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Guilt, Shame, Feeling of Burden and Child Parent Relationship among Parents of Children with Attention Deficit Hyperactivity Disorder

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Abstract:
Background: Attention-deficit hyperactivity disorder is the most common behavioral disease in kids. It is a chronic condition that impacts both the kids and their parents. The parents of such children reported increased degrees of guilt, shame and burden. **Aim of the study:** The presented study aims to assess guilt, shame, feeling of burden and child parent relationship among parents of children with attention deficit hyperactivity disorder. **Subjects and Method: Design:** The study design used was a descriptive correlational one. **Subjects:** A Purposive sample of one hundred parents of ADHD child. **Tools:** A self-administered questionnaire, guilt and shame experience scale, Zarit burden interview as well as child-parent relationship scale-short form were utilized. **Results:** It was found that, 45% are in the age group "30- <40" years, approximately 66% of the studied parents experienced moderate levels of guilt and shame, while 70% of them have a moderate to severe burden level. More than three-quarters of the studied parents has child-parent conflict. Also, about two thirds of them have a poor child-parent relationship. **Conclusion:** A significant positive correlation was found between shame and guilt experiences and burden felt by the caregiver. Both of shame and guilt experience and burden felt by the caregiver was positively correlated to child parent conflict. **Recommendations:** Parent-oriented psycho-education program is needed for the management of ADHD-associated feelings of shame, guilt, burden, conflict and poor child-parent relationships.

***Keywords**: Attention Deficit Hyperactivity Disorder, Burden, Child Parent Relationship, Guilt & Shame*

Introduction:
World Health Organization (WHO) indicates that one of the most common neuro-developmental conditions is Attention Deficit Hyperactivity Disorder (ADHD) among kids which are considered today's the greatest public health challenges worldwide **(Borge et al., 2021)**. ADHD is mentioned in the Diagnostic Statistical Manual version-5 (DSM-V) as "a disorder that is associated with a minimum of 6 symptoms of inattention and/or at least 6 symptoms of hyperactivity and impulsivity; the disorder's onset must occur before the age of twelve, and its symptoms have been severe enough that prevent one from proper functioning in two or more different areas, like house and school" **(Blanken et al., 2021)**.
Unfortunately, "ADHD" is a chronic, early-onset condition that causes severe functional deficits in a wide range of life areas. The impacted people are more likely to have social issues, emotional dysfunction, disruptive behavior, poor peer connections, worse academic success, and greater rates of anxiety and mood disorders **(Pang et al., 2021& Sánchez et al., 2019)**. Children with ADHD in particular may greatly dislike tasks that require concentration or mental effort and are easily distracted by environmental events. In addition to anxiety and depression, this illness may be linked to other problems including conduct disorder, disobedience, and stubbornness if it is not addressed and treated in childhood **(Beaton et al., 2022)**.
DSM-V classified ADHD into three subtypes: The predominantly hyperactive-impulsive type, the predominantly inattentive type, and the combined type, which is characterized by the both inattentiveness and hyperactivity-impulsivity. Since ADHD is regarded as a lifelong disorder, inadequate treatment may have a negative impact on the children functioning as they approach adolescence and adulthood **(American Psychiatric Association, 2013)**. There hasn't been a single identified cause of this condition as of yet. Although the exact origin of ADHD is unknown, a number of variables may be involved, including: being preterm, being underweight at delivery, and abusing drugs, alcohol, or cigarettes while pregnant **(Schellack et al., 2019)**.
Taking into account, some parents naturally go through stages of shock, denial, sadness, or depression, followed by emotions of guilt and shame beyond the first, often incomplete acceptance of diagnosing their kid as ADHD and after all of this must deal with further challenges in daily life **(El-Nady & Abdel-Aziz, 2019 and Kocabıyık & Fazlıoğlu, 2018)**. When parents respond to the ADHD children's misbehavior, guilt predicts adaptive

parenting try to make amends and make up for the harm their kid has caused, while shame predicts dysfunctional parenting harsh punishment and withholding emotional warmth **(Mostafavi et al., (2020)**.

Interestingly, guilt and shame are both morally conscious and self-evaluative emotions that include discomfort brought on by perceived shortcomings or offences. People who are guilty feel tension, remorse and sorry of the "bad thing done." In a same spirit, shame makes people feel exposer, degradation, and worthlessness. Shame-related feelings frequently result in a need to run away or hide **(Nicolas et al., 2019**).

Unfortunately, parents hold a burden of caring for children with ADHD worldwide perform their parental and non-parental tasks less well than parents of normal children. Caregiver burden is defined as the experiences that occur from providing assistance and support to someone else who is unable to care for themselves due to illness or disability on an emotional, psychological, financial, social, and physical level **(Quintero et al., 2018)**. Parental physical, mental, social, and psychological tiredness will increase consequently as the child grow older hence negatively impact the children's health. As a result, this disease will impact significantly on the child's parents and other family members **(Penuelas-Calvo et al., 2021)**.

Apart from that, even though the primary caregiver must spend more money and use more services to care for the kid, the stress of raising an ADHD child may also negatively impact their productivity at work. Mothers bear greater responsibility for their children than do dads. They also deal with teachers, school personnel, and health care professionals more frequently, which add to their load and emotional strain **(Abd El Massehh et al., 2023)**. Studies showed that those mothers feel more fatigue, depressed, hopeless, guilty and embarrassed. As a result, their physical and mental well-being suffer and become more fearful of what lies ahead **(Burke et al., 2018 and Mofokeng & van der Wath, 2017)**.

Parent-child clashes can grow when children gain more independence and acknowledge the value of parents in how they grow up. The existence of health conditions like ADHD, which children may find especially challenging at times, may intensify these confrontations **(Movahed et al., 2023)**. It is not surprising that children with ADHD interact more negatively with their parents than those without the disorder. Those children are more likely to have more serious behavioral issues during adolescence if their parent-child relationships are defined by conflict; on the other hand, positive parenting is negatively correlated with the emergence of conduct issues in both children with or without ADHD **(Meamarbashi et al., 2020)**.

