

Factors Influencing The Mental Health of School Age Children in Assiut Governorate

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Abstract

Mental health is a state of balance between the individual and the surrounding world also, it a state of harmony between himself with others coexistence between the realities of the self. other people and environment. **The aim** of this study was to identify the factors influencing mental health of school age children in Assiut Governorate. **Results** of this study revealed that the mean age of the studied children was (9.99 ± 0.35) years and they were 50.5% males and 49.5% females. There were a statistically significant differences between IQ levels and psychiatric disorder ($P=0.000$). There were a statistically significant difference between psychiatric disorders with malnutrition during pregnancy, exposed to stress during pregnancy, non follow up during pregnancy and receives medication during pregnancy ($p=0.008$, $p=0.047$, $p=0.002$ and $p=0.048$) respectively. **This study concluded** that the percentage of children who suffered from psychiatric disorders was higher in children who lives in rural area. Also, the percentage of children who suffered from psychiatric disorders was higher in those who had low socio-economic level. **Recommended:** That health education should gave to the parent through mass media to prevent child's mental disorder.

Key words: *Mental Health & Psychiatric Disorders.*

Introduction

School-age children are those 6-12 years of age. This time period is a stage of continuing growth and development for your young children. He will go through many changes in his physical, mental and social development (**Schult et al., 2001; wong, 2003**). There is no health without mental health, mental health is the way we think or feel about ourselves and what is going on around us and how we cope with the stresses of life-affects our sense of well-being as well as our physical health in this sense everyone has mental health (**WHO, 2010**). All children have the right to be happy and healthy lives and deserve access to effective care to prevent or treat any mental health problems that they may develop. However, there is a tremendous amount of unmet needs, and health disparities are particularly pronounced for children living in low-income communities, ethnic minority youth or those with special needs (**Knitzer, 2008**).

Mental disorders in children can cause major suffering for the individual and their families and impair educational, psychological and social development. They can be associated with a variety of physical health problems, risk behaviors', reduced school performance and vocational attainment, suicidal thinking and actions, later mental health problems, substance abuse and disharmony and stress in families (**Sanders et al., 2008**).

There are many Egyptian studies that revealed many factors affecting mental health of middle school age

children 59% of the sample reported experiencing feelings of fear or anxiety. Another study revealed a 7.9% prevalence rate of anxiety among Egyptian primary-school children. Behavioral problems in children are frequently interpreted as misbehavior that can be managed by punishment or reward within the family. Within the overcrowded schools, teachers are less likely to differentiate between children with a developmental disorder, adjustment disorder or mild learning disability (**Okasha et al., 2000**).

Early recognition and referral can make a positive difference to the child and family, in both the short and longer term. However, identifying mental health problems and responding appropriately can prove challenging for nurses working with children and young people (**Lederman et al., 2007**). With support and training, they will be able to provide screening and some simple interventions with children and their families. To do this effectively, nurses need to ensure they have good knowledge of how children and young people develop socially, emotionally and psychologically, and the risk factors that can lead to mental health problems. The skills and knowledge necessary for identifying potential mental health problems (**WHO, 2010**).

Aim of the Study

The aim of this study was to identify the factors influencing the mental health of school age children in Assiut Governorate .

Subjects & Method

Research design

A descriptive research design was used in this study.

Subjects

Setting of the study

The study was carried out in (6) Primary schools in Assiut (El-Wehda El-Arabia School, Mohammed Farid School, Ali Ibn Abi Talib School, Bahethat El-Badia School) to represent the urban areas and (El-Nasiriyah School in Abnob and El-Ghanayem Primary School) to represent the rural areas.

Sample

The study subjects consisted of 600 school age children of both sexes. (400 child from urban schools and 200 child from rural schools in Assiut Governorate (100 child from each school) the children were selected randomly according to the sitting arrangement in their classes.

Tools of the study

The following tools were used to collect the required data for this study and include:-

Tool (1): A structured questionnaire sheet

It was developed by the researcher and consists of three parts:-

Part I-Data related to the child as age, sex , number of the family residence, birth order and health history.

Part II-Data related to parents such as age, educational level, working condition, health condition, family size and marital condition.

