifi, 2007).

- 1- Title:** clear & to the point.
- 2-Aim of the study:** clearly stated.
- 3-Study design:** mentioned.
- 4-Setting of the study:** mentioned.
- 5-Time of the study:** mentioned.
- 6-Study population:** mentioned.
- 7-Sample design:** described.
- 8-Sample size:** not calculated to choose an appropriate number.
- 9- Tools:** mentioned in details & referenced.
- 10-Statistical methods:** stated.
- 11-Consent:** oral informed consent is taken.
- 12-Pilot study:** The study is preceded by a pilot study.
- 13- Results:** mentioned and displayed in tables with the use of analytical tests; chi-square, and p value.
- 14-Discussion:** the results are discussed & compared with previous studies.
- 15-Conclusion:** clearly mentioned.
- 16-Recommendations;** helpful recommendations mentioned
- 17-Limitations of the study:** not mentioned.

18-The general appearance of the study: it is well organized.

(See appendix 30).

31- Subject: Burden of mother and wife caregivers of psychiatric and non-psychiatric patients and its relation to psychiatric disorders. (Abd El-maksoad, 2007).

1- Title: clear and to the point.

2-Aim of the study: clearly stated giving an explanation for why the study is carried out.

3-Study design: not mentioned.

4-Setting of the study: mentioned but without specification.

5-Time of the study: not mentioned.

6-Study population: mentioned clearly.

7-Sample design: described.

8-Sample size: not calculated to choose an appropriate number.

9-Tools: mentioned in details and referenced, with validity and reliability of the chosen scales.

10-Statistical methods:: clearly stated using chi square, t-test and p-value.

11-Consent: written consent is taken.

12-Pilot study; The study is preceded by a pilot study.

13- Results: clearly mentioned and the results are illustrated in tables.

14-Discussion: the results are discussed and compared with previous studies.

15-Conclusion: clearly mentioned.

16-Recommendations: helpful recommendations are mentioned

17-Limitations of the study: mentioned.

18-The general appearance of the study: it is well organized.

(See appendix 31).

32- Subject: Obsessive Compulsive Disorder and Personality disorders among first degree relatives of Obsessive Compulsive Disorder patients. (Tantawy et al, 2008).

1- Title: clear & to the point.

2-Aim of the study: mentioned.

3-Study design: mentioned.

4-Setting of the study: clearly mentioned.

5-Time of the study: mentioned.

6-Study population: not clearly mentioned.

7-Sample design: not mentioned.

8-Sample size: not calculated to choose an appropriate number.

9- Tools: mentioned in details & referenced.

10-Statistical methods: stated.

11-Consent: informed consent is taken.

12-Pilot study: The study is not preceded by a pilot study.

13- Results: the results of statistical significance using p-value was not clear, also there's a healthy control with OCD.

14-Discussion: the results are discussed & compared with previous studies.

15-Abstract & conclusion: clearly mentioned.

16-Recommendations; not mentioned

17-Limitations of the study: mentioned.

18-The general appearance of the study: it is well organized; the number of pages is 14.

(See appendix 32).

33- Subject: Effect of educational intervention on caregiver burden and quality of life in dementia in an Egyptian sample. (Waly, 2008).

1- Title: clear and to the point.

2-Aim of the study: clearly stated giving an explanation for why the study is carried out.

3-Study design: not mentioned.

4-Setting of the study: mentioned.

5-Time of the study: mentioned.

6-Study population: not clearly described.

7-Sample design: randomly selected without specific criteria for caregivers are mentioned.

8-Sample size: not calculated to choose an appropriate number.

9- Tools: mentioned in details & referenced.

10-Statistical methods: stated.

11-Consent: informed consent is taken from patients and caregivers.

12-Pilot study: The study is preceded by a pilot study.

13- Results: clearly stated and displayed in tables, the results in table 26 are not consistent with the comment on the table in page 148.

14-Discussion: the results are discussed & compared with previous studies.

15-Conclusion: clearly mentioned.

16-Recommendations: helpful recommendations are mentioned.

17-Limitations of the study: not mentioned.

18-The general appearance of the study: there's no list of contents, and not all the abbreviations in the study mentioned. The number of pages is 236.

(See appendix 33).

34- Subject: The psychological impact of children's mental health problems on their parents. (*Bastawy, 2009*)

1- Title: clear & to the point, yet the researcher couldn't study the impact of children's mental health problems on

their fathers due to the absence of the fathers in the child psychiatric clinics.

2-Aim of the study: clearly stated giving an explanation for why the study is carried out.

3-Study design: mentioned (convenient sample).

4-Setting of the study: mentioned.

5-Time of the study: not mentioned.

6-Study population: mentioned.

7-Sample design: mentioned.

8-Sample size: calculated to choose an appropriate number.

9- Tools: mentioned in details & referenced.

10-Statistical methods: stated.

11-Consent: oral consent from parents is taken.

12-Pilot study: The study is preceded by a pilot study.

13-Results: All the data are collected and analyzed using Chi-square test (X^2), and p-value.

14-Discussion: the results are discussed & compared with previous studies.

15-conclusion: clearly mentioned.

16-Recommendations; mentioned

17-Limitations of the study: mentioned.

18-The general appearance of the study: it is well organized.

(See appendix 34).

We collected 34 Egyptian psychiatric researches done on "relatives of psychiatric patients" (one M.D. and one M.Sc thesis from El Azhar University, three M.Sc thesis from Cairo University, twelve M.D and one M.Sc thesis from Ain Shams University, seven studies from the Egyptian Journal of Psychiatry and nine studies from the Current Psychiatry Journal). Although there are many papers done by staff of faculty of medicine- Suez Canal university, there is no available M.Sc or M.D. thesis done on this topic in Suez Canal university.

These researches cover the period from 1981-2009 (28 years). Only two researches was done in the period from 1981 to 1993, the maximum number of researches was seven researches in year 2004 as shown in figure 1. The number of researches is considered not sufficient to cover this important subject "relatives of psychiatric patients" as it has deleterious effects on psychiatric conditions of the patients.

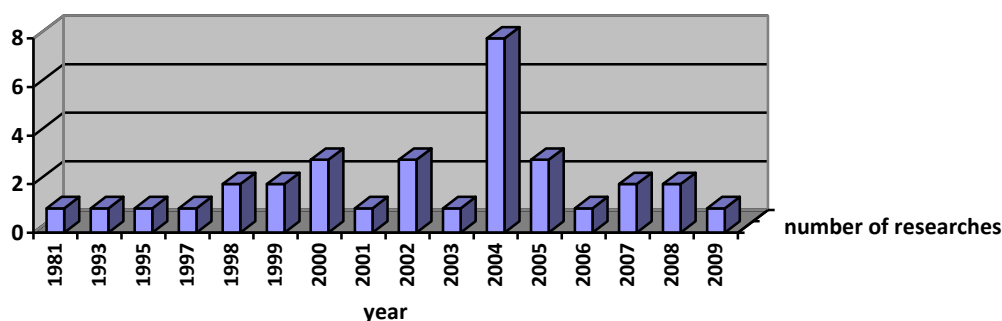


Figure (1)

A- Epidemiology:

We found nine researches studied the **prevalence** of psychiatric morbidities among the relatives of psychiatric patients; and they reported the following; About half the wives and half the children of **GAD patients** have GAD. Anxiety symptoms and GAD are common among spouses and children of **OCD patients**. 22.48% of the first degree relatives of OCD patients suffer from OCD (*Mansour, 1993*) This agrees with the western studies such as *Stanley et al (1990)*, *Black et al (1993)*, and *Grabe et al (2006)*. There is a high rate of psychiatric disorders among the first degree relatives of **schizophrenics** compared to the first degree relatives of healthy controls (*El-Ibiary, 2001*). The relatives of chronic schizophrenics and the relatives of **chronic major depressed** patients are more liable to suffer from depressive symptoms and major depressive disorder (*Mansour, 1993*). This agrees with *Weisman and Seigal (1972)*, who reported that affective disturbances particularly major depressive disorder are present in high proportion among children of depressed parents. Also, 26% of the first degree relatives of **BAD patients** suffer from psychiatric disorders (*Rabie, 2005*). Anxiety symptoms and GAD are frequent among the relatives of patients with currently manic episode, especially among the children and the wives of the male patients. (*Mansour, 1993*). This agrees with *Weisman et al (1984)* who found high level of anxiety among the children of affectively ill parents. 12% (7/25) of fathers of **PDD child** suffer from depression (*Azzam, 2003*). 8.4% (3/36) of fathers of **ADHD children** have psychiatric disorders (*Elsheikh,*

2003 and *Sadek et al, 2004*). In an European study *Whitman (2000)* studied fathers of ADHD children and found a significantly high rate of substance abuse (14.25%) and anti-social personality disorders (25.28%). The parents of **MR children** are prone to psychiatric disorders especially anxiety, depression, and panic disorders (*EL Dod, 1998*). 40.4% (36/89) of the mothers of **psychiatric ill child** have psychiatric disorders, commonly adjustment disorder with depressed mood (*Bastawy, 2009*). The wives of **addicts** have higher level of depression and anxiety than wives of healthy persons. (*Abolmagd et al, 2004a*) Personality disorders are more prevalent in the addicts' wives than the non addicts' wives. The commonest personality disorder is borderline PD, then histrionic PD, followed by narcissistic PD. (*Afifi, 2007*).

We found only one research studied the **age distribution** of the relatives of psychiatric patients which done at 2009: and the researcher reported that the highest age incidence of the mothers (relative) (40%) are from 25 years old to less than 33 years old which corresponds to highest age incidence of psychiatric ill children (between 6 years and less than 13 years) (*Bastawy, 2009*).

There are two researches studied the **sex distribution** of the relatives of psychiatric patients both done at 2008: 62.02% (80/129) of the FDR of **OCD patients** are females (*Tantawy et al, 2008*). 54% of the caregiver relatives of **demented patients** are females (*Waly, 2008*). This agrees with the results of western studies who adopted the role of females as health care provider in the family much more than males,

also females take responsibility towards their mentally ill patients more than males. (*Schwartz and Gidron, 2002*).

Also, we found three researches studied the **marital status distribution** of the relatives of psychiatric patients which cover the period from 2008-2009: 70.54% (91/129) of the FDR of **OCD patients** never married (*Tantawy et al, 2008*). 11.5% of the mothers of **psychiatric ill child** are divorced. (*Bastawy, 2009*). 19% of the caregiver family members of **demented patients** are single, 1% is widow (*Waly, 2008*). This shows that the divorced mothers, the single caregiver family member of the psychiatric patients are highly presented.

There are two researches studied the **educational level distribution** of the relatives of psychiatric patients which done in 2001 and 2009: 29.03% (36/124) of the FDR of **schizophrenics** are in high school and 1.61% (2/124) are postgraduate. (*El-Ibiary, 2001*). 58% (117/200) of the mothers of **psychiatric ill child** received secondary school or diploma education, and 2% (4/200) are illiterate, others include college graduate mothers 42/200 (21%), mothers that can read and write 29/200 (14.5%), and postgraduate mothers 8/200 (4%). (*Bastawy, 2009*). These results are not matching the results of **Central Agency of Public Mobilization and Statistics (2006)** in which 50% of Egyptian females are illiterate, while only 16% are educated till secondary or diploma schools.

There are four researches studied the **occupation distribution** of the relatives of psychiatric patients which cover the period from 2001-2009: 28.22% (35/124) of the FDR of **schizophrenics** are professionals, while 4.83% (6/124) are unskilled. (*El-Ibiary, 2001*). 75.5% (151/200) of the mothers of **psychiatric ill child** don't work, while 24.5% (49/200) have work. (*Bastawy, 2009*). 66% (66/100) of the caregiver family members of **demented patients** are employed, 34% (34/100) are housewives. (*Waly, 2008*). 60% of **wives of addicts** are workers, 30% are skilled, while 30% are professionals. (*Emara, 2002*). These results is much more than the female with no work in general population which is only 29% among females living in Urban region as published by the **Central Agency of Public Mobilization and Statistics (2006)**.

Only one research studied the **religion distribution** of the relatives of psychiatric patients which done in 2009: 94% (188/200) of the mothers of **psychiatric ill child** are Muslims, while 6% (12/200) are Christians. (*Bastawy, 2009*). These results match the results published by the **Central Agency of Public Mobilization and Statistics (2006)** in which Christian mothers represent 7%.

We found only one study as regards the **Socio-economic status** of the relatives of psychiatric patients done at 2008: 69.77% (90/124) of the FDR of **OCD patients** are present in the middle socioeconomic status. (*Tantawy et al, 2008*).

So, we found that number of researches is sufficient in prevalence but, the researches done on different socio-demographic variables are not sufficient. The results showed that psychiatric morbidities are common among relatives of psychiatric patients, these results corresponds to western studies as discussed before.

(B) Etiology:

We found four researches studied the **Socio-demographic risk factors** of bad mental health among the relatives of psychiatric patients which cover the period from 1999-2009: *Azzam (2003)* and *Bastawy (2009)* couldn't prove any relation between mental health of the relative and sex of the child, also *Bastawy (2009)* prove that there is no relation between the age of the patient (child) and the mental health of the relative (mother).

Also, there is no significant difference between boys and girls of **depressed mothers** as regards any of the CDI, Child Anxiety Scale, and Neurotic Subscale of J-EPQ, but there's very high significant difference between boys and girls as regards Reaction Time for Discrimination of Train The Brain. (*Fouad, 1999*). University educated parents of **schizophrenics** are more satisfied than the parents with less than university degree as regards Affective Communication. (*Seleem, 1999*). There is no relation between the education of the mothers of **psychiatric ill child** and the impact of children's mental health problems, on their mothers. (*Bastawy, 2009*). This is controversy to results of *Banthina et al (2007)* who reported

that less educated caregivers are associated with better QOL. There is no significant difference between housewives mothers and working mothers as regards results of (MSI) Time Together, and Role Orientation, with high score for working mothers. (*Seleem, 1999*). Whereas 66.2% of the non working mothers have bad mental health more than working mothers (49%), with significant difference. (*Bastawy, 2009*).

We found only three researches as regards the **Psychiatric risk factors** of bad mental health among the relatives of psychiatric patients done in 2003 and 2004: There is no relation between the different psychiatric diagnoses among the parents of **PDD children** with or without **mentally retarded**. (*Azzam, 2003*). no significant difference between different types of **bipolar patients** (whether manic, depressed or mixed) and different psychiatric disorders of their children. (*Gomaa, 2004*). There is no relation between age of onset of bipolar disorder among parents and behavioral problems in their children either by using CRS or CBCL. Also, the serious child disorders as mental retardation, autistic disorder, attention disorder and disruptive behavior disorders, and psychotic disorder have the worst impact on the mothers. The conduct symptoms, abnormal emotional symptoms, hyperactivity, peer problems, total difficulties (mental health problems), the impact of child's symptoms on his life and the duration of symptoms; All these factors have the worst role on the mental health and quality of life of the mothers. (*Bastawy, 2009*).

We found seven researches studied the **hereditary risk factors** of bad mental health among the relatives of psychiatric patients which cover the period from 1995-2002: There is strong genetic load in FDR of **schizophrenics** evidenced by the presence of higher rates of family history of psychiatric disorders and the change in the pattern and frequency of both genotypes and alleles in the FDR of schizophrenics. (*El-Ibiary, 2001*). There is trend for a preferential transmission of longer alleles among parents of **BAD patients** where genotyping tested the association between the 11 alleles of tryptophan hydroxylase gene, the allele 1 and 2 of dopamine transporter gene, the 4 alleles of serotonin transporter gene and relatives of BAD patients by using TDT. (*Fikry et al, 2002*). These results agree with western studies such as (*Meloni et al., 2000*) who proposed that the tryptophan hydroxylase gene may only influence susceptibility in a subset of families, and other different studies which revealed that dopamine transporter gene might be involved in the etiology of bipolar disorder. (*Perez de Castro et al., 1994 and Manki et al., 1996*).

Regarding auditory evoked potential; there is change in frequent stimuli of auditory evoked potential in the offsprings of **schizophrenics**. (*Abd-El Azim, 1997*). 72% of the FDR have prolonged P200 and P300 latencies. (*Essawy, 1995*). There is decreased amplitude and prolonged latency of p300 in FDR of schizophrenics. (*Bassiouny et al, 1998*). These results match the results of (*Ford et al 1994*). FDR of schizophrenics have longer latency and lower amplitude of P300 wave and they suffer from impairment in selective attention. (*Madkour*

et al, 1998). The previous results are similar to the results of the western study in which schizophrenics have reduced P₃₀₀, over both the right and left hemispheres, but more significant differences were found in P₃₀₀ recorded over the left. (*Koga et al, 1987*).

Regarding Soft neurological signs: relatives of **BAD patients** show worse performance on NES as regards the sensory integration scores only. (*Rabie, 2005*).

So, the available Egyptian studies reported that the bad mental health and the bad quality of life of the relatives of psychiatric patients may be due to the impact of psychiatric disorders of the patient on the relatives, which is either due to genetic factors or due to the nature and severity of psychiatric disorders of the patients or due to the socio-demographic factors (of the patients or the relatives).

(C) Clinical description:

We found ten researches studied the different **psychiatric symptoms** among the relatives of psychiatric patients which cover the period from 1993-2009: Distress and anxiety symptoms are more common among relatives of **OCD patients** with predominant compulsion than with predominant or pure obsessions (ruminations). (*Mansour, 1993*). The most prevalent obsessive symptom among FDR is the religious symptoms (70.59%), then sexual, then contamination, while the most prevalent compulsive symptom is cleaning/ washing (29.41%). (*Tantawy et al, 2008*). These results are in

agreement with several western studies such as *Rauch et al. (1998)*, *Nasreldin et al. (2004)* and *Matsunaga et al. (2008)*. Also, *Black et al (1998)* reported that spouses of OCD patients frequently experiences anger/frustration disturbed personal life and lack of time for self. Psychological or physical symptoms are common among caregiver family members of relapsed **schizophrenics**. 86% (43/50), 72% (36/50) and 44% (22/50) of the caregiver family members of the schizophrenics have grief, anger and shame respectively. (*Shama & Gad, 2000*), these results are consistent with results of (*Miller, 1996*). Children of **depressed mothers** suffer from anxiety and depressive symptoms. Children of **BAD patients** have significantly high psychosomatic (64.9%), anxiety (40.5%) and hyperactivity (56.8%) symptoms than children of healthy parents. (*Gomaa, 2004*). There is highly significant differences between the followings; scores of Block design and similarities subtests of (WAIS), all the categories tested of (WMS-R), all the scores of the (WCST) except for the categories completed and the BAD patients, first degree relatives and the controls. (*Rabie, 2005*).