Luckily, good bonds between children and parents are crucial for a child's normal development. Also, positive attachment relates to several advantageous consequences for ADHD children such as, behavioral, social and emotional outcomes **(Emma et al., 2017)**. Additionally, the life quality and course of treatment for kids with ADHD are greatly influenced by the way parents interact with them. As a result, family-centered methods and parent's cooperation are advised when treating behavioral problems in these children **(Siu, Lo, 2020)**.

Importantly, nurses play a critical role in assisting parents of children with ADHD in lessening the psychological burden and distress. Nurses can teach parents and other caregivers new strategies for calming hyperactive children and getting them involved in more fulfilling activities **(Belleza, 2021)**. Additionally, nurses aid parents in comprehending the rationale behind any diagnostic procedure, different courses of treatment and the importance of follow-up to reassess their child's case and ensure the course of treatment and diagnosis appropriateness over time. Finally, as **El Sebaie (2016)** pointed out, nurses assist families in comprehending and adjusting to unavoidable uncertainties.

Significance of the study:

The estimated prevalence of ADHD is 7.2% (129 million) worldwide. Girls (6%) are less likely than boys (13%) to have an ADHD diagnosis **(Bitsko et al., 2022)**. Within the Arab world, ADHD prevalence in the Saudi populace was 12.4% (95% confidence interval: 5.4%–26%). The prevalence rates for presentations of the Inattentive ADHD type and the Hyperactive one were 2.9% (95% CI: 0.3%–23.3%) and 2.5% (95% CI: 0.2%–20.5%), respectively. The prevalence of ADHD combined type was 2.5% (95% CI: 0.2%–20.5%) **(Aljadani et al., 2023)**.

As ADHD children's parents experience problems that put them at a great risk of experiencing guilt and shame, limiting parenting strategies and other adverse psychological effects that may lead to a poor child-parent relationship **(Leitch, et al., 2019)**. Additionally, there are lacks of the studies on the hardships faced by parents of children with ADHD, particularly in Egypt. Therefore, it became necessary to assess guilt and shame, feelings of burden, and child-parent relationships among those parents of children with ADHD.

Aim of the study:

The presented study aims to assess guilt, shame, feeling of burden and child parent relationship among parents of children with attention deficit hyperactivity disorder.

Research questions:

1- What are the levels of guilt, shame and burden among parents of ADHD children?
2- What is the style of child parent relationship among ADHD children's parents?
3- Are there relationships between guilt, shame and burden and child parent relationship among ADHD children's parents?

Subjects and Method

Research Design:

The current study used a descriptive correlational research approach. Non-experimental kind of quantitative study, that examine the association between two different variables without modifying or controlling any of them **(Bhandari, 2022)**.

Research Setting:

This study was conducted at New Minia City Hospital's children and adolescent outpatient clinic, which provides mental health and addiction treatment services. The clinic for outpatients is open three days a week, from 9 a.m. to 12 p.m. on Saturday, Monday, and Wednesday. The hospital serves governorate of Minia and its nine districts.

Research Subjects:

A Purposive sample included one hundred (100) parents of ADHD child. A certain mathematical formula developed by **Thompson, (2012)** was used to ascertain this sample size.

$$\text{that is : } n = \frac{N}{(N-1)B2+1}$$

n= sample size, N= total entire population which was (125), and B= proportion of error (0.05), this sample size formula was. The study sample was chosen using the subsequent inclusion and exclusion standards:

Inclusion criteria:

- Parents of the ADHD child with age ranges form (6-12) years.
- Parents of all types of ADHD children who are diagnosed according to (DSM-V).

Exclusion criteria:

- Parents of kids of mental retardation, conduct disorder, autistic disorders, and or deviant disorder).

Data collection Tools: Data were collected through the utilization of the following listed tools**:**

Tool (I): A Self-administered questionnaire:

The researcher developed it in an Arabic language to cover demographic characteristics of the parents and their ADHD children which divided into two parts; **Part I:** The parents' personal information like: age, gender, education, working status, residence as well as accompanying person with children. **Part II:** ADHD child personal data as: child age, gender, school grade, severity of ADHD, as well as the family history of ADHD.

Tool (II): Guilt and Shame Experience Scale (GSES) (Malinakova et al., 2020): This scale was initially created by **Malinakova et al. (2019)** in an English language and translated by researches into Arabic which included ten elements. However, an 8-item version had higher qualities according to a psychometric evaluation was finalized by **Malinakova et al. (2020)** and employed in this study. **GSES** is a self-assessment measure of one's experiences of guilt and shame which was divided into two subscales guilt and a shame one, each having four items; Items 2, 4, 6, and 8 are part of the guilt subscale, whereas items 1, 3, 5, and 7 are part of the shame subscale.

Respondents use a four-point Likert scale ranging from "not at all" (1) to "significantly" (4), to indicate how much they agree with each item. The GSES's overall score is calculated by adding the answers to each item and it can vary from 8 to 32. An increased score is indicative of more feelings of shame and guilt experiences. Interpretation of the scores includes the following: 8-16: low guilt and shame experience, 17-24: moderate guilt and shame experience, 25-32: severe guilt and shame experience.

Tool (III): Zarit Burden Interview (ZBI) (**Zarit et al., 1980):**

Zarit et al. (1980) designed (ZBI) in an English language and translated by researches into Arabic to assess and evaluate the burden felt by the caregiver through addressing the perceived impact of the act of providing care on the social activities, physical and emotional health as well as financial situation. It has 22 items with ratings ranging from 0 (never) to 4 (nearly always) using a Likert scale of 5 points. The aggregate of the item scores yields a total that varies between 0 and 88, with a higher score indicates greater burden. Interpretation of score includes the following: Little to No Burden falls between 0 and 20, Mild to Moderate Burden falls between 21 and 40, 41–60 refers to Moderate to Severe Burden, while, 61–88 indicates Severe Burden.