Part III-Questions to assess factors affecting mental health of children as (Prenatal, natal and Postnatal history), Feeding, Vaccination, Medical history, Scholastic problems, Family history, Family events (stressors), environmental factors and Academic achievement.

Tool (2): Socioeconomic assessment scale

- This scale has been adopted from Abd El-Tawab (1998). It contains of four main variables, the educational level of the father and mother which divided into (illiterate, read & write, primary, preparatory, secondary and higher education), the occupation of the father and mother had divided to three categories (employee, skilled worker and unemployed), the total family monthly income, had ranged from <200 pound,200<800 pound and 800<1500 pound and life style of the family as cultural aspects (e.g. buy daily newspapers, weekly magazines, have library at home, membership in sporting club) and ownership of (taxi, private car, video-cassette, computer, dish (satellite), mobile phone and fax).

- The total score of the scale equal the sum of scores in each level. The total score summed up to 42. Families whose scores are 36-42 considered high social class, those who score 27- 35 are considered as middle social class and those whose scores ranged from 21-26 are considered low social class.

Tool (3):-The Stanford- Binet Intelligence

The Stanford- Binet Intelligence Scale: Fourth Edition (SB: FE) is a standardized test that measures intelligence and cognitive abilities in children and adults, from age two through mature adulthood. The Stanford Binet IQ Test is designed to test intelligence in four areas including verbal reasoning, quantitative reasoning, abstract and visual reasoning, and short-term memory skills. The test consists of 15 subtests, which are grouped into the four area scores. Not all subtests are administered to each age group; but six subtests are administered to all age levels. These subtests are: Vocabulary, comprehension, Pattern Analysis, Quantitative, Bead Memory, and Memory for Sentences. The number of tests administered and general test difficulty is adjusted based on the test taker's age and performance on the sub-test that measures word knowledge. The subtest measuring word knowledge is given to all test takers and is the first subtest administer.

IQ Range	Classification
140 and over	Genius or near genius
120-140	Very superior intelligence
110-120	Superior intelligence
90-110	Normal or average intelligence
80-90	Dullness
70-80	Borderline deficiency
Below 70	Definite feeble-mindedness

Classification of IQ (Stanford Binet 4th Edition).

Tool (4):- Mini Kids Arabic

Mini Kids Arabic (Mini International Neuropsychiatric Interview for children and adolescents We used Arabic version (Mohamed & Ghanemetal, 1999). It contains twenty one neuropsychiatric disorders. Used to assess psychiatric disorders in children.

Psychiatric disorders

No.	Psychiatric disorders
1.	Major Depressive Episode (MDE)
2.	Dysthymia
3.	Manic Episode
4.	Panic Disorder
5.	Separation Anxiety Disorder
6.	Social phobia
7.	Generalized Anxiety Disorder
8.	Obsessive Compulsive Disorder
9.	Sociality
10.	Psychosis
11.	Alcohol Abuse
12.	Drug Abuse/Depend.
13.	Anorexia Nervosa
14.	Bulimia Nervosa
15.	Post-Traumatic Stress Disorder(PTSD)
16.	Tourette's Disorder
17.	ADHD(C,I,H/I)
18.	Conduct Disorder
19.	Oppositional Defiant Disorder
20.	Adjustment Disorder
21.	Pervasive Developmental Disorder

psychiatric disorders including in mini kids

Method

An approval letter was taken from Dean of Faculty of Nursing to Directors of the study setting at Assiut governrate to conduct the study and this letter was presented to the directors of the selected schools. Before starting data collection a visit to each school was done by the researcher. The researcher introduced herself to the director of each school and presented to them a copy of approval letter. Then researcher introduced herself to the teachers who working in the school and to the studied children.

Validity and Reliability

Tool one was developed by the researcher and was tested for its content and validity by five experts in both pediatric and psychiatric field. Tool reliability was done. The other three tools were adopted from Abd El-Tawab (1998), Intelligence Quotient (I.Q) Stanford Binet 4th edition (1997) by psychologist from Assiut university hospital and Mini Kid Questionnaire Divid Shihan, (1998) by assistant lecture of psychiatry Assiut university hospital.

• Pilot study

It was carried out on 5% of the total children. To assess the clarity of the tools and to estimate the length of time needed to collect the data in the study.

