

Correlation between Parental Stress, Emotional needs Satisfaction and Quality of Life among Parents of Children with Attention Deficit Hyperactivity Disorder

Doha Abd elbaseer Mahmoud¹, Hoda Abd El moaty², Hend Ahmed Mostafa³

^{1,3}Assistant professor of Psychiatric and Mental Health Nursing, Faculty of Nursing, Benha University, Egypt.

²Lecturer of Psychiatric and Mental Health Nursing, Faculty of Nursing, Benha University, Egypt.

Abstract

Background: children with attention deficit hyperactivity disorder is experience for any parent many negative impact not only their emotional needs satisfaction, but also their quality of life **Aim of the study:** This study aimed to assess the correlation between parental stress, emotional needs satisfaction and quality of life among parents of children with attention deficit hyperactivity disorder. **Research question:** What is the correlation between parental stress, emotional needs satisfaction and quality of life among parents of children with attention deficit hyperactivity disorder? **Design:** A descriptive correlational research design was utilized in this study. **Setting:** This study was conducted at the outpatient clinics of Psychiatric Mental health and Addiction Hospital at Benha city, Qalubia governorate which is affiliated to General Secretariat of Mental Health in Egypt. **Sample:** A purposive sample of 100 parents of children with ADHD was selected from the above mentioned settings. **Tools:** *Tool (I):* A structured Interviewing Questionnaire Sheet, *Tool (II):* Parental Stress Scale, *Tool (III):* Emotional needs satisfaction Scale and *Tool (V):* Quality of Life Scale. **Results:** findings showed that half of the studied parents had high stress level and more than half of them have had moderate level of emotional needs satisfaction while less than three quarter of the studied parents had poor level of quality of life **Conclusion:** There was highly statistically significant negative correlation between total parental stress, total emotional needs satisfaction and total quality of life among the studied parents while there was a highly statistically significant positive correlation between total emotional needs satisfaction and total quality of life among the studied parents **Recommendation:** Psycho educational program for parents are needed to reduce their stress, and enhance parenting satisfaction and quality of life.

Key Words: ADHD, Emotional needs satisfaction, Parental stress, Quality of life

Introduction:

Attention deficit hyperactivity disorder (ADHD) is a very common childhood-onset psychiatric condition of which the rates have risen over the past few decades and continue to raise (El-Bakry et al., 2022). ADHD is characterized by pervasive, persistent, and impairing symptoms of impulsivity, hyperactivity, and inattention that occur before the age of seven year, with the possibility of extending into adult life. ADHD has three subtypes which include the inattentive subtype, the hyperactive/impulsive subtype, and the

combined subtype (Al-Habib et al., 2021). According to (DSM-5) for ADHD: Five or more symptoms of ADHD present to a degree that is developmentally inappropriate, the onset of these clinical features usually before the age of 12, lasted six months, interfere with daily life functioning and social functioning (Anastopoulos et al., 2020).

Parental stress can be defined as excess anxiety and tension specifically related to the role of a parent and to parent-child interactions. Parents of child with ADHD are hidden patients in the need of protection from physical and emotional harm. Parents may experience stress

regardless of the degree of the child's illness; Parents will be severely stressful after diagnosis of ADHD in their children. Exposure of stress, depression and anxiety may exist as a perceived form of psychological status caused by response towards stress (Uludağ et al., 2020). Giving birth to a mentally challenged children or other disabled child is an unexpected stressful event which affects the whole family (Benjamin & Dorianne, 2020).

Emotional needs of parents of children with ADHD are a state or condition that must be fulfilled for them to experience happiness and peace. When **emotional** needs of parents are met and responded to appropriately, they keep in balance. It is essential to a healthy lifestyle. When they aren't met, may feel frustrated, hurt, or dissatisfied (Johnson, 2022). People are all born with essential physical and emotional needs and the innate resources to help them to fulfill their needs. If parents with ADHD main essential needs are being met, and resources are being used well, they don't suffer any mental health problems. On other hand, if just one of these needs is unmet, or the resources are being misused, it can affect individuals' mental health and wellbeing (Deci & Ryan, 2020).

Moreover, quality of life can be defined as the ability of people to function normally every day and to be satisfied with their participation in everyday activities. The ability of maintaining these daily activities includes maintaining physical mobility, independence from others, sufficient energy for self-help, social contacts, emotional stability, absence of pain or other symptoms of discomfort, and adequate sleep and rest. Treatment of children with ADHD can affect daily lives of parents. This can disrupt roles in social life, limit daily activities, disrupt health and physical and emotional balance as well as causing economic problems and creating poor quality of life (Bektas et al., 2022).

Furthermore, parents of children with ADHD are key members of their children's health teams and serve as the primary nurse for them. They may face greater challenges in caring for their children than ordinary parents such as increased therapy expenditures and child care difficulties and governmental support

as well as their socioeconomic status. These issues may have an adverse effect on child care and increase parents stress and affect their quality of life (Mirzaei et al., 2021).

Psychiatric and mental health nurse can motivate the adherence to the treatments, explain about the risks and severities, analyze the psychosocial interaction, behavioral attitudes and, as necessary carry out planned interventions. In addition, nurses can communicate with the family, so that they understand in the best possible way that the children with ADHD need familiar support. Every mental health nurse, through its theoretical and scientific foundation, can perform these activities through inter disciplinarily and can contribute to the treatment of ADHD and evolutionary analysis, thus providing an improvement in the coping strategies of ADHD (Paidipati et al., 2023).

Significance of the study:

Attention deficit hyperactivity disorder (ADHD) is the most common behavioral condition and the second most common chronic illness in children. ADHD is a frequent neurodevelopmental disorder that is widespread throughout the world, affecting 7% of children worldwide, for instance; 7.47% of African school-age children and teenagers, and 1.3 to 16 % in Arab countries (Ayano et al., 2023). The prevalence of ADHD in Egypt is 5-10% among children in school age and 2-4% among adults (El-Monshed et al., 2020). Children with ADHD face obstacles and impairment in academic, social, emotional domains and also essential biological functions which parents perceive as a burden (National Institution of Mental Health, 2020)

Taking care of a family member with a disability especially ADHD is one of the most difficult types of chronic stress. Which reflect on their emotional needs and hence their quality of life so there is essential need for the researcher to conduct this study to assess the correlation between parental stress, emotional needs satisfaction and quality of life among parents of children with attention deficit hyperactivity disorder (Jansen et al., 2022).

Aim of the study:

This study aimed to assess the correlation between parental stress, emotional needs satisfaction and quality of life among parents of children with attention deficit hyperactivity disorder.

Research Questions:

- What are the levels of parental stress, emotional needs satisfaction and quality of life among parents of children with attention deficit hyperactivity disorder?

- What is the correlation between parental stress, emotional needs satisfaction and quality of life among parents of children with attention deficit hyperactivity disorder?

Subject and Methods**Research design:**

A descriptive correlational research design was utilized to achieve the aim of this study.