Fathers of **PDD child** have statistically significant lower scores on comprehension and picture completion subtests, while mothers have significantly higher performance, lower comprehension, lower scores in arithmetic problems, picture completion and block design than mothers of healthy children. (*Azzam, 2003*). Mothers of **ADHD** children score high significant difference in low self-directedness, while fathers

score high in novelty seeking, persistence and harm avoidance. (*Sadek et al, 2004*). mothers of **psychiatric ill child** suffer from high stress due to paternal factors which includes bad attachment to their children (87.5%, 175/200), bad mother's health (65%,130/200), depression (49%,98/200), social isolation (46%, 92/200), and restrictions of mother's other roles because of her child (44%, 89/200). (*Bastawy, 2009*) These results agree with *Richard et al (2007)* and *Scheive et al (2007)* who reported that parents of children with developmental delay or autism or children with special health care show high stress range. Wives of **addicts** express more severe aggression than wives of healthy controls, as addicts lie, steal, and are often seen confused at home, this makes them distant from the family. These factors initiate hopelessness in the family and aggression towards the addicts. (*Abolmagd et al, 2004*).

So, we found that researches discussed most of the psychiatric disorders and the accompanying psychiatric symptoms in the relatives of psychiatric patients. The results showed relatives of psychiatric patients suffer from different psychiatric symptoms. These results correspond to western studies as discussed before.

(D) Management:

We found three researches studied the effect of **Psycho-educational program** on the relatives of the psychiatric patients which cover the period from 2002-2008: if the parents of **schizophrenics** subjected to psycho-educational

program improvement in compliance to treatment and in the disease relapse rate, better QOL are recorded. (*Abolmagd et al, 2004b*). also, there is decrease in the caregiver burden of **demented patients** subjected to educational intervention program. (*Waly, 2008*).

Only one research studied the **effect of improvement of the psychiatric condition of the patient on the relative** which done in 2009: After 6 month duration of management of the psychiatric conditions of the children, the mothers of **psychiatric ill children** showed improvement in the mental health, maternal stress, and mother's and family burden, while the maternal quality of life significantly improved in all the domains except the environmental and physical quality of life. (*Bastawy, 2009*) these results agree with the results of *Lawrence et al (2008)* who found that parents of children with various psychiatric disorders, experienced greater reduction in symptoms after their children improvement.

Only one research studied the **effect of Family cooperation** on the treatment of the patient which done in 2009: Strong family cooperation (spouse and parents) significantly decrease the incidence of relapse of addicts. *Abolmagd et al (2004a)*. These results were proved by (*Kosten et al, 1983*) who admitted that maximum family involvement in the treatment including spouses and parents is associated with a better prognosis.

We can conclude that the researches discussed the management of the relatives of psychiatric patients focused

mainly on the patients, but one research (*Bastawy, 2009*) proved that the improvement of the psychiatric condition of the patient will in turn improve the relative's condition. And only only one study (*Waly, 2008*) discussed the effect of the psycho-educational program on decreasing the burden of the caregiver.

(E) Outcome:

We found 15 researches studied the bad outcome of the psychiatric disorders on the patients' families which are:

The **divorce**; it is more common among the husband of the psychiatric ill patients than the wives of the psychiatric ill husbands. (*Mansour, 1993*).

Marital dissatisfaction is more common among parents of **schizophrenics** than the parents of healthy offsprings with high significant difference between the two groups in almost all subscales of the MSI (except in disagreement about finances, role orientation and family history of distress). Fathers of schizophrenics have significant worse scores in all the subscales of MSI except in: (FIN), (ROR) and (FHD) where they are statistically insignificant. Parents above 50 years old are more dissatisfied than those below 50 years as regards Dissatisfaction with Children (DSC). There is insignificant difference between the parents of single schizophrenics either have or haven't positive family history of psychotic disorder as regards the marital satisfaction. (*Seleem, 1999*). These results are similar to the results of *Sarhan et al (2000)*. Spouses of **addicts** have more marital dissatisfaction in

all items of MSI except in family history of distress. (*Abolmagd et al, 2004c*).

Marital are present 25 times more among addicts' wives than among the non addicts' wives, while the **sexual problems** are present 37.50 more among addicts' wives.

Learning problems are common among children of **BAD patients** who have family history of psychiatric illnesses. There's statistically significant relation between presence of past history of hyperactivity symptom or misconduct behavior in BAD parents and presence of learning and attention hyperactivity problems in their children. (*Gomaa, 2004*).

Occupational difficulties are high among families of patients with BAD (currently manic), followed by relatives of chronic schizophrenics, while relatives of other groups have minimal or no work function problems. On the other hand, some relatives may stop work to look after the patient especially during the time of relapse, where the highest incidence is found also among relatives of manic patients (40%), followed by relatives of chronic schizophrenia (20%). (*Mansour, 1993*). The work of the caregiver family members of **schizophrenics** may be affected in the form of Difficulty in performance of work or Loss of interest in work. (*Shama & Gad, 2000*)

Financial problems are high among relatives of **schizophrenics**, they are related to costs of treatment, loss of

patient's productivity, and loss of caregiver's work. (*Shama & Gad, 2000*). **Family burden** among relatives of female manic patients is high as they are the most socially restricted, followed by relatives of male manic patients. Legal problems that occur due to patient's illness are found only in two psychiatric patients out of 80 cases. The first is the male manic patients, followed by the chronic schizophrenic male patients. (*Mansour, 1993*). Great deal family burden is common among mothers of **psychiatric ill child** including attention-deficit and disruptive behavior disorders (67/89, 75.3%), mental retardation (28/38, 73.7%), and autistic disorders (11/17, 64.7%). The great deal family burden is less common in mothers of children with neurotic and depressive disorders (18/31, 58.1%), with significant difference. the great deal burden on mother is insignificantly more present among mothers of children with abnormal conduct symptoms (113/156, 72.4%) and abnormal hyperactivity (85/110, 77.3%). (*Bastawy, 2009*). 40.6% of **addicts** have disturbed relation with family. Addicts put an extra burden on the family due to repeated academic failures (59.4%). Marriages are greatly affected in the majority of addicts (59.4%). Also, drug abuse has deleterious effects on sexual functioning (32.4%). (*Emara, 2002*).

Fadden et al (1987) reported that caring of patients with chronic mental illness, often affects the caring relatives' social and leisure activities, and financial problems arise frequently. **Caregiver's burden** is severe in schizophrenia, followed by stroke and renal disease, while the burden is

medium to severe in bipolar mania. There is insignificant differences between mothers and wives as regards the objective burden among the caregivers of **psychiatric patients**, 100% women caregivers of schizophrenics have objective burden. The subjective burden is severe among (20.7%) of the female caregivers of psychiatric patients. (*Abd El-maksoad, 2007*). Caregivers of **OCD patients** have significantly high mean scores than that of schizophrenia group as regards the Burden Assessment Scale (BAS) items including; the spouse related domain, and the caregiver's strategy domain suggesting greater burden in the key relatives of patients with OCD. Relatives of OCD patients reveal high burden among spouses than other relatives. There is no significant difference in total burden score among the relatives as regards the other demographic variables. (*Abou Zeid et al, 2005*). Caregivers of **Alzheimer disease** group show the highest level of burden followed by the caregivers of the rheumatoid arthritis patients, while the caregivers of the metastatic cancer patients obtained the lowest score. Caregivers of the Alzheimer disease patients obtain the lowest score in QOL followed by the caregivers of the metastatic patients, and then the caregivers of the rheumatoid arthritis patients. (*Ramy et al, 2004*).

Maternal stress is high among children with psychotic disorder (4/4, 100%) and with autistic disorders (17/17, 100%), followed by mothers of children with MR (37/38, 97.4%), and finally mothers of children with learning disorders (4/8, 50%), with high significant difference. 89.7% (140/156) and 95.5%

(105/110) of mothers who have children with abnormal conduct symptoms and abnormal hyperactivity respectively have high stress. (*Bastawy, 2009*). *Angold et al (1998)* found that 10.7% of the parents in the general population perceived burden resulting from their children's symptomatology.

So, we found that the available Egyptian researches showed that the psychiatric illness of the patients leads to bad outcomes on the families such as; divorce, marital unsatisfaction, marital and sexual problems, learning problems, occupational difficulties, family and caregiver burden, and maternal stress.

(F) Knowledge and attitudes of relatives of psychiatric patients:

We found four researches studied the knowledge and attitude of relatives of psychiatric patients which cover the period from 1981-2005: Family member's opinion about patient's behavior necessitating hospital admission includes excitement (73.33% of the concerned and 71.05% of the responsible family members), Insomnia and refusal of food are the next mentioned causes of hospitalization. They tend to view the psychiatric patient as a person with bizarre and irresponsible behavior and one who is excited and dangerous to others. Also, they explain the nature of their patients' illness to be due to psychological troubles by 43.34% of the concerned and 42.11% of the responsible. 73.33% of the concerned and 84.21% of the responsible family members believe that disturbed family

relationship is a direct cause of mental illness. (*EL-Sherbini et al, 1981*)

Education leads to improvement in attitudes and knowledge in relatives of the schizophrenics. (*EL-Shafei et al, 2002* and *Kamel et al, 2005*). Most studies have found significant increases in knowledge about schizophrenia following the intervention *Barrowclough et al (1987)* who used the same assessment tool (KASI) reported similar results. As regards the attitude of the family member caregivers of the elderly patients; 36.6% of the caregiver didn't accept someone else or a community service to provide care for their elderly relative. 13.3% demonstrated that caring of elderly is out of their duties and that the government should be completely responsible for providing the elderly needs. (*Abido, 2000*).

So, we found that researches showed that caregiver's knowledge and attitudes are missing, they need extensive educational methods to be aware about mental illness and how to deal with their mentally ill patients.

Conclusion:

Only thirty four available Egyptian studies discussed the topic "Relatives of psychiatric patients" either caregivers or not, but this subject needs more studies to be done and more data to be collected and analyzed.

The researches cover the period from 1981-2009 (28 years). Through this period thirty four available studies were done. Most of the studies are present in the last six years, while the first twelve years there was only one research. The number of researches is considered not sufficient to cover this important subject "relatives of psychiatric patients". Twenty three researches studied the epidemiology among relatives of psychiatric patients, followed by fifteen researches on the outcome and ten researches on the clinical description then thirteen researches on the etiology and four researches on the knowledge and opinion of family about psychiatric illness and lastly three management studies.

The number of studies done on the prevalence among the relatives of psychiatric patients are sufficient, but the researches done on different socio-demographic variables are not sufficient. The results showed that psychiatric morbidities are common among relatives of psychiatric patients.

There are three risk factors which lead to bad mental health and the bad quality of life of the relatives of psychiatric patients which are (1) genetic factors (2) the nature and severity of psychiatric disorders of the patients or (3) the socio-demographic factors (of the patients or the relatives).

We found that researches discussed most of the psychiatric disorders and the accompanying psychiatric symptoms among the relatives of psychiatric patients. The results showed relatives of psychiatric patients suffer from different psychiatric symptoms.

The researches discussed the management of the relatives of psychiatric patients focused mainly on the patients, but one research proved that the improvement of the psychiatric condition of the patient will in turn improve the relative's condition. And only one study discussed the effect of the psycho-educational program on decreasing the burden of the caregiver.

As regards the psychiatric illness of the patients, it leads to bad outcomes on the families such as; divorce, marital unsatisfaction, marital and sexual problems, learning problems, occupational difficulties, family and caregiver burden, and maternal stress.

We can conclude that the caregiver's knowledge and attitudes are missing, they need extensive educational methods to be aware about mental illness and how to deal with their mentally ill patients.

As regards the critical appraisal of the studies, we found that most of the researches neither mention the design of the study nor describe the design of the sample. Only small number of researches statistically calculated the sample size to choose the appropriate number of cases. The study population is not well described in many researches. Also, many researches neither mention the time of the study nor the setting of the study. In almost all the studies no informed consent is

taken. The researches are not preceded by a pilot study to justify the study proper. Limitations of the study are missed from almost all the researches. Otherwise, the title of most of the studies is clear and to the point, the aim of the study is clearly stated, the methods of assessment and management are mentioned and referenced and they are valid and reliable. The statistical methods used are mentioned and discussed in some studies.

Most of the results are presented in a clear way (tables and figures), then the results are compared with other researches either supporting the same findings or establishing other findings with explanation of the different findings. The recommendations are mentioned in many studies and the general appearance of the studies is not bad.

We are in need to review our Egyptian studies done on "relatives of psychiatric patients" in a systematic way, to appraise its results across the time and place, in order to illustrate points of power and weakness, to generate recommendations which may help us in constructing guidelines in our next researches on this important topic.

In order to achieve this goal the following databases were explored; 1- Library of faculty of medicine- Ain Shams University. 2- Library of faculty of medicine- Cairo University. 3- Library of faculty of medicine- El Azhar University. 4- Library of faculty of medicine- El Azhar University, girls. 5- Library of faculty of medicine- Suez Canal University. 6- Databases of Egyptian Journal of Psychiatry and Current Psychiatry Journal.

After exploring these databases, a list of 34 Egyptian psychiatric researches on "relatives of psychiatric patients" is generated (one M.D. and one M.Sc thesis from El Azhar University, 3 M.Sc thesis from Cairo University, twelve M.D and one M.Sc thesis from Ain Shams University, seven studies from the Egyptian Journal of Psychiatry and nine studies from the Current Psychiatry Journal).

After reviewing these studies, they are categorized in the following: 1-Epidemiology, 2-Etiology, 3-Clinical description, 4- Management, 5- Outcome, 6- Knowledge and opinion. All researches which were used in the review were critically appraised.

Regarding researches done, it was found that:

A- Epidemiology:

(I) Relatives (mothers and wives) of psychiatric patients:

Abd El-maksoad (2007) reported that 92.7% (139/150) of the caregivers of psychiatric patients have psychiatric disorders.

(II) Relatives of chronic GAD patients:

Mansour (1993) found that about half the wives and half the children have GAD.

(III) Relatives of OCD patients:

Mansour (1993) found that anxiety symptoms and GAD are common among spouses and children. Whereas, *Tantawy et al (2008)* found that the prevalence of OCD in first degree relatives is (22.48%) (29/129). He reported also that 1st degree relatives of OCD patients have high prevalence of any cluster C personality disorder especially Obsessive compulsive personality disorder.

Regarding sex distribution; *Tantawy et al (2008)* found that females represent the common sex among FDR of OCD patients (80/129, 62.02%).

Regarding marital status; *Tantawy et al (2008)* found that never married FDR of OCD patients represent the common marital status (91/129, 70.54%).

Regarding socio-economic status; *Tantawy et al (2008)* found that most of the FDR of OCD patients 90/124 (69.77%) are present in the middle socioeconomic status.

(IV) Relatives of schizophrenic patients:

Mansour (1993) found that the relatives of chronic schizophrenics are more liable to suffer from both depressive symptoms and major depressive disorder. Whereas, *El-Ibiary (2001)* reported a significant higher rates of psychiatric disorders among the first degree relatives of schizophrenics compared to first degree relatives of healthy controls.

Regarding educational level; *El-Ibiary (2001)* found that the commonest educational level among the FDR of schizophrenics is high school 36/124 (29.03%) and the lowest educational level is postgraduate 2/124 (1.61%).

Regarding occupation distribution; *El-Ibiary (2001)* found that professionals represent the commonest occupational degree among the FDR of schizophrenics (35/124, 28.22%), while the unskilled FDR represent 6/124 (4.83%).

(V) Relatives of chronic major depressive patients:

Mansour (1993) found that depressive symptoms and major depressive disorder are frequent among relatives of patients with chronic major depression.

(VI) Relatives of chronic BAD patients:

Mansour (1993) found that anxiety symptoms and GAD are frequent among the relatives of patients with currently manic episode, especially among the children and the wives of the male patients. Whereas, *Rabie (2005)* found that 26% of the FDR of BAD patients have psychiatric disorders.

(VII) Parents of psychiatric ill children:

Azzam (2003) found that 12% (7/25) of fathers of **PDD child** suffer from depression. *Elsheikh (2003)* and *Sadek et al (2004)* found more prevalence of psychiatric disorders among mothers of **ADHD children** than controls, also 8.4% (3/36) of fathers of ADHD children have psychiatric disorders. *Bastawy (2009)* found that 40.4% (36/89) mothers of **psychiatric ill child** have psychiatric disorders, commonly adjustment disorder with depressed mood.

Regarding age distribution; *Bastawy (2009)* found that 81/200 (40.5%) of the mothers present in the age group from 33 to < 41 years, 80/200 (40%) are present in the age group from 25 to < 33 years, and 39/200 (19.5%) are present in the age group from 41 to 49 years.

Regarding educational level; *Bastawy (2009)* found that mothers received secondary school or diploma education are the most common group 117/200 (58%), while the illiterate mothers are the least group 4/200 (2%).

Regarding occupation distribution; *Bastawy (2009)* found that 151/200 (75.5%) of the mothers don't work, while 49/200 (24.5%) have a work.

Regarding religion distribution; *Bastawy (2009)* found that 188/200 (94%) of the mothers are Muslims, while 12/200 (6%) are Christians.

(VIII) Relatives of demented patients:

Regarding sex distribution; *Waly (2008)* found that female caregivers of demented patients represent the main sex 54/100 (54%).

Regarding marital status; **Waly (2008)** found that 80% of the caregiver family members of demented patients are married, 1% widow, and 19% are single.

Regarding occupation distribution; **Waly (2008)** found that 66% of the caregiver family members of dementia patients are employed, 34% are housewives, with statistical significant difference between both groups.

(IX) wives of addicts:

Abolmagd et al (2004a) found that the wives of addicts have higher level of depression and anxiety than wives of healthy persons. Whereas, **Afifi (2007)** found that personality disorders are more prevalent among the addicts' wives than the non addicts' wives.

Regarding occupation distribution; **Emara (2002)** found that 60% of addicts' wives are workers, 30% are skilled, while 30% are professionals.

(B) Etiology:

(I) Socio-demographic risk factors:

Azzam (2003) and **Bastawy (2009)** couldn't prove any relation between mental health of the relative and sex of the child, also **Bastawy (2009)** prove that there is no relation between the age of the patient (child) and the mental health of the relative (mother). **Fouad (1999)** found no significant difference between boys and girls as regards any of the CDI, Child Anxiety Scale, and Neurotic Subscale of J-EPQ, but the difference between boys and girls as regards Reaction Time

for Discrimination of Train The Brain is very highly significant. *Seleem (1999)* reported that the university educated parents are more satisfied than the parents with less than university degree as regards Affective Communication. There is no difference between housewives mothers and working mothers as regards results of Time Together (TTO), and Role Orientation, with high score for working mothers. *Bastawy (2009)* found no relation between the education of the mothers of psychiatric ill child and the impact of children's mental health problems on their mothers..