Field work

The study was conducted in a period of one year from the 1st November 2012 to 30th of November 2013.

- The study was conducted on two shifts at the morning shift in (Mo Mohammed Farid School,

Bahethat El-Badia School, El-Nasiriyah School in Abnob and El-Ghanayem Primary School).While the afternoon in (El-Wehda El-Arabia School and Ali Ibn Abi Talib School).

- Interviewing of the studied children was conducted according to their available time to collect data: five or six child were interviewed per day. The time needed for each interview ranged from 45 minutes to one hour depended upon the response of the participant child.
- Interviewing of the studied children was conducted with parent to collect a structured questionnaire sheet from them. The researcher was met with parent, explained the purpose of the study, and asked for participation. The researcher started a face to face individual interview with parent and some of parent cannot be interview so I connected with them; each interview took about 20-30 minutes. Throughout this interview relevant information was recorded in the questionnaire sheet and socioeconomic assessment scale(about 6 parent per day).
- IQ scale was done by Psychologist Department of Neuropsychiatry Assiut University Hospitals and the researcher collect the data about socioeconomic assessment scale and Mini Kids Arabic.

Ethical considerations

Confidentiality of the research was asserted and the obtained data was available only to the researcher. Informed consent was taken from the directors of the selected schools for studies in Assiut. Also, a written consent was taken from the studied child's parents and they were reassured that information obtained would be confidential and used only for the purpose of the study.

Statistical analysis

The collected data was coded, tabulated and analyzed using the statistical package for social science programs (SPSS) version 16 windows Microsoft. Continuous data was expressed as frequency, percentage, means and SD. Discrete data was expressed as frequency and percentage. P.value considered statistically significant when ($p < 0.05$). Less than (0.001) was considered highly significant.