Setting:

This study was conducted at the outpatient clinics of Psychiatric Mental health and Addiction Hospital at Benha city, Qalubia governorate which is affiliated to General Secretariat of Mental Health in Egypt. The hospital has (6) departments (5 male and 1 female) with capacity of 277 beds. The outpatient clinics consist of 6 outpatient clinics. Out-patients pediatric clinics in which this study was conducted are located in the ground floor of the hospital. They serve the children and adolescents with psychiatric and mental disorders such as: ADHD, autism, epilepsy and mental retardation for treatment and follow up. Out-patients pediatric clinics work from 9am to 1pm two days / week (Monday and Thursday per week).

Sample:

A purposive sample of 100 parents of children with ADHD was selected from the outpatient clinics of Psychiatric Mental Health

and Addiction Hospital according to the following inclusion criteria of the parents:

- Primary care giver to child
- Both sexes.
- Agree to participate in the study.
- Free from history of neurological and psychological disorders.

Tools of Data Collection:

In order to fulfill the aim of the study, the data was collected using the following three tools:-

Tool (one):- A Structured Interviewing Questionnaire sheet:

The questionnaire was developed by the researcher based on scientific review of literature and was designed on Arabic format in suitable language to suit parents' level of understanding to assess the following parts:

Part 1: Socio-demographic data of parents:

It was consisted of 6 items; parent's age, sex, marital status, educational level, occupation, and residence.

Part 11: Clinical data for children with ADHD:

It consisted of 6 items: child's age at onset of signs & symptoms of the disease, child's age at onset of diagnosis of the disease, ADHD subtype, type of treatment the child receives, number of treatment sessions per week and family history of ADHD.

Tool two: - Parental Stress Scale (PSS):

The scale was originally developed by **Berry & Jones (1995)**, was used to measure the levels of parental stress for parents. It is a self-report measure that contains 18 items. Parents were asked to rate each item on a five-point scale: strongly disagree (1) disagree (2), undecided (3), agree (4), strongly agree (5). To compute the parental stress score, items 1, 2, 5, 6, 7, 8, 17, and 18 should be reverse scored as follows: (strongly disagree = 5) (disagree = 4)

(undecided = 3) (agree = 2) (strongly agree = 1). The item scores are then summed. Higher scores on the scale specify a high level of parent stress and low scores indicates low level of parent stress. Overall possible scores on the scale range from 18-90.

Scoring system for parental stress scale:

- 18-30 grades indicate a low level of parental stress.
- 31-60 grades indicate a moderate level of parental stress.
- 61-90 grades a high level of parental stress.

Tool three : Emotional Needs Satisfaction Scale (ENS) :

The scale was developed by (*Brett Culham, 2008*). The scale designed to measure **nine** emotional needs satisfaction, which are the need for security, attention, being emotionally connected to others, having a sense of autonomy and control, feeling part of a wider community, privacy, sense of status within social grouping, being accepted and valued as well as sense of competence and achievement. The Scale consists of 14 items using a five-point Likert scale for respondents' answers ranged as follow: never (1), rarely (2), sometimes (3), often (4), and always (5).

Scoring system:

- (14-33) grades : Low emotional need satisfaction.
- (34-51) grades: Moderate emotional need satisfaction.
- (52-70) grades: High emotional need satisfaction.

Tool Four : - Quality of Life Scale (QOLS):

This scale was constructed by **World Health Organization Quality of Life Group, (1997)**; to assess the subjective opinion of parents regarding quality of life. It was consisted of a total of 24 questions divided into

four domains: physical health (7 items), psychological health (6 items), social relationships (3 items), and environment (8 items). All items are rated on a five-point scale (1= not at all, 2= a little, 3=a moderate amount, 4=very much, 5= an extreme amount). Higher scores indicate better quality of life. The four domains are scaled in a positive direction except for three items, which are reversed before scoring.

Scoring system for Quality-of-Life Scale (QOLS):

- (less than 50%) 24- 59 grades indicate poor quality of life.
- (50–75%) 60- 90 grades indicate moderate quality of life.
- (more than 75%) 91-120 grades indicate good quality of life.

Operational design

Validity

Content validity was done to assure that the utilized tools measure what it was supposed to measure. Tools were examined by a panel of five experts in the field of psychiatric mental health nursing to determine whether the included items clearly and adequately cover the domain of content addressed.

Reliability:

The study tools were tested for its internal consistency by Cronbach's Alpha. Test-retest was repeated to the same sample of parents on two occasions and then compares the scores. The Cronbach's coefficient alpha of Parental Stress scale is 0.918 for total score, Emotional Needs Satisfaction Scale is 0.865for total score while Quality of Life Scale Scales is 0.947.

Pilot study

After the development of tools, a pilot study was carried out on 10% of the studied subjects (10) parents. The purpose of the pilot study were to ascertain the clarity, applicability relevance and content validity of the tools, estimate the time needed to complete the sheet,

and the necessary changes were undertaken.

The results of the pilot study:

After conducting the pilot study, it was found that:

- The tools were clear and applicable; however, few modifications were made in rephrasing of some sentences in both parental stress scale and QOL scale to be easier and more understandable.

- Tools were relevant and valid.

- No problem that interferes with the process of data collection was detected.

- Following this pilot study the tools were made ready for use.

Field work:

The actual field work was carried out within 2 months from the beginning of February 2024 to the end of March 2024. The study setting was visited by the researcher two days/week ((Monday and Thursday), because this days specified for treatment of ADHD) from 9Am to 1Pm about 6-7 parents/ day. An individual interview was conducted for every parent and the average time needed was around (30-45) minutes. At the beginning of interview the researcher greeted the patients, introduced herself to each patient, explained the purpose of the study, took oral consent to participate in the study, filled interviewing questionnaire sheet, and then each patient was asked to fill parental stress scale, emotional needs scale and quality of life scale.

Ethical considerations:

- Approvals from ethical committee of research, faculty of nursing, Benha University is obtained for data collection with code (REC.PSYN.P24).

- Approvals of parents were obtained before data collection and after explaining the purpose of the study.

- Anonymity was assured as the filled questionnaire sheets were given a code number

(not by names).

- The parents were ensured that questionnaire sheet will be used only for the purpose of the study and will be discarded at the end of the study.

- The study maneuvers do not entail any harmful effects on participation.

- The parents who participated in the study were informed about having the right to withdraw at any time without giving any reason.

Administrative design:

A written letter was issued from the Dean of Faculty of Nursing, Benha University to obtain the approval for data collection from the director of Psychiatric Mental health and Addiction Hospital at Benha City Kaluobia Governorate and from General Secretariat of Mental Health in Egypt to conduct the proposed study.

An official approval was obtained from the Human Rights Protection Committee and Research Committee of General Secretariat of Mental Health in Egypt after revision of the study protocol and tools, then an official approval was obtained from the director of the Psychiatric Mental Health and addiction Hospital. The aim and the nature of the study were explained to the administrative personnel.