(II) Psychiatric risk factors:

Azzam (2003) found no relation between the different psychiatric diagnoses among the parents of PDD children with or without mentally retarded. Whereas, *Gomaa (2004)* found no relation between age of onset of bipolar disorder among parents and behavioral problems in their children either by using CRS or CBCL. Also, there's no significant difference between different types of bipolar patients and different psychiatric disorders of their children. *Bastawy (2009)* found that the serious child disorders as mental retardation, autistic disorder, attention disorder and disruptive behavior disorders, and psychotic disorder have the worst impact on the mothers. The conduct symptoms, abnormal emotional symptoms, hyperactivity, peer problems, total difficulties (mental health problems), the impact of child's symptoms on his life and the duration of symptoms; All these factors have the worst role on the mental health and quality of life of the mothers.

(III) Hereditary risk factors:

In an attempt to study the **biological causes** of psychiatric disorders, many researchers did different studies among the relatives of the patients to prove the hereditary factors of the disorders: *El-Ibiary (2001)* tried to prove the change in the pattern and frequency of both genotypes and alleles in the first degree relatives. He found a strong genetic load in first degree relatives of schizophrenics evidenced by the presence of higher rates of family history of psychiatric disorders. Whereas, *Fikry et al (2002)* tried to prove the trend for a preferential transmission of longer alleles among parents of BAD patients using (TDT). He performed genotyping and tried to prove the association between the 11 alleles of tryptophan hydorxylse gene, allele 1 and 2 of dopamine transporter gene, 4 alleles of serotonin transporter gene and bipolar disorder by using the TDT.

Regarding **auditory evoked potential**; *Essawy (1995)* found that 72% of the FDR have prolonged P200 and P300 latencies. Whereas, *Abd-El Azim (1997)* tried to prove the change in frequent stimuli of auditory evoked potential in the offsprings of schizophrenics. *Bassiouny et al (1998)* tried to prove the decrease in amplitude and prolonged latency of p300 in first degree relatives of schizophrenics. *Madkour et al (1998)* found that FDR have longer latency and lower amplitude of P300 wave. He also, tried to prove the impairment in selective attention among the FDR by neuropsychological assessment (Cancellation Letters Test).

Regarding **Soft neurological signs**: *Rabie (2005)* tried to prove the genetic susceptibility in the relatives of BAD

patients by the presence of soft neurological signs evidenced by NES.

(C) Clinical description:

(I) Relatives of OCD patients:

Mansour (1993) found that distress and anxiety symptoms are more common among relatives of OCD patients with predominant compulsion than relatives of OCD patients with predominant or pure obsessions (ruminations). Whereas, *Tantawy et al (2008)* reported that the most prevalent obsessive symptom among first degree relatives is the religious symptoms (70.59%), then sexual, then contamination, while the most prevalent compulsive symptom is cleaning/ washing (29.41%).

(II) Relatives of schizophrenic patients:

Shama & Gad (2000) found that the psychological or physical symptoms are common among caregiver family members of relapsed schizophrenics. 86% (43/50), 72% (36/50) and 44% (22/50) of the caregiver family members of the schizophrenics have grief, anger and shame respectively.

(III) Offsprings of depressed mothers:

Fouad (1999) reported that on CDI, J-EPQ and Neurotic subscale (J-EPQ) there's a highly significant difference between the children of depressed mothers and the children of healthy mothers where the former suffer more anxiety and depressive symptoms.

(IV) Relatives of BAD patients:

Gomaa (2004) found that children of BAD patients have significantly high psychosomatic (64.9%), anxiety (40.5%) and hyperactivity symptoms (56.8%) than children of healthy parents. *Rabie (2005)* reported that there is highly significant differences between the followings; scores of Block design and similarities subtests of (WAIS), all the categories tested of (WMS-R), all the scores of the (WCST) except for the categories completed and the BAD patients, their first degree relatives and the controls.

(V) Parents of psychiatric ill children:

Azzam (2003) found that fathers of **PDD child** have statistically significant lower scores on comprehension and picture completion subtests, while mothers have significantly higher performance, lower comprehension, lower scores in arithmetic problems, picture completion and block design than mothers of healthy children. *Sadek et al (2004)* found that mothers of **ADHD children** score highly significant difference in low self-directedness. *Bastawy (2009)* found that mothers of **psychiatric ill child** suffer from high stress due to parental factors which includes bad attachment to their children (87.5%, 175/200), bad mother's health (65%,130/200), depression (49%,98/200), social isolation (46%, 92/200), and restrictions of mother's other roles because of her child (44%, 89/200).

(VI) Wives of addicts:

Abolmagd et al (2004) found that wives of addicts express more severe aggression than wives of healthy controls.

(D) Management:

(I) Psycho-educational program to the relatives of the patients:

Abolmagd et al (2004b) reported that if the parents of **schizophrenics** subjected to psycho-educational program improvement in compliance to treatment and in the disease relapse rate, better QOL are recorded. Also, *Waly (2008)* reported decrease in the caregiver burden of **demented patients** subjected to educational intervention program.

(II) Improving the psychiatric condition of the patient:

Bastawy (2009) found that after 6 month duration of management of the psychiatric conditions of the children, the mothers of psychiatric ill children showed decreased incidence of the followings; bad mental health, maternal stress, and mother's and family burden, while the maternal quality of life significantly improved in all the domains except the environmental and physical quality of life.

(III) Family cooperation:

Abolmagd et al (2004a) found that strong family cooperation (spouse and parents) significantly decrease the incidence of relapse of addicts.

(E) Outcome:

Psychiatric disorders may lead to bad outcome on the patients' families such as:

a) Divorce:

Mansour (1993) found that divorce is more common among the husband of the psychiatric ill patients than the wives of the psychiatric ill husbands.

b) Marital unsatisfaction:

1- Relatives of schizophrenics:

Seleem (1999) found that parents of schizophrenics show less marital satisfaction than the parents of healthy offsprings with high significant difference between the two groups in almost all subscales of the MSI (except in disagreement about finances, role orientation and family history of distress). Fathers of schizophrenics have significant worse scores in all the subscales of MSI except in: (FIN), (ROR) and (FHD) where they are statistically insignificant. There is no significant difference between housewives mothers and working mothers as regards results of Time Together (TTO), and Role Orientation, with high score for working mothers. Parents above 50 years old are more dissatisfied than those below 50 years as regards Dissatisfaction with Children (DSC). Whereas, *Sarhan et al (2000)* found that fathers scored significantly higher scores as regards Affective communication

(AFC), Dissatisfaction with children (DSC), whereas the mothers scored significantly higher scores as regards Conventionalization (CNV).

2- Wives of addicts:

Abolmagd et al (2004c) found significant differences between spouses of addicts and healthy controls where spouses of addicts have more marital dissatisfaction in all items of MSI except in family history of distress.

c) Marital and sexual problems:

Afifi (2007) also found marital are present 25 times more among addicts' wives than among the non addicts' wives, while the sexual problems are present 37.50 more among addicts' wives.

d) learning problems among children of psychiatric patients:

Gomaa (2004) found that Learning problems are common among children of **BAD patients** who have family history of psychiatric illnesses. There's statistically significant relation between presence of past history of hyperactivity symptom or misconduct behavior in BAD parents and presence of learning and attention hyperactivity problems in their children.

e) Occupational difficulties:

1- Relatives of psychiatric patients:

Mansour (1993) found that families of patients with BAD (currently manic) are the highest to have occupational difficulties, followed by relatives of chronic schizophrenics, while relatives of other groups have minimal or no work function problems. On the other hand, some relatives may stop work to look after the patient especially during the time of relapse, where the highest incidence is found also among relatives of manic patients (40%), followed by relatives of chronic schizophrenia (20%).

2- Relatives of schizophrenics:

Shama & Gad (2000) reported that the work of the caregiver family members may be affected in the form of Difficulty in performance of work or Loss of interest in work.

f) Family burden:

1- Relatives of psychiatric patients:

Mansour (1993) found that relatives of female manic patients are the most socially restricted, followed by relatives of male manic patients. Legal problems that occur due to patient's illness are found only in two cases; the first is the male manic patients, followed by the chronic schizophrenic male patients.

2- mothers of psychiatric ill children:

Great deal family burden is common among mothers of **psychiatric ill child** including attention-deficit and disruptive behavior disorders (67/89, 75.3%), mental retardation (28/38, 73.7%), and autistic disorders (11/17, 64.7%). The great deal family burden is less common in mothers of children with neurotic and depressive disorders (18/31, 58.1%), with significant difference.

3- Wives of addicts:

Abolmagd et al (2004a) found that 40.6% of addicts have disturbed relation with family. Addicts put an extra burden on the family due to repeated academic failures (59.4%). Marriages are greatly affected in the majority of addicts (59.4%). Also, drug abuse has deleterious effects on sexual functioning (32.4%).

g) Caregiver's burden:

1- Objective burden of the caregiver family member of psychiatric patients:

Abd El-maksoad (2007) found insignificant differences between mothers and wives as regards the objective burden in the caregivers of psychiatric patients. But, there is a statistical significant difference among caregivers (mothers) of psychiatric patients and non-psychiatric patients for the benefit of the caregivers (mothers) of non-psychiatric patients. 100% (38/38) women caregivers of schizophrenics have objective

burden, while in the BAD the objective burden on the caregivers is simple in 11 women and severe in 27 women.

2- Subjective burden of the caregiver family member of psychiatric patients:

Abd El-maksoad (2007) found that the subjective burden is severe in 61 female caregivers (40.6%), compared to 31 women (20.7%) among the caregivers of psychiatric patients. The burden is severe in schizophrenia, followed by stroke and renal disease, while the burden is medium to severe in bipolar mania.

3- Caregiver burden of OCD patients (BAS):

Abou Zeid et al (2005) found that caregivers of OCD patients have significantly high mean scores than that of schizophrenia group as regards the spouse related domain, and the caregiver's strategy domain suggesting greater burden in the key relatives of patients with OCD. The relatives of OCD patients reveal high burden among spouses than other relatives. There is no significant difference in total burden score among the relatives as regards the other demographic variables.

4- financial problems of the family caregiver:

Shama & Gad (2000) reported that caregiver family members may have financial problems.

5- Global functioning of the family caregiver:

El-Ibiary (2001) found highly significant difference between the families of both schizophrenics and healthy controls as regards the scores of global functioning scale.

6- Family Caregiver burden of Alzheimer and demented patients:

Ramy et al (2004) found that the caregivers of Alzheimer disease group show the highest level of burden followed by the caregivers of the rheumatoid arthritis patients, while the caregivers of the metastatic cancer patients obtained the lowest score. The caregivers of the Alzheimer disease patients obtain the lowest score in QOL followed by the caregivers of the metastatic patients, and then the caregivers of the rheumatoid arthritis patients. There is a highly significant statistical difference between the three groups as regards the previous results.

(h) Maternal stress:

Bastawy (2009) found that all mothers of children with psychotic disorder (4/4, 100%) and with autistic disorders (17/17, 100%), have high stress followed by mothers of children with mental retardation (37/38, 97.4%), and finally mothers of children with learning disorders (4/8, 50%), with significant difference. Also, high stress is found in 89.7% (140/156), 95.5% (105/110), and 96.9% (124/128) of mothers who have children with abnormal conduct symptoms, abnormal hyperactivity, and social difficulties with high significant difference compared to other groups.

(F) Knowledge and attitude of relatives of psychiatric patients:

(I) Knowledge of relatives of psychiatric patients about:

1- Patients' behavior necessitating hospital admission:

EL-Sherbini et al (1981) found that excitement (73.33% of the concerned and 71.05% of the responsible family members), Insomnia and refusal of food are the next mentioned causes of hospitalization.

2-Definition of psychiatric patients:

EL-Sherbini et al (1981) found that family members tend to view the psychiatric patient as a person with bizarre and irresponsible behavior and one who is excited and dangerous to others.

3- Nature of their patient's illness:

EL-Sherbini et al (1981) found that the family members explain the nature of their patients' illness to be due to psychological troubles by 43.34% of the concerned and 42.11% of the responsible, while only 23.33% of the concerned and 21.05% of the responsible viewed their patient's illness as psychosis. *EL-Sherbini et al (1981)* found that 73.33% of the concerned and 84.21% of the responsible family members believe that disturbed family relationship is a direct cause of mental illness.

(II) Knowledge and attitude of relatives of schizophrenics:

EL-Shafei (2002) and *Kamel et al (2005)* found that education leads to improvement in attitudes and knowledge in relatives of the schizophrenics. The educational program has a positive effect on the attitudes and knowledge of relatives which maintains over time.

(III) The attitude of the family member caregiver of the elderly patient:

Abido (2000) found that 11 out of 30 cases (36.6%) didn't accept someone else or a community service to provide care for their elderly relative. On the other hand, others 4 out of 30 cases (13.3%) demonstrated that caring of elderly is out of their duties and that the government should be completely responsible for providing the elderly needs.

As regards the **critical appraisal** of the studies, we found that most of the researches neither mention the design of the study nor describe the design of the sample. Only small number of researches statistically calculated the sample size to choose the appropriate number of cases. The study population is not well described in many researches. Also, many researches neither mention the time of the study nor the setting of the study. In almost all the studies no informed consent is taken. The researches are not preceded by a pilot study to

justify the study proper. Limitations of the study are missed from almost all the researches. Otherwise, the title of most of the studies is clear and to the point, the aim of the study is clearly stated, the methods of assessment and management are mentioned and referenced and they are valid and reliable. The statistical methods used are mentioned and discussed in some studies.

Most of the results are presented in a clear way (tables and figures), then the results are compared with other researches either supporting the same findings or establishing other findings with explanation of the different findings. The recommendations are mentioned in many studies and the general appearance of the studies is not bad.

Recommendations:

1. Establishing a national register system for all Egyptian researches and studies is an essential need. Presence of such system will allow recording of all Egyptian studies and so obtaining of these studies will be easier.
2. It is important to have a research strategy aiming from time to time to revise the researches done, looking at the end for a complimentary work system.
3. We need more studies on epidemiology of different socio-demographic factors especially age, religion, and socioeconomic status as there is only one research for each.
4. Regarding thesis; study design and sample size calculation are crucial to be mentioned as study design is important in assessment of how much it is appropriate to the aim, while sample size calculation is important for the reliability of the study results.
5. We recommend that Library of Faculty of Medicine, Al-Azhar University would allow researchers to borrow or photocopy their available studies.
6. Also, we recommend that Faculty of Medicine, Cairo University would list M.Sc and M.D. theses before year 1990.

Limitations of the study:

- Some studies are not listed, as all Cairo University M.D. and M.Sc theses before 1990 are not presented in this study because they are neither available nor indexed in the library of faculty of medicine - Cairo University.

- Unavailability of photocopying or borrowing M.D. or M.Sc theses of the faculty of medicine, AL-Azhar University.

APPENDIX (1)

Subject: Knowledge and opinions of families about mental illness and mental patients.

1- Authors: EL-Sherbini A.F., EL-Gueneidy M., Reda S., and Abd EL-Aziz S.

2- Documents: Egyptian journal of psychiatry, 1981, vol. 4, pp 120-128.

3-Site: not mentioned.

4-Time: not mentioned.

5-Aim of the work: To explore families' knowledge about mental illness and their opinions about mental patients in general and their hospitalized ill member in particular.

6- Study design: not mentioned but can be described as Cross- sectional study.

7-Method: Families of 60 psychiatric patients admitted for the first time, 2 family members for each patient were interviewed at their home. These 2 members were the emotionally concerned member and the financially responsible one. They are subjected to an interview schedule questionnaire.

8-Results: As regards families opinion about mental patients; they tend to view the psychiatric patient as a person with bizarre and irresponsible behavior and one who is excited and dangerous to others. Excitement appears to be the most common cause of hospitalization as mentioned by 73.33% of the concerned and 71.05% of the responsible family members, Insomnia and refusal of food are the next

mentioned causes of hospitalization. They explain the nature of their patients' illness to be due to psychological troubles by 43.34% of the concerned and 42.11% of the responsible. As regards families' knowledge about mental illness; 73.33% of the concerned and 81.38% of the responsible family members believe that disturbed family relationship is a direct factor in the causation of mental illness. Figures are much lower when talking about their own patient with 8.33% and 10.53% respectively.

9-Conclusion: family members tend to reflect the general community view of mental patients, describing them as unreasonable, odd and bizarre. They also tend to deny psychotic illness among their patients. Their knowledge about mental illness is very limited and greatly influenced by the stigma attached to mental illness.

APPENDIX (2)

Subject: Psychiatric morbidity in the families of mentally- ill patients.

1-Authors: Mansour M., **Supervised by** prof. Okasha A., Prof. Bishry Z. and Dr. Ghanem M.

2-Documents: MD thesis Faculty of medicine, Ain Shams University, 1993.

3-Site: the institute of psychiatry, Ain Shams university hospitals.

4-Time: from March 1990 to December 19991.

5-Aim of the work: to detect psychiatric morbidity among relatives who live with the patient, to detect different types of burden that occurs in the families of chronic mentally ill patients and to identify the factors leading to morbidity.

6- Study design: not mentioned but we can consider it as cross sectional, case control study.

7-Method: the study consists of 80 patients (40 patients with neurotic disorder & 40 with chronic psychotic disorder) arranged in 4 groups; 1st group consists of 20 patients with O.C.D. and their families, 2nd group consists of 20 patients with chronic anxiety disorder and their families, 3rd group consists of 20 patients with chronic schizophrenia and their families 4th group consists of 20 patients with chronic affective disorder and their families, And 20 patients with chronic D.M. as controls. They are subjected to the following scales: a-full psychiatric history and clinical examination (for the patients only). b-Structured Clinical Interview (for patients and relatives). c-General Health Questionnaire. d-Family burden interview schedule. d-the spouse of the affected patients are subjected to Beck inventory and Taylor scale for anxiety.

