

The Mediating Role Of Perceived Social Support In The Link Between Stress And Quality Of Life Among Mothers Of Children With Attention Deficits Hyperactivity Disorder

Muhammad Zakaria^{1*}, Sabiha Dar², Lubna Kanwal Dar³, Ghinasha Chudary⁴, Zohaiba Nasir⁵

^{1, 2, 3, 4} (Ph.D Scholars) Department of Psychology University of Central Punjab Lahore Pakistan.

⁵ Department of Psychology University of Central Punjab Lahore Pakistan.

ABSTRACT

Background: Perceived social support is the only external important factor which improves quality of life and overcome the worries during problematic and stressful situations.

Objective: Purpose of present research is to determine the mediating role of social support in stress and quality of life among the mothers of ADHD children's for the determination of better understand their life quality and psychological problems.

Methods: Cross sectional and co-relational research design was used in current study to test the study hypothesis. The examination is made via convenient sampling technique to select the sample of (N= 100) parents of ADHD children including 50% male and 50% female with age ranging from 20-40 years. The sample was selected based on G power software. Different public and private sector hospitals and special educations schools of Peshawar and Mardan cities of, Khyber Pakhtoon khawa province of Pakistan were selected for data collection.

Results: The results of the analysis show that the mediating role of entertained social support is significant between stress and quality of life among ADHD child mothers ($C' = \beta = -.952$, SE .3370, $p < 0.01$). The analysis also revealed maternal stress significant different basis of gender of their ADHD child (Stress Male, $M = 25.780$, $SD = 4.6$; Stress Female, $M = 25.950$, $SD = 3.58$; $*p < .05$).

Conclusion: The current paper reveal that the perceived social support play a key role to overcome the stress and improve the quality of life of ADHD children mother. The study also concluded that the substantial difference of stress among mothers of males and females of kids was found.

Keywords: Social support, Stress, Quality of life, ADHD, Parents

Introduction

Inattention impulsivity and hyperactivity disorder is the most common neurodevelopmental psychiatric disorder among children and young adults characterized by hyperactivity, high levels of inattention and impulsivity resulting in mothers' stress. ADHD is defined as "poor patterns of inattention, hyperactivity, and imprudent performance in young children with marked developmental progressions. The magnetic resonance imaging (MRI) results indicated the significant abnormalities in cortical (frontal) regions in ADHD clients and peculiarities in basal ganglia and in the sub cortical brain regions as well ^{1, 2, and 3,4,5,6}.

Attention deficit hyperactivity disorder most common neurodevelopmental disease which affects approximately three to five percent school age children and 2.5 % in adults. The prevalence rates vary from region to region. The prevalence rate in west is 10-20% has been reported. There are no numbers for Pakistan; however, a research in neighbor India reports an 8.1 percent frequency among youngsters. High variability of prevalence estimates within these countries may be credited to methodological problems, such as defining "attention deficit. Studies indicated that the gender, birth order, nature of delivery, siblings, and mother's education was not significantly correlated to Attention deficit hyperactivity disorder^{7, 8, and 9,10,11,12}.

The Previous research studies reported that, the development of child's hyperactivity, increases and decreases parenting stress and self-esteem. Parents of attention deficit hyperactivity disorder reported less confidence, restriction, social isolation self-blame and depression. Stress level is higher among their parents as compared to normal the children's' parents because of behavioral difficulties in attention and hyperactivity reported by research study. The stress has significant effect on parent's wellbeing and on mother-child inter-relationship especially when stress becomes chronic in early developmental stages, consequently affecting the parent's relationship, caregiver sleep and working schedule. Parenting stress or depression causes the substantial physical and psychological uneasiness elevated by the challenging and demanding parenting style^{13, 14, 15, 16}.

A research study showed that the mothers of pre-school ADHD children faces significantly high parenting stress and relationship conflicts in all domains than the older children. ADHD children's mother proves to be more commanding in nature, less rewarding and giving less cooperation as compared to the mothers of normal children which results in their child to be become less obedient and more negative^{17, 18}.