Statistical design:

All data collected were organized, coded, computerized, tabulated and analyzed by using The Statistical Package for Social Science (SPSS) program (version 25), which used frequencies and percentages for qualitative descriptive data, Chi-square was used for relation tests, mean and standard deviation was used for quantitative data and person correlation coefficient (r) was used for correlation analysis and degree of significance was identified. A highly statistically significant difference was considered if $p\text{-value} < 0.01$, statistical significant difference was considered if $p\text{-value} < 0.05$ and non-statistical significant difference was considered if $p\text{-value} > 0.05$.

Results:

Table (1): Illustrates percentage distribution of the studied parents according to their socio-demographic data. It shows that less than one third (32%) of the studied parents has 40 years and more regarding their age with Mean \pm SD (35 \pm 9. 77), more than half (60%) of them is female, more than three quarters(80%) of parents are married, more than one third (38%) of them has intermediate education, less than two thirds (64%) of parents are not working, and more than two third (70%) of them live in rural.

Table (2): Demonstrates percentage distribution of the children with ADHD according to their clinical data. It reflects that children their age at onset of signs & symptoms of the disease, child age onset of diagnosis of the disease ranged from 3 <6 years (52%, 56% respectively). As regard to ADHD type, more than two thirds (67%) of them diagnosed with combined type and more than half (56%) of them treated with both medication and treatment sessions. Also, more than two third (73.5%) of the studied children who treated with treatment sessions received sessions once per week. . Furthermore, less than one third (32%) of the studied children have family history of ADHD and more than one third (37.5%) of them from the first degree of kinship to the studied children.

Figure (1):Shows percentage distribution of total level of stress among the studied parents .It reflects that half (50%) of the studied parents has high stress level and less than half (40%) of studied parents has moderate stress level, and one tenth (10%) of studied parents has low stress level.

Figure (2): Explains percentage distribution of the total emotional needs satisfaction level among the studied parents. It shows that more than half (57.0%) of them have moderate level of emotional needs satisfaction, as well as nearly one third (33.1%) of them have high emotional needs satisfaction. While minority (9.9%) of the studied parents has low emotional needs satisfaction.

Figure (3): Illustrates percentage distribution of total level of quality of life among the studied parents. It reports that less than three quarter (70%) of the studied parents has poor level of quality of life and more than one fifth(22%) of the

studied parents has moderate level of quality of life, while less than one tenth (8%) of parents has good level of quality of life.

Table (3): Shows relationship between parents' socio-demographic characteristics and total parental stress level. It illustrates that, there is a highly statistically significant relation between total stress level among the studied parents and their marital status. Also, there is a statistically significant relation between parents' stress level and their age, sex and educational level, while there is no statistically significant relation between total stress level among the studied parents and their occupation and residence.

Table (4): illustrates relationship between clinical data of the children with ADHD and total parental stress level. It demonstrates that, there is a highly statistically significant relation between total stress level among the studied parents and Child's age at onset of signs & symptoms of the disease Also, there is a statistically significant relation between parents' stress level and Child's age at onset of diagnosis of the disease, ADHD subtype, Family history with ADHD while there is no statistically significant relation between total stress level among the studied parents and Type of treatment the child receives

Table (5): Demonstrates relationship between parents' socio-demographic characteristics and total emotional needs satisfaction. It shows that, there is a highly statistically significant relation between total level of emotional needs satisfaction among the studied parents and their age, and sex. Also, there is a statistically significant relation between total level of emotional needs satisfaction and their marital status, and occupation, while there is no statistically significant relation between total level of emotional needs satisfaction and their educational level and residence.

Table (6): explains relationship between clinical data of the children with ADHD and total parents emotional needs satisfaction. It demonstrates that, there is a highly statistically significant relation between total parents emotional needs satisfaction among the studied parents and ADHD subtype Also, there is a statistically significant relation between total level of parents emotional needs satisfaction and Child's age at onset of signs & symptoms of the disease, Child's age at onset of diagnosis of the disease, Type of treatment the child receives while there is

no statistically significant relation between total level of parent emotional needs satisfaction and family history with ADHD

Table (7): Demonstrates relationship between parents' socio-demographic characteristics and total quality of life. It shows that, there is a highly statistically significant relation between total level of quality of life among the studied parents and their age, and sex. Also, there is a statistically significant relation between total level of quality of life and their marital status, and occupation, while there is no statistically significant relation between total level of quality of life and their educational level and residence.

Table (8): shows relationship between clinical data of the children with ADHD and total quality of life. It demonstrates that, there is a highly statistically significant relation between level of total parents quality of life among the studied parents and clinical data as ADHD subtype. Also, there is a statistically significant relation with child's age at onset of signs &

symptoms of the disease, child's age at onset of diagnosis of the disease, and type of treatment the child receives. While, there is no statistically significant relation with family history with ADHD.

Table (9): Illustrates correlation between mean scores of total parental stress, total emotional needs satisfaction and total quality of life scales among the studied parents. It shows that, there is a highly statistically significant negative correlation between total parental stress, total emotional needs satisfaction and total quality of life among studied parents. While there is a highly statistically significant positive correlation between total emotional needs satisfaction and total quality of life.

Part (I): Socio-demographic data of the studied parents.

Table (1): Percentage distribution of the studied parents according to their socio-demographic data (n=100).

Socio-demographic characteristics the studied parents	No.	%
Age (years)		
Less than 25 years	10	10.0
25 - less than 30 years	30	30.0
30 - less than 35 years	12	12.0
35- less than 40 years	16	16.0
40 years and more	32	32.0
Mean ± SD	35 ± 9.77	
Sex		
Male	40	40.0
Female	60	60.0
Marital status		
Married	80	80.0
Widowed	10	10.0
Divorced	10	10.0
Educational level		
Illiterate	32	32.0
Basic education	22	22.0
Intermediate education	38	38.0
University education	8	8.0
Occupation		
Employee	8	8.0
Free business	28	28.0
Not working	64	64.0
Residence		
Rural	70	70.0
Urban	30	30.0

Part II: Clinical data for children with ADHD

Table (2): Percentage distribution of the children with ADHD according to their clinical data (n=100).