Tool (IV): Child-Parent Relationship Scale – Short Form (CPRS-SF) which was developed by (Driscoll & Pianta, 2011)

Driscoll & Pianta (2011) developed the child-parent relationship scale short-form (CPRS-SF) that was applied by parents to report how they interact with their kids in this study. CPRS-SF consists of fifteen questions divided into the closeness and conflict subscale; that are summed to create separate summed scores: The seven-item closeness subscale reflects how parents feel about the way the kids express affection and open communication.

On the other hand, the eight-item conflict subscale evaluates parents' perceptions of negativity and conflict with the kid. A Likert scale with five points,

varying from 1 (certainly does not apply) to 5 (clearly applies), is used to score every item on the CPRS-SF. Conflict Items included: aggregation of the responses' value for the items: 2, 4, 8, 10, 11, 12, 13, and 14; A relationship is more conflictual if the conflict subscale score is greater, where the score ranges from 8-40. Whereas, closeness items identify child-parent closeness included: aggregation of the responses' value for the items: 1, 3, 5, 6, 7, 9, and 15; A relationship is warmer and close if the closeness subscale score is greater, where the score ranges from 7-35.

Validity and Reliability of the study tools:

Tools were examined for validity by a panel of five professors of Psychiatric and Mental Health Nursing, to know items' phrasing, form simplicity, terms, sequences, applicability and importance. The present study tools contained proper data that were related to the study's objective according to the jury members' opinion to assess the items' internal consistency that make up all research tool; the reliability test was determined using Cronbach's Alpha Coefficient. The Cronbach's alpha value of the GSES is 0.896, and of the ZBI is 0.903, and for the CPRS-SF is 0.901.

Pilot Study:

Pilot testing of the research tools involved the recruitment of 10 parents, or 10% of the overall population. The tools were tested for applicability, comprehensiveness, clarity, time spent in filling out, as well as for the study process feasibility. Since the evaluation was left unaltered, the pilot sample was combined with the main research sample.

Ethical considerations:

A preliminary written agreement was acquired from Minia University's Faculty of Nursing's "Research Ethical Committee." Because the study adhered to standard clinical ethical guidelines, there was no harm to study respondents and anonymity was guaranteed during gathering data; and informed oral consent was granted from the studied participants. Confidentiality and privacy were ascertained by encoding the data and giving parents the option to refuse any taking part in the research without any justification.

Procedure:

- To understand the research topic and choose the best study needed tools, a survey of relevant literature covering all facets of the issue was conducted using readily available journals and books. Formal approval to conduct the study was granted by the New Minia City Hospital for Mental Health and Addiction Treatment manager.
- The studied sample provided oral consent for taking part in the research. The researcher personally communicated with the parents under study to explain the study purpose, obtained their consent, and ensured their voluntary involvement while maintaining their privacy and confidentiality.
- The data were gathered during the period from October to December 2023. Through interviews, the researcher gathered data from the ADHD children's parents at the outpatient clinic for children and adolescents at New Minia City Hospital for Mental Health and Addiction Treatment for three days a week from 9 AM to 12 PM. Filling out the research tools' queries took anywhere from 15 to 20 minutes, depending on what each participant needed to explain.

Statistical Analysis:

Version 26.0 of SPSS for Windows was the software employed for all data analysis. The mean ± standard deviation (SD) was used to express continuous normally distributed data. The percentage and number were used to convey the categorical data. Correlation co-efficient tests were applied to look for the correlation between the variables of continuous data. A reliability test was conducted on the study's questionnaires. For statistical significance, $p<0.05$ was used as the cutoff point.

Limitations of the study:

One of the greatest limitations is that all of the measures utilized were dependent on parent self-report. As a result, the study could be biased as it relied on parent perceptions, which might be a threat to the internal validity of the present study; thus, source variance should be strongly considered, as reports from other sources (e.g., children, other family members) would likely reveal different results. This study was also limited by the difficulty of reaching a large sample size; thus, the generalizability of this study is limited by the small sample size. Finally, the participants were recruited from the same site, which might influence the transferability of the results.

Results:

Table (1): Frequency Distribution of the Parents' and ADHD Children Demographic Characteristics (n=100)

Demographic characteristics	N	%
Parent's age (years)		
< 30	27	27.0
30 - < 40	45	45.0
40 - < 50	28	28.0
Mean ±SD	**34.5 ±7.7**	
Parent's educational levels		
Illiterate / Read and write	18	18.0
Primary	17	17.0
Preparatory	7	7.0
Secondary	21	21.0
University	37	37.0
Parent's working status		
Working	66	66.0
Not working	34	34.0
Residence		
Rural	52	52.0
Urban	48	48.0
Family history of ADHD		
Present	12	12.0
Absent	88	88.0
Child age (years)		
< 6	46	46.0
6 – 12	54	54.0
Mean ±SD	**6.5 ±2.4**	
Child gender		
Male	61	61.0
Female	39	39.0
Academic grade of the child		
Nursery / Pre – school	53	53
Primary	38	38.0
Preparatory	9	9.0
ADHD severity		
Mild	24	24.0
Moderate	53	53.0
Severe	23	23.0
Parent accompanying the child		
Father	13	13.0
Mother	56	56.0
Both parents	31	31.0