Another study was conducted to examine the relationship between social support and stress. The results indicated that social support is inversely correlated to the significant predictor of stress level, experienced by the mothers. The insight about Social Support was recognized as positive parental source for lowering the parenting stress level and for controlling and for reducing negative effect of stress. A study was conducted to examine the association between parenting stress and quality of life among ADHD parents. Results confirmed that parents of children with ADHD experience more parenting stress if they have lower level of quality of life than parents of ADHD children with good quality of life.^{19, 20, and 21}.

Current research was planned to study the relationship among social support, stress and quality of life in mothers of ADHD children and to assess the effect of the ADHD child's gender-based discrepancy on levels of maternal stress. This study will provide us platform to find out the basic elements/factors which can then be sort out to provide mental health relief to the mothers of ADHD children and to move a step ahead towards improving patient and mother quality of life.

Materials and Methods

Current research was planned to inspect the impact of social support, assessment of quality of life and stress among mothers and its association with behavioral turbulence in their off springs. The current study further inspects the variance among maternal stresses on the basis of gender of their ADHD child.

The sample size was consisted of (N= 100) ADHD children's mothers but the 20 participants forms were withdraw due to unwillingness. The participants including (50% male and 50% females parents between the mother age of 20 to 40 years were approached. The age ranged was selected based on culture perspective. The data was selected created on G power software. The required data was collected from different government and non-government hospitals of Peshawar and Mardan kpk by using of convenient sampling technique.

The current study included and excluded criteria are ADHD children having 1 year disease history, education of mother must be primary, mothers with intact relationship with their husbands were included in study. Mothers with psychological or physical disability were excluded. Widow and divorced mothers were not included. Children possessing with other disabilities were not included.

Demographic information form was used to collect the demographic variable information i.e. (age, sex, education and duration of illness, marital status, family system, financial status, education, number of children other than child under study, and years of marriage from child and their mothers.

The snap-iv teacher and parent rating scale were used in current study for the purpose to identify the ADHD signs. The scale was designed and created by Bussing, Regina et al., (2008)²³. Scale has included 18 items with 4 point Likert scoring from 0 to 3. The scale validity value is $>.79$. The Cronbach α value of SNAP-IV is $>.8$.

The perceived social support scale was use used in current study. The scale was designed by Zimet, (1988)²⁴. Insight of support by family, friends, and a significant other was identifying by using of scale. The scale consists of 12 items and 7-point Likert. The validity value of the scale is $>.78$ and Cronbach's is 0.92.

The world health organization quality of life-brief questionnaire is used to measure the understanding of individuals about QOL in four broad areas, Physical Health, Psychological Health, Social Relations and Climate. This scale was used in the Urdu translated edition. It consists of 26 items, and is a Likert type scale of 5 points. The value of the validity scale is 0.7 which is very good, and the alpha value of Cronbach is 0.95²⁵.

The perceived stress scale was used in current study to report the stress level. This scale was developed by Cohen in 1983. It's important to assess how different environments influence our emotions and the tension we experience. The version of this scale translated into Urdu was used. The questionnaire has 10 objects and 5 point Likert scale rating from 0 to 4. Cronbach is 0.89.

This study was approved by university research ethical committee along with details of sample, assessment and data collection procedure. Following approval the research procedure was followed. The permission was taken from the authors of the scales and authorities of hospitals. Data from participants were obtained using the purposeful sampling technique. Before the research questionnaire was

administered the contributors were informed about the purpose and nature of study. The scales were used to collect the data from participants. All questionnaires filled out by the participants. The data were analyzed via by statistical package for the social sciences (SPSS) 21. The research hypothesis was tested by means of mediation tests.

The permission was taken from authors of the scales and authorities of concerned institutions. All participants had confidentiality and privacy guaranteed. There was also consideration of the comfort level of the participants. Without giving any explanation, the contestants have fully right to extract from study at any time. It's ensured that the members were safe against any psychological distress physical and emotional harms.

Results

The outcome of the induced regression is shown in Table I.

Statistically important are all c, a, and b; at least 5%, though c' is smaller than c. As per the approach of Baron and Kenny (1986)²⁶, this provides the role of mediation of social support for the relationship with stress and the quality of life of mothers of children with ADHD. The product ab is statistically significant, at 5%, which provides the statistical significance of the mediation function of social support for the relationship with stress and quality of life of mothers of children with ADHD as per Sobel's (1982) approach²⁷. The overall mediation regression analysis showed that social support plays an important role in the mediation of stress and quality of life between mothers of children with ADHD.