8-Results: the study reveals that spouses of the manic patients are the most liable group to develop anxiety disorders. Husbands of manic wives have highest rate of anxiety disorder among all the studied groups. Anxiety symptoms tend to be higher among the relatives of the neurotic groups than the psychotic groups. Relatives of psychotic patients are more likely to be severely depressed, while relatives of patients of the other groups are more likely to have mild to moderate depression. Wives of neurotic patients; OCD and GAD are more likely to have severe

anxiety than the relatives of the other groups. 30% of relatives of male patients and 20% of relatives of female diabetic control are found to have anxiety symptoms. All those with anxiety symptoms are relatives of diabetic patients with unsteady blood sugar levels, frequent complications and admission to hospitals. Relatives of female manic patients are the most socially restricted group, followed by relatives of male manic patients. The control group shows no impaired social function that is attributed to the patient illness. There's significant difference between all groups of mental disorder and the control group as regards the scores on the social readjustment rating scale (SRRS), the controls scored significantly less. Anxiety symptoms and even GAD are the most frequent diagnosis among the relatives of patients with currently manic episode; however the frequency of depressive symptoms cannot be ignored, especially among the children and the wives of the male patients.

9-Conclusion: Relatives of mentally ill patients are at increased risk for various psychiatric morbidity as well as many psychosocial stressors and burdens.

APPENDIX (3)

Subject: Event Related Potential in schizophrenia.

1-Authors: Essawy H., supervised by prof. Okasha A., prof. Rafaat M., and dr. Ghanem M.

2-Documents: MD thesis, Faculty of medicine, Ain Shams University, 1995.

3-Site: the outpatient clinics or inpatients of the Institute of psychiatry, Ain Shams University hospitals.

4-Time: from first of March 1993 to the mid of January 1994.

5-Aim of the work: To determine if the evoked potential can provide a diagnostic tool aid in early detection of schizophrenia among subjects who are at risk genetically.

6- Study design: Cross- sectional, longitudinal study.

7-Method: the study includes 60 schizophrenics receiving monotherapy with equivalent doses of 200-800 mg/day and receiving not ore than 3 ECT prior to the procedure, and their 27 FDR (parents and children), compared to 23 healthy controls. This work was divided into 2 stages: in the first stage the schizophrenics are subjected to structured clinical interview based on diagnostic criteria for DSM-III-R, Symbol digit modality test, Paired association test, Digit span test plus 2 subscales from Wechsler Bellevue to estimate the intellectual level, PANS scale, Auditory evoked potential. The FDR and healthy controls were subjected to the previous except the PANS. In the second stage follow up for 3-6 months with retesting using revised similarities, Digit span test, and long latency auditory evoked potential.

8-Results: all schizophrenics have prolonged P200, P300 latencies as well as 72% of their FDR, P300 amplitude always diminished in frontal, temporal and central area in schizophrenics, while in their FDR and healthy controls there's reduced P300 amplitude in the parietal area. Reduced N100 amplitude is only statistically significant for schizophrenics at

left and right frontal areas, while that of controls was reduced at right and left central areas and these results were not correlated with any electrode sites in the FDR.

9-Conclusion: prolonged p300 amplitude and its prolonged latency are good indices for schizophrenia. Reduced p200 amplitude and its prolonged latency are good markers for identification of schizophrenics and their FDR, So P200 amplitude may be one of the trait markers.

APPENDIX (4)

**Subject: Event Related Potential in offsprings at high risk for schizophrenia and depression.
(HQ1998-03446)**

1-Authors: Abd-El Azim K, **supervised by;** prof. Bishry Z, prof. Raafat M. and DR. Sayed M.

2-Documents: MD thesis, Faculty of medicine, Ain Shams University, 1997.

3-Site: the outpatient clinics of the Institute of psychiatry, Ain Shams University hospitals.

4-Time: not mentioned.

5-Aim of the work: To determine if the evoked potential can provide a diagnostic tool aid in early detection of schizophrenia and depression among subjects who are at risk genetically.

6- Study design: Cross- sectional, case control study.

7-Method: the study includes 5 schizophrenic patients and 18 individuals of their offsprings and 6 depressed patients and 20 individuals of their offsprings, compared to 29 healthy controls (12 parents and 17 offsprings), and matched for age, sex and educational level. All subjects of the study are subjected to; auditory cortical evoked potentials, ICD10 symptom checklist and General Health Questionnaire (GHQ).

8-Results: Reduction in p200 amplitude is the only constant wave present in depressed patients and it isn't in their offsprings. So, it is a state marker. Reduction in p300 amplitude and delayed N200 latency are considered as a trait marker in schizophrenic patients and their offsprings. Prolonged N100 and P200 latencies are characteristic findings in offspring of schizophrenic patients and not in the patients themselves. Evoked potentially changes appear earlier than clinical changes in offspring of schizophrenia and depressed patients.

9-Conclusion: Evoked potentials should be done for the offspring of schizophrenic or depressed patients to detect earlier vulnerability (trait marker).

APPENDIX (5)

Subject: Event Related Potentials (ERPS) in schizophrenics and their first degree relatives.

1- Authors: Bassiouny MM., Abdel-Aal I., and Owida M.

2- Documents: Current psychiatry; Vol.5, No.3, Nov. 1998, P294-301.

3-Site: not mentioned.

4-Time: not mentioned.

5-Aim of the work: To evaluate the auditory P300 event-related potential (ERP) in schizophrenics and their first degree relatives.

6- Study design: not mentioned but can be described as Cross- sectional, case control study.

7-Method: the study includes 40 schizophrenic patients and 28 individuals of their first degree relatives, compared to 22 healthy controls matched for age, sex and handedness. All subjects of the study are subjected to; auditory cortical evoked potential using P₃₀₀ wave amplitude and latency.

8-Results: the study reveals that the schizophrenic relatives have smaller amplitude and longer latency compared to controls but the difference is insignificant. Also the difference between schizophrenics and their first degree relatives as regards P₃₀₀ amplitude and latency is non-significant. There is also insignificant difference between acute and chronic schizophrenics and schizophrenics on and off treatment either in P₃₀₀ amplitude or in latency. No statistical difference between left and right temporal leads in amplitude and in latency among schizophrenics.

9-Conclusion: The study confirms the reduction in P₃₀₀ amplitude among the schizophrenic patients.

APPENDIX (6)

Subject: Attention impairment in first-degree relatives of schizophrenic patients: neuropsychological and neurophysiological evidence.

1- Authors: Madkour O., Kamal S.A., Hashem A. & Raslan M.R.

2- Documents: Egyptian journal of psychiatry, 1998, vol. 21, pp 101-106.

3-Site: Not mentioned.

4-Time: Not mentioned.

5-Aim of the work: To prove that first degree relatives (FDR) show impairment in selective attention compared to healthy controls; this would give support for hereditability of attentional impairment in schizophrenia.

6-Study design: not mentioned but can be described as Cross- sectional, case control study.

7-Method: 55 first-degree relatives (FDR) of schizophrenic patients and 30 healthy controls (age and sex matched) are subjected to neuropsychological assessment using Cancellation Tests (Cancellation Letters Test and Cancellation Digits Test) and Reaction Time and neurophysiological investigation using P300 component of auditory evoked cortical potential.

8-Results: As regards neuropsychological tests; a) Cancellation Letters Test reveals statistically significant

difference with the FDR need more time and make more errors. b) Cancellation Digits Test reveals that both groups need comparable time; however the FDR make more errors. As regards neurophysiological investigation; a) auditory evoked cortical potential, FDR have statistically significant longer latency and lower amplitude of P300 wave. b) Reaction time is longer and response stimulus percentage is lower in FDR compared to healthy controls and the difference is statistically significant.

9-Conclusion: There is impairment of attention in FDR of schizophrenic patients. The use of neuropsychological and neurophysiological investigations could identify high risk individuals who are vulnerable to development of schizophrenia and thus, preventive interventions could be directed to those individuals to avoid or delay the onset of schizophrenia.

APPENDIX (7)

Subject: Maternal depression: The risk for children's psychopathology.

1-Authors: Fouad M, supervised by; prof. Okasha A., prof. Bishry Z., prof. Hamed A., dr. Effat S., and dr. EL-Kholy S.

2-Documents: MD thesis, Faculty of medicine, Ain Shams University, 1999.

3-Site: the outpatient clinics and the inpatient wards of the Institute of psychiatry, Ain Shams University hospitals and Kasr EL-Maadi hospital.

4-Time: the pilot study performed from March to September 1996.

5-Aim of the work: To study the effect of maternal depression on the children.

6- Study design: Cross- sectional, case control study.

7-Method: the study includes 30 depressed mothers, 25 diabetic mothers, and 32 healthy mothers with one of their children. All mothers are subjected to parenting stress index (PSI) to assess the parent-child system, diagnosis of depressed mothers is verified using ICD-10 symptom checklist (*Janka et al., 1994*). Both groups of diabetic and healthy mothers are subjected to GHQ (*Golberg DP. and Hiller VF. 1979*) to exclude any psychiatric morbidity. Children are subjected to CDI, J-EPQ, children Anxiety Scale, and Intellectual Processing Scale of Lauria-Nebraska Neuropsychological battery.

8-Results: There are similar results between depressed and diabetic mothers on PSI, denoting that maternal illness whether psychiatric or physical are affecting mother-child system. Children of both depressed and diabetic mothers are significantly different as regards the emotional state from children of healthy mothers on CDI, and Children Anxiety Scale, hence they are considered at risk to develop depression and anxiety symptoms. The children of depressed mothers have decreased ability for concept

formation and interpretation of situations more than children of both other groups.

9-Conclusion: Maternal illness whether psychiatric or physical has deleterious effects on their parenting process. These effects reflect on their children who are more prone for neurotic traits, emotional suffering, and cognitive deficits.

APPENDIX (8)

Subject: Evaluation of marriage in families of schizophrenic patients. (HQ2000-00072)

1-Authors: Seleem M, **Supervised by** prof. EL-Gindy T, prof. Sarhan Z, and prof. Abdel-Latif A.

2-Documents: M.Sc thesis faculty of medicine, Cairo University, 1999.

3-Site: Private mental hospital in Cairo.

4-Time: from 1/10/1997 to 1/5/1998.

5-Aim of the work: To study marriage and marital satisfaction in families of schizophrenic patients.

6- Study design: Cross- sectional study.

7-Method: The study includes the parents of 30 single schizophrenic patients & 20 parents of healthy matching individuals. The parents of patients consisted of 51 subjects (28 mothers & 23 fathers) 42 are married & 9 are widowed. The parents of patients & controls are subjected to; 1- the Arabic version Marital satisfaction inventory prepared by

Viola EL-Beblawy (1987), modified from Marital satisfaction inventory (*Snyder, 1981*). 2-Eysenck personality questionnaire (*Eysenk et al., 1978*).

8-Results: Parents of schizophrenic patients show less marital satisfaction than the parents of healthy offsprings with high significant difference between the two groups in almost all subscales of the MSI (except in disagreement about finances, role orientation and family history of distress). A highly significant difference between parents of schizophrenic patients and parents of healthy offsprings as regards the relation between results of time together and affective communication. Fathers of schizophrenics have significant worse scores in all the subscales of MSI except in; disagreement about finances (FIN), role orientation (ROR) and family history of distress (FHD) where they are statistically insignificant, while mothers of schizophrenics and mothers of healthy offsprings shows insignificant difference in all the subscales of Marital satisfaction inventory (MSI). The university educated parents are more satisfied than the parents with less than university degree as regards Affective Communication. Parents above 50 years old are more dissatisfied than those below 50 years as regards Dissatisfaction with Children (DSC). There is insignificant difference between the parents of single schizophrenics either have or haven't positive family history of psychotic disorder as regards the marital satisfaction. There's highly significant difference between fathers and mothers of single schizophrenics as regards the Extroversion of EPQ.

9-Conclusion: parents of schizophrenic patients show less marital satisfaction than the controls. The presences of significant difference between fathers and mothers of the patients in their evaluation to their marital relation indicate the presence of wide area of disagreement between them.

APPENDIX (9)

Subject: Marital satisfaction in parents living with a schizophrenic offspring; A neglected topic. (HQ2010-10424)

1- Authors: Sarhan, Z., EL Gindy, T., Abdel Latif, A.M., EL Batrawi, M. & Ezat, M.

2- Documents: Egyptian journal of psychiatry, 2000, vol. 23, pp 253-260.

3-Site: Private mental hospital in Cairo.

4-Time: In the period from 1/10/1997 to 1/5/1998.

5-Aim of the work: To study nature of marital stresses in parents living with a schizophrenic offspring.

6- Study design: Cross- sectional, case control study.

7-Method: The study includes the parents of 30 single schizophrenic patients & 20 parents of healthy offsprings as controls. The parents of patients consisted of 51 subjects (28 mothers & 23 fathers) 42 are married & 9 are widowed. The parents of patients & controls are subjected to; 1-Arabic version Marital satisfaction inventory (MSI) & 2-Eysenck personality questionnaire (*Eysenck et al., 1978*).

8-Results: Results of Marital satisfaction inventory reveal significant worse scores in all the subscales of the fathers of patients when compared to controls except; disagreement about finances (FIN), role orientation (ROR) & family history of distress (FHD). Mothers of the patients show no significant difference in any of MSI subscales when compared to the controls. Parents of the patients express significantly higher psychotic scores than parents of controls.

9-Conclusion: Parents caring for their schizophrenic offspring suffer a lot as regards their marital satisfaction where mothers tend to repress or conventionalize their distress, while fathers tend to externalize their distress.

APPENDIX (10)

Subject: The impact of relapse of schizophrenia on patient's functions & their families.

1- Authors: Shama G. & Gad E.

2- Documents: Egyptian journal of psychiatry, 2000, vol. 23, pp 179-186.

3-Site: Tanta mental hospital.

4-Time: Not mentioned.

5-Aim of the work: Identification of the impact of relapse of schizophrenia on patient's functions & their families.

6-Study design: not mentioned but can be described as Cross- sectional, case control study.

7-Method: 50 schizophrenic relapsed patients are subjected to interview schedule questionnaire in addition to Taylor anxiety scale to assess the impact of relapse of schizophrenia on the patients and 50 family members (caregivers for those patients), are subjected to another interview schedule questionnaire.

8-Results: There is no significant relation between frequency of schizophrenic relapse & the personal hygiene of the patients. There are significant correlation between frequency of patient's relapse and the following; interaction with their families, their work capacity & patient's anxiety level. The impact of patient's relapse on caregivers reveals; affection of caregiver's work (40.5% suffered from difficulty in performance & 34% have loss of interest in work), financial problems (74% of caregivers have financial problems related to costs of treatment, loss of patient's productivity & loss of caregiver's work) , caregiver's physical complains (headache, insomnia & loss of appetite) & caregiver's psychological symptoms (anxiety, sadness & fear).

9-Conclusion: Frequent relapses of schizophrenia leads to decrease in social network, work capacity, also it increases the anxiety, and reduces the function of patient's family. Moreover, the frequent relapses of schizophrenia leads to the following; the family suffers from physical and psychological health problems, the family social network

decreases and the family exposes to financial and work problems.

APPENDIX (11)

Subject: Stress of geriatric patient caregivers.
(HQ2001-00213)

1- Authors: Abido R. **supervised by** prof. Ashour A., dr. Assad T., and Dr. EL-Nahas G.

2- Documents: M.Sc thesis, faculty of medicine, Ain Shams University, 2000.

3-Site: the neuropsychiatry outpatient clinic of Mataria hospital.

4-Time: not mentioned.

5-Aim of the work: to explore the determinants of caregiver stress.

6- Study design: Cross- sectional study.

7-Method: The study includes 30 caregivers of medically and psychiatrically ill elderly people. The 30 subjects are interviewed to assess the degree of their stress using "**Burden interview**".

8-Results: As regards the attitude of the caregiver to elderly caring; most of cases (11cases) didn't accept someone else or a community service to provide care for their elderly relative. On

the other hand, others (4 cases) demonstrated that caring of elderly is out of their duties and that the government should be completely responsible for providing the elderly needs. Stressed caregiver show marked deterioration of their productivity and repeated absence from work. Female caregivers show more stress than males. Lack of financial resources is a major stress, the poor economic status led to severe economic burden or to lack of compliance to treatment protocols with the result of psychological burden in the form of guilt or anxiety. High levels of stress are reported when one family member is responsible for all caring activities; this led to negative impact on the caregiver and the elderly himself as he felt disputed by other members.

9-Conclusion: caregiver's stress is caused by a combination of both elderly determinants and caregiver's determinant.

APPENDIX (12)

Subject: Molecular and family study in the schizophrenic spectrum.

1- Authors: El-Ibiary N., **Supervised by;** prof. Kamel M., Prof. Sadek A., prof. Ghanem M., prof. El Sawi M. and Dr. Zaghloul M.

2- Documents: MD thesis, Faculty of medicine, Ain Shams University, 2001.

3-Site: Institute of psychiatry, Ain Shams University.

4-Time: during the period from January 1998 to April 2000.

5-Aim of the work: to answer the following questions;

- Whether schizophrenia and/or related spectrum disorders cluster in the first degree relatives of schizophrenic patients.
- Does a relation exist between that familial spectral segregation and D3 receptor gene, one of the proposed candidate genes for the inheritance of schizophrenia?
- Is there a possibility to find clinical correlates for that genetic linkage?

6-Study design: not mentioned but can be described as Cross- sectional, case control study.

7-Method: the study includes 40 schizophrenic patients and 124 individuals of their first degree relatives, compared to 23 healthy controls and 75 individuals of their first degree relatives matched for age, sex, social standard, and ethnicity. All subjects of the study are subjected to; 1- psychiatric interview schedules: ICD-10 symptom checklist for mental disorders and Global Assessment of Functioning (GAF) Scale. 2- Laboratory procedures: blood sampling, DNA extraction and DNA analysis.

8-Results: the study reveals that there are significantly higher rates of family history of psychiatric disorders among the patients rather than the control group, where 32.5% of first degree relatives have schizophrenia. 12.5% of the first degree relatives of schizophrenic probands have either paranoid personality disorder or even traits, compared to negative history in the relatives of control probands. Psychiatric morbidity is found in 17.7% of first degree relatives of

schizophrenic patients and 1.3% of first degree relatives of control group, very highly statistically significant difference is found between the 2 groups. There's significant degree of deterioration of functioning, education and occupational level in the families of patients rather than those of the control group. There is no linkage between homozygosity at dopamine D3 receptor gene in the schizophrenic patients and presence of heredity for mental disorders. Also, there's no significant difference in the genotype frequency between the families of patients and those of the control group.

9-Conclusion: schizophrenia is a familial disorder with multifactorial mode of inheritance. Schizophrenia as well as spectrum disorders are found in significantly higher rates in the families of schizophrenic probands compared to expected rates in random distribution of general population. Families of schizophrenic patients have a degree of impaired function, which denotes a sub-threshold symptom. No association is found between homozygosity at dopamine D3 receptor gene and schizophrenia.