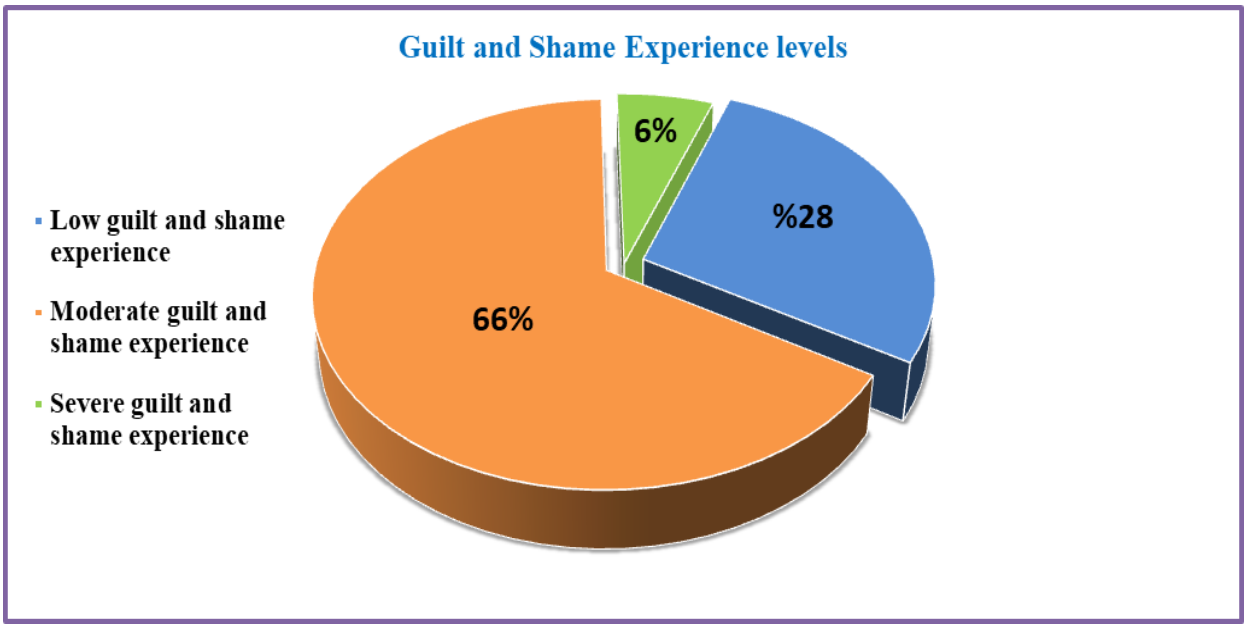

Figure (1): Frequency Distribution of Guilt and Shame Experience Levels among the Studied Parents (n = 100)

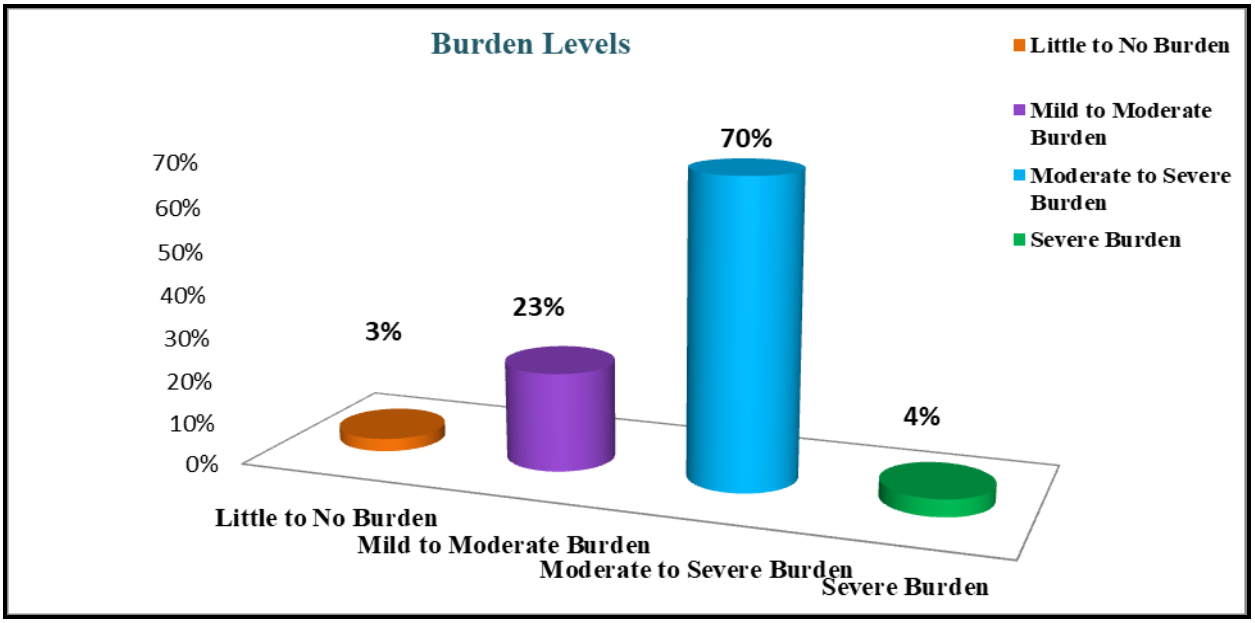

Figure (2): Frequency Distribution of Burden Levels among the Studied Parents (n = 100)

Table (2): Frequency Distribution of Child Parent Relationship Subscale among the Studied Parents (n = 100)

Items	N	%
Child Parent conflict		
Presence of child parent conflict	83	83.0
Absence of child parent conflict	17	17.0
Child Parent closeness		
Poor child parent relationship	66	66.0
Warm child parent relationship	34	34.0

Table (3): Relation between Guilt, Shame Experience and Demographic Characteristics among the Studied Parents and ADHD Children (n = 100)