Results

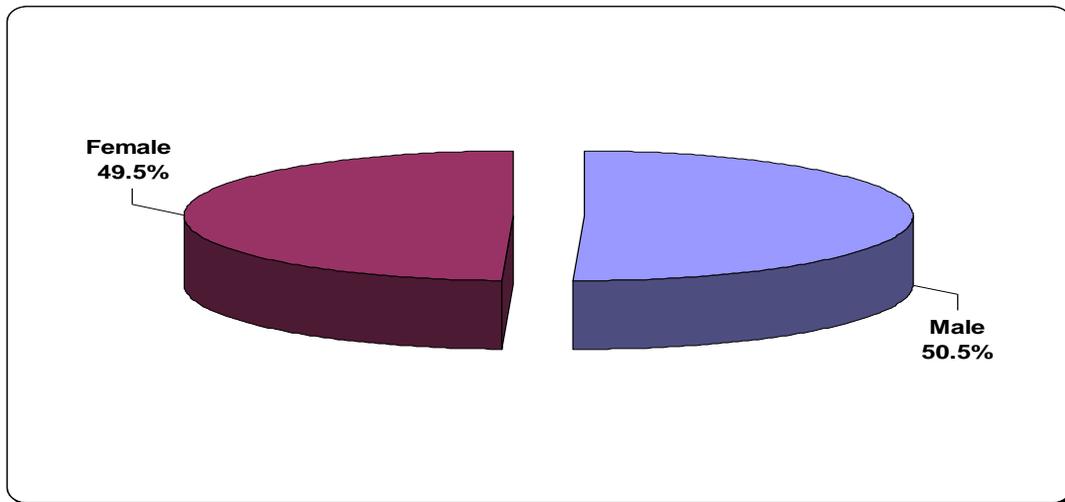


Fig. (1): Percentage distribution of the studied children according to their sex

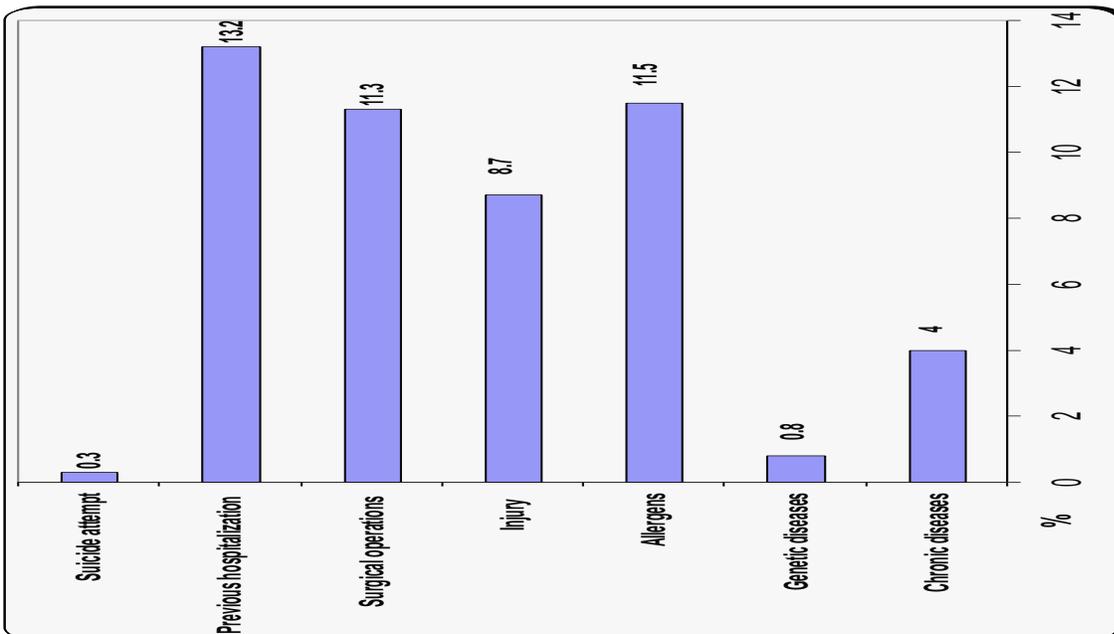


Fig. (2): Percentage distribution of the of studied children according to their Medical history

Table (1): Relationship between psychiatric disorders and personal characteristics of the studied children.

Items	Psychiatric disorders				P-value
	Yes (n= 417)		No (n= 183)		
	No.	%	No.	%	
Age					0.994
9 years	26	70.3	11	29.7	
10 years	373	69.5	164	30.5	
11 – 12 years	18	69.2	8	30.8	
Sex					0.000*
Male	251	82.8	52	17.2	
Female	166	55.9	131	44.1	

Items	Psychiatric disorders				P-value
	Yes (n= 417)		No (n= 183)		
	No.	%	No.	%	
Residence					
Rural	97	79.5	25	20.5	0.007*
Urban	320	66.9	158	33.1	
Number of family members					
3 – 5	137	63.7	78	36.3	0.060
6 – 7	239	73.3	87	26.7	
8 or more	41	69.5	18	30.5	
Birth order					
First	113	67.7	54	32.3	0.687
Second	102	68.0	48	32.0	
Third	84	67.2	41	32.8	
Fourth	63	75.9	20	24.1	
Fifth	31	75.6	10	24.4	
Sixth or more	24	70.6	10	29.4	

Table (2): Relationship between psychiatric disorders and socio-economic levels of the studied children families

Socio-economic levels	Psychiatric disorders				P-value
	Yes (n= 417)		No (n= 183)		
	No.	%	No.	%	
Low	65	80.2	16	19.8	0.054
Middle	273	66.9	135	33.1	
High	79	71.2	32	28.8	

Table (3): Relationship between psychiatric disorders and IQ levels.

IQ levels	Psychiatric disorders				P-value
	Yes (n= 417)		No (n= 183)		
	No.	%	No.	%	
Definite feeble-mindedness	96	23.0	8	4.4	0.000*
Borderline deficiency	165	39.6	56	30.6	
Dullness	56	13.4	26	14.2	
Normal or average intelligence	97	23.3	88	48.1	
Superior intelligence	3	0.7	4	2.2	
Very superior intelligence	0	0.0	1	0.5	

Table (4): Relationship between psychiatric disorders and pre-natal factors related to the studied children mothers.