APPENDIX (13)

Subject: A Family Based Association Study of Genes in Bipolar Mood Disorder in An Egyptian Sample Using TDT Design.

1- Authors: Fikry M., Sadek A., EL Missiry A.G., Khalil A.H., EL Fikky M.R., Saad A. and Ramy H.

2- Documents: Current psychiatry, Vol. 9, No 1, March 2002, P 80-94.

3-Site: the Institute of Psychiatry, Ain Shams University Hospitals.

4-Time: not mentioned.

5-Aim of the work: to test the hypothesis that bipolar disorder is linked to tyrosine hydroxylase gene, tryptophan hydroxylase gene, dopamine transporter gene and serotonin transporter gene and whether these genetic loci differ according to clinical presentation.

6-Study design: family based association study.

7-Method: The study includes 116 patients (72 males, 44 females) and their parents. The patients are subjected to the Mania Scale (*Beck et al., 1978*), and Hamilton Rating Scale for Depression (HAM-D) (*Hamilton 1960*), General Health Questionnaire (GHQ) (Arabic version) (*Okasha A., 1988*). 5-7ml of blood is taken from the patients and their parents by venipuncture.

8-Results: there's high association of dopamine transporter gene variants with bipolar disorder. The B and D alleles of tyrosine hydroxylase gene confer protection and susceptibility to bipolar disorder respectively. No association between and tryptophan hydroxylase gene and bipolar disorder. There is no correlation between clinical profile and positive genetic association in this sample.

9-Conclusion: dopamine transporter plays a major effect in the susceptibility for bipolar disorder. Furthermore, it is evident that the neurotransmitters norepinephrine and dopamine are implicated in the etiology of bipolar disorder.

APPENDIX (14)

Subject: An educational program for knowledge and attitude change in families of patients with schizophrenia. (HQ2007-11405)

1- Authors: EL-Shafei A., **Supervised by** prof. Kamel M., Prof. Craig T, prof. Effat S., Dr. Omar A. & Dr. EL Nahas G.

2- Documents: MD thesis Faculty of medicine, Ain Shams University, 2002.

3-Site: the institute of psychiatry, Ain Shams university hospitals.

4-Time: in the period from beginning of March 2000 to the end of February 2001.

5-Aim of the work: To design an educational program about schizophrenia and to study the effect of educating relatives on various aspects. And also to provide families with support focusing on problems encountered within the family.

6-Study design: not mentioned but we can consider it as cross sectional, longitudinal case control study.

7-Method: the study consists of 90 relatives of 50 schizophrenics. (Not more than 2 relatives for each patient, including the main caregiver of the patient). The schizophrenics are divided randomly into 34 cases and 16 controls. Relatives of the 34 cases receive the educational program and 30 relatives of the 16 controls are allocated to routine care. Relatives (both cases and controls) are selected randomly and are subjected to the following scales: The Community Attitudes toward the mentally ill (CAMI), Fear and Behavioral Intentions Inventory (FABI), Knowledge about Schizophrenia Interview (KASI) and Experience of Care giving Inventory (ECI). Baseline and Effect-of-Program assessments are done.

8-Results: Improvement in attitudes is significantly high in relatives with low educational level, and very highly significant in unemployed relatives, housewives and laborers. Relatives who are unemployed, housewives, and laborers gain less knowledge. The educational program results in a very high significant improvement in attitudes and increase in knowledge among relatives of the schizophrenics. These effects are maintained overtime (3 month follow up). Also, reduction in caregiving burden is detected.

9-Conclusion: Family education improves their knowledge and coping with the illness, and promotes the psychological health of the patients. Also it increases awareness of the caregivers about the various aspects of the illness, improves their attitudes towards their ill relatives, and decreases their care-giving burden.

APPENDIX (15)

Subject: Spouse role in the problem of drug abuse. (HQ2007-11378)

1- Authors: Emara E., supervised by prof. Abdel-Wahab M., prof. Abdel-gawad T., and assist. Prof. Abolmagd S.

2- Documents: M.Sc Thesis, Faculty of medicine, Cairo University, 2002.

3-Site: inpatient psychiatric department in Maadi Nile sanatorium.

4-Time: not mentioned.

5-Aim of the work: To identify the causes of the marital dissatisfaction which occur in the family of substance abuse patients, to identify the relation between the causes of marital dissatisfaction and (a) deviant behavior of addicts. (b) Attitude and behavior of spouses of addicts, to identify the coping mechanisms of the spouse, and to highlight the predisposing factors in the family atmosphere that may lead to addictive behavior.

6-Study design: Cross- sectional, case control study.

7-Method: The study includes 30 male married addicts and 30 healthy controls subjected to Marital satisfaction inventory (MSI) (*Sryder, 1981*), Guilford aggression scale, the spouses are subjected to previous scales in addition to Hamilton depression rating scale (HDRS) (**Hamilton M., 1960**) and Hamilton anxiety rating scale (**Hamilton M., 1959**).

8-Results: There is significant difference between the occupation of wives of addicts and wives of healthy controls. The majority of addict wives are house wives (60%) while the majority of wives of healthy controls are professional (63%).

9-Conclusion: there are significant differences in scores of different psychometric tests between couples of drug abusing husbands and healthy controls.

APPENDIX (16)

Subject: Psychiatric morbidity in First degree Relatives of a sample of ADHD Children. (HQ2009-29496)

1- Authors: El-Sheikh M. supervised by prof. Sadek A., Omar A., and El-Nahas G.

2- Documents: MD thesis, faculty of medicine, Ain shams university, 2003.

3-Site: the child psychiatry clinic in the Institute of Psychiatry, Ain Shams University and several other private hospitals and clinics.

4-Time: the pilot study is conducted for 6 months (May-October 2000) prior to start of the study proper.

5-Aim of the work: to test the following hypotheses: 1-relatives of ADHD children would be at higher risk for

developing psychiatric morbidity for mood, antisocial and anxiety disorders more than relatives of non ADHD children. 2- First degree relatives of ADHD children would be at a higher risk for developing ADHD more than non ADHD first degree relatives. 3- Personality traits of ADHD relatives could be different from the personality traits of non ADHD relatives. 4- Differences in personality profile of ADHD parents could have an effect on subsequent functioning, adaptability, and severity of ADHD children.

6-Study design: Cross- sectional, case control study.

7-Method: The study includes 50 Egyptian ADHD children; (84 parents and 47 siblings) as a clinical group, 15 healthy children, (29 parents and 13 siblings) as a control group. The children are subjected to the Arabic version Kiddie Schedule for affective Disorders and Schizophrenia, (*Ibrahim et al., 2000*), The Arabic version of Structured Clinical Interview for DSM-IV axis I disorders, Intelligence tests (Stanford Binet test, and Wechsler Intelligence Scale for Children (WISC), Severity of ADHD assessment using The Conners' rating scales-revised (CRS-R)-(*Conners' CK 1997*), Child Behavior Checklist (*Achenbach, 1991*), Arabic version of General Health Questionnaire (GHQ). (*Werneke, 2000*), Personality assessment tests using Temperament and character inventory-revised (TCI-R) (for parents, assessment), Junior Temperament and Character Inventory (J-TCI) (*Cloninger et al, 1994*).

8-Results: there's statistically significant difference in psychiatric morbidity between ADHD mothers and controls ($p=0.04$), mood disorders are prevalent among ADHD's

mothers group. There's statistically significant difference of morbidity of ADHD mothers compared to ADHD fathers ($p=0.01$). The effect of paternal psychiatric morbidity is not a significant factor in affecting the child's activities. However a statistically significant ($P=0.05$) effect of paternal morbidity is obtained when comparing social subscale (28.6%) of children, total competence subscale (11.1%) of children and externalizing problems (8.7%) of children who have abnormal range of behavior. There is a very high statistical significance for total problems that ADHD children encounter with maternal psychiatric morbidity ($P=0.005$), significant effect with externalizing subscale ($P=0.01$) and total competence subscale ($P=0.04$). paternal morbidity is significantly associated with increased comorbidity as all fathers (100%) who have morbidity have children with comorbid ADHD 11.5%, with 0.0% for pure ADHD group ($P<0.05$) pointing to a potential strong influence of paternal morbidity on comorbidity of child. unlike paternal psychopathology, social problems and opposition don't exhibit any affection by sibling psychopathology, whereas inattention has a double impact being affected being affected by paternal and sibling psychopathology. Sibling morbidity does not seem to affect the comorbidity profile of the children, with 40.0% of comorbid children and 60.0% of pure ADHD children associated with sibling morbidity. ($P>0.05$).

9-Conclusion: ADHD is a multifaceted disorder that not only affects school performance but also affects adaptation and competence of affected probands. First-degree relatives are

important in any assessment as they affect the ADHD children (severity, adaptability).

APPENDIX (17)

Subject: A family study of autism: psychiatric morbidity and cognitive pattern in parents. (2009-29565)

1- Authors: Azzam H. supervised by prof. Bishry Z., prof. Effat S., dr. EL Sayed N., and dr. EL Kholi S.

2- Documents: MD thesis, faculty of medicine, Ain Shams University, 2003.

3-Site: the outpatient Child Psychiatry Clinic of the Institute of Psychiatry, Ain Shams University Hospitals.

4-Time: from March 2001 to the end of January 2003.

5-Aim of the work: to study psychiatric morbidity and cognitive pattern in parents of autistic children.

6-Study design: Cross- sectional, case control study.

7-Method: The study includes 28 children with different types of pervasive developmental disorders; both parents of each child are included in the study and 20 healthy children both parents of each child are also included in the study. The children are subjected to the International Classification of Disease ICD-10 (*Janka, 1994*), Childhood Autism Rating Scale (CARS) and Stanford Binet intelligence scale for IQ assessment. The parents of both groups are subjected to

psychiatric interview using ICD-10 symptoms checklist, assessment of IQ using Arabic version of Wechsler Adult Intelligence Scale-Revised (WAIS-R) and Wisconsin Card Sorting Test (WCST) for assessment of cognitive function namely executive functions.

8-Results: parents of autistics show multiple cognitive deficits in WCST and WAIS-R when compared to control group. Some of these deficits are of statistical significance. Fathers of autistics show more total errors, more preserved errors, more trials to complete first category as well as less failure to maintain set, all of which are statistically significant compared to control. Mothers of autistics have more trials administered, more total correct, total and preserved errors, less conceptual all of which are of statistical significance compared to control. When fathers And mothers are compared to each other regarding the items of WCST mothers scored statistically significant less scores on total errors, preserved errors, trial to complete 1st category and failure to maintain set.

9-Conclusion: Psychiatric disorders are more prevalent among parents of cases compared to control. Mothers have higher rates of psychiatric disorders than fathers. Cognitive deficits present in autistics and in milder form in their relatives.

APPENDIX (18)

Subject: Patterns of psychiatric morbidity and cognitive styles in parents of autistic children: the

correlation with the symptoms profile of their autistic children.

1- Authors: Bishry Z., EL Sayed N., Sayed M., EL Nahas G., Effat S., Azzam H. and EL Kholi S.

2- Documents: Current psychiatry, Vol. 11, No 1, March 2004, P 63-74.

3-Site: the outpatient Child Psychiatry Clinic of the Institute of Psychiatry, Ain Shams University Hospitals.

4-Time: not mentioned.

5-Aim of the work: To detect the type of possible psychiatric morbidity in parents of autistic children and to assess the cognitive style in those parents in order to correlate cognitive style and psychiatric morbidity in the parents to autistic features in their children.

6-Study design: Cross- sectional, case control study.

7-Method: The study includes 28 child with pervasive developmental disorder with their parents and 20 healthy child with their parents. The children are subjected to the International Classification of Disease ICD-10 (*Janka, 1994*), Childhood Autism Rating Scale (CARS) and Stanford Binet intelligence scale for IQ assessment. The parents of both groups are subjected to psychiatric interview using ICD-10 symptoms checklist, assessment of IQ using Arabic version of Wechsler Adult Intelligence Scale-Revised (WAIS-R) and all are underwent Wisconsin Card Sorting Test (WCST) for assessment of cognitive function.

8-Results: Fathers of cases have more total errors on WCST scores than fathers of control. Mothers of cases needed more trials administered, more perseverated errors, they had less conceptual level. There is Statistical significant difference between fathers and mothers of cases as regards total error, trials to complete first category, and failure to maintain set. There is statistically significant difference between Fathers of cases and fathers of control as regards the comprehension and the picture completion subscales of WAIS-R, while mothers of cases show impairments in comprehension and Picture completion, and lower scores in arithmetic problem and block design.

9-Conclusion: parents of autistic children have multiple cognitive deficits in both WCST and WAIS-R. Psychiatric disorders are prevalent among parents of cases compared to control, mothers have higher rate of psychiatric disorder than fathers. Mild to moderate severity of autism is related to the presence of psychiatric morbidity in parents.

APPENDIX (19)

Subject: Patterns of psychiatric morbidity and cognitive styles in parents of autistic children: the correlation with the symptoms profile of their autistic children.

1- Authors: Bishry Z., EL Sayed N., Sayed M., EL Nahas G., Effat S., Azzam H. and EL Kholi S.

2- Documents: Current psychiatry, Vol. 11, No 1, March 2004, P 63-74.

3-Site: the outpatient Child Psychiatry Clinic of the Institute of Psychiatry, Ain Shams University Hospitals.

4-Time: not mentioned.

5-Aim of the work: To detect the type of possible psychiatric morbidity in parents of autistic children and to assess the cognitive style in those parents in order to correlate cognitive style and psychiatric morbidity in the parents to autistic features in their children.

6-Study design: Cross- sectional, case control study.

7-Method: The study includes 28 child with pervasive developmental disorder with their parents and 20 healthy child with their parents. The children are subjected to the International Classification of Disease ICD-10 (*Janka, 1994*), Childhood Autism Rating Scale (CARS) and Stanford Binet intelligence scale for IQ assessment. The parents of both groups are subjected to psychiatric interview using ICD-10 symptoms checklist, assessment of IQ using Arabic version of Wechsler Adult Intelligence Scale-Revised (WAIS-R) and all are underwent Wisconsin Card Sorting Test (WCST) for assessment of cognitive function.

8-Results: Fathers of cases have more total errors on WCST scores than fathers of control. Mothers of cases needed more trials administered, more perseverated errors, they had less conceptual level. There is Statistical significant difference between fathers and mothers of cases as regards total error, trials to complete first category, and failure to maintain set.

There is statistically significant difference between Fathers of cases and fathers of control as regards the comprehension and the picture completion subscales of WAIS-R, while mothers of cases show impairments in comprehension and Picture completion, and lower scores in arithmetic problem and block design.

9-Conclusion: parents of autistic children have multiple cognitive deficits in both WCST and WAIS-R. Psychiatric disorders are prevalent among parents of cases compared to control, mothers have higher rate of psychiatric disorder than fathers. Mild to moderate severity of autism is related to the presence of psychiatric morbidity in parents.

APPENDIX (20)

Subject: A group of Egyptian addicts: Users view for addiction causes and its impact on self and family. (HQ2005-11144)

1- Authors: Abolmagd S., Nasr AA., Erfan S., Mamdouh R., and EL-Lawendi M.

2- Documents: Egyptian journal of psychiatry, June 2004, vol. 23, p 145-158.

3-Site: private Cairo sanatorium.

4-Time: during the year 2003.

5-Aim of the work: To understand the primary causes of addiction, to clarify the impact of addiction on self and others, and to study the different treatment success factors supposed to decrease the likelihood of relapse.

6-Study design: not mentioned but we can describe it as cross sectional, longitudinal study.

7-Method: 37 inpatient addicts are subjected to screening questionnaire, in-depth interviews and focal group discussions (FGD). Each session ranged from 60-90 minutes. Follow up of the patient six month with urine screening for drug addiction every 2-4 weeks.

8-Results: 40.6% of addicts admit that they have disturbed relation with family, disturbed academic and social life, repeated hospitalization and physical complications. Addicts put a great burden on their families; they lie, steal (89.2%) to cover addictive expenses. They are often seen overdosed or confused at home, and they put an extra burden on the family due to repeated academic failures (59.4%). Marriages are greatly affected in the majority of addicts (59.4%). Also, drug abuse has deleterious effects on sexual functioning (32.4%). 29.7% of families of addicts show positive attitude as regards learning new ways of dealing with the addict, those patients with cooperative families show significantly less relapse rate. Treatment success factors include good doctor patient relationship, involvement of family (spouse and parents) and healthy religious background.

9-Conclusion: drug abuse (addiction) is powerful force which has its destructive impact not only on drug abusers but also on their families as well. Social, behavioral and environmental factors place individuals at risk for drug abuse (addiction).

APPENDIX (21)

Subject: Family caregivers burden of patients with Alzheimer dementia: Psychological and economic perspectives. (HQ2008-10445)

1- Authors: Ramy H., Abulmagd S., Fikry M., Erfan S., Mansour O., and Shabara H.

2- Documents: Current psychiatry, Vol. 11, No 3, November 2004, P 396-404.

3-Site: the memory clinic of the Institute of Psychiatry, Ain Shams University and outpatient private clinic, the outpatient clinic of the Institute of Cancer, Cairo University and the outpatient clinics of the Rheumatology and Rehabilitation Department, Cairo University.

4-Time: not mentioned.

5-Aim of the work: To study the psychological and economic burdens upon the family caregivers of Alzheimer patients.

6-Study design: Cross- sectional, case control study.

7-Method: The study includes three matched groups, (Alzheimer Disease group), 30 patients, (metastatic cancer group), 30 patients and (Rheumatoid Arthritis group), 30 patients and their primary care givers. The caregivers were evaluated using the following scales: 1-Screen for Caregiver Burden (SCB) (*Viataliano et al 1991*). 2-The PCASEE quality of life scale. 3-The General Health Questionnaire (*Golberg DP. and Hiller VF., 1979*). Then the caregivers were asked to

report the percent of their monthly income they spend on the patients as a result of their illness.

8-Results: By using the Screen for Caregivers Burden; the caregivers of Alzheimer disease group show the highest level of burden followed by the caregivers of the rheumatoid arthritis patients, while the caregivers of the metastatic cancer patients obtained the lowest score. On the General Health Questionnaire (GHQ), ; the caregivers of Alzheimer disease patients show the highest level of burden followed by the caregivers of the metastatic cancer patients, then the caregivers of the rheumatoid arthritis patients. As regards the quality of life, the caregivers of the Alzheimer disease patients obtain the lowest score followed by the caregivers of the metastatic patients, then the caregivers of the rheumatoid arthritis patients. Economically, caregivers of Alzheimer disease patients spend the highest percentage of their income, followed by caregivers of the metastatic cancer patients then caregivers of the rheumatoid arthritis patients. There is a highly significant statistical difference between the three groups as regards the previous results.