	Low guilt and shame experience		Moderate guilt and shame experience		Severe guilt and shame experience		Chi – Square / Fisher's exact tes	
	N	%	N	%	N	%	X^2	P
Parent's age (years)								
< 30	6	21.4	18	27.3	3	50.0	8.000	0.092
30 - < 40	18	64.3	25	37.9	2	33.3		
40 - < 50	4	14.3	23	34.8	1	16.7		
Parent's educational levels								
Illiterate / Read and write	3	10.7	12	18.2	3	50.0	15.144	0.056
Primary	2	7.1	15	22.7	0	0.0		
Preparatory	5	17.9	2	3.0	0	0.0		
Secondary	7	25.0	13	19.7	1	16.7		
University	11	39.3	24	36.4	2	33.3		
Parent's working status								
Working	21	75.0	41	62.1	4	66.7	1.454	0.483
Not working	7	25.0	25	37.9	2	33.3		
Residence								
Rural	13	46.4	39	59.1	0	0.0	8.178	**0.017***
Urban	15	53.6	27	40.9	6	100.0		
Family history of ADHD								
Present	0	0.0	10	15.2	2	33.3	7.025	**0.030***
Absent	28	100.0	56	84.8	4	66.7		
Child age (years)								
< 6	11	39.3	35	53.0	0	0.0	6.933	**0.031***
6 – 12	17	60.7	31	47.0	6	100.0		
Child gender								
Male	12	42.9	44	66.7	5	83.3	6.023	**0.049***
Female	16	57.1	22	33.3	1	16.7		
Academic grade of the child								
Nursery / Pre – school	13	46.4	40	60.6	0	0.0	10.651	**0.031***
Primary	12	42.9	22	33.3	4	66.7		
Preparatory	3	10.7	4	6.1	2	33.3		
ADHD severity								
Mild	10	35.7	14	21.2	0	0.0	15.012	**0.005***
Moderate	13	46.4	34	51.5	6	100.0		
Severe	5	17.9	18	27.3	0	0.0		
Parent accompanying the child								
Father	5	17.9	8	12.1	0	0.0	8.237	0.083
Mother	15	53.6	41	62.1	0	0.0		
Both parents	8	28.6	17	25.8	6	100.0		

Table (4): Relation between Burden and Demographic Characteristics among the Studied Parents and ADHD Children (n = 100)

	Little to No Burden		Mild to Moderat Burden		Moderate to Severe Burden		Severe Burden		Chi – Square / Fisher's exact tes	
	N	%	N	%	N	%	N	%	X^2	P
Parent's age (years)										
< 30	0	0.0	5	21.7	22	31.4	0	0.0	19.366	**0.004***
30 - < 40	3	100.0	15	65.2	27	38.6	0	0.0		
40 - < 50	0	0.0	3	13.0	21	30.0	4	100.0		
Parent's educational level										
Illiterate / Read and write	0	0.0	0	0.0	18	25.7	0	0.0	80.259	**<0.001****
Primary	0	0.0	0	0.0	17	24.3	0	0.0		
Preparatory	3	100.0	0	0.0	4	5.7	0	0.0		
Secondary	0	0.0	6	26.1	11	15.7	4	100.0		
University	0	0.0	17	73.9	20	28.6	0	0.0		

	Little to No Burden		Mild to Moderat Burden		Moderate to Severe Burden		Severe Burden		Chi – Square / Fisher's exact tes	
	N	%	N	%	N	%	N	%	X^2	P
Parent's working status										
Working	2	66.7	11	47.8	51	72.9	2	50.0	5.309	0.151
Not working	1	33.3	12	52.2	19	27.1	2	50.0		
Residence										
Rural	3	100.0	12	52.2	37	52.9	0	0.0	7.123	0.068
Urban	0	0.0	11	47.8	33	47.1	4	100.0		
Family history of ADHD										
Present	0	0.0	2	8.7	7	10.0	3	75.0	15.946	**<0.001****
Absent	3	100.0	21	91.3	63	90.0	1	25.0		
Child age (years)										
< 6	3	100.0	15	65.2	28	40.0	0	0.0	11.363	**0.010***
6 – 12	0	0.0	8	34.8	42	60.0	4	100.0		
Child gender										
Male	3	100.0	10	43.5	45	64.3	3	75.0	5.533	0.137
Female	0	0.0	13	56.5	25	35.7	1	25.0		
Academic grade of the child										
Nursery / Pre – school	3	100.0	15	65.2	35	50.0	0	0.0	13.257	**0.039***
Primary	0	0.0	8	34.8	26	37.1	4	100.0		
Preparatory	0	0.0	0	0.0	9	12.9	0	0.0		
ADHD severity										
Mild	0	0.0	13	56.5	11	15.7	0	0.0	24.641	**<0.001****
Moderate	3	100.0	4	17.4	42	60.0	4	100.0		
Severe	0	0.0	6	26.1	17	24.3	0	0.0		
Parent accompanying the child										
Father	0	0.0	4	17.4	9	12.9	0	0.0	8.761	0.188
Mother	0	0.0	11	47.8	42	60.0	3	75.0		
Both parents	3	100.0	8	34.8	19	27.1	1	25.0		

Table (5): Relation between Child Parent Conflict and Demographic Characteristics among the Studied Parents and ADHD Children (n = 100)

	Presence of conflict		Absence of conflict		Chi-Square/Fisher's exact tes	
	N	%	N	%	X^2	P
Parent's age (years)						
< 30	24	28.9	3	17.6	1.072	0.585
30 - < 40	37	44.6	8	47.1		
40 - < 50	22	26.5	6	35.3		
Parent's educational levels						
Illiterate / Read and write	12	14.5	6	35.3	17.151	**0.002***
Primary	15	18.1	2	11.8		
Preparatory	7	8.4	0	0.0		
Secondary	13	15.7	8	47.1		
University	36	43.4	1	5.9		
Parent's working status						
Working	52	62.7	14	82.4	2.441	0.118
Not working	31	37.3	3	17.6		
Residence						
Rural	40	48.2	12	70.6	2.835	0.092
Urban	43	51.8	5	29.4		
Family history of ADHD						
Present	12	14.5	0	0.0	2.793	0.095
Absent	71	85.5	17	100.0		
Child age (years)						
< 6	40	48.2	6	35.3	0.945	0.331
6 – 12	43	51.8	11	64.7		