Prenatal risk factors	Psychiatric disorders				P-value
	Yes (n= 417)		No (n= 183)		
	No.	%	No.	%	
Bleeding during pregnancy	29	78.4	8	21.6	0.226
Threatened abortion	34	72.3	13	27.7	0.660
Infection during pregnancy	5	100.0	0	0.0	0.317
Receive medication during pregnancy	50	60.2	33	39.8	0.048*
Gestational diabetes during pregnancy	2	66.7	1	33.3	1.000
Hypertension during pregnancy	33	70.2	14	29.8	0.912
Non follow up during pregnancy	330	66.8	164	33.2	0.002*
Malnutrition during pregnancy	88	80.0	22	20.0	0.008*
Smoking during pregnancy	1	33.3	2	66.7	0.462
Exposed to stress during pregnancy	88	77.2	26	22.8	0.047*
Rh factor					
Positive	339	70.5	142	29.5	0.295
Negative	78	65.5	41	34.5	

Figure (1) Show Percentage distribution of the studied children according to their sex. It was found that, 50.5% males and 49.5% females.

Figure (2): shows percentage of the medical history of the studied children. About less than half (49.5%) had medical history. divided to (13.2%) had previous hospitalization, (11.5%) of the studied children suffer from allergies, (11.3%) had surgical operations, (8.7%) had injuries, (4.0%) suffer from chronic disease and only (0.8%) had Genetic diseases.

Table (1): Shows relationship between psychiatric disorders and personal characteristics of the studied children. It was found that, there is no statistical relation between psychiatric disorders and age of the studied children ($P=0.994$). It was found that there is a statistical relation between psychiatric disorders and residence of the studied children ($P= 0.007$). and the percentage of children who suffering from psychiatric disorders was higher in child who lives in rural area (79.5%) compared with children who live in urban area (66.9%).

Table (2): Demonstrate relationship between psychiatric disorders and socio-economic levels of the studied children families. It was found that, there was a statistical relation between psychiatric disorders and social data ($P= 0.054$). The percentage of children who suffered from psychiatric disorders was higher in the low socio-economic level (80.2%). As regard the percentage of psychiatric disorders was higher in the middle socio-economic level compared with no psychiatric disorders (66.9 % and 33.1% respectively) also, the children who suffered from psychiatric disorders was higher in high socio-economic level

compared with mentally healthy children (71.2% and 28.8% respectively).

Table (3): Shows relationship between psychiatric disorders and IQ levels. It was found that, there were a statistically significant differences between IQ levels and psychiatric disorder at ($P=0.000$). The borderline deficiency was the highest percentage in the IQ levels (39.6%) in children with psychiatric disorders. while, the normal or average intelligence was the highest percentage (48.1%) in children with non-psychiatric disorders compared with children who suffered from psychiatric disorders (23.3%).

Table (4):Show relationship between psychiatric disorders and pre-natal factors related to the studied children's mothers. It was found that, there are a statistically significant difference between psychiatric disorders with malnutrition during pregnancy, exposed to stress during pregnancy, un follow up during pregnancy and receives medication during pregnancy ($p=0.008$, $p=0.047$, $p=0.002$ and $p=0.048$) respectively.

Discussion

Mental health for children has a strong interrelationship with normal growth and development. Mental health can be understood as the capacity of individuals within groups and the environment to interact with one another in ways that promote subjective wellbeing, optimal development and use of mental abilities (cognitive, affective and relational) and achievement of individual and collective goals consistent with justice (Kielsing et al., 2011).

Regarding to relation between children sex and psychiatric disorder these study indicated that there are highly significance differences between children sex and psychiatric disorder. These finding are consistent with those of **Abu Elkiat (2008)** who found that there are significance differences between children sex and the presents of psychiatric disorder. On other hand these finding are in contrast with **Thomas (2001) & Lelliott, (1999)** studied who found that, there were no significance differences between children sex and the presents of psychiatric disorder.

According to relation between residence and psychiatric disorders among children, findings of this study illustrated that there are a significance differences between children residence and the presents of psychiatric disorder. These results are consistence with **Hafez, (1991)** results who found that, a significance differences between residence and the presents psychiatric disorders.

Regarding to relation between numbers of family member with the presents of psychiatric disorders among children. The current study showed that there are statistical significant differences was found between number of family member and the presents of psychiatric disorders among children. These results are disagreeing with result of **Ahmed, (2010)**, who found that there is no statistically significant relation between number of family member and psychiatric disorders. Also, this finding in contrast with finding of **Richard et al., (1999)**, they found that, no relation between number of children and the presents of psychiatric disorders.