9-Conclusion: caregivers of patients with Alzheimer disease experience the highest level of burden as measured by Screen for Caregivers Burden (SCB) and GHQ. Also they show the worst quality of life and they spent the highest percentage of their income as compared with caregivers of metastatic cancer patients and rheumatoid arthritis patients.

APPENDIX (22)

Subject: First degree Relatives of ADHD Children II: The impact of their psychiatric morbidity and personality profiles on the severity, comorbidity and adaptability of ADHD children.

1- Authors: Sadek A., El-Nahas G., Sayed M., El-Sheikh M., Omar A.

2- Documents: Current psychiatry, Vol. 11, No. 3, November 2004, P 354-369.

3-Site: the child psychiatry clinic in the Institute of Psychiatry, Ain Shams University and several other private hospitals and clinics.

4-Time: not mentioned.

5-Aim of the work: to assess the impact of psychiatric morbidity and personality profiles of first and second degree relatives, on the severity, comorbidity and adaptability of ADHD children.

6-Study design: Cross- sectional, case control study.

7-Method: The study includes 50 Egyptian ADHD children; (84 parents and 47 siblings), 15 healthy children, (29 parents and 13 siblings) as a control group. The ADHD and healthy children are subjected to full medical, developmental and psychiatric examinations by using Arabic version of K-SADS-PL (*Ibrahim et al., 2000*), The Arabic version of SCID-I,

Stanford Binet test, and WISC, Severity of ADHD assessment using The CRS-R (*Conners' CK 1997*), CBCL (*Achenbach, 1991*), GHQ was applied then SCID-I for those obtained high score in GHQ. The personality structure of the parents was outlined by using the TCI-R (*Cloninger et al, 1999*), for sibling of both ADHD and healthy children psychiatric morbidity was assessed by using the K-SADS-PL. J-TCI (*Cloninger et al, 1994*) was then administered to assess the temperament and characters.

8-Results: The impact of parental psychopathology reveals that maternal psychopathology is associated with more severity, poorer competence and adaptability compared to paternal psychopathology which exerted a lesser effect however, the latter had an effect on the comorbidity profile of the children warranting further replication with greater numbers of morbid parents. Sibling psychopathology on the other hand is associated with greater ADHD severity in hyperactivity and diagnostic severity with insignificant effect on the other domains. The impact of personality traits is more intriguing, highlighting the effect of high novelty seeking, low persistence and low harm avoidance in fathers; low harm avoidance, low Reward dependence and high novelty seeking in ADHD mothers to affect severity, adaptability and competence of ADHD children.

9-Conclusion: First and second-degree relatives are important in any assessment as they affect the ADHD children (severity, adaptability).

APPENDIX (23)

Subject: Schizophrenic patients' families psycho-education: outcomes on patients' quality of life and disease relapse rate.

1- Authors: Abulmagd S., EL-Raay L., Akram A., Amin M, Abdel Aziz H. & M. EL-Lawindi.

2- Documents: Egyptian journal of psychiatry, 2004, vol. 23, NO. 1, pp 59-74.

3-Site: not mentioned.

4-Time: not mentioned.

5-Aim of the work: Development of a psycho-educational program to families of schizophrenic patients, assessment of the impact for psycho-educational program on the knowledge of schizophrenic patients' families. Evaluation of the psycho-educational program integration for schizophrenia treatment on the patients' quality of life and the disease relapse rate.

6-Study design: not mentioned but we can consider it as cohort case control study.

7-Method: the study consists of two main phases; phase 1: development of psycho-educational program for schizophrenic patients. Phase 2: evaluation of the psycho-educational program. The study is conducted on two groups of schizophrenic patients each consisting of 30 randomly selected patients. The parents of the first group (the trial group) are subjected to a psycho-educational program while those of the second group (control group) are not. The two

groups are followed for 18 months to detect the disease relapse rate among patients. Also, the effect of the psycho-educational program on the parents' knowledge and the patients' quality of life are assessed using pre-post evaluation questionnaires.

8-Results: Application of psycho-educational program to families of trial group reveals an evident improvement in performance on all items of Quality Of Life domains except physical and financial aspects. The impact of the psycho-educational program on trial group's knowledge domains reveals higher knowledge scores in the post assessment compared to the pre-assessment. There is also significant improvement in the following; compliance to treatment and relapse rate in the trial group compared to the control group.

9-Conclusion: psycho-educational programs applied to families of schizophrenic patients decrease the disease relapse rate and improve patients' quality of life.

APPENDIX (24)

Subject: Role of spouse in addiction: Is there a contribution. (HQ2010-10428)

1- Authors: Abolmagd S., Erfan SM., Abdel Wahab M., and Abdel Gwad T.M.S.

2- Documents: Egyptian journal of psychiatry, 2004, vol. 23, No 1, pp 95-102.

3-Site: not mentioned.

4-Time: not mentioned.

5-Aim of the work: To assess psychological profile of spouses of addicts, and to identify patterns of marital dysfunction among heroin addicts.

6-Study design: Cross- sectional, case control study.

7-Method: The study includes 30 addicts and their spouses compared to 30 healthy males and their spouses, matched for age, social class and duration of marriage. The patients are subjected to; Marital satisfaction inventory (MSI) (*Sryder, 1981*) and Guilford aggression scale (*Guilford, 1959*). Spouses are subjected to the same scales in addition to Hamilton depression (*Hamilton, 1960*) and anxiety scales (*Hamilton, 1959*).

8-Results: spouses of addicts show significantly higher scores on Guilford aggression scale, Hamilton depression and anxiety scales than controls. They also show significant dissatisfaction on all parameters of Marital satisfaction inventory as compared to controls. Couples of addicts show significant agreement on traditional roles and significant disagreement on global distress as compared to controls.

9-Conclusion: spouses are not incriminated as a cause of their husband's addiction. Spouses of addicts show significantly higher levels of depression, anxiety and aggression. Spouses of addicts show significantly higher levels of dissatisfaction on all domains of marital relations.

Appendix (25)

Subject: Assessment of attention and hyperactivity symptoms in offsprings of parents with Bipolar disorder.

1- Authors: Gomaa M., supervised by prof. El-Batrawy M., prof. El-Bakry A. and dr. Khowiled A.

2- Documents: M.Sc thesis, faculty of medicine, Cairo University, 2004.

3-Site: Kasr El-Aini University hospital.

4-Time: not mentioned.

5-Aim of the work: To detect the presence or absence of attention and hyperactivity symptoms in bipolar patient's offsprings to determine if they are at high risk for psychopathology necessitating early assessment and intervention.

6-Study design: Cross- sectional study.

7-Method: The study includes offsprings of 60 subjects divided into two groups; group (A) includes children of 30 patients with bipolar disorder (13 males and 17 females) and group (B) which includes children of 30 healthy parents. Children of both groups are subjected to the Arabic version of the Achenbach's Child Behavior Checklist, and Conners' Rating Scale (C.R.S.).

8-Results: Children of bipolar patients show higher scores on the total problem subscale of the Child Behavior Checklist

which includes attention-hyperactivity problems than children of controls ($p=0.008$). Children of bipolar patients have more significant problems regarding psychosomatic, anxiety and hyperactivity subscales of the Conners' Rating Scale than children of healthy parents. Children whom their parents have most of their episodes of the manic type are liable to somatic problems and attention-hyperactivity problems than children whom their parents have most of their episodes of depressive or mixed types. Children who don't have family history of psychiatric illnesses are significantly less liable to learning problems and hyperactivity problems than other children. There's statistically significant relation between presence of past history of hyperactivity symptom or misconduct behavior in parents and presence of learning and attention hyperactivity problems in their children. Male and female children of bipolar parents show more liability to somatic, impulsivity and hyperactivity problems than male and female children of healthy parents.

9-Conclusion: Offsprings of bipolar patients suffer from behavioral problems. Attention-hyperactivity problem is one of the most prominent behavioral problems in children of bipolar parents especially, those of manic type.

APPENDIX (26)

Subject: Caregiver burden among schizophrenic and obsessive compulsive disorder families: A comparative study. (HQ2008-10310)

1-Authors: Abou Zeid M., EL Taweel M., Abdelazim Kh and Essawy H.

2-Documents: Current psychiatry; Vol.12, No.1, March 2005, P180-187.

3-Site: the outpatient clinic of Kaser EL Aini psychiatric department.

4-Time: in the period between January 2002 and July 2002.

5-Aim of the work: To compare burden of the caregivers of patients with OCD and schizophrenia.

6-Study design: cross sectional, comparative study.

7-Method: the study consists of key relatives* of consecutive 30 patients with obsessive-compulsive disorder (OCD group) and 41 patients with schizophrenia (schizophrenia group) diagnosed according to the DSM-IV and are subjected to the Burden assessment schedule (BAS) (*Thara et al., 1998*).

8-Results: By comparing caregivers of schizophrenics and caregivers of OCD group, the OCD group have significantly high mean scores for such domains; spouse relation factor and caregivers strategy of burden assessment schedule (BAS). The degree of burden, evidenced by mean scores is comparable between groups for other domains of BAS. Spouses and unemployed caregivers in OCD group have significantly elevated mean total burden scores.

9-Conclusion: The caregiver's burden imposed by OCD is either excess or nearly similar to that of schizophrenia.

*key relative is defined as a relative who had cared the patient continuously for the last two years and spent a lot of time and emotion in caring the patient.

APPENDIX (27)

Subject: Change in knowledge and attitude of families of patients with schizophrenia: A preliminary Egyptian Educational Program.

1- Authors: Kamel M, El-Nahas G, Craig T, Shafei A, , Effat S, Omar A.

2- Documents: Current psychiatry; Vol.12, No.2, July 2005, P300-316.

3-Site; the institute of psychiatry, Ain Shams university hospitals.

4-Time: not mentioned.

5-Aim of the work: To design an educational program about schizophrenia and to study the effect of educating relatives on various aspects.

6-Study design: not mentioned but we can consider it as cross sectional, longitudinal case control study.

7-Method: the study consists of 90 relatives of 50 schizophrenics. (Not more than 2 relatives for each patient, including the main caregiver of the patient). The schizophrenics are divided randomly into 34 cases and 16 controls. Relatives of the 34 cases receive the educational program and 30 relatives of the 16 controls are allocated to

routine care. Relatives (both cases and controls) are selected randomly and are subjected to the following scales: The Community Attitudes toward the mentally ill (CAMI), Fear and Behavioral Intentions Inventory (FABI), Knowledge about Schizophrenia Interview (KASI) and Experience of Care giving Inventory (ECI). Baseline and Effect-of-Program assessments are done.

8-Results: The educational program appears to have a positive impact on relatives of schizophrenics. This is evidenced by the fact that educating relatives show an overall significant improvement in attitudes, gain in knowledge, and reduction of care giving burdens, which are not detected in non educated relatives. Changes in attitudes and knowledge are maintained at 3-month follow-up.

9-Conclusion: Family education improves their knowledge and coping with the illness, and promotes the psychological health of the patients. Also it increases awareness of the caregivers about the various aspects of the illness, improves their attitudes towards their ill relatives, and decreases their care-giving burden.

APPENDIX (28)

Subject: psychiatric morbidity, cognitive dysfunction and neurological soft signs in bipolar patients and their first degree relatives in an Egyptian sample.

1- Authors: Rabie M. supervised by prof. Sadek A., Dr. Soliman A., and Dr. Ramy H.

2- Documents: MD thesis, faculty of medicine, Ain shams university, 2005.

3-Site: the Institute of Psychiatry, Ain Shams University hospitals.

4-Time: from January 2003 to June 2004.

5-Aim of the work: to study the psychiatric morbidity, cognitive dysfunction and NSS in bipolar patients and their first degree relatives.

6-Study design: Cross- sectional, case control study.

7-Method: 35 Bipolar I disorder patients (20 males, 15 females). Subjects of their first degree relatives subjects (51 males, 64 females). The study also includes 50 healthy controls (25 males, 25 females). All are subjected to; (SCID-I), the neurological evaluation scale, similarities and block design subtests of Wechsler adult intelligence scale (WAIS), verbal paired associates, design span, and visual memory span subtests of Wechsler memory scale- revised, Wisconsin card sorting test, and general health questionnaire (*Okasha et al, 1988*).

8-Results: There are highly statistically significant differences ($P < 0.01$) comparing the following variables: On the WMS-R subtests, the control subjects perform better than both the patients and their 1st degree relatives. On the Verbal Paired Associates subtests for both immediate and delayed recall of WMS-R, the 1st degree relatives performs better than

the patients. On the WCST, the control subjects performed better than the 1st degree relatives, in all the scores except Total correct and Conceptual level response. All the NES scores higher in the patients than in the control subjects. All the NES scores higher in the patients than their 1st degree relatives. The Sensory Integration scores higher in the relatives, than the control subjects.

9-Conclusion: Bipolar patients and their first degree relatives have cognitive dysfunction and neurological soft signs in addition to their psychiatric morbidity.

APPENDIX (29)

Subject: Impact of family relations on psychiatric patients.

1- Authors: EL-Shafei T., **Supervised by** prof. Ragheb K., prof. Demerdash A., dr. Khalil A., and dr. Seif A.

2- Documents: MD thesis, Faculty of medicine of girls, AL-Azhar University, 2006.

3-Site: outpatient clinic and psychiatric department of AL-Azhar hospital.

4-Time: not mentioned.

5-Aim of the work: To estimate the prevalence of disturbed family relations in a sample of Egyptian female psychiatric patients, to recognize the risk factors that affect family relations and its impact on psychiatric patients, and to assess

the magnitude of relational problems among families with psychiatric patient in Egyptian society.

6-Study design: not mentioned but we can consider it as case control, cross-sectional study.

7-Method: the study includes 1006 Egyptian female patients with a 1ry diagnosis of psychiatric disorders, compared to 1007 healthy females. Both groups are subjected to complete medical and social history, and Family Assessment Device (FAD) to assess family relationship. Psychiatric female patients are in addition subjected to SCID-I and II for diagnosis of psychiatric disorder and Lehman Quality Of Life Interview (LQLI) to assess quality of life of psychiatric patients

8-Results: Applying the FAD to the subjects of the group revealed that the presence of the mother affect problem solving (PS), while mother education affects problem solving (PS), general functioning (GF), and behavior control (BC), father education level affect PS, GF, and BC, while father presence and number of sibling have no effect on family function. A significant difference between psychiatric female patients and healthy females is found as regards their healthy and unhealthy families functioning using FAD. There's statistical significance and positive correlation between the followings; families of bipolar disorder patients and all items of FAD except communication (COM) and GF, families of schizophrenic patients and all items of FAD except COM, with similar results in families of anxiety disorders.

9-Conclusion: depressive and anxiety disorders are more common psychiatric disorders associate with unhealthy family

relations. There's reciprocal relation between family functions through relations and psychiatric morbidity.

APPENDIX (30)

Subject: Psychiatric Morbidity in Wives of Substance Users in an Egyptian Sample.

1- Authors: Afifi M., supervised by prof. Ghaneim M., prof. Saad A., prof. Mansour M., prof. Nagy N. and dr. El Shahawy H.

2- Documents: M.D. Thesis, Faculty of medicine, Ain Shams University, 2007.

3-Site: Institute of Psychiatry, Ain Shams University Hospitals and private psychiatric hospital.

4-Time: The study proper is preceded by a pilot study for three months, starting from the beginning of April till the end of June 2004.

5-Aim of the work: To Examine the impact of substance use disorder of a patient on his wife, To Detect different types of burden that face wives of substance users, To prevent morbidity detected if possible, and To manage morbidity detected.

6-Study design: Cross- sectional, case control study.

7-Method: The study includes 120 wives of substance users compared to 120 spouses of non-addicted husbands. All wives are subjected to Screening test for the wives: GHQ-28; Arabic Version (*Goldberg & Hiller, 1979*), MINI-PLUS; Arabic

version, North Carolina Family Assessment Scale and Social Readjustment Rating Questionnaire.

8-Results: By using social readjustment rating scale; the addicts' wives have significantly more chance to illness compared to non addicts' wives. The stressful life events are more present among the addicts' wives than among the non addicts' wives especially the sexual problems which are present 37.50 times more among addicts' wives than among the non addicts' wives. There's no significant difference between addicts' wives and non addicts' wives as regards the psychiatric morbidity. There's significant difference between the addicts' wives and the non addicts' wives as regards the personality disorder, but no relation between the type of personality of the wife and the type of substance used by her husband. By studying the overall family environment, the parental capabilities problems, the family interactions and the family safety using the North Carolina Family assessment; it is found more significant problems among the addicts' wives than among the non addicts' wives. 29 out of 120 (24.2%) of addicts' wives share their husband substance use maximum twice. .

9-Conclusion: the wives of substance users are experiencing burden related to the addiction of their husbands, and consequently the duration of the addiction lengthens, the burden will increase. Therefore a negative impact on their life is expected affecting their quality of life and well-being.

APPENDIX (31)

***Subject: Burden of mother and wife caregivers of psychiatric and non-psychiatric patients and its relation to psychiatric disorders.**

1- Authors: Abdel-Maksoud A., supervised by Prof. Kamel F., and Prof. AL- Mahdi M.

2- Documents: M.Sc thesis, faculty of medicine, Al-Azhar university, Boys, 2007.

3-Site: outpatient clinics and inpatients of Al-Azhar university Hospital.

4-Time: from the first of June 2007 until the end of March 2008.

5-Aim of the work: to study of the burden on mothers and wives caregivers of psychiatric and non- psychiatric patients.

6-Study design: not mentioned or described.

7-Method: 150 mothers and wives caregivers of psychiatric patients and 150 caregivers of chronic disease patients. They're subjected to: 1- semi-structured interview, 2- Zarit Burden Interview to measure the burdens on the caregivers (*Zarit et al, 1985*), and 3- Caregiver Strain Index (*Garretson and Van Der Ende, 1994*).

8-Results: There are statistically significant differences between mothers and wives for the objective burden in caring non-psychiatric patients in favor of wives, also there are significant differences between caregivers of psychiatric and non-psychiatric patients for the benefit of the caregivers for non-psychiatric patients. Burden subjective to providers of care for patients with schizophrenia is found in 38 women from a total of 38/38 women (100%), while in Bipolar Affective

Disorder the burden is simple in 11 women and severe in 27 women, with total burden of 65 woman in simple burden and 235 women in severe burden. There are significant differences between the degree of the subjective burden and the type of illness provided with care, for example, in schizophrenia, the burden is severe, followed by stroke and renal disease, while in the degree of medium to severe found more in the hepatic disease, followed by Bipolar Affective Disorder

9-Conclusion: providing care for psychiatric and non-psychiatric patients represents a great burden on the caregiver. The burden is not linked to the quality of personal care providers, but the nature of disease associated with the future of care and its impact on functional capacity of the patient.