Clinical data for children with ADHD	Studied children(n = 100)	
	No	%
Child's age at onset of signs & symptoms of the disease		
< 3 years	36	36.0
3 <6 years	52	52.0
6 <9 years	8	8.0
9 ≤12 year	4	4.0
Mean	3.6 ± 1.7	
Child's age at onset of diagnosis of the disease		
< 3 years	24	24.0
3 <6 years	56	56.0
6 <9 years	12	12.0
9 ≤12 year	8	8.0
Mean SD	3.72 ± 1.4	
ADHD subtype		
Inattention type	20	20.0
Hyperactivity / impulsivity type	13	13.0
Combined type	67	67.0
Type of treatment the child receives		
Medication	32	32.0
Treatment sessions	12	12.0
Both	56	56.0
Number of treatment sessions per week (n=68)		
Once	50	73.5
Twice	11	16.2
Triple	7	10.3
Family history with ADHD		
Yes	32	32.0
No	68	86.0
If yes, The degree of kinship of the child (n=32)		
First degree	12	37.5
Second degree	11	34.4
Third degree	9	28.1

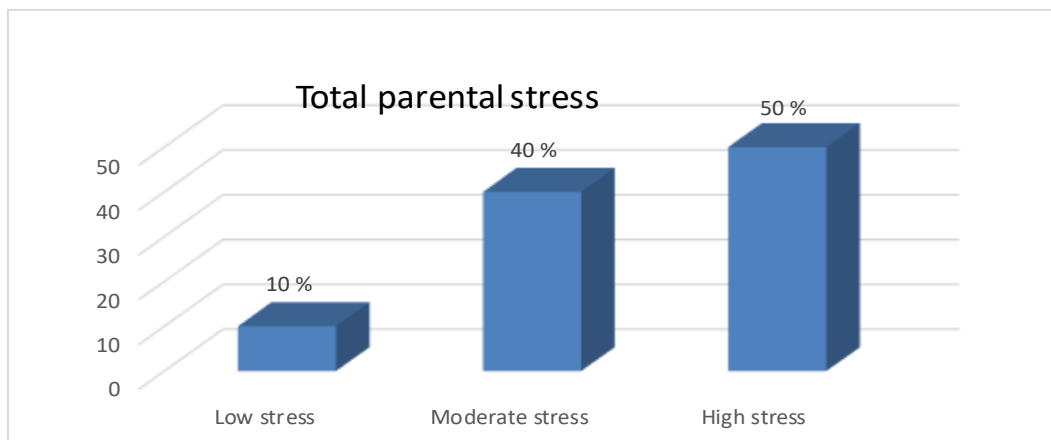


Figure (1): Percentage distribution of total level of stress among the studied parents (n=100).

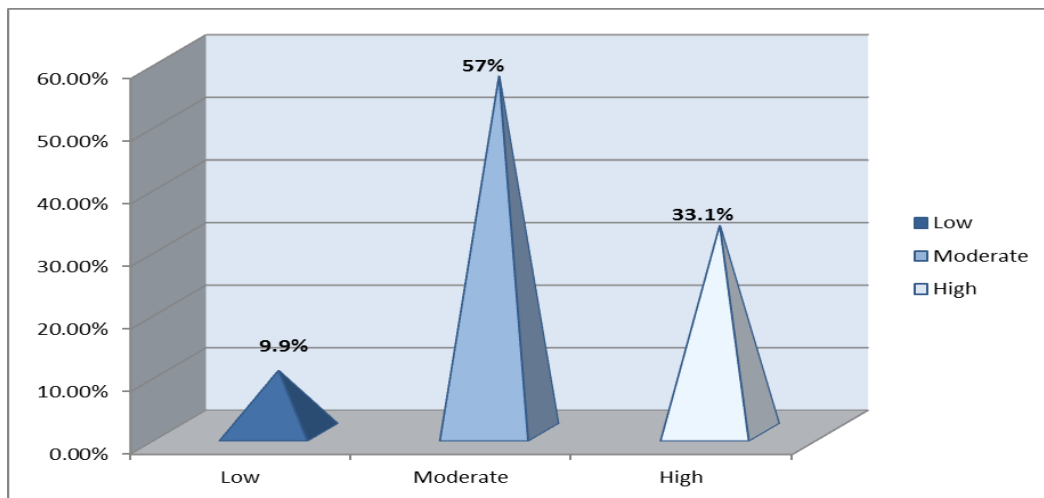


Figure (2): Percentage distribution of total level of emotional needs satisfaction among the studied parents (n=100).

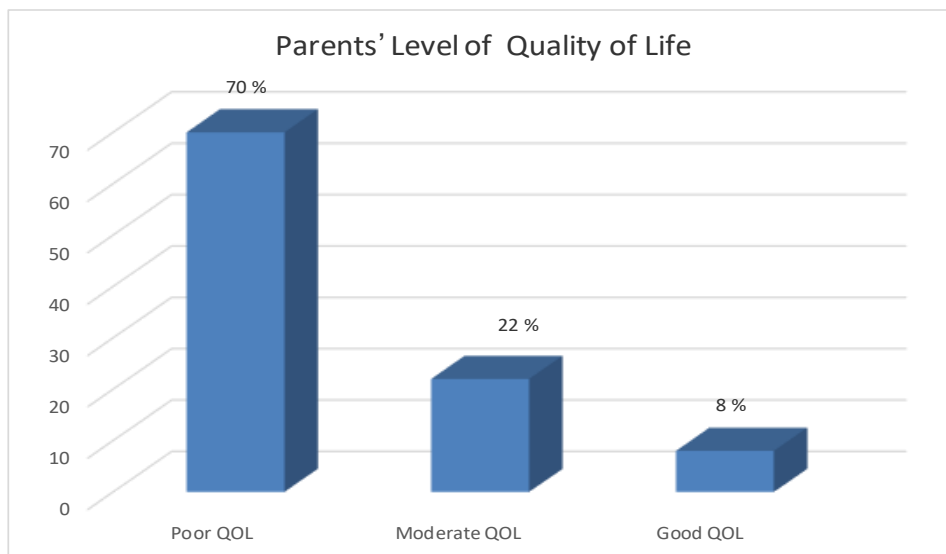


Figure (3): Percentage distribution of total level of quality of life among the studied parents (n=100).

Part III: Relationships between socio-demographic of studied parents, and their total levels of stress, emotional needs satisfaction and total level of quality of life.

Table (3): Relationship between parents' socio-demographic characteristics and total parental stress levels among the studied parents (n=100)

Socio-demographic parents' characteristics	Total parental stress levels				X ²	P-Value
	No	Low stress	Moderate stress	High stress		
Age (years)					16.6	<0.05*
Less than 25 years	10	2	2	6		
25 - less than 30 years	30	2	18	10		
30 - less than 35 years	12	2	4	6		
35 - less than 40 years	16	4	4	8		
40 years or more	32	0	12	20		
Sex					6.7	<0.05*
Male	40	2	22	16		
Female	60	8	18	34		
Marital status					20.4	<0.01**
Married	80	8	40	32		
Widowed	10	0	0	10		
Divorced	10	2	0	8		
Educational level					15.4	<0.05*
Illiterate	32	6	16	10		
Basic education	22	2	6	14		
intermediate education	38	0	14	24		
University education	8	2	4	2		
Occupation					5.61	>0.05
Employee	8	0	4	4		
Free business	28	2	12	14		
Not working	64	8	24	32		
Residence					1.05	>0.05
Rural	70	6	30	34		
Urban	30	4	10	16		

Table (4): Relationship between clinical data of the children with ADHD and total parental stress level (n=100)