Table: I Mediation regression

Independent Variable	Direct effect model			Indirect effect model				
	β	SE	P	β	SE	P		
Stress	c	-1.5277	.4944	.0030	a	-1.2808	.4062	.0023
Social support					b	.7434	.1114	.0000
					ab	-.5756	.4243	.0003
					c'	-.9521	.3370	.0047

Note: Dependent variable; quality of life

Table II shows the results of Independent t test

To capture the variances in maternal stress on the basis of their ADHD child's gender, the independent t test was applied. The result revealed substantial variations in maternal stress depending on the sex of the child with ADHD. The result is shown in the table that the stress score of male child mothers is (m=25.78, sd= 4.655) and female child mothers is (m=25.95, sd= 3.580). The overall result showed that female child mothers are higher stress score as compare to male child mothers. Viewed in Table 2

Table: II Independent t test

Variables	M	SD	Std (error mean)	T	Df	P
Stress Male	25.78	4.655	.736	34.342	39	.000***
Stress Female	25.95	3.580	.566	44.958	39	.000***

Note: M= mean, SD= standard deviation, t= T-test, df= degree of freedom, *p<.05, N= 80

Discussion

There is a significant connection between parents of children with ADHD who perceived social support and quality of life and satisfaction with life. The analysis of the first hypothesis presented that social reinforcement is a major mediator of stress and quality of life for children's mothers with ADHD ($C' = B - .952$, $SE = .3370$, $p < 0.01$). During caring for children with ADHD the parents who perceived more social support have responded positively and have less stress. The results of the current research are supported by previous research studies which are conducted on the role of social support in stress and quality of life. Recent findings showed that growing social support would minimize tension and boost the quality of life. Previous research, results confirmed that parents of children with ADHD experience more parenting stress if they have lower level of quality of life than parents of ADHD children with good quality of life. Another study of the relationship between social support and stress also support our current study results which indicated that social support is inversely correlated to the significant predictor of stress level, experienced by the mothers. The insight about Social Support was recognized as positive parental source for lowering the parenting stress level and for controlling and for reducing negative effect of stress. The findings showed that social support is directly correlated with stress level faced by the mother. In order to reduce parental stress levels and to monitor and reduce the negative impact of stress, social support insight has been recognized as a beneficial parental source.^{19, 20}

Our results support the theorizing prior and are consistent with the empirical findings. Social support provides pathways for comfort and security to turn to others, leading one to feel cared for by others. In the presence of such protection and a feeling of being in the company of near people, people feel bonded.

The Table II results showed significant difference in stress among mothers of males and females of childrens. The maternal stress has difference on the basis of gender in the light of previous studies. Study indicated that the result of the role of gender in mediating the association among childrens risk of ADHD, environmental difficulty and stress among ADHD mothers. Results show that stress levels were different for male and female mothers with ADHD. Stress is one of the strong psychological problems that are predominant in parents with ADHD, but the caregiver stress was found differently in the caregiver of male and female children. The previous study results also showed that there is a significant gender-based difference in stress among mothers. It has been discovered that male and female parents of children with ADHD appear to respond differently to stress both mentally and biologically.

Recent findings in Pakistan showed that the effect of gender in mediating the association between environmental adversity, attention deficit hyperactivity disorder (ADHD) and stress. The stress is one of

the common psychological problems which are often reported by the parents of ADHD children. However, the caregiver stress was found different in male and female children's caregiver.

In our culture, children are differentiated on the basis of their gender in all aspects of life. Male children are given more preferences than female, male child mothers share their child mischiefs conveniently than female child mothers. Female child mothers hide about their child problems due to avoiding labialization and stigmatization, because these stigmas carry with whole life of their female children and have great impact on future. Due to suppressing their feelings, emotions and thoughts, female child mothers get exhausted and their stress level become high.

Conclusion

In our present study the social support is also defined with fundamental features of positive relations with quality of life, and negative relationship with stress. Hence, the mothers who perceive support by society have improved quality of life. They also have convenience in regulation of their emotions, and they have more tendencies of positive coping skills. From the study, it was found that, there were significant differences in maternal stress among male and female children mothers. The view of present study and sample support the hypotheses which define that there are significant differences among them.