	Presence of conflict		Absence of conflict		Chi-Square/Fisher's exact tes	
	N	%	N	%	X^2	P
Child gender						
Male	54	65.1	7	41.2	3.383	0.066
Female	29	34.9	10	58.8		
Academic grade of the child						
Nursery / Pre – school	49	59.0	4	23.5	9.302	**0.010***
Primary	26	31.3	12	70.6		
Preparatory	8	9.6	1	5.9		
ADHD severity						
Mild	18	21.7	6	35.3	2.666	0.264
Moderate	47	56.6	6	35.3		
Severe	18	21.7	5	29.4		
Parent accompanying the child						
Father	12	14.5	1	5.9	1.092	0.579
Mother	45	54.2	11	64.7		
Both parents	26	31.3	5	29.4		

Table (6): Relation between Child Parent Closeness and Demographic Characteristics among the Studied Parents and ADHD Children (n = 100)

	Poor relationship		Warm relationship		Chi-Square/Fisher's exact test	
	N	%	N	%	X^2	P
Parent's age (years)						
< 30	20	30.3	7	20.6	1.549	0.461
30 - < 40	27	40.9	18	52.9		
40 - < 50	19	28.8	9	26.5		
Parent's educational levels						
Illiterate / Read and write	11	16.7	7	20.6	2.452	0.653
Primary	11	16.7	6	17.6		
Preparatory	6	9.1	1	2.9		
Secondary	12	18.2	9	26.5		
University	26	39.4	11	32.4		
Parent's working Status						
Working	41	62.1	25	73.5	1.301	0.254
Not working	25	37.9	9	26.5		
Residence						
Rural	33	50.0	19	55.9	0.311	0.577
Urban	33	50.0	15	44.1		
Family history of ADHD						
Present	8	12.1	4	11.8	0.003	0.959
Absent	58	87.9	30	88.2		
Child age (years)						
< 6	33	50.0	13	38.2	1.250	0.263
6 – 12	33	50.0	21	61.8		
Child gender						
Male	43	65.2	18	52.9	1.406	0.236
Female	23	34.8	16	47.1		
Academic grade of the child						
Nursery / Pre – school	40	60.6	13	38.2	4.509	0.105
Primary	21	31.8	17	50.0		
Preparatory	5	7.6	4	11.8		
ADHD severity						
Mild	14	21.2	10	29.4	0.978	0.613
Moderate	37	56.1	16	47.1		
Severe	15	22.7	8	23.5		
Parent accompanying the child						
Father	9	13.6	4	11.8	0.176	0.916
Mother	36	54.5	20	58.8		
Both parents	21	31.8	10	29.4		

Table (7): Correlation between Guilt and Shame Experience, Burden, Child Parent Relationship Subscales among the Studied Parents (n= 100)

Variables	Guilt & shame experience		Burden		Child Parent conflict		Child Parent closeness	
	r	p	R	p	r	p	r	p
Guilt & shame experience			0.454	**<0.001****	0.244	**0.015***	- 0.289	0.003
Burden					0.311	**0.002***	- 0.235	**0.018***
Child Parent conflict							- 0.224	**0.025***
Child Parent closeness								

Table (1): Shows that less than half of the studied parents (45%) are in the age group of "30-<40" years, with a mean of 34.5 ± 7.7, more than one third (37%) of them have a university educational level, and 66% are working. Moreover, about half of them (52%) live in rural areas, while 88% have no family history of ADHD. Additionally, the table shows that more than half of the studied ADHD children are in the age groups 6–12 and males (54% and 61%, respectively). Also, 53% of them are in nursery or preschool and have a moderate level of ADHD, while 56% are accompanied by their mothers to the outpatient clinic.

Figure (1): Indicates that 66% of the studied parents experienced moderate guilt and shame, 28% experienced low, 6% only experienced severe.

Figure (2): Demonstrates that 70% of the studied parents have a moderate to severe burden, while 23% of them have a mild to moderate and only 4% have a severe burden.

Table (2): Illustrates that more than three-quarters of the studied parents 83% has child-parent conflict, while child- parent conflict is absent among 17% of them. Also, about two thirds of the studied parents (66%) have a poor child-parent relationship while 34% have a warm child-parent relationship.

Table (3): Reveals that there is a significant relationship between guilt and shame experience with residence, family history of ADHD, child age, child gender, academic grade of the child, and ADHD severity at P-values (0.017, 0.030, 0.031, 0.049, 0.031, and 0.005, respectively).

Table (4): Illustrates that there is a significant relationship between burden with parent age, education, family history of ADHD, child age, academic grade of the child, and ADHD severity at P-values (0.004, <0.001, <0.001, 0.010, 0.039, and <0.001, respectively).

Table (5): Shows that there is a significant relationship between child-parent conflict with parent education, and the academic grade of the child, at P-values (0.002, 0.010, respectively).

Table (6): Demonstrates that there is no a significant relationship between child-parent closeness and demographic characteristics among the studied parents.

Table (7): Summarizes that there is a significant positive correlation between shame, guilt experience and both of burden and child-parent conflict, with a total score of r = 0.45 at P values =.001, r =.24 at P =.01 respectively. Also, there was a significant positive correlation between burden and child-parent conflict, with a total score of r =.3 at P values =.002. Additionally, shame and guilt experience, burden, and child-parent conflict have significant negative correlation with child-parent closeness with a total score of r= -0.2 at P =.003, r = -0.2 at P =.018, r = -0.2 at P = 0.025, respectively.

Discussion

It's widely accepted that raising children with ADHD is incredibly difficult and stressful. Because of the disruptive behaviors associated with this disorder, it presents extraordinary challenges. For a considerable amount of time, prior research neglected the crucial issue of parent support in favor of diagnosing and treating conditions. Research has gradually revealed that parents are the ones who have the greatest influence over children with ADHD, especially during their early years. Additionally, studies have shown that parents of children with ADHD frequently endure high levels of stress, burden, guilt, shame, and disruption in their parent-child relationship **(Leitch et al., 2019)**.