Clinical data		Level of parental stress						X2	P-Value
		Low		Moderate		High			
		N	%	N	%	N	%		
Child's age at onset of signs & symptoms of the disease	< 3 years	0	0.0	8	28.6	24	48.8	9.18	<0.001**
	3 <6 years	4	20.0	20	71.4	28	53.2		
	6 <9 years	8	40.0	0	0.0	0	0.0		
	9 ≤12 year	4	20.0	0	0.0	0	0.0		
Child's age at onset of diagnosis of the disease	< 3 years	0	0.0	4	14.3	20	38.5	8.774	<0.05*
	3 <6 years	0	0.0	24	85.7	32	61.5		
	6 <9 years	8	40.0	0	0.0	0	0.0		
	9 ≤12 year	8	40.0	0	0.0	0	0.0		
ADHD subtype	Inattention type	15	75.0	5	17.9	0	0.0	13.62	<0.05*
	Hyperactivity / impulsivity type	5	25.0	3	10.7	5	9.6		
	Combined type	0	0.0	20	71.4	47	90.4		
Type of treatment the child receives	Medication	0	0.0	0	0.0	32	61.5	8.200	>0.05
	Treatment sessions	0	0.0	10	35.7	2	3.9		
	Both	20	100.0	18	64.3	18	34.6		
Family history with ADHD	Yes	8	40.0	20	71.4	36	69.2	3.990	<0.05*
	No	12	60.0	8	28.6	16	30.8		

Table (5): Relationship between parents' socio-demographic characteristics and total emotional needs satisfaction among the studied parents (n=100)

Socio-demographic parents' characteristics	Total emotional needs satisfaction levels					
	No	Low	Moderate	High	X ²	P-Value
Age (years)						
- Less than 25 years	10	7	0	3	30.8	<0.01**
- 25 - less than 30 years	30	9	18	3		
- 30 - less than 35 years	12	11	1	0		
- 35 - less than 40 years	16	8	4	4		
- 40 years or more	32	14	18	0		
Sex						
- Male	40	14	20	6	10.8	<0.01**
- Female	60	40	16	4		
Marital status						
- Married	80	33	40	7	12.9	<0.05*
- Widowed	10	6	4	0		
- Divorced	10	10	0	0		
Educational level						
- Illiterate	32	14	14	4	10.4	>0.05
- Basic education	22	15	5	2		
-intermediate education	38	20	18	0		
- University education	8	2	4	2		
Occupation						
- Employee	8	2	6	0	12.7	<0.05*
- Free business	28	12	14	2		
- Not working	64	38	20	6		
Residence						
- Rural	70	34	30	6	2.4	>0.05
- Urban	30	14	12	4		

(*) Statistically significant at p<0.05. (**) highly statistically significant at p<0.01.

Table (6): Relationship between clinical data of the children with ADHD and total emotional needs satisfaction (n=100)

Clinical data		total emotional needs satisfaction						X ²	P-Value
		Low		moderate		High			
		N	%	N	%	N	%		
Child's age at onset of signs & symptoms of the disease	< 3 years	0	0.0	8	28.6	28	53.8	11.14	<0.05*
	3 <6 years	4	20.0	20	71.4	24	46.2		
	6 <9 years	8	40.0	0	0.0	0	0.0		
	9 ≤12 year	4	20.0	0	0.0	0	0.0		
Child's age at onset of diagnosis of the disease	< 3 years	0	0.0	4	14.3	20	38.5	7.976	<0.05*
	3 <6 years	0	0.0	24	85.7	32	61.5		
	6 <9 years	12	60.0	0	0.0	0	0.0		
	9 ≤12 year	8	40.0	0	0.0	0	0.0		
ADHD subtype	Inattention type	15	75.0	5	17.9	0	0.0	13.66	<0.001**
	Hyperactivity / impulsivity type	5	25.0	3	10.7	5	9.6		
	Combined type	0	0.0	20	71.4	47	90.4		
Type of treatment the child receives	Medication	0	0.0	0	0.0	32	61.5	8.246	<0.05*
	Treatment sessions	0	0.0	10	35.7	2	3.9		
	Both	20	100.0	18	64.3	18	34.6		
Family history with ADHD	Yes	12	60.0	20	71.4	36	69.2	4.970	>0.05
	No	8	40.0	8	28.6	16	30.8		

Table (7) :Relationship between parents' socio-demographic characteristics and total quality of life among the studied parents (n=100)

Socio-demographic parents' characteristics	Total quality of life				X ²	P-Value
	No	Poor QOL	Moderate QOL	Good QOL		
Age (years)						
- Less than 25 years	10	8	0	2	30.8	<.0.01**
- 25 - less than 30 years	30	8	20	2		
- 30 - less than 35 years	12	10	2	0		
- 35 - less than 40 years	16	8	4	4		
- 40 years or more	32	16	16	0		
Sex						
- Male	40	12	24	4	10.8	<.0.01**
- Female	60	38	18	4		
Marital status						
- Married	80	34	38	8	12.9	<0.05*
- Widowed	10	6	4	0		
- Divorced	10	10	0	0		
Educational level						
- Illiterate	32	14	14	4	10.4	>0.05
- Basic education	22	14	6	2		
-intermediate education	38	20	18	0		
- University education	8	2	4	2		
Occupation						
- Employee	8	2	6	0	12.7	<0.05*
- Free business	28	10	14	4		
- Not working	64	38	22	4		
Residence						
- Rural	70	34	32	4	2.4	>0.05
- Urban	30	16	10	4		

(*) Statistically significant at p<0.05. (**) highly statistically significant at p<0.01.

Table (8): Relationship between clinical data of the children with ADHD and total quality of life (n=100)

Clinical data		Level of total quality of life						X ²	P-Value
		Poor		Moderate		Good			
		N	%	N	%	N	%		
Child's age at onset of signs & symptoms of the disease	< 3 years	0	0.0	8	28.6	28	53.8	10.14	<0.05*
	3 <6 years	8	40.0	20	71.4	24	46.2		
	6 <9 years	8	40.0	0	0.0	0	0.0		
	9 ≤12 year	4	20.0	0	0.0	0	0.0		
Child's age at onset of diagnosis of the disease	< 3 years	0	0.0	4	14.3	20	38.5	9.974	<0.05*
	3 <6 years	0	0.0	24	85.7	32	61.5		
	6 <9 years	12	60.0	0	0.0	0	0.0		
	9 ≤12 year	8	40.0	0	0.0	0	0.0		
ADHD subtype	Inattention type	15	75.0	5	17.9	0	0.0	15.63	<0.001**
	Hyperactivity / impulsivity type	5	25.0	3	10.7	5	9.6		
	Combined type	0	0.0	20	71.4	47	90.4		
Type of treatment the child receives	Medication	0	0.0	0	0.0	32	61.5	9.256	<0.05*
	Treatment sessions	0	0.0	10	35.7	2	3.9		
	Both	20	100.0	18	64.3	18	34.6		
Family history with ADHD	Yes	12	60.0	20	71.4	36	69.2	2.970	>0.05
	No	8	40.0	8	28.6	16	30.8		

Table (9): Correlation between mean scores of total parental stress, total emotional needs satisfaction and total quality of life scales among the studied parents (n=100).