Limitations and Recommendations

The drawbacks of this investigation are that, after a longitudinal report tracking the condition of the moms over the long term, the concept of the point could provide a more accurate picture of their concern. Subjective exploration is expected to explain the triggers and makers of stress. The greater part of the examination led on these factors was not directed in Pakistan, so little information on the considered factors of this investigation was accessible in Pakistan.

Comparison between moms of youngsters with ADHD and moms of children with other mental issues is excluded from this investigation to decide the pressure more normal in moms of kids with ADHD or equivalent to in moms of kids with other mental issues. In this investigation information did excluded fathers' reactions to recognize their life working with ADHD youngsters, to relate moms and father's personal satisfaction and social help.

Implications of the Study

For the clinical psychologist and psychiatrist, the current study is helpful in helping mothers with ADHD children. This research has shown that lack of social support can result in a high level of stress and poor standard of living quality that these are the hazard factors for psychological well-being. Simultaneously significant level of help can bring an expectation for prosperity and arrange natural stressors.

Contribution of social help is significant as the system comprising of companions, family, colleagues and family members assumes a significant job in individuals' lives to help them through difficult stretches. Nonetheless, the deep bonding of relationships really counts when it comes to enhancing well-being and not just the amount of relationships.

In view of study's outcomes, a few ramifications for emotional wellness administrations and practices are thought of and proposed. Public and Federal social projects ought to energize and encourage

significant inclusion and investment of individuals to help them giving expectation and propelling them by giving social help. Government ought to likewise help individuals with mental issues by offering monetary help.

References

1. Machado M., Machado F., Oliveira A. Parental and best-friend acceptance, self-efficacy, and self-esteem in ADHD students: Innovative practice and interventions for children and adolescents with psychosocial difficulties and disabilities. Cambridge Scholars Publishing. Newcastle. 2015; p. 275-294.
2. Kaplan, H.I. and B.J. Sadock. Learning Theory, In: Synopsis of Psychiatry: Behavioral Sciences/Clinical Psychiatry, 8th ed. 2000; p. 148-215.
3. Durston, Sarah & Davison, M.C. & Tottenham, Nim & Galvan, Adriana & Spicer, Julie & Fossella, F. & Casey, B.J. A shift from diffuse to focal cortical activity with development. *Journal of Cognitive Neuroscience*. 2005; p. 57-58.
4. Wolosin SM, Richardson ME, Hennessey JG, Denckla MB, Mostofsky SH. Abnormal cerebral cortex structure in children with ADHD; *Hum Brain Mapp*. 2009; 30(1):175-184.
5. Castellanos, F.X., Giedd, J.M., Marsh, W.L., et al. Quantitative brain magnetic resonance imaging in ADHD; *Archives of General Psychiatry*. 1996; (53); 607-616.
6. Valera et al. E.M. Valera, S.V. Faraone, K.E. Murray, L.J. Seidman. Meta-analysis of structural imaging findings in attention deficit/hyperactivity disorder; *Biol Psychiatry*. 2007; (61); pp. 1361-1369.
7. American Psychiatric Association. Diagnostic and Statistical Manual of Mental Disorders, 5th ed., Washington, DC; 2013.
8. Swanson JM, Sergeant JA, Taylor E, et al. Attention-deficit hyperactivity disorder and hyperkinetic disorder. *Lancet*. 1998; (33); p. 351-429.
9. Goldman LS, Genel M, Bezman RJ, et al. Diagnosis and treatment of attention-deficit/hyperactivity disorder in children and adolescents. *JAMA*. 1998; (7); p. 279:1100.
10. Malhi P, Singhi P. Spectrum of attention deficit hyperactivity disorder in children among referrals to psychology services. *Indian Pediatr*. 2000 ;(37); p. 1258-1260.
11. The World Health Organization Quality of Life assessment (WHOQOL): position paper from the World Health Organization. *Soc Sci Med*. 2011;41(10):1403–1409.
12. Moradi B, DeBlaere C, Huang Y-P. Centralizing the experiences of LGB people of color in counseling psychology. *The Counseling Psychologist*. 2010; (38):p. 322–330.
13. Johnston, Charlotte