NB. *= Arabic reference.

APPENDIX (32)

Subject: Obsessive Compulsive Disorder and Personality disorders among first degree relatives of Obsessive Compulsive disorder patients.

1- Authors: Tantawy A., Raya Y., Al-Yahya and Al-Sayed Zaki A.

2- Documents: Current psychiatry, Vol. 15, No 2, July 2008, P 215-229.

3-Site: outpatient clinic of Buraydah Mental Health Hospital, Al-Gassim, KSA.

4-Time: in the period from October 2007 to March 2008.

5-Aim of the work: To test these hypotheses; (1) First-degree relatives of OCD probands have significantly higher rates of OCD than general population. (2) First-degree relatives of OCD patients have significantly higher rates of personality disorders than general population. (3) Normal personality characteristics particularly neuroticism are common among OCD probands and their relatives than general population.

6-Study design: Cross- sectional, case control study.

7-Method: 50 adult OCD patients and 129 persons of their first-degree relatives and 30 healthy subjects, are subjected to; semi-structured interview, Eysenck Personality Questionnaire Revised Saudi Form and Yale-Brown Obsessive Compulsive Scale and checklist (*Goodman et al., 1989a and Goodman, et al., 1989b*).

8-Results: the prevalence of OCD in first degree relatives of OCD patients is 29/129. Obsessive compulsive personality disorder is significantly more prevalent in OCD patients (30%), than relatives (22.48%) with and controls (3.33%). OCD patients and their first degree relatives score much higher on neuroticism than do controls. The OCD patients and their first degree relatives have significantly higher total scores on the Yale-Brown Obsessive Compulsive Scale than do the controls. The most prevalent obsessive symptom among all groups is the religious symptoms (73.53%), then sexual, contamination and aggressive symptoms.

9-Conclusion: Obsessive-Compulsive disorder is a familial disorder. OCD patients and their first degree relatives have a higher prevalence than controls of any cluster C personality

disorder in general and obsessive compulsive personality disorder and avoidant personality disorder in particular.

APPENDIX (33)

Subject: Effect of educational intervention on caregiver burden and quality of life in dementia in an Egyptian sample.

1- Authors: Waly A., supervised by prof. Ashour A., prof. Soliman A., prof. EL-Sayed N., and dr. Hewedi D.

2- Documents: MD thesis, faculty of medicine, Ain Shams University, 2008.

3-Site: the Institute of Psychiatry, Ain Shams University hospital, and EL-Abbaseya hospital for mental health.

4-Time: from November 2006 to February 2008..

5-Aim of the work: To study the effect of educational intervention on caregiver burden and the factors affecting caregiver burden and quality of life of patients with dementia.

6-Design of the study: not described, but we can consider it as longitudinal, case control study.

7-Method: The study includes 100 demented patients and their principle caregiver. Educational intervention program is applied to 50 caregivers, and the other 50 caregivers are controls. Evaluation of the program is done after 3 months. They are subjected to: 1- Geriatric Mental State, Arabic version (*Ashour et al., 2003*). 2- Quality Of Life, brief Arabic version (*Ashour et al., 2003*). 3- Burden Interview (*Zarit et al., 1980*).

4- Mental Test Score (*Hodkinson, 1972*). 5- Revised Memory and Behavior Problems Checklist (*Teri et al., 1992*). 6- Disability Assessment for Dementia (*Gelinas et al., 1999*). 7- GHQ (*Goldberg and Hillier, 1979*). 8- Clinical Dementia Rating (*Huges et al., 1982*).

8-Results: Female caregivers of dementia patients represent the main sex 54/100 (54%), while males represent 46/100 (46%). 80/100 (80%) of the caregiver family members of dementia patients are married, 1/100 (1%) widow, and 19/100 (19%) are single. 66/100 (66%) of the caregiver family members of dementia patients are employed, 34/100 (34%) are housewives, with statistical significant difference between both groups. No significant correlation between the caregiver burden and the socio-demographic variables of the caregiver of dementia patients, the number of rooms negatively correlates with the burden. There's a negative correlation between caregiver burden and education, occupation, and family income of the caregiver of dementia patients, while a positive correlation with socio-economic status scale, with statistical significant difference. There's a positive correlation between the caregiver burden and age and employment state of the caregiver of dementia patients, while a negative correlation with marital status with statistical significant difference. significant difference between psychiatric disorders of the elderly and burden of the caregiver of dementia patients. significant decrease in the caregiver burden of dementia patients in the study group after 3 month of application of the educational intervention.

9-Conclusion: Social and educational intervention for caregivers of patients with dementia might have an effect in alleviating caregiver burden and improving quality of life of patients with dementia.

APPENDIX (34)

Subject: The psychological impact of children's mental health problems on their parents.

1- Authors: Bastawy M., supervised by Prof. EL-Mahallawy N., Prof. EL-Sutohy M., dr. Abu EL-Ela E., dr. Sadek H.

2- Documents: M.D. thesis, faculty of medicine, Ain Shams university, 2009.

3-Site: Child psychiatric clinics of the Institute of psychiatry, Ain Shams University Hospital.

4-Time: not mentioned.

5-Aim of the work: to study the impact of children's mental health problems on their parents (mothers), to explore the factors affecting this impact, and to study the effect of the child's improvement upon this impact.

6-Study design: Cross-sectional longitudinal study (follow up after six months).

7-Method: The study includes 200 child and their parents, every child will be subjected to full psychiatric sheet and will be diagnosed according to (DSM-IV-TR) (**Sadock & Sadock, 2007**). every parent (mothers) will be subjected to: (1) The Arabic version of General Health Questionnaire -28 (GHQ-28), (2) The Arabic version of the extended version of the Strengths And Difficulty Questionnaire (SDQ) parental form (**Thabet et al, 2000**), (3) The Arabic version of Parenting Stress Index (PSI) (**EL-Bablawy, 1988**)*, (4) The Arabic version of World Health Organization Quality Of Life Questionnaire-100 (**Mick and Willem, 1998**).

8-Results: 62% of the mothers have bad mental health and about half of them have psychiatric disorders (depression or anxiety). The burden on the mother and the families is rated in 86% of the mothers; also there is high maternal stress among 87% of the mothers. The mothers of psychiatric children have high prevalence of bad quality of life. Mother without work and/or having young psychiatric children has the risk of maternal mental health problem. Also the serious child disorders as mental retardation, autistic disorder, attention disorder and disruptive behavior disorders, and psychotic disorder have the worst impact on the mothers. The psychological impact on the mothers improves six months later after improving the psychiatric conditions of the children except the environmental maternal quality of life where most probably it takes more time to show improvement.

9-Conclusion: Mental health and quality of life of the mothers caring psychiatrically ill-children are affected. The

psychological impact on the mothers improves six months later after improving the psychiatric conditions of the children.

*= Arabic reference.

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عبد المقصود أيمن. (2007): الضغوط الواقعة على الامهات و الزوجات مقدمات الرعاية للمرضى النفسيين و غير النفسيين و علاقتها بالاضطرابات. رسالة ماجستير نفسية و عصبية- كلية الأزهر بنين. تحت إشراف أ.د فؤاد كامل و أ.د محمد المهدي.

المقدمة

إن دور مقدمى الرعاية دور لة متطلبات كما أنة يسبب ضغوط نفسية و يسبب ضرر لصحة مقدم الرعاية وجودة حياته. (ستروننج , 2001)*. إن تواجد مقدمي الرعاية فى الأسرة لة تأثير جيد على أقاربهم من المرضى النفسيين وذلك فى تعزيز ثقتهم بأنفسهم و تعزيز علاقاتهم الاجتماعية. (جوزيف و كاثي , 2003) *.

تم تعريف اعباء مقدمى الرعاية على انها المشاكل الجسدية و النفسية أو العاطفية والاجتماعية والمشاكل المالية التى يمكن أن يتعرض لها مقدمى الرعاية و هذه المشاكل من الممكن أن يمر بها أفراد الأسرة الذين يرعوا كبار السن المصابين . (شولز ومارتى , 2004)* . إن الدور المطلوب تقديمه لرعاية المريض فى الأسرة لا يلغى دورة الأصلية تجاة الأسرة مما يزيد من أعباء النفسية والاقتصادية على حد سواء. (ميلر , 1990)* .

وقد قام كام شانج , 2005 * بتحديد ثلاثة أنواع من الأعباء :

- 1- عبء التعامل مع المريض العقلي : على سبيل المثال: العبء المالي ، الوقت والجهد المبذول في تقديم الرعاية ، كذلك ارتباك الاعمال اليومية لمقدمى الرعاية الطبية و ارتباك حياتهم الاجتماعية .
- 2- عبء المرض العقلي : على سبيل المثال: مشاعر الخسارة والخجل الناتج عن أصابة أحد أفراد الأسرة بالمرض العقلي، كذلك الشعور بالقلق والغضب وفقد الأمل تجاه ذويهم المصابين بالمرض العقلي .
- 3- أعباء التحكم وتحمل المشاكل السلوكية للمرضى العقليين : مثل: الاعتداءات الجسدية ، والتقلبات المزاجية , والاعراض السلبيه والغير متوقعه

إن رعاية المريض النفسى قد تؤدى الى الاصابة بأمراض نفسية و نعطى مثالا لذلك رعاية المريض المصاب بمرض الزهايمر قد يصاب بتدهور فى حالة الصحة ، أو قد يصاب بمرض الاكتئاب ، كما أن نمط الحياة سيتغير تغيرا جذريا. (هيرمن , 2001)* .

*=مراجع أنجليزية

قامت دراسات عديدة على العلاقة بين المرضى و ذويهم من مقدمى الرعاية. وتشمل هذه الدراسات الحالة الديموجرافية لمقدمى الرعاية-(السن والجنس والحالة الاجتماعية والاقتصادية ، والوظيفة ، والتعليم)، وشخصية مقدمى الرعاية ، والمساندة الاجتماعية ، ونوعية علاقة المريض بمقدمى الرعاية قبل بداية المرض . فعلى سبيل المثال أقيمت بعض الدراسات على الاضطراب ثنائي القطب ووجد أن هذا الاضطراب لا يؤثر فقط على المرضى ولكن أيضا على أقاربهم الذين يعانون من آثار توالى الأصابة.(رينير 2006)*.

دواعى البحث :

يوجد العديد من الأبحاث السابقة التى أقيمت على "أقارب المرضى النفسيين" في مصر ونوقش هذ الموضوع من جوانب مختلفة لذلك يجب ألا يذهب هذا الجهد هباءا. وهذا يبرز أهمية وجود نظام واضح لاستعراض تلك الدراسات و الأبحاث والتخطيط للدراسات المستقبلية. مع أهمية وجود معايير للتقييم النقدي لتحديد قيمة الأبحاث المنشورة و أن يتقرر تطبيقها إكلينيكيًا. لذا فإن هذا العمل يقوم على أساس الاستفادة من هذه الدراسات السابقة مع تحديد النقاط الغير مدروسة للتوصية بدراساتها فى المستقبل.

الهدف من الدراسة :

- 1 - مراجعة منهجية لتقييم الدراسات المصرية المتاحة المقامة على " أقارب المرضى النفسيين"
- 2 - عمل توصيات تفيد الدراسة فى مجال . " أقارب المرضى النفسيين"
- 3 - وضع ملخص للدراسات المصرية المتاحة التى أجريت على "أقارب المرضى النفسيين".

*مراجع أنجليزية

الطريقة (الإجراءات):

من أجل تحقيق هدف هذا العمل:

أولاً: سنقوم بتجميع جميع الدراسات المصرية المتاحة المقامة على "أقارب المرضى النفسيين".

من قواعد البيانات التالية :

- 1- مكتبة كلية الطب جامعة عين شمس .
- 2- مكتبة كلية الطب جامعة الأزهر بنين و بنات.
- 3- مكتبة كلية الطب جامعة القاهرة .
- 4- مكتبة كلية الطب جامعة قناة السويس.
- 5- قاعدة بيانات المجلة المصرية للطب النفسي ، ومجلة الطب النفسى المعاصرو
أى مجلة مصرية علمية متاحة

ثانياً: سنقوم بعمل استعراض منهجى لهذه الدراسات حيث ستصنف وفقاً للفتات التالية :

- 1- الوبائيات .
- 2- المسببات
- 3- الوصف الإكلينيكي .
- 4- النتائج.
- 5-العلاج.
- 6- معرفة و اتجاه الأسر بالنسبة للمرض النفسى.

ثالثاً: سيتم تقييم هذه الدراسات بدقة ومناقشة نتائجها . وعقب هذه الخطوات ، سيتم تقديم التوصيات التى تفيد الدراسة فى هذا المجال مستقبلاً.

المراجعة النظامية الوصفية:

بعد الإطلاع على قواعد المعلومات تم عمل قائمة من (34) بحث مصرى عن "أقارب المرضى النفسيين".

(1) بالنسبة لدراسة الوبائيات:

(أولاً) أقارب (أمهات وزوجات) المرضى النفسيين :

و جد عبد المقصود 2007 أن 92.7 ٪ (150/139) من مقدمي الرعاية يعانون من اضطرابات نفسية.

(ثانيا) أقارب مرضى اضطراب القلق العام المزمن :

وجد منصور 1993 * أن ما يقرب من نصف الزوجات ونصف الأطفال يعانون من اضطراب القلق العام.

(ثالثا) أقارب مرضى الوسواس القهري :

وجد منصور 1993 * أن أعراض القلق واضطراب القلق العام شائعة بين الزوجين والأطفال. في حين، وجد طنطاوى 2008 * أن انتشار الوسواس القهري في أقاربهم من الدرجة الأولى يمثل (22.48 %) (129/29). وأفاد أيضا أن أقارب مرضى الوسواس القهري من الدرجة الأولى يعانون من اضطرابات في الشخصية خاصة اضطراب الوسواس القهري. وفيما يتعلق بالتوزيع الجنس : وجد طنطاوى 2008 * أن الإناث تمثل الجنس الأكثر انتشارا بين أقارب الدرجة الأولى لمرضى الوسواس القهري (129/80 ، 62.02 %).

وفيما يتعلق بالحالة الزوجية : وجد طنطاوى 2008 * أن أقارب مرضى الوسواس القهري الذين لم يتزوجوا قط يمثلون (70.54 % ، 129/91). وفيما يتعلق بالوضع الاجتماعي والاقتصادي : وجد طنطاوى 2008 * أن معظم أقارب مرضى الوسواس القهري 124/90 (69.77 %) يمثلوا الطبقة الاقتصادية الاجتماعية المتوسطة.

(رابعا) أقارب مرضى الفصام :

وجد منصور 1993 * أن أقارب مرضى الفصام العقلي المزمن هم أكثر عرضة للمعاناة من أعراض الإكتئاب ومرض الإكتئاب الحاد على حد سواء. في حين ذكر الأبيارى 2001 * ارتفاع معدلات الاضطرابات النفسية بين أقارب مرضى الفصام العقلي من الدرجة الأولى مقارنة بالأقارب الأصحاء. وفيما يتعلق بالمستوى التعليمي : ذكر الأبيارى 2001 * أن المستوى التعليمي الأكثر شيوعا بين أقارب مرضى الفصام العقلي هو خريجي المدرسة الثانوية 124/36 (29.03 %) وأن أقل مستوى تعليمي هو الحاصلين على الدراسات العليا 124 / 2 (1.61 %).

* =مراجع أنجليزية

وفيما يتعلق بالتوزيع المهني : ذكر الأبياري 2001 * أن ذوي المهارة من أقارب الفصام العقلي يمثلون الدرجة المهنية الأكثر شيوعا (124/35 ، 28.22 %) ، في حين أن العمالة غير الماهرة هي الأقل ممثلة في 124 / 6 (4.83 %).

(خامسا) أقارب مرضى الاكتئاب المزمن:

وجد منصور 1993 * أن أعراض الاكتئاب ومرض الاكتئاب الحاد هما أكثر الأمراض شيوعا بين أقارب المرضى الذين يعانون من الاكتئاب الشديد المزمن.

(سادسا) أقارب مرضى الاضطراب الوجداني ثنائي القطب :

وجد منصور 1993 * أن أعراض القلق واضطراب القلق العام يكثر بين أقارب المرضى الذين يعانون من الهوس ، خاصة بين الأطفال وزوجات المرضى الذكور. في حين وجد ربيع 2005 * أن 26.5% (30 من أصل 115) من أقارب الدرجة الأولى من مرضى الهوس يعانون من اضطرابات نفسية.

(سابعا) آباء وأمهات الأطفال المرضى نفسيا :

وجد عزام 2003 * أنه يتم تشخيص الاكتئاب بين 12% (25/7) من آباء الأطفال اللذين يعانون من التوحد. في حين وجد الشيخ 2003 * إنتشار الاضطرابات النفسية في أمهات الأطفال الذين يعانون من فرط الحركة أكثر من أمهات الأطفال الأصحاء. بينما وجد صادق 2004 * أن 8.4 % (3 / 36) من آباء الأطفال الذين يعانون من فرط الحركة لديهم اضطرابات نفسية. بسطاوى 2009 * وجد أن 40.4 % (89/36) من الأمهات لديهم اضطرابات نفسية, حيث أن اضطراب التكيف مع حالة مزاجية اكتئابية هو الأكثر شيوعا. وفيما يتعلق بتوزيع العمر : وجد بسطاوى 2009 * أن 200/81 (40.5 %) من الأمهات موجودة في الفئة العمرية من 33 إلى >41 سنة ، 200 / 80 (40 %) موجودة في الفئة العمرية من 25 إلى >33 سنة ، و200/39 (19.5 %) موجودة في الفئة العمرية من 41-49 سنة.

وفيما يتعلق بالمستوى التعليمي : فقد وجد بسطاوى 2009 * أن الأمهات الاتى تلقت الدراسة الثانوية أو دبلوم التعليم هم المجموعة الأكثر شيوعا 200/117 (58 %) ، بينما الأمهات الأميات هن المجموعة الأقل 200 / 4 (2 %).