Also, the present study showed that, there were no significant differences between children birth order and psychiatric disorders. This finding is supported by **Abu Elkiat (2008)**, who found that, there was no relation between psychiatric disorders and birth order. Also, these results are consistent with **Ahmed, (2010)**, who found that, there were no statistical significant differences between birth order of children and the presents of psychiatric disorder. These findings are disagreement with study carried out by **Antony et al., (2001) & myers, (2004)**, who reported a highly significant differences between phobia and children birth order in children. And **Rahi et al., (2005)**, found that the prevalence of psychiatric disorders was higher statistical significantly difference in the first born children.

Concerning to relation between socio-economic level and the presents of psychiatric disorders among children based on the results of the present study, it was observed that, there was a statistical relation between psychiatric disorder and socio- economic level of the family. These results are agreement with **Abu Elkiat (2008)**, who found that, there are a

statistical relation between psychiatric disorder and socio- economic level of the family. Also, similar results reported by **Abdel Fattah (2000)**, who found that, there are was a statistical relation between psychiatric disorder and socio- economic level of the family. Also, this results were supported with **Jacobson, (2007)**, they found that, there was a statistical relation between psychiatric disorder and socio- economic level. These findings are disagreement with study carried out by **Kork, (1990) & Stinson, (1999)** they reported that there was a statistical relation between psychiatric disorder and socio- economic level of the family. Also, this results in contrast with **Kohen & Melvin, (2000)** who reported that, there are no significance differences between psychiatric disorder and socio- economic level.

Regarding to, relation between IQ level and psychiatric disorders this study revealed that, there are a statistically significant differences between psychiatric disorders and IQ levels. This results are in an agreement with the study of **May Jerry, (1999)** who found that there was a relation between IQ level and psychiatric disorders. These findings are disagreement with study carried out by **Abdel Fattah, (2000)**, who found that, there were no significant differences between IQ level and psychiatric disorders.

As regard to, relation between psychiatric disorders and prenatal factors this study illustrated that, there were statistical significance differences between psychiatric disorders and exposed to stress during pregnancy. These results are in agreement with **DiPietro, (2004)**, who mentioned that, a number of retrospective and epidemiological studies have linked severe stress during pregnancy to higher incidences of mental illness in adult offspring, such as schizophrenia and severe depression. Also, this finding are consistence with study carried out by **Schetter & Tanner, (2012)**, found that, there was statistical significance differences between psychiatric disorders and exposed to stress during pregnancy.

Concerning to relation between psychiatric disorders and diabetes during pregnancy this result indicated that there are no relation between psychiatric disorders and diabetes during pregnancy. This result are disagree with **Van Lieshout & Voruganti, (2008)**, who mentioned that the children of mothers who experienced diabetes mellitus during their pregnancies are 7 times more likely to develop schizophrenia, compared with those who were not exposed to diabetic pregnancy.

As regard to, relation between psychiatric disorders and smoking during pregnancy this study illustrated that, there was no statistical significance differences

between psychiatric disorders and smoking during pregnancy. This result are disagree with **Linnet et al., (2003)**, who found that prenatal exposure to nicotine may result in Attention Deficit Hyperactivity Disorder symptoms.

According to, relation between psychiatric disorders and hypertension during pregnancy this study mentioned that, there was no statistical significance differences between psychiatric disorders and hypertension during pregnancy. This result are disagree with **Robinson, (2013)**, who found that High blood pressure-related diseases during pregnancy have been linked to behavioral and mental health problems in children.

Conclusion

Based on the results of the present study, It was concluded that there was relationship between psychiatric disorders and personal characteristics of the studied children. Malnutrition and exposed to stress during pregnancy are the most common factor influencing mental health of school age children Also, there were a statistically significant differences between IQ levels and psychiatric disorders in the school age children.

Recommendations

- Parent must have enough knowledge about normal growth and development of children especially the psychological development and its needs.
- Health education should be given to the parent through mass media to prevent child's mental disorder.
- Designing a directive program for the psychiatric disorders' children.

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