Deanship of Graduate Studies

Al-Quds University

Prevalence of Attention Deficit Hyperactivity Disorder and Conduct Disorder among Children in Gaza governorates

Ikram Saleem Elumour

MPH Thesis

Jerusalem – Palestine

1429-2008

Deanship of Graduate Studies

Al-Quds University

Prevalence of Attention Deficit Hyperactivity Disorder and Conduct Disorder among Children in Gaza governorates

Submitted by

Ikram Saleem Elumour

B.Sc. of Nursing

Gaza - Palestine

Supervisor

Dr. Abdel Aziz Mousa Thabet Assistant Professor of Psychiatry School of Public Health

A thesis Submitted in Partial fulfillment of requirements for the degree of Master of Community Mental Health

School of Public Health - Gaza Al-Quds University- Palestine

1429-2008

Community Mental Health

School of Public Health

Deanship of Graduate Studies

Al –Quds University



Prevalence of Attention Deficit Hyperactive Disorder and Conduct Disorder among Children in Gaza Governorates

	Student n	name:	Ikram	Saleem	Elumour
--	-----------	-------	-------	--------	---------

Registration No.:20511514

follows:

Supervisor: Dr. Abdel Aziz Mousa Thabet

3. Prof. Dr. Mohamed El Helou External Examiner

Master thesis submitted and accepted, Date 25/5/2008

The names and signatures of the examining committee members are as

Dr. Abdel Aziz Thabet Head of Committee Dr. Bassam Abu Hamad Internal Examiner

Al-Quds University

2008

بسم الله الرحمن الرحيم

يرفع اللهُ الذينَ آمَنُوا مِنكُم والذينَ أُوتُوا العِلْمَ دَمَرِ جَاتٍ واللهُ بِمَا تَعمَلُونَ ﴿

المنافعة الم

صدق الله العظيمر سورة المجادلة

الآية " 11 "

Declaration

I certify that this thesis submitted for the degree of Master is the result of my own research, except where otherwise acknowledged, and that this thesis (or any part of the same) has not been submitted for a higher degree to any other university or institution.

Signed:.....

Ikram Saleem Elumour

25/5/2008

Dedication

I would like to dedicate this work
to the precious soul of
my father, my mother
and to my family

Ikram

Acknowledgment

I would like to knowledge my supervisor Dr. Abdel Aziz Thabet, for his guidance, patience and support to achieve this work. My deepest gratitude to Dr. Mohamed El Heluo and Dr. Bassam Abu Hamad for their careful reading and critique of the initial drafts of the thesis and for their helpful suggestion. In addition, I thank the staff of lecturers of the school of public health. I want to thank my family for their support and love. Special thanks to my colleagues Mohamed El Jadily; Soma Baroud; Salwa Tibi; Ahmed El-kahlout; Hend Abu Eyada for their love and respect. My sincere thank to Mr. Emad El-Kahlout for his guidance and helping in statistical analysis and final layout. Also I would like to thank my dear colleagues Dr. Tawfik El Maddaga; Mr. Samy Mansour; Mr. Salem Al-Arjani for their support and encouragements. Many thanks to every one who participated in this study and every one whom not mentioned by the name.

Abstract

This study aimed at assessing the prevalence of behavioral problems; Attention Deficit Hyperactivity Disorder (ADHD) and Conduct Disorder (CD) among children of the study sample, and to determine the differences in behavioral problems according to gender and other socioeconomic factors of the children. A stratified random sample of 388 children; 194 males (50.0%) and 194 females (50.0%) were selected from eight preparatory schools were equally distributed between UNRWA and governmental from Khan-Younis and Rafah Governorates. Data collected by using structured clinical interview of mothers and fathers for DSM-IV diagnosis of ADHD, CD questionnaire DSM-IV diagnosis of Conduct disorder, and Socio-economic questionnaire. This study found that there were 4.4% as rated by parents and 9.8% as rated by teachers of the children were ADHD cases. However there were 15.7% as rated by parents and 17.5% as rated by students of the study sample were conduct disorder children. There were statistical significant differences between boys and girls in ADHD, in favor to boys were rated by parents p=0.001, and rated by teachers p=0.001. There were statistical significant differences in ADHD according to the sponsored of the schools, children who studied in governmental schools more suffering from ADHD than who studied in UNRWA schools as rated by teacher p=0.001. There were a significant statistical difference in ADHD by patents according to the level of classes 0.006, in favor of those children who were in the level of 7^{th} class. There were significant statistical differences in ADHD disorders rated by teachers according to the family income p=0.006, father education p=0.004, father work p=0.001 and mother work p=0.045. In favor to the children who had low family income "< 600 NIS", primary school of father education, and had unemployee fathers, and in favor to the children with house wife mother. While; there were no significant statistical difference in total ADHD rated by parents and teachers according to the place of residency, number of siblings, and according to the mother education. There were statistical significant differences between boys and girls in CD, in favor to boys as rated by parents p=0.001, and as rated by students p=0.001. However; there were no statistical significant differences in CD by parents and by students according to the sponsored of the schools, level of classes, place of residency, number of siblings, family income, father and mother education or father and mother work of the study sample. There were 6.7% as rated by parents of the study sample were inattentive, 5.2% as rated by parents of the study sample were hyperactive- impulsive, and 3.4% as rated by parents of the study sample were ADHD children were co-morbid CD. The conclusion of this study was, there were positive significant correlation between total scores of ADHD and total CD and CD subscales by

parents among the study sample of children P=0.001. In addition; there were positive significant correlation between total scores of CD and total ADHD and ADHD subscales by parents among the study sample of the children P=0.001, also their were positive significant correlation between ADHD, CD and child gender, father education, classes level, family income, father and mother education.