Correlation	R	P-value
Total Parental stress & Total Quality of Life	-.384	.000**
Total Parental stress & Total Emotional needs satisfaction	-.256	.000**
Total Emotional needs satisfaction & Total Quality of Life	0.488	.000**

** Highly statistically significant

Discussion:

Attention Deficit Hyperactivity Disorder is one of the most common chronic disorders which influence millions of children worldwide. It is not merely a childhood disorder, but the symptoms may maintain throughout adolescence and persist into adulthood in up to 70% of children with ADHD. Parents may react to the diagnosis of ADHD in their children with depressive symptoms. a persistent sad, anxious or empty mood, feelings of hopelessness or pessimism, feelings of guilt or helplessness, decreased energy, difficulty concentrating or making decisions, restlessness, and insomnia or oversleeping (*Conlon, 2020*). So, the current

study aimed to assess the correlation between parental stress, emotional needs satisfaction and quality of life among parents of children with attention deficit hyperactivity disorder.

Regarding socio-demographic characteristics of the studied parents, the current study result showed that, less than one third of the studied parents had 40 years or more regarding their age with Mean ± SD (35 ±9. 77). Regarding their sex, more than half of them were females, this result might be due to mothers are considered the primary caregiver for their children and more responsible for caring than father related to Egyptian community. Regarding marital status, majority of parents were married, this result might be due

to the nature of this study that assessed the variables for parents. This finding was similar to the study done by **Sutan et al., (2018)** who reported that mean of parents' age was 35, more than half were mothers, and the majority of parents were married. On the other hand, this result was in disagreement with **Wang et al., (2018)** who reported that more than half of the parents were 40 years old or more and more than half of them were males.

Also, the result of the current study revealed that more than one third of the studied parents had intermediate level of education. Less than two thirds of parents were not working and Less than three quarters of them lived in rural areas, this result might be due to higher percentage of studied parents were mothers who were housewife lived in rural area, the life with their families and provide emotional support from life in rural area and psychiatric and mental health hospital serves a large sector of villages around it. This finding was similar to the study done by **Al-Buraiki et al., (2021)** who reported that more than one third of the studied parents had intermediate education, less than two third of them were not working and the majority of them lived in rural area. On the other hand, this result was in disagreement with **Talaat, (2017)** who reported that half of the studied parents had a job and the majority of them were lived in urban area.

Regarding clinical data of the children with ADHD. The result of this study revealed that, more than half of the studied children their age at onset of signs & symptoms of the disease ranged from 3 <6 years, with mean age was 3.6 ± 1.7 years. From the researcher point of view; this might be due to the caregiver of child noticed fewer and warning signs at early age when the child became more interactive with the surroundings; and development of the child different from his peers. The result of this study come in agreement with a study done by **El-Sadek et al., (2021)** who found that the mean age at onset of signs & symptoms appear was 4.7 ± 1.5 years. On the other hand, the result of this study contradicted with a study done by **Al-Saad et al., (2021)** who stated that the age of onset of symptoms of ADHD was raised from 7 years to 12 years.

The result of this study revealed that more than half of the studied children their age at onset of diagnosis of the disease ranged from 3 <6 years, with mean age was 3.72 ± 1.4 years. From the researcher point of view; this might be due to that this is the age of preschool which the child begins to go to the nursery school. At the time of the physician need obtain information from at least 2 places (home & school) to diagnose the disease. The mean age at onset of signs & symptoms and onset of diagnosis of disease are close to each other. This might indicated increase awareness about ADHD among caregivers of children that once signs & symptoms appear and affect their child, they seek for diagnosis. This result was in agreement with a study done by **Al-Habib et al., (2021)** who found that the mean age \pm SD of disease diagnosis was 5.76 ± 2.28 years. Most cases are diagnosed when children are 3 to 7 years old, but sometimes it's diagnosed later in childhood.

Regarding to family history with ADHD, the result of this study referred to that less than one third of children had positive family history with ADHD with more than one third of them from the first degree of kinship to the studied children. From the researcher point of view; it is may be due to that the most dangerous risk factor of the disease is the genetic factor which plays an important role in causing the disease especially if the degree of kinship was closer.

Concerning to total level of stress among the studied parents, the current study showed that one half of the studied parents had high stress level and less than half of them had moderate stress, while one tenth of them had low stress. From the researcher point of view, this result might be due ADHD diagnoses, invasive treatment and side effect of treatment cause physical and psychological stress among parents of those children. This result was in agreement with, **Sherief et al., (2018)** stated that, one half of parents had severe stress. Conversely, this result disagree with **Irwantto et al., (2020)** who revealed that less than one fifth of parents who caring for their children with ADHD had severe stress and more than half of them had moderate stress.

Regarding to total level of emotional needs satisfaction among the studied parents .It

revealed that more than half of the studied parents reported moderate emotional needs satisfaction. From the researcher point of view, this may be attributed to adequate emotional support they receive, parents adequately prepared to deal with the emotional needs of children, more likely seeking to social and emotional support, sharing their feelings with colleagues, providing opportunities for parents to develop range of coping strategies. According to *Moore et al., (2022)*, parents who have high emotional need satisfaction are more open, flexible, and curious toward new situation, can control their own feelings, warm and capable of motivating their children. This result was congruent with the study done by *Başoğul et al., (2019)* and reported that moderate level of emotional needs satisfaction.

According to total level of quality of life among the studied parents, the result of current study illustrated that less than three quarter of the studied parents had poor level of quality of life and less than one tenth of parents had good level of quality of life. From the researcher point of view, this result might be due to after child diagnosis with ADHD, parents experience a feeling of physical, social and psychological problems. The problems include insomnia, fatigue, isolation, fear, stress, anxiety and depression, which may negatively affect the quality of life (QOL) of those parents. This result was supported with *Vercasson et al., (2020)* who reported that less than three quarter of parents had poor level of quality of life. Conversely, this result was disagreement with the study of *Yu et al., (2018)* showed good QOL of more than half of family caregivers for ADHD children.

Concerning relationship between parents' socio demographic characteristics and total stress level, the current study illustrated that, there was a highly statistically significant relation between total stress level among the studied parents and their marital status. From the researcher point of view, this result could be due to married parents had more responsibility; couple supports each other to tolerate responsibility of child care and treatment than divorced or widowed. This result was accordance with *Bemis et al., (2018)* was reported that there was a highly statistically

significant relation between total stress level among the studied parents and their marital status. Conversely, this result was in disagreement with *Zarina et al., (2017)* who found that there was no statistically significant relation between total stress level and their marital status.