*= مراجع أنجليزية

وفيما يتعلق بالتوزيع المهني : فقد وجد **بسطاوى 2009** * أن 200/151 (75.5 %) من الأمهات لا تعمل ، في حين 200/49 (24.5 %) لديها عمل. وفيما يتعلق بالتدين : فقد وجد **بسطاوى 2009** * أن 200/188 (94 %) من الأمهات مسلمات ، في حين 200/12 (6 %) مسيحيات. **(ثامنا) أقارب مرضى عتة الشيخوخة :**

فيما يتعلق بالتوزيع الجنس : فقد وجد **والى 2008** * أن مقدمي الرعاية لمرضى عتة الشيخوخة من الإناث يمثلن الجنس الرئيسي 100/54 (54 %) ، في حين أن الذكور يمثلوا 100/46 (46 %).

وفيما يتعلق بالوضع الزواجى : فقد وجد **والى 2008** * أن المتزوجات 100/80 (80 %) من أفراد أسرة مقدمى الرعاية لمرضى عتة الشيخوخة ، 100 / 1 (1 %) أرملة ، و 100/19 (19 %) انسة.

وفيما يتعلق بالتوزيع المهني : فقد وجد **والى 2008** * أن 100/66 (66 %) من أفراد أسرة مقدمى الرعاية لمرضى عتة الشيخوخة يعملون، بينما 100 / 34 (34 %) ربات بيوت ، مع اختلاف كبير بين المجموعتين إحصائيا. **(تاسعا) زوجات المدمنين :**

وجد **أبو المجد 2004** * أن زوجات المدمنين يعانون من الاكتئاب والقلق أكثر من زوجات الأشخاص الأصحاء. في حين وجد **عفيفى 2007** * أن اضطرابات الشخصية هي أكثر انتشارا في زوجات المدمنين عن زوجات الغير المدمنين. وفيما يتعلق بالتوزيع المهني : فقد وجد **عمارة 2002** * أن 60 % من زوجات المدمنين عاملات ، و 30 % من ذوي المهارات ، في حين أن 30 % من المحترفات.

(2) بالنسبة لدراسة المسببات :

(أولاً) العوامل الاجتماعية والديمغرافية :

وجد **عزام 2003** * أن الاضطرابات النفسية لدي آباء وأمهات الأطفال المصابين بالتوحد ليس لها دلالة إحصائية فيما يتعلق بجنس الطفل.

*= مراجع أنجليزية

في حين وجد **بسطاوى 2009** * عدم وجود علاقة كبيرة بين عمر وجنس الأطفال المصابين بأمراض نفسية وكلا من الصحة النفسية، الاضطرابات النفسية، التشخيص النفسي، عبء الأسرة، صحة الأم ونوعية حياتها. بينما وجد **فؤاد 1999** * أنه لا يوجد فرق كبير بين البنين والبنات فيما يتعلق بمقياس الاكتئاب، القلق، والعصبية للأطفال. ولكن هناك فروق كبيرة احصائيا بين الفتيان والفتيات فيما يتعلق بمقياس الوقت للرد من تدريب المخ. وذكر **سليم 1999** * أن خريجي الجامعة من الآباء والأمهات هم أكثر ارتياحا من الآباء والأمهات الحاصلين علي أقل من الدرجة الجامعية في ما يتعلق بعاطفة الوصال. **بسطاوى 2009** * لم يجد علاقة بين تعليم الأم وتأثير مشاكل الأطفال وصحتهم العقلية، على أمهاتهم. كما أن 66.2 % من الأمهات غير العاملات تكون صحتهم النفسية سيئة أكثر من الأمهات العاملات (49 %).

(ثانيا) العوامل النفسية :

عزام 2003 * وجد ان وجود الاضطرابات النفسية بين الآباء لا علاقة لها بمعدل الذكاء لأطفالهم. كما أنه لا توجد علاقة بين تشخيص الأمراض النفسية المختلفة بين الآباء والأمهات ومعدل الذكاء لدى الأطفال الذين يعانون من التوحد. في حين لم يجد **جمعة 2004** * علاقة بين سن بداية الاضطراب ثنائي القطب بين الآباء والأمهات والمشاكل السلوكية لدى أطفالهم باستخدام المقياس السلوكي. بينما وجد **بسطاوى 2009** * أن الأمراض النفسية لدى الأطفال مثل التوحد، اضطراب فرط الحركة، والتخلف العقلي هي من أشد الأمراض المؤثرة تأثيرا سينا علي الأم.

(ثالثا) العوامل الوراثية :

في محاولة لدراسة الأسباب البيولوجية من الاضطرابات النفسية، فإن العديد من الباحثين قدموا دراسات مختلفة على أقارب المرضى لإثبات العوامل الوراثية : **الأيبارى 2001** * حاول ان يثبت التغيير في نمط المورثات والأليلات في الأقارب من الدرجة الأولى. كما حاول أيضا إثبات وجود انتقال وراثي قوي في أقارب الدرجة الأولى لمرضى الفصام العقلي من خلال وجود معدلات أعلى من تاريخ عائلي من الاضطرابات النفسية. في حين، **فكرى 2002** * حاول ان يثبت انتقال الأليلات الطويلة بين الآباء والأمهات من المرضى. وقام بعمل تنميط جيني لإثبات علاقة بين كل من: الأليلات 11 من الجين الترتوفان، 1 و 2 من الأليل * =مراجع أنجليزية

الجين الناقل الدوبامين , الأليلات 4 من الجين الناقل للسيروتونين وأقارب مرضى الاضطراب ثنائي القطب.

وقد حاول كل من عيسوى 1995* , عبد العظيم 1997* , بسيونى 1998* ان يثبتوا التغيير في المثبرات السمعية المتكررة في أقارب مرضى الفصام العقلي. وفيما يتعلق بالعلامات العصبية اللينة : ربيع 2005* حاول إثبات القابلية الجينية في أقارب مرضى الاضطراب الوجداني بسبب وجود العلامات العصبية اللينة لديهم.

(3) بالنسبة لدراسة الوصف الإكلينيكي:

(أولاً) أقارب مرضى الوسواس القهري :

وجد منصور 1993* أن أعراض القلق منتشرة بين أقارب مرضى الوسواس القهري. في حين ، وجد طنطاوى 2008* أن أعراض الوسوسة الأكثر انتشارا بين أقارب مرضى الوسواس القهري من الدرجة الأولى هي أعراض تخص الناحية الدينية (70.59 %) ، ثم الناحية الجنسية ، ثم التلوث.

(ثانياً) أقارب مرضى الفصام :

وجد شاما و جاد 2002* أن الأعراض النفسية أو الجسدية شائعة بين أفراد أسرة مقدمى الرعاية لمرضى الفصام العقلي المنتكسين. كما وجد أن 86 % (50/43) ، 72 % (50/36) و 44 % (50/22) من أفراد الأسرة مقدمى الرعاية لمرضى الفصام العقلي يعانون من الحزن والغضب والعار على التوالي.

(ثالثاً) أطفال الأمهات المصابة بالاكتئاب :

ذكر فؤاد 1999* أن هناك فرق كبير جدا بين أطفال الأمهات المصابة بالاكتئاب وأطفال الأمهات السليمة حيث أنهم يعانون أكثر من القلق وأعراض الاكتئاب.

(رابعاً) أقارب مرضى الاضطراب الوجداني ثنائي القطب :

وجد جمعة 2004* أن أطفال مرضى الاضطراب الوجداني يعانون من أعراض الجسدية والقلق وأعراض فرط النشاط. كما أن الأطفال الذكور والإناث من آباء الاضطراب الوجداني ابدوا مزيد من أعراض الجسدية والاندفاع والنشاط المفرط عن الأطفال الذكور والإناث من الآباء والأمهات السليمة. في حين وجد

*= مراجع أنجليزية

ربيع 2005* أن هناك اختلافات كبيرة جدا بين جميع الفئات في جميع درجات اختبار بطاقة ويسكونسن مع وجود فروق ذات دلالة إحصائية.

(خامسا) آباء وأمهات الأطفال المرضى نفسيا :

وجد بسطاوى 2009* أن الأمهات يعانين من ضغوط عديدة نتيجة لعوامل أبوية و التي تشتمل على الارتباط السيئ بأبنائهم (87.5 % ، 175 / 200) ، سوء الصحة النفسية للأم (65 % ، 130 / 200) ، الاكتئاب (49 % ، 98 / 200) ، العزلة الاجتماعية (46 % ، 92 / 200) ، والقيود المفروضة على الأم بسبب طفلها (44 % ، 89 / 200).

(سادسا) زوجات المدمنين :

أبو المجد 2004 ج* وجد أن زوجات المدمنين تعبر عن العدوان بطريقة أشد من زوجات الاصحاء.

(4) بالنسبة لدراسة كيفية التعامل مع أقارب المرضى النفسيين:

(أولا) أستخدم البرنامج النفسى التعليمى لأقارب المرضى :
بالنسبة لأقارب مرضى الفصام العقلى وجد أبو المجد 2004 ب* تحسنا كبيرا في الامتثال للعلاج ونسبة انتكاس المرض في المجموعة التجريبية الذين يتعرضون لبرنامج تعليمي مقارنة بالمجموعة الاخرى. كما وجد أيضا أن الآباء الذين يتعرضون للبرنامج النفسى والتربوي تظهر بشكل ملحوظ نوعية حياة أفضل في جميع البنود وتكون المعرفة أعلى بكثير.
بالنسبة لأقارب مرضى عتة الشيخوخة: فقد وجد والى 2008* أنخفاض العبء الواقع على مقدمى الرعاية بمعدل ملحوظ بعد استخدام البرنامج التعليمي.

(ثانيا) تحسين الحالة النفسية للأطفال المرضى نفسيا :

بسطاوى 2009* وجد أنه بعد مدة 6 أشهر من علاج الأعراض النفسية للأطفال ، أظهرت أمهات الأطفال المرضى نفسيا انخفاض معدل ما يلي: الصحة النفسية السيئة ، والأعباء العائلية ، في حين أن نوعية حياة الأمهات أظهرت تحسنا كبيرا في كافة المجالات باستثناء النوعية البيئية والمادية.

*=مراجع أنجليزية

(ثالثاً) التعاون الأسري و اشراكة فى العلاج :
أبو المجد 2004* * وجد أن تعاون الأسرة (الزوجة والآباء) أدى الى انخفاض كبير في معدلات الانتكاس.

(5) بالنسبة لدراسة مصير أقارب المرضى النفسيين:

إن العديد من الأمراض النفسية تؤدي إلى آثار سيئة على الأقارب مثل:
(أولاً) الطلاق:

وجد منصور 1993* أن الطلاق أكثر شيوعاً إذا كان المريض من الإناث.

(ثانياً) عدم الرضا الزوجي:

وجد سليم 1999* أن آباء و أمهات مرضى الفصام العقلي يظهروا ارتياحاً أقل من آباء و أمهات الذريات السليمة فيما يخص مقياس رضا الزواج مع اختلاف كبير بين المجموعتين في معظم الجوانب. كما أن هناك فرق كبير جداً بين آباء و أمهات مرضى الفصام العقلي فيما يتعلق بالاهتمام بإرضاء الآخرين.

أما بالنسبة لزوجات المدمنين فقد وجد أبو المجد 2004ج* عدم وجود رضا زوجي مقارنة بزوجات الأشخاص الأصحاء.

(ثالثاً) المشاكل الجنسية و الزوجية:

وجد عفيفي 2007* أن المشاكل الجنسية و الزوجية بات وجودها 37.50 , 25مرة على التوالي أكثر بين زوجات المدمنين عن زوجات غير المدمنين.

(رابعاً) المشاكل السلوكية لدى الأطفال:

وجد جمعة 2004* أن الأطفال الذين يعانون أبائهم من نوبات هوس معرضون لمشاكل جسدية ولانتباه فرط النشاط عن الأطفال الذين يعانون أبائهم من نوبات اكتئاب أو أنواع متباينة. كما وجد أن الأطفال الذين ليس لديهم تاريخ عائلي من الأمراض النفسية هم أقل عرضة لمشاكل في التعلم وفرط النشاط عن الأطفال الآخرين.

(خامساً) صعوبات العمل:

وجد منصور 1993* أن صعوبات العمل أكثر ما يكون لدى أقارب مرضى الأضطراب الوجداني , يليهم أقارب مرضى الفصام. حيث وجد شاما و جاد

2002* أن عمل أقارب مرضى الفصام يتأثر اما نتيجة عدم القدرة على العمل

=* مراجع أنجليزية

أو فقد الرغبة في العمل.

(سادسا) الأعباء الأسرية:

وجد منصور 1993* أن أقارب مرضى الهوس من الإناث هن أكثر الفئات الاجتماعية أنعزالا ، تليها أقارب مرضى الهوس الذكور. بينما أقارب المرضى العضوين لا يظهروا أي خلل في الوظيفة الاجتماعية. بينما وجد أبو المجد 2004* أن 40.6 ٪ يعترفون بوجود اضطرابات في العلاقة العائلية. الإدمان يشكل عبئا على الأسرة بسبب الاخفاقات المتكررة الأكاديمية (59.4 ٪). كما يتأثر الزواج في معظم المدمنين (59.4 ٪). أيضا ، وتعاطي المخدرات له آثار الضارة على الأداء الجنسي (32.4 ٪). وجد بسطاوى 2009* أن 68.5 ٪ (200/137) من أمهات الأطفال المرضى نفسيا أقروا أن الصعوبات (مشكلات الصحة النفسية) لأطفالهم تضع "عبء كبير" على الأمهات والعائلات ككل. و هذا العبء الكبير ينتشر لدى أمهات الأطفال الذين يعانون من فرط الحركة أو صعوبات اجتماعية.

(سابعاً) الأعباء الواقعة على مقدم الرعاية:

أقارب المرضى النفسيين :

وجد عبد المقصود 2007 فروق ذات دلالة إحصائية بين الأمهات والزوجات فيما يتعلق بعبء مقدم الرعاية للمرضى غير النفسيين لصالح الزوجات ، وكما وجد فروق ذات دلالة إحصائية بين مقدمي الرعاية للمرضى النفسيين وغير النفسيين ، لصالح مقدمي الرعاية للمرضى غير النفسيين.

أقارب مرضى الوسواس القهري :

أبو زياد 2005* وجد أن مقدمي الرعاية لمرضى الوسواس القهري يعانون من عبء رعاية أقاربهم المرضى أكثر من أقارب مرضى الفصام. كما أن أقارب مرضى الوسواس القهري خاصة الأزواج لديهم ارتفاع عبء الرعاية عن باقي الأقارب الآخرين.

أقارب مرضى الزهايمر:

وجد رامي 2004* أن العبء الواقع على مقدمي الرعاية لمرضى الزهايمر أعلى مستوى يليه العبء الواقع على مقدمي الرعاية لمرضى الروماتويد ، في حين أن مقدمي الرعاية لمرضى السرطان المنتشر حصلت على أدنى علامة.

*= مراجع أنجليزية

(ثامنا) الضغوط النفسية الواقعة على الأمهات:

وجد بسطاوى 2009 * أن الضغوط النفسية تكون 100% في أمهات أطفال الفصام , 100% فى أطفال التوحد , يليهم أطفال التخلف العقلى بنسبة 97.4%.

(6) بالنسبة لدراسة المعرفة والأراء عن المرض النفسى والمرضى النفسيين:**(أولا) رأى أقارب المرضى النفسيين :**

وجد الشربيني 1981* أن رأى أفراد الأسرة حول سلوك المريض اللذى يستلزم دخوله المستشفى يشتمل على الهياج (73.33 % من 71.05 % المعنية وأفراد الأسرة المسؤولين) ، الأرق ، ورفض الطعام. كما وجد أيضا أن أفراد الأسرة تميل إلى وصف المريض النفسي بأنه شخص ذو سلوك غريب وغير مسؤول و أنه يشكل خطرا على الآخرين. قام أفراد الأسرة بشرح طبيعة مرض ذويهم على أنه يكون بسبب اضطرابات نفسية من قبل 43,34 % من المعنيين و 42.11 % من المسؤولين ، في حين لا تتعدى 23.33 % ممن ينظر لمرض ذويهم على أنه ذهان.

(ثانيا) معرفة وموقف أقارب مرضى الفصام العقلى :

الشافى 2002 و كامل 2005* قارنوا نتائج قبل التعليم ، في نهاية البرنامج التعليمي وبعد 3 أشهر ، ووجد فروق ذات دلالة إحصائية عالية في جميع المستويات لصالح التعليم. وهذا يدل على أن التعليم يؤدي إلى تحسين المواقف والمعرفة في اقارب الفصام العقلي. البرنامج التعليمي له تأثير إيجابي على مواقف ومعرفة الأقارب الذي يستمر على مر الزمن ، حيث يؤدي أيضا إلى انخفاض عبء الرعاية على أقارب مرضى الفصام.

(ثالثا) موقف مقدمى الرعاية تجاه ذويهم المسنين :

وجد عبيدو 2000* أنه فيما يتعلق بالموقف من رعاية المرضى المسنين معظم الحالات (11 حالة, 36.6%) لا يقبل شخص آخر أو خدمة من المجتمع لتوفير الرعاية لأقاربهم المسنين. من ناحية أخرى ، فإن البعض الآخر (4 حالات) 13.3 (%) أظهرت أن رعاية المسنين ليست من واجباتهم ويجب على الحكومة أن تكون مسؤولة مسؤولية كاملة عن توفير احتياجات المسنين.

*=مراجع أنجليزية

وفيما يتعلق بالتقييم النقدي للدراسات ، فقد وجد أن معظم البحوث لا تذكر تصميم الدراسة ولا تصف تصميم العينة. عدد صغير فقط من الأبحاث قام بحساب حجم العينة الإحصائية لاختيار عدد مناسب من الحالات. كما أن حالات الدراسة لم توصف جيدا في العديد من الأبحاث. أيضا فإن العديد من الأبحاث لم تذكر وقت أو مكان الدراسة . و تقريبا في كل هذه الدراسات لم يتم أخذ موافقة مسبقة. و أيضا فإن الأبحاث لم يسبقها دراسة تجريبية لتبرير الدراسة الأصلية. خلاف ذلك ، فإن عنوان معظم الدراسات واضح و محدد ، كما أن الهدف من الدراسة مذكور بدقة و تفصيل، وقد تم ذكر أساليب تقييم الدراسة بعد التأكد من صحتها وموثوقيتها. كما تم ذكر الأساليب الإحصائية المستخدمة وتم مناقشتها في بعض الدراسات. وتم عرض معظم النتائج بطريقة واضحة (باستخدام الجداول والصور) ، ثم تم مقارنة النتائج مع نتائج البحوث الأخرى التي إما تدعم نفس النتائج أو تعرض نتائج أخرى مع وضع تفسير للنتائج مختلفة. و قد تم استخلاص التوصيات في العديد من الدراسات كما أن المظهر العام للدراسات ليس سيئا.