)ADHD) (CD 388 %50 194 %50 194 DSM-IV DSM-IV . % 9.8 % 4.4 % 17.5 % 15.7 .0.001 0.001 .0.001 0.006 0.045 0.001 0.004 0.006 (600)

VII

(

CD

)

. 0.001 0.001

.

%5.2 %6.7

%3.4

) (co-morbidity) CD .(

.(0.001)

.(0.001)

Table of Contents

	Subjects	Page
Declaration		ii
Dedication		iii
Acknowledge	ement	iv
Abstract		v
Arabic abstr	act	vii
Table of cont	tents	ix
List of tables		xiv
List of annex	es	xvi
Chapter	1 Introduction	Page
1.1	Introduction	2
1.2	Justification of the study	6
1.3	Objectives	6
1.3.2	Specific Objectives	6
1.4	Research Questions	7
1.5	Operational definitions	8
1.5.1	Socioeconomic Factors	8
1.5.2	Behavioral Problems	8
1.5.3	ADHD	8
1.5.4	Conduct disorders	8
1.5.5	Children	8
1.6	Geographic background	8
1.7	General view of the chapters	10
Chapter	Literature review	Page
2.1	Theoretical approaches of ADHD	12
2.2	Theories of conduct disorder	
2.3	Attention Deficit Hyperactivity Disorder (ADHD) studies	22
2.4	Studies of conduct disorder (CD)	27
2.5	Attention Deficit Hyperactivity Disorder (ADHD) and Co-morbidity of conduct disorder (CD) studies	32
2.6	Emotional and behavior problems with ADHD and Conduct Disorder studies	38
2.7	Conclusion of the previous studies	44

Chapte	r 3 Theoretical Framework	Page
3.1	Attention Deficit Hyperactivity Disorder "ADHD"	46
3.1.1	Prevalence of ADHA	48
3.1.2	Symptoms of ADHD	49
3.1.3	Diagnosis of ADHD	53
3.1.4	Measuring ADHD	55
3.1.5	Causes of ADHD	56
3.1.6	Treatments for ADHD	58
3.1.7	Psychiatric Co-morbid Disorders	64
3.2	Conduct disorder	68
3.2.1	Definition and Characteristics	68
3.2.2	Prevalence of Conduct Disorder	69
3.2.3	Diagnosis of Conduct Disorders	70
3.2.4	Etiology	71
3.2.5	Parent Psychopathology	72
3.2.6	Parenting Inconsistency	73
3.2.7	Peer Relations	74
3.2.8	The Organic Context	74
3.2.9	Psychiatric correlations to CD	76
3.3	Socio-economic factors associated to ADHD and CD	76

Chapter	4 Methodology	Page
4.2	Study design	82
4.3	Population and sample	82
4.3.1	Study population	82
4.3.2	Study sample	82
4.4	Place of the research	83
4.5	Ethical considerations	83
4.6	Instruments of the study	84
4.6.1	Socio-economic questionnaire	84
4.6.2	Structured Clinical Interview of mothers and fathers for DSM-IV diagnosis of ADHD (APA, 1994), prepared by (Thabet, 2005)	84
4.6.3	Conduct Disorder CD questionnaire DSM-IV diagnosis of ADHD (APA, 1994)	85
4.7	Pilot study	85
4.8	Data entry and analysis	86
4.9	Eligibility criteria	86
4.9.1	Inclusion criteria	86
4.9.2	Exclusion criteria	87
4.10	Limitations	87
Chapter 5		Page
5.1	Socio-demographic results of the study sample	89
5.2	Prevalence and severity of ADHD	93
5.2.1	Prevalence of symptoms of ADHD	93
5.2.2	Severity of ADHD among the study sample	94
5.3	Comparing between ADHD and gender "Boys – Girls" of the study sample	94

5.4	Comparing between ADHD and the sponsored of the schools	96
	"Government and UNRWA" among the study sample	
5.5	Comparing between ADHD according to the classes "7th- 8th- and	97
	9th class" among the study sample	
5.6	Comparing between ADHD according to the place of residence "city-	100
	village- camp" among the study sample	
5.7	Comparing between ADHD according to the number of siblings "≤ 4	101
	siblings, $5-7$, ≥ 8 " among the study sample	
5.8	Comparing between ADHD according to the family income "< 600	103
	NIS, $601-1000$, $1001-1500$, > 1500 NIS" among the study sample	
5.9	Comparing between ADHD according to the father education among	105
	the study sample	
5.10	Comparing between ADHD according to the mother education	107
	among the study sample	
5.11	Comparing between ADHD according to the father work among the	109
	study sample	
5.12	Comparing between ADHD according to the mother's work among	111
	the study sample	
5.13	Prevalence and severity of Conduct Disorder	112
5.13.1	Prevalence of symptoms of Conduct Disorder	112
5.13.2	Severity of CD among the study sample	113
5.14	Comparing between CD and gender "Boys – Girls" of the study	114
	sample	
5.15	Comparing between CD and the sponsored of the schools "Government and	115
	UNRWA" among the study sample	
5.16	Comparing between CD according to the classes "7th- 8th- and 9th class" among the	117
	study sample	110
5.17	Comparing between CD according to the place of residence "city- village- camp" among the study sample	118