As well, the result of current study showed that, there was a statistically significant relation between parents' stress level and their age, sex and educational level. From the researcher point of view, this result could be due to mothers assume the large part of child's care duties and home care than fathers, and younger parents may experience greater burden. This result was in agreement with *McCarthy et al., (2018)* who reported the presence of statistically significant relation between parents' stress level and their age and sex. Conversely, this result was in disagreement with *Zarina et al., (2017)* who found that there was no statistically significant relation between total stress level among the studied parents and their age, sex and educational level.

Regarding to relationship between the clinical data of the children and their total level of parental stress, the result of this study revealed that a highly statistically significant relation between Child's age at onset of signs & symptoms of the disease and total parental stress. From the researcher point of view; this could be due to caregiver of child noticed fewer and warning signs at early age when the child became interactive with the surroundings; and development of the child different from his peers .the parents became very worry and felling of stress and anxiety about their children . The result of this study came in agreement with a study done by *El-Sadek et al., (2021)* who found that there highly statistically significant relation between child's age at onset of signs & symptoms of the disease and total parental stress.

Concerning relationship between parents' socio demographic characteristics and total emotional needs satisfaction, the current study illustrated that, there was a highly statistically significant relation between total emotional needs satisfaction among the studied parents and their age, and sex. From the researcher

point of view, this result could be due to the mother have hormonal changes and more sensitive than father and when they younger were less capable to responsibility and life changes. The result of this study came similar with a study done by *Rohmah et al., (2018)* who reported that there was a highly statistically significant relation between total emotional needs satisfaction among the studied parents and their age, and sex

Concerning to relationship between the clinical data of the children and their total level of emotional needs satisfaction, the result of this study revealed that a highly statistically significant relation between ADHD subtype and total emotional needs satisfaction. From the researcher point of view; this could be due to, high levels of ADHD symptoms associated with inappropriate internalized (sadness, moodiness) or externalized (anger, aggressiveness) emotional responses; and children with ADHD experience more difficulties in social relationships with parents, peers and siblings than their non-ADHD peers which affect negatively on parents satisfaction. The result of this study was in the same line of a study done by *Lemes et al., (2017)* who found that highly statistically significant relation between ADHD subtype and total emotional needs satisfaction.

Regarding relationship between parents' socio demographic characteristics and total quality of life, the current study illustrated that, there was a highly statistically significant relation between total quality of life among the studied parents and their age and sex. From the researcher point of view, this result might be due to parents don't have awareness about ADHD and its consequences which locate burden on their daily livings activates which consequently affect their quality of life, also, woman have the main role as administration of children, households, and husbands. This result was in accordance with the study of *Mondal et al., (2020)* who reported that there was a highly statistically significant relation between total quality of life among the studied parents and their age and sex. Conversely, this result was in disagreement with *Rohmah et al., (2018)* who found that there was no statistically significant relation between total quality of life among the studied parents and their age and sex.

Concerning to relationship between the clinical data of the children and their total level of quality of life, the result of this study revealed that a highly statistically significant relation between ADHD subtype and total quality of life. From the researcher point of view; this may be due that, the symptoms increase and complex as in the combined type which usually causes poor academic performance which QOL become poorer for their parents. This result was consistent with a study done by *Conlon, (2020)* who found that subtypes of ADHD have an impact on the QOL of their parents

According to correlation between total parental stress, total emotional satisfaction and total quality of life and among the studied parents, the current study showed that there was highly statistically significant negative correlation between total parental stress, total emotional need satisfaction and total quality of life among the studied parents. From the researcher point of view, this result could be due to anxiety, stress and depressive symptoms, which occurred in substantial percentage of parents these psychiatric problems, had an adverse impact on parents' emotional need satisfaction and quality of life. This result agreement with, *Yildirim et al., (2021)* who reported that there was highly statistically significant negative correlation between total parental stress, emotional need satisfaction and total quality of life among his studied parents.

Furthermore, the current study revealed that there was highly statistically significant positive correlation between emotional needs satisfaction and total quality of life among the studied parents. From the researcher point of view, this result might be due to being emotionally satisfied, and have an active engagement in life, and maintain emotional wellbeing. This will let them have a successful social life with a positive effect on quality of life. This result was similar with the study done by *Barker, (2020)* who revealed that highly positive correlation between total emotional needs satisfaction and total quality of life among the studied parents with ADHD children.

Conclusion:

Based on the result of the present study , it can concluded that half of the studied parents had high stress level and more than half of them have moderate level of emotional needs satisfaction while less than three quarter of them had poor level of quality of life. Also there is a highly statistically significant negative correlation between total parental stress, total emotional needs satisfaction and quality of life. While there is a highly statistically significant positive correlation between total emotional needs satisfaction and total quality of life among the studied parents.

Recommendations

- Educational program for Parents about ADHD to improve their behavior, enhance the QOL and stress.
- Psycho educational program for parents are needed to reduce their stress, and enhance parenting satisfaction and quality of life..
- Social support and awareness programs to increase acceptance and avoid bullying toward the children with ADHD.
- Further studies by using larger probability sample for generalization of the results.

Acknowledgements:

We would like to thank all the children and their parents whom participated in the study and all people supported me.

References:

- Al-Buraiki, T., Hany, A., Riad, K., & Osman, D. (2021):** Association of parental, child, and environmental factors with the occurrence of childhood ADHD in Upper Egypt; 51(1):10-18.
- Al-Habib, D., Alhaidar, F., Alzayed, I., & Youssef, R. (2021):** Consistency of child self-reports with parent proxy reports on the quality of life of children with attention-deficit/hyperactivity disorder in Riyadh, 2021. *Journal of family & community medicine*, 26(1), P. 9.
- Al-Saad, M., Al-Jabri, B., & Almarzouki, A. (2021):** A review of working memory training in the management of attention deficit hyperactivity disorder. *Frontiers in Behavioral Neuroscience*, P. 159.
- Anastopoulos, A., Langberg, J., Besecker, L. & Eddy, L. (2020):** *CBT for College Students with ADHD: A Clinical Guide to ACCESS* ,Elsevier, Switzerland, Available at: [https:// books.google.com.eg/books?](https://books.google.com.eg/books?), P. 88.
- Anderson, A. (2018):** Predictors of acute and posttraumatic stress symptoms in parents following their child's ADHD diagnosis. *Journal of Traumatic Stress* 25, 558–566.
- Ayano, G., Yohannes, K., & Abraha, M. (2023):** Epidemiology of attention-deficit/hyperactivity disorder (ADHD) in children and adolescents in Africa: a systematic review and meta-analysis. *Annals of general psychiatry*, 19(1), Pp. 1-10.
- Barker, P. (2020).** The Tidal Model: developing an empowering, person-centred approach to recovery within psychiatric and mental health nursing. *Journal of psychiatric and mental health nursing*, 8(3), 233-240.
- Baçoğul, C., Arabacı, B., Büyükbayram, A., Aktaş, Y., & Uzunoglu, G. (2019):** Emotional intelligence and personality characteristics of parents and their situations of exposure to stress. 55(2), 255-261.
- Bektas, İ., Kır, M., Yıldız, K., Genç, Z., Bektas, M., & Ünal, N. (2022):** Symptom frequency in children with congenital heart disease and parental care burden in predicting the quality of life of parents in Turkey. *Journal of Pediatric Nursing*, 53, e211–e216.
- Bemis, H., Yarboi, J., Gerhardt, C., Vannatta, K., Desjardins, L., Murphy, K., & Compas, B. (2018):** Childhood ADHD in context: Sociodemographic factors, stress, and psychological distress among mothers

