Psychological Distress and Copping Strategies in mother of children with ADHD

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Abstract: The purpose of the present study is to evaluate the relationship of attention deficit hyperactivity symptom of children with psychological distress (i.e. depression, anxiety & stress) in their mothers. Further it aims to explore the predictive relation of coping strategies with psychological distress among mothers of ADHD children. Based on review of empirical work it is hypothesized that (a) The symptom of ADHD in children will be positively correlated with the level of depression in mothers of children with ADHD (b) The symptom of ADHD in children will be positively correlated with the level of stress in mother of children with ADHD (d) Problem focused coping and emotion focused coping will predict the level of depression stress and anxiety. The sample of the present study consisted of 80 mothers with ADHD children age ranged 28-45 years. The mothers were selected with children age range from 6-12, both male and female. The study utilized cross sectional research design and purposive sampling technique. The measures used were DASS-21 scale (Lovibond, 1995) translated version, along with Coping style scale-Urdu (CSS;Zaman,2015), and the Conner parent rating scale of attention deficit hyperactivity disorder. The statistical analyses Pearson product moment coefficient correlation and hierarchal regression were used. The results of the present study are significant and shows that there was significant at .p< .001 for maternal depression, at .p< .001 for maternal anxiety and at .p< .001 for maternal depression, anxiety and stress among the mothers.

Keywords: Psychological distress. Copping strategies, ADHD, DASS-21, CSS

1 Introduction & Literature Review

Parental interaction is a reciprocal process. Both parents and children's behavior is influenced by the way they are treated by each other (Maccoby, 2000). Child birth is an often celebrated and joyous occasion in our society, however, in households where a child is born with a disability, deformity or a disease, the existing level of stress within that household tends to increase and the family members find it difficult to cope with the needs and demands of the new-born. Even with the spread of information regarding attention deficit hyperactivity disorder, it has done little to share light on the condition of such families with children born with ADHD (Arcia&Fernandez, 1998).

Raising a child is not easy and rearing an ADHD child is more difficult as it puts a lot of additional challenges owing to the disruptive behaviors of ADHD child (Harrison, &Sofronoff, 2002) and it can also affect the mental health of parents. So, fostering an ADHD can adversely influence the functioning of a family and can put burdens on parenting (Sawyer et al., 2000; Seipp& Johnston 2005). Parents of ADHD children are more tended to have inadequate feelings in their parenting roles. One of the reasons why ADHD parents are compelled to apply for psychiatric treatment is the ever increasing negative behavior and interaction of the child with the parents. Parents of ADHD children often show lesser levels of parenting self-esteem. They have been observed blaming themselves and social isolation gets prominent in their lives (Mash & Johnston, 1983).

Different meta-analysis studies inspect the relation between ADHD and parenting depression. ADHD is a long term

extensive condition distinguished by inattention, impulsivity and hyperactivity. Recent research points to robust genomic influences in the parents of ADHD children (Levy, Hay, & Bennett, 2006; Willcutt, in press) along with elevated rates of ADHD symptomatology (Epstein et al., 2000) and depression(Nigg&hinshaw 1998). Acknowledging the child behavior can also help to forecast both child and parental stress and maternal depression of

families of children with ADHD (Harrison &Sofronoff,

Stress is defined as a sensation of pressure and tension. Stress can be Positive and Negative. Positive stress is desired since it plays a considerable role in impetus, acclimatization and response to the environment. On the other hand, excessive amount of stress is undesirable which may lead to bodily harm. It increases the chances of strokes, heart attacks, sores, and psychological disorders such as depression (Sapolsky& Robert, 2004). We suffer from stress when we have a belief that our resources for coping hurdles like situations, people, stimuli etc. are not adequate for the situations. Amongst many challenges of life, parenting is one of the toughest jobs an adult ever does, which is more likely to result in the parental stress. When parents maintain a balance between their perception of demands and their perception of resources for meeting those, it gives positive results (Theule, 2010).

1.1 Rationale

2002).

Parenting is considered as one of the challenges of life especially for a mother when she deals with ADHD symptoms of the child. Parenting of ADHD child may result into depression, anxiety and stress. The study would identify the distress and the coping strategies adopted by mothers of children with ADHD. It would provide

evidence about how these coping strategies affect the emotional problems of mothers and may improve their mental health. Helpful coping strategies will be promoted on the basis of results of this study by mental health professionals.