Approximately two-thirds of the parents reported feeling of moderate shame and guilt. A possible explanation for this result may be that, the challenges associated with negative judgments and attitudes of others, since a child's bad behavior is often regarded as evidence of poor parenting, moreover, hyperactivity in ADHD children is often embarrassing to their parents; the others start blaming them for inadequate child care. Also, feelings of guilt can stem from the struggle to manage their child's behavior, the fear of being judged by others, and the belief that they are not doing enough for their child **(Dauman et al., 2019)**.

In contrast, a systematic review by **Lauritsen et al. (2016)** reported that the majority of ADHD parents had feelings of shame and guilt. In the same respect, **El-Nady & Abdel-Aziz (2019)** revealed that the majority of the sample had a moderate level of shame

pre-intervention. Additionally, **Karimzadeh et al. (2020)** reported that feeling guilty and ashamed is experienced by the majority of the ADHD children's parents.

The current results revealed that nearly three-quarters of studied parents experienced a moderate to severe level of burden. This could be because ADHD is linked to noticeable deficits in social and adaptive functioning, daily living and academic skills, task completion, and interpersonal relationships. Consequently, these parents are faced with increased responsibilities and interactions with medical professionals, and school personnel **(Corcoran et al., 2017, Zhao et al., 2019)**. Therefore, caring for children with ADHD can be challenging and can lead to significant and various forms of burden, including academic, financial, and interpersonal relationship burden.

Parental stress, social isolation, disruption of daily life, and negative effects on work were found to be the main sources of burden for caregivers of ADHD children, according to a large-scale study **(Fridman et al., 2017)**. This result aligned with the studies of **Adeosun et al. (2017) & Alnakhli et al. (2020)**, which demonstrated that the majority of their studied samples had a burden varying between moderate and severe. However, this result is inconsistent with **Mostafavi et al. (2020)**, who reported that the majority of the parents had a mild level of burden.

According to the child -parent relationship subscales, the results of the present study revealed that child-parent conflict was present among more than three-quarters of the studied sample. It could be related to the reality that hyperactive children are more negative, less compliant, and require for assistance from their parents. Also, parents of hyperactive children are less rewarding, more directive, and harsher in their parenting **(Movahed et al., 2023)**.

In the same vein, it has been proposed that the symptoms of ADHD, such as impulsivity and hyperactivity, can lead to conflicted environments and challenges in simple daily activities, such as homework or bedtime routines, which can contribute to parent-child conflict **(Chan et al., 2022).** This result is consistent with the results of **Deater-Deckard (2017)**, who revealed that conflicted child-parent relationships were present among the majority of the sample**.**

However, almost half of the parents in the current study had a poor child-parent relationship. It could result from the parents and children's conflicted relationship. Additionally, early isolation and seclusion from classmates and family hinder ADHD children from developing the social skills needed to build and maintain relationships with others and negatively affect their relationships with their parents **(Emma et al., 2017)**.

On the other hand, **Taghizade et al. (2022)** suggested that shame could promote both extremely passive and aggressive disciplinary approaches in the context of parenting, which negatively affect relationships with ADHD children. This outcome concurs with **Maddah et al. (2018),** who stated that poor child-parent relationships were demonstrated among the majority of the parents at pre-intervention.

The current study showed that there is a significant relationship between guilt and shame experience with residence, family history of ADHD, child age, gender, academic grade, and ADHD severity**.** The significant relationship between guilt and shame experience with residence could be due to the fact that the majority of the sample came from rural areas, and it is well known that these people internalize societal judgments and stigma about mental health issues, which increases feelings of guilt and shame.

Regarding the significant relationships between guilt and shame experience with family history of ADHD, this could be attributed to increased cultural stigma and a negative view of families with a history of illness, which lead to an increased feeling of shame. Parents could also feel guilty, as they believe that they have passed the health problem on to their child. Also**,** the significant relationship between guilt and shame experience with child gender was explained in considering the fact that most of children were males, and males tend to exhibit hyperactive symptoms and damage the belongings of others that may be bothersome and disruptive to others **(Stibbe et al., 2020),** which in turn increases parents' feelings of shame and guilt.

The significant relationship between guilt and shame experience with child age and academic grade could be due to the fact that, with increase in the child age and academic grade, it is expected that children will acquire new social and academic skills, learn more adaptive behavior, and build successful relationships with relatives, teachers, and friends. But the ADHD children exhibit poor academic performance and disruptive behavior both at school and home that consequently cause emotional difficulties for their parents and increase their feelings of shame and guilt.

Additionally, the significant relationship between guilt and shame experience and ADHD severity may be due to increased ADHD severity associated with increased misbehavior, "e.g., beating other children, fighting with a parent, and destroying property." This causes parents to experience more public stigma and blaming, which, as a result, increases their feelings of shame. Also, the parents feel that the increase in ADHD severity is their fault as they are unable to

provide appropriate care to their children, which increases their feelings of guilt.

In the same vein, the results of **İnan (2016)** revealed that shame and guilt are significantly associated with parent gender but not with parent education or marital status. Additionally, **El-Nady & Abdel-Aziz (2019)** showed that there were statistically significant differences between child age, heredity, parent education, mother age, and shame at pre-intervention. However, **James (2022)** reported that the gender of the child did not correlate with levels of shame for parents.

The present study findings also demonstrated that there is a significant relationship between burden levels and parent age, education, family history of ADHD, child age, academic grade of the child, and ADHD severity. A number of studies reported that the parents' age was a crucial element influencing caregivers' burden **(Mulud& McCarthy, 2017)**. This result can be described in terms of the fact that, as caregivers get older, their weariness increases, making it harder for them to look after their diseased children and increasing their perceived burden. In addition, as time goes on, the parents feel failure in changing their child's condition and attitude in spite of all efforts. This result is supported by those of **Mostafavi et al. (2020),** and **Wong & Wong**. **(2021)** that showed parents' age is significantly correlated with the burden level.