- and children. *Journal of pediatric psychology*, 40(8), 733-743.
- Benjamin, W., & Dorianne, B. (2020):** Maternal stress and social support prospectively predict infant inflammation, Brain, Behavior, and Immunity 86, p 14–21
- Berry, J., & Jones, W.(1995):** The Parental Stress Scale : initial psychometric evidence. *Journal of Social and Personal Relationships*, 12, 463 – 472.
- Brett Culham B. Emotional Needs Scale (2008).** *Human Givens Journal* (2008 15(3)available at <http://www.Hgi.org.UK/archive/brettemonneedscale.htm>.
- Carthy, C., Ashley, M., Lee, J. & Conlon, A. (2020):** Parents' Views of Ways to Improve Behavior or Enhance the Quality of Life of ADHD Children, Doctoral dissertation, Interdisciplinary Educational Studies College of Education, Information, and Technology, Long Island University, Pp. 1-24.
- Deci, L., & Ryan, M. (2020):** The " what" and " why" of goal pursuits: Human needs and the self-determination of behavior. *Psychological inquiry*, 11(4), 227-26
- El-Bakry, A., El Safty, A., Abdou, A., Amin, O., Ayoub, D., & Afifi, D. (2022):** Effect of zinc supplementation in zinc-deficient children with attention-deficit hyperactivity disorder. *Egyptian Journal of Psychiatry*, 40(2), P. 86.
- El-Monshed, A., Fathy, A. & Shehata, A. (2020):** Association between Sleep Habits and Quality of Life in Children with Attention Deficit Hyperactivity Disorder. *American Journal of Nursing*, 8(2), Pp. 290-302.
- El-Sadek, A., Soliman, D., Elbakry, S., Behiry, E., & Omran, H. (2021):** Clinical Evaluation of Latrophilin 3 (LPHN3) Gene in Children with Attention Deficit Hyperactivity Disorder (ADHD). *Benha Journal of Applied Sciences*, 6(2), Pp. 129-132
- Irwanto, R., Prihaningtyas, A., & Mustakim, D. (2020):** Impact of Caregiver's Psychological Aspects towards Quality of Life of Children with ADHD , 21(9), 2683.
- Jansen, S., Van der Putten, A., Post, W., & Vlaskamp, C. (2022):** Family-centredness of professionals who support people with profound intellectual and multiple disabilities: Validation of the Dutch 'Measure of Processes of Care for Service Providers' (MPOC-SP-PIMD)., 35, 1623–1630
- Johnson, (2022):** Attachment theory and emotionally focused therapy for individuals and couples. *Attachment theory and research in clinical work with adults*, 410-433.
- Lemes, P., Soares, M., Hattori, W., & Morales, N. (2017):** Predictors of quality of life and symptom severity in attention deficit/hyperactivity. *International Physical Medicine & Rehabilitation Journal*, 1, 00030. doi:10.15406/ipmrj.2017.01.00030Mc
- Mirzaei, M., Yasini, A, Ardekani, M.,& Dehghani, A. (2021):** Prevalence of depression, anxiety and stress among adult population: Results of Yazd Health Study. *Iran J Psychiatry*. 2019; 14:137–46. [[PMC free article](#)] [[PubMed](#)] [[Google Scholar](#)]
- Mondal, M., Dey, T., & Poddar, S. (2020):** A Study to Assess the Quality of Life (QOL) Among Parents of Children with ADHD Out Patient Department (OPD) In Selected Hospital of Kolkata, West Bengal, India, *Malaysian Journal of Medicine and Health Sciences*; 16(SUPP10): 125-130, Nov 2020
- Moore A, Ball RA, Kuipers L. (2022):** Expressed emotion in staff working with the long term adult mentally ill. *Br J Psychiatry*; 161 :802-808.
- National Institution of Mental Health (2020):** Attention deficit/hyperactivity disorder, Available at: <https://www.nimh.nih.gov/health/topics/attention->

- deficit-hyperactivity-disorder-adhd/index.shtml. Retrieved on 20, December, 2021
- Paidipati, C., Deatrick, J., Eiraldi, R., Ulrich, C., & Brawner, B. (2023):** Family management in childhood attention deficit hyperactivity disorder: A qualitative inquiry. *Journal of pediatric nursing*, 52, Pp. 82-90.
- Rohmah, B., Anis N., & Bariyah, K. (2018):** Kualitas hidup lanjut usia [Quality of life of elderly]. *Jurnal Keperawatan*, 3(2), 120–132.
- Sherief, M., Kamal, M., Abdalrahman, M., Youssef, M., Abd Alhady, A., Ali, S., & Hashim, M. (2018):** Psychological impact of treatment for childhood ADHD on patients and their parents. *Medicine*, 94(51).
- Sutan, R., Al-Saidi, A., Latiff, A., & Ibrahim, M. (2018):** Coping Strategies among Parents of Children with Attention deficit hyper active disorder. *Health*, 9, 987-999.
- Talaat, f., (2017):** Psychological Problems And Coping Patterns Among Parents Of Children With ADHD; M.D. Helwan University. Helwan, Egypt, P75-85.
- Uludağ, A., Tüfekç, F., & Ceviz, N. (2020):** The connection between social support and caregiver burden and life satisfaction of the parents whose children have congenital heart disease. *YOBU Faculty of Health Sciences Journal*, 1(1), 11–20.
- Vercasson, C., Ansoborlo, S., Gandemer, V., Paillard, c., Sirvent, N., & Berbis, L. (2020):** Quality of life in parents of childhood. *A French Childhood ADHD*. 2020; 67: e28419.
- Wang, G., Shen, N., Zhang, X., & Shen, M. (2018):** Care burden and its predictive factors in parents of newly diagnosed children with ADHD in academic hospitals in China, (25); p.3703–3713
- World Health Organization Quality Of Life (WHOQOL) Group (1997):** Development of the World Health Organization WHOQOL-Brief quality of life assessment. *Psycho Med* 28:551–558.
- Yildirim, H., Yayan, Y., & Suna, D. (2021):** The relationship between the care burden and quality of life of parents who have children with ADHD, *Journal of Pediatric Nursing*,
- Yu, H., Li, M., Liu, C., & Ma., Y. (2018):** Factors associated with the quality of life of family caregivers for ADHD patients in China, *Health and Quality of Life Outcomes*, 15(15), P2.
- Zarina, A., Radhiyah, R., Hamidah A., & Rahman, J. (2017):** Parenting Stress in Childhood ADHD *Med & Health*; 7(2): 73