2 Hypotheses

The study measures the following hypotheses.

- (a) The symptom of ADHD in children will be positively correlated with the level of depression in mother of children with ADHD
- **(b)** The symptom of ADHD in children will be positively correlated with the level of anxiety in mother of children with ADHD
- **(c)** The symptom of ADHD in children will be positively correlated with the level of stress in mother of children with ADHD
- **(d)** Problem focused coping and emotion focused coping will predict the level of depression stress and anxiety

3 METHOD

In the present study, the endeavor is to get to know whether ADHD child has a direct impact on a mother which increases the risk of maternal depression, anxiety and stress and explore which type of coping strategies are effective in dealing with this risk.

3.1 Participants

In the present study participants were include 80 mothers of children with ADHD from Lahore Pakistan. The age range of mothers was from 28 - 45 years. The sampling techniques were used in order to find mothers of children with ADHD with depression stress and anxiety. Sampling technique was non-probability, Purposive sampling. Mothers of ADHD children were approached from different government and private institutions in Lahore Pakistan. Cross sectional research design was employed.

3.1.1 Inclusion criteria

Mother of children with ADHD was selected from private and government clinic/ hospitals whose authorities were given formal permission to collect data from their registered patients.

The participants were being included with following stipulated characteristics:

1. The child male and female with ADHD age range 6-12 years

- 2. Mother of children with ADHD age range 28-45 years
- Mothers from all socioeconomic background were selected.
- 4. Working and non working women were included.

3.1.2 Exclusion criteria

- 1. Patient beyond the specified age range was excluded.
- Mothers diagnosed with other psychological disorder were excluded.
- 3. Mothers with other medical condition were excluded.
- 4. Single mothers were excluded from the study

3.2 Measures

Following tools were used:

3.2.1 Demographic sheet

Demographic Information consisted of variables that gathered personal information, education, age and variables related to family system and socio economic status.

3.2.2 Conner parent rating scale

CRS-R's checklist is broadly used to diagnose and screen ADHD in children having age of three to twelve years. It can be used in both settings i-e home and school. For this study, Parent Rating Scale-R's short form has been used which contains 28 items. If the score is 60 or above on this scale, it represents clinically significant ADHD symptoms. The number of sub-scales are four namely Hyperactivity, Oppositional, Inattention and ADHD index. The response of mothers was collected while considering the behavior of their child in the past month on 3-point rating scale 0 to 3. '0' meant never while '3' meant very often. CRS-R's realiability as far as internal consistency is concerned was around .75 to .90 (Conners, 1997). Cronbach's alpha reliability coefficient was also found to be satisfactory being .58.

3.2.3 Depression Anxiety and Stress Scale (DASS; Lovibond, &Lovibond, (1995)

The DASS 21 is a 21 item self report questionnaire that is intended to measure the levels of some symptoms common to Depression Anxiety and stress. While completing the DASS the participant is required to indicate the symptoms over the previous week. The items are scored ranging from 0 (did not apply to me at all over the previous week) to 3 (applied to me very much or most of the time over the last

week). The letters D (Depression), A (Anxiety) and S (Stress) indicate the scale to which each item belongs. For the scoring each item from the D, A and S are added and then the summed valued from each scale is multiplied by 2 as DASS21 is a short form of version of the DASS which has 42 items. The scores are then evaluated with respect to the severity rating index which includes scoring in normal, mild, moderate, severe and extremely severe intensity levels. The scores falling within these levels will show the intensity levels of depression, anxiety and stress. The scores higher in one scale e.g. Depression and unchanging or consistently high scores in other domain like Anxiety may aware the clinician of the fact that the participant might be having a coexisting Anxiety Disorder for which treatment might be sought. Cronbach's alpha was .88 for the Depression scale, .82 for the Anxiety scale, .90 for the Stress scale, and .93 for the Total scale. (Henry & Crawford, 2005)