In the same respect, one of the possible explanations for the significant relationship observed between parent education and burden level is the expectation of superiority and success for children of highly educated parents. However, the ADHD child performs poorly academically and consistently receives low grades. This places the parents under pressure to perform well and to take responsibility for the child's academic shortcomings, which ultimately leads to adding a new burden to the parents. The results of **Mostafavi et al. (2020)** are in the same line with this result, but contrary to **Alnakhli et al. (2020)** and **Adeosun et al. (2017)** who revealed that parent burden had no significant relationship with parent education or family history of ADHD.

In relation to the significant relationship between the burden level and the child's age and academic grade, this may be due to the fact that as an ADHD child grows older, people expect his behavior to improve and settle down. Similarly, parents' growing concern about academic issues as the child must make new friends and social connections, acquire new academic abilities, complete their schoolwork, and interact with teachers. All of these are considered new challenges and increase the burden on parents. **Alnakhli et al. (2020)** found no significant correlation between age and the burden placed on ADHD children's caregivers. This finding runs counter to the current results of the research.

The significant connection between the ADHD severity and parental burden could be explained as an increase of ADHD severity is correlated with increased levels of stress among parents and a negative impact on normal life, social relationships, and work. Additionally, the most serious the symptoms, the greatest the care needed for the children, and as a result, parents need to spend more time and financial resources, which increases the level of burden. In the same vein, **Peñuelas-Calvo et al. (2021), Mostafavi et al. (2020), & Fridman et al. (2017)** found that increased ADHD severity was correlated with increased parental burden level.

The results of the current study reveal that there is a significant relationship between a child-parent conflict, parent education, and the child's academic grade. The association between child-parent conflict and parent education may be because of the high academic expectations that a highly educated parent places on their child, and the inability to handle a child's persistent academic underachievement may lead to a disruptive and conflicted relationship.

Additionally, the association between child-parent conflict and the academic grade of children may be due to the fact that the increase in academic stage is associated with new academic stressors and challenges for both parents and children, which subsequently lead to conflict between the child and the parent. This result is not supported by the studies of **Russell et al. (2020)** and **Climie & Mitchell (2016),** who reported that child-parent conflict and closeness are significantly associated with parent and child gender, severity of symptoms, and child age.

The current study results showed that there is a positive significant correlation between shame and guilt experiences and burden felt by the caregiver. According to **Mostafavi et al., (2020)**, reported that parents who have feelings of hopelessness, guilt, and shame are more likely to experience stress, poorer physical and mental health, a lower quality of life, and a greater fear of the future**.** Such conditions not only diminish caregiver adaptation but also may lead to greater subjective distress, emotional exhaustion, and additional burden on parents'. This finding is consistent with **de Mamani & Suro (2016)** who demonstrated a significant positive correlation between guilt and shame feelings and caregiver burden. Furthermore, **El Derwy et al. (2022)** found positive significant correlation between caregiver guilt and the burden of care.

Additionally, the results of the present study revealed that shame and guilt experiences are positively and significantly correlated with child-parent conflict however negatively correlated with child-parent

closeness. One possible explanation for this finding is that the parents may feel inadequate, separate, unequal, and angry due to feelings of shame and guilt, and a frequent inability to meet expectations, which can contribute to strained interactions with their children. Moreover, parents who feel shame due to receiving continuous blame from others for their child's behaviors may be more likely to use aggressive or harsh discipline strategies.

Also, parents who experience guilt may be more likely to overcompensate for their perceived short-comings by being overly critical or controlling, which in turn increase conflict between the parent and the child while decreasing closeness **(Parisette-Sparks, et al., 2017)**. In the same respect, the results of **Marcinechová et al. (2023)** showed that shame-proneness had an inverse correlation with family closeness however, positively related to conflict; guilt, meanwhile, was not related in any way with those variables. According to **James (2022)**, guilt was also positively connected to parental warmth.

Moreover, the current findings revealed that levels of burden were positively and significantly correlated with child-parent conflict and negatively but significantly correlated with parent-child closeness. This could be due to the caregiver burden can lead to disruption of the caregiver's life, intense emotional and physical exhaustion, stress, and feelings of loneliness, which can affect the quality of the parent-child relationship **(Kobos et al., 2023)** and further exacerbate conflict and decrease warmth between the parents and the child.

On the other hand, conflicted and poor relationships lead to social, emotional, and psychological challenges for the parents, which contribute to emotional hardship, feelings of stress, and an additional burden for the parents. This result is in the same vein of **Russell et al. (2020)**, who reported positive associations existed between child-parent conflict and caregiver burden. Also, child-parent closeness was negatively but significantly associated with caregiver felt burden.

Furthermore, the current findings showed a negative correlation between child-parent conflict and child-parent closeness. One explanation for this is that the increase in conflict is associated with an increased level of stress, poor communication and a lack of comfort in the interaction. Conflict can also create tension at home; weaken the strength and satisfaction of relationships, make parent-child relationships relatively less secure and anxious and finally lead to a decreased feeling of warmth and closeness. This result is supported by **Russell et al. (2020)**, who declared that there was a significant negative correlation between child-parent conflict and child-parent closeness.

Conclusions

The present study concluded that the highest percentage of the studied sample had moderate shame and guilt experiences, moderate to severe burden level, conflicted child-parent relationship and poor child-parent closeness. Also, a positive significant correlation was found between shame and guilt experiences with burden felt by the caregiver. Both of shame and guilt experience as well as burden felt by the caregiver was positively correlated to child-parent conflict, however, negatively correlated to child-parent closeness. The child-parent conflict was negatively related to the child-parent closeness.

Recommendations:

- Parent-oriented psycho-education is needed for the management of ADHD-associated feelings of shame, guilt, burden, conflict and poor child-parent relationships.
- Future research is needed to be carried out with a wider sample to have accurate and sufficient findings.
- Provide necessary guidance to increase parents' awareness and knowledge about ADHD and how to manage its associated problems.

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Conflict of Interests

The authors stated that there are no any conflicts of interest in this work.

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