3.2.4 Coping styles scale (css-zaman, 2015) Coping styles scale (CSS; zaman, 2015) is an ingenious questionnaire and

4 Results

Table 1

Variables	M	SD	A
Depression, Anxiety and stress	93.77	5.55	.75
Depression	38.23	2.11	.64
Anxiety	41.01	1.02	.63
Stress	43.12	1.31	.67
Connor parent rating scale	56.63	4.90	.47
Coping style scale	73.47	8.68	.79
Emotion Focused	18.21	4.32	.77
Coping			
Problem focused	22.13	3.43	.83

Note. M=Mean; SD=Standard Deviation; Mini=Minimum value; Max= Maximum value; α = Cronbach's alpha

In order to test hypothesis I, i.e., The symptom of ADHD in children will be positively correlated with the level of depression, stress and anxiety in mother of children with ADHD. Pearson Product moment correlation was used, as shown in table studied variables Pearson Product moment correlation was used as showed in Table 2;

The main focus of the study was to find either there is significant depression, anxiety or stress in mothers of children with ADHD by stating there is likely to be greater comprises of 22 items and is developed for Pakistani population. The respondent has responded on a 5-point scale. The questionnaire assesses two types of coping such as problem focused coping and emotion focused coping. Alpha measure of problem focused is .879 and alpha measure of emotion focused coping is .890.

3.3 Procedure

In order to collect data different hospitals and foundations were approached by the researcher. Permission from the director of the hospital and the concerning department's heads was taken to contact the mothers of ADHD child. The consent for participation was taken from each subject. They were assured about the confidentiality of the data obtained from them that it would only be used for research purpose. After their approval to participate in the study, the subjects were given test booklet. The test booklet was comprise of three scales along with demographic information sheet ,DASS scale and coping styles scale and Conner parent rating scale. The subjects were debriefed about how to answer the items.

depression, anxiety and stress in mothers of ADHD children.

Table 2

Descriptive summary of maternal depression, anxiety and stress

Major Study Variables	F	%
Levels of Maternal Depression		
Low depression	0	0
Moderate Depression	1	1.25
Severe Depression	79	98.75
Levels of Maternal Stress		
Low stress	0	0
Moderate Stress	9	11.25
Severe Stress	71	88.75
Levels of Maternal Anxiety		
Low Anxiety	1	1.25
Moderate Anxiety	8	10.0
Severe Anxiety	71	86.35

Table 3

Descriptive summary of maternal depression, anxiety and stress with reference to Connor Rating Scale ranges for

Connor	Depression	Anxiety	Stress
ranges			
Severe	72%	78%	66%
Moderate	22%	20%	22%
Mild	6%	2%	12%

ADHD features through Cross Tabulation Procedure

Table 4

Pearson Product moment coefficient correlation indicate the relation among the maternal depression level and symptoms of ADHD in children (N=80)

Variable	Symptoms in ADHD Children
Maternal Depression	.072***

Result showed that there was significant relationship among symptoms of ADHD children and their mothers' level of depression. In order to test hypothesis II, i.e. the symptom of ADHD in children will be positively correlated with the level of anxiety in mother of children with ADHD Pearson Product moment correlation was used, as shown in table 5.

Table 5

Pearson Product moment coefficient correlation indicate the relation among the maternal anxiety level and symptoms of ADHD in children (N=80)

Variable	Symptoms in ADHD
	Children
Maternal Anxiety	.65**

Result showed that there was significant relationship among symptoms of ADHD children and their mothers' level of anxiety. This implies that with increase in hyperactivity symptoms of children, there was increase in anxiety states of the mothers. This invokes the likelihood that this relationship might be indicative of predictive relationship in ADHD symptoms of the child and mothers' anxiety. In order to test hypothesis III, i.e., the symptom of ADHD in children will be positively correlated with the level of stress in mother of children with ADHD. Pearson Product moment correlation was used, as shown in table 6 & 7.

Table 6

Pearson Product moment coefficient correlation indicate the relationship among the maternal stress level and symptoms of ADHD in children (N=80)

Variable	Symptoms in ADHD
	Children
Maternal Stress	.75***

Note.*.p < .05; ".p< .01; ".p< .001

Result showed that there was significant increasing relationship among symptoms of ADHD children and their mothers' level of stress.

Table 7

Correlation of maternal Depression with oppositional,

inattention, hyperactivity & ADHD index

Variable	Oppositional	Inattenti0n	Hyperactivity	ADHD Index	P
	r	r	r	R	
Maternal					
Depressi	.786**	.816**	.804**	.813**	0.01
on					

N=80, Correlation is significant at the level of 0.01.

Table 8

Pearson product moment coefficient correlation indicate

the relationship among the maternal anxiety and according

to subscale of Conner symptom of ADHD in children (N=80)

Correlation of maternal Anxiety with oppositional, inattention,

hyperactivity & ADHD index

Variable	Oppositional	Inattenti0n	Hyperactivity	ADHD Index	P
	r	r	r	R	
Maternal Anxiety	.686**	.716**	.801**	.823**	0.01

N=80, Correlation is significant at the level of 0.01.

Table 9

Pearson product moment coefficient correlation indicate the

relationship among maternal stress and subscales of

Conner's symptom of ADHD in children (N=80).

Variable	Oppositional	Inattenti0n	Hyperactivity	ADHD Index	P
	r	r	r	R	
Maternal					
Stress	.686**	.816**	.701**	.723**	0.01

N=80, Correlation is significant at the level of 0.01.

Table 10 Hierarchical regression of depression with coping strategies (N=80)

Depression	
ΔR^2	В
24***	
	.43***
	18
.02	
	.47**
	22°
	02
	.17
-	1 1:

Note. p<.05; p<.01; p<.001; $\beta = Standardized$ Co efficient; ΔR²= R Square change; R²= R Square

Overall model for depression in block 2 explained 26% of the variance of depression in mothers of ADHD children, F (4, 76) = 6.64, p<.001. This model showed that family system and socioeconomic class are significant predictors of depression. When family system and socioeconomic status are added in first block then the variance was 23.6% and significance of model is F_{change} (2, 78) = 12.06, p<.001. This model showed that family system is the positive significant predictor of depression.

In order to test the fourth hypothesis i.e., problem focused and emotion focused coping will predict the level of depression stress and anxiety in mother of children with ADHD, hierarchical regression is used as shown in table 11;

Table 11 Hierarchical regression of anxiety with coping strategies (N=80)

Variables	Anxiety	
	ΔR^2	B
Block 1	.16***	
Family System		.25*
Socioeconomic Status		28"
Block 2	.008	
Family System		.27
Socioeconomic Status		28
Emotional focused		09
Coping		
Problem focused Coping		.08

Co efficient; ∆R2= R square change; R2= R square

Overall model for anxiety in block 2 explained 17% of the variance of anxiety in mothers of ADHD children, F (4, 76) = 3.88, p<.006. This model showed that family system and socioeconomic class are significant predictors of anxiety in ADHD children's mother. When family system and socioeconomic status are added in first block then the variance was 16.1% and significance of model is F_{change} (2, 78) = 7.50, p<.001. This model showed that family system is the positive, while socioeconomic status is negative significant predictors of anxiety in mothers.

In this study it was also assumed that level of stress is also likely to predicted by coping strategies used by the mother of children with ADHD, Hierarchical regression was used to indicate the predictors of stress;

Table 12 Hierarchical regression of stress with coping strateoies (N=80)

Variables	Stress	
	ΔR^2	В
Block 1	.16***	
Family System		.25*
Socioeconomic Status		28"
Block 2	.008	
Family System		.27*
Socioeconomic Status		28
Emotional focused		09
Coping		
Problem focused Coping		.08

*Note.**p<.05;**p<.01; **p<.001; β = Standardized Co efficient; $\Delta R^2 = R$ Square change; $R^2 = R$ Square

Overall model for level of stress in block 2 explained 17% of the variance of stress in mothers of ADHD children, F (4, 76) = 3.88, p<.006. This model showed that family system and socioeconomic class are significant predictors of level

of stress in ADHD children's mother. When family system and socioeconomic status are added in first block then the variance was 16.1% and significance of model is F_{change} (2, 78) = 7.50, p<.001. This model showed that family system is the positive, while socioeconomic status is negative significant predictors of stress in mothers.

In order to execute the supplementary hypothesis to complement the analysis of association and regression, the Pearson Product Moment correlation was computed for all study variables.

Table 13

Pearson Product Moment Correlation among demographic variable with depression, stress, anxiety and coping strategies (N=80)

Vars.	Dep	Anx	Stress	EFC	PFC
Age	08	.063	.063	01	.003
Education	08	02	02	14	19
Family System	.45"	.29"	.29"	09	28
No. of	09	.09	.09	17	01
children					
Birth order	11	06	06	07	.09
Spouse Age	03	.04	.04	27	.04
Spouse	-2.14	19	19	.05	15
Education					
Spouse	.01	07	07	01	014
income					
Socioeconomic	24*	32**	32"	.28	.27*
Status					
Dependent	03	01	01	18	06
upon i					
Ncome					
First time	17	15	15	03	18
diagnosis					
Duration of	16	14	14	.04	03
treatment					
Illness in	.13	06	06	.23*	.06
family					
ADHD in	.15	.18	.18	17	.03
family					
Emotion	06	16	16	-	.36**
focused					
coping					
Problem	03	10	10	.36**	40
focused					
coping					
Depression		.84"	.84"	06	.03
Anxiety	.84**		1.00***	16	10
Stress	.84**	1.00***		16	10

Note.*.p < .05; ".p < .01; "".p < .001

Results showed that family system has significant relationship with depression, anxiety, stress and problem solving coping of mothers of ADHD children. Findings also

showed that spouse age has significant negative association with emotion focused coping strategies. It means that in early age, fathers of ADHD children are more likely to use emotional focused strategies to cope with their children's problem. Socioeconomic status has significant link with stress, anxiety, depression, emotion and problem focused coping strategies used by mothers of children of ADHD. Results also indicated that emotional focused coping strategies had significant positive relation with problem focused coping strategies. It means both strategies can be used for coping with problems. Those using emotional strategies are also more likely to used problem focused coping techniques. Results also reflect that level of anxiety and stress significantly increases with increase in level of depression among the mothers of ADHD children.

5 Discussions

The aim of this research is to indicate the relationship between level of depression, anxiety and stress; and different coping strategies used by the mothers of children with ADHD. The mother's psychological health is affected due to certain behaviors of children with ADHD such as emotional instability, disobedience, irritability, conflict, vandalism, inattention and impulsivity. In general, these conditions can lead to isolation and lack of interest in relationships with the environment, low self-esteem, aggression, anxiety, frustration and depression. The very first finding from the current study reveals significant depression in mothers of children with ADHD due to the chronic symptoms of their children. The results showed that there is positive significant relationship among symptoms of ADHD and maternal depression (r= .75, <.001; Table 5). It shows that higher level of maternal depression is linked with child's attention deficit hyperactivity disorder.

These findings are accordance with previous empirical findings in which Mc Cormick and colleagues,. et al (1995) evaluated the levels of anxiety and depression in mothers of children with ADHD and reported that the prevalence of major depression was 17.9% while that of minor depression was 20.5%. Similar to our study, Gau and colleagues interviewed mothers of children with ADHD for psychiatric diagnoses and they evaluated parental and familial factors in ADHD (Gau, 2007). They reported that anxiety, depression, somatic symptoms and sleeping problems increased in mothers. Alizadeh and colleagues reported that self-esteem of parents with children diagnosed with ADHD reduced (Alizadeh, Applequist & Coolidge, 2007).

Similarly, Lesesne and colleagues reported that mothers of school age children diagnosed with ADHD experienced depression, anxiety and emotional problems at impairing levels (Lesesne, Visser, & White, 2003). The mothers reported that when their children fail to follow instructions

they feel incompetent at their ability. This feeling of incompetency leads towards maternal feeingls of hopelessness and contributes towards depression. A study reveals that feelings of incompetency in individuals can lead to depression (West. 1999).

Another factor linking maternal depression with child's symptoms of ADHD is social withdrawal. Mothers are preoccupied with fear their children can cause damage to self or others because of their hyperactivity and inattentive behavior. Thus the mother's become home bound in taking care of the children. This isolation the mothers faced by getting bound at home to take care of their children with ADHD. This feeling of social isolation leads to feelings of depression. A study reveals that feelings of isolation in individuals creates loneliness, withdrawal and it contributes to depression.(Tiwari & Ruhela, 2012). Another main cause which leads to mothers of ADHD children to depression includes external factors as well as internal factors. External factors are related to the pressure of the society, the negative criticism and the way society treats them this uncontrollable life event leads toward the feeling of incompetence and worthlessness which eventually leads toward the mother to feel unworthy and not being able to handle the child. The negative impact leads the mother toward depression. Johnston and Mash (2001) reported that mothers of ADHD children might be exposed to considerable negative social support because of the poor behaviors frequently displayed by their children and attribution placed on those behaviors by others. As according to Gerdes (2007) mothers of ADHD children experience depression due to the uncontrollable external events put toward them by society which displayed inadequate feelings in a mother induce guilt as well. Thus the present study reveals that the behavior of the child with ADHD creates feelings of hopelessness, incompetency and social withdrawal among the mothers which contribute towards depression.

The second hypothesis tested the relation between maternal anxiety and symptoms of ADHD children (r=.65, p<.001; Table 6). Results showed that there was significant relationship among ADHD and their maternal' level of anxiety. Based on a study by Yusefi (1988), some characteristics of ADHD were associated with increasing parent/child issues and leading towards anxiety and tension.

Moreover, similar to the findings of the current study, ADHD was associated with maternal anxiety. Dewolf (1997) also found that mothers of (pre-school) ADHD children considered their parental efficacy to be less than desirable; this feeling increased the rate of anxiety and depression among them. Costin (2004) reported a significant relationship between children's hyperactivity

and maternal anxiety. According to the mentioned study, ADHD mother face higher risks of anxiety due to parenting inefficacy.

Mothers of ADHD children have to devote more energy and time on parenting and caring, it can certainly lead to exhaustion and anxiety (Dos Reis & Myers, 2008). Another study on this subject concluded that mother having ADHD child is more likely to experience high levels of anxiety due to her worries and inadequate parenting skills (Mirzaaghasi , Kohani , Baniasadi , Tara , 2014)

As per our third hypotheses, finding showed significant relationship between maternal stress and children with attention deficit children (r=-.75, p< .001; Table 4.3). In ADHD mothers stress gets higher due to facing the disturbed child all the day. Higher degree in Conner's scales subtypes like oppositional, hyperactivity and inattention predicts the severity of maternal stress. Culturally in Pakistan mother are responsible for child rearing and behavioral management of children rather than fathers.

As we know if a mother is a bringing a child with a disability, the things gets worse and worse for her. They have to go through an extra burden in addition to home making responsibility due to which they sometime curb themselves from all kind of routine social situation owing to the poor behavior very often demonstrated by their ADHD children. Hence it dwindle mother control over child behavior in turn intensifies maternal stress. The study by Hekmati et al. (2008) reported lower cooperation, less sexual satisfaction, stronger support, and more emotional reactions in families with ADHD children, compared to other families. In other words, mothers showed less efficient functioning, which led to higher levels of anxiety and stress. Families of hyperactive children are affected by the signs and symptoms of children's disorders; therefore, mothers face more problems in these families. These findings are in agreement with the present results and previous studies which have reported higher levels of conflict and lower levels of cohesion in families with ADHD children (Hekmati et al., 2008).

The results of the fourth hypothesis showed significant relationship between different coping strategies and level of depression, anxiety and stress in mothers of children with ADHD. The result for this hypothesis in Table 7 shows significant scores at p<.000 (F = 6.64) for relationship between coping strategies and the level of depression among the mothers of ADHD children. Whereas Table 4.7 shows the significant scores at p<.006 (F=3.88) for relationship between the coping strategies and the level of anxiety in mothers of ADHD children. The relationship

between the coping strategies and the level of stress is explained as significant at p<.006(F=3.88) shown in Table 4.8. It means that coping strategies predict levels of stress, depression and anxiety is likely to be predicted by coping strategies as depicted by the results of Regression analysis. Findings also indicated that mother having children with ADHD are more frequently used problem focused coping as compared to emotion focused coping to deal with depression anxiety and stress. Bailey study has also demonstrated that problem-focused is more frequently used by ADHD mothers than emotional-focused coping (Bailey, Barton & Vignola, 1999). Similarly, in another research, mothers were found to be using rational/problem focused strategies more frequently rather than others rational strategies are more effective for the mother of ADHD chidren (Bailey, 1999).

The higher stress levels are experienced in parents involved in using emotion focused strategies rather than problem focused strategies. Therefore, families tend to cope better while adhering to problem focused strategies rather than emotion focused ones (Knussen&Sloper, 1992).

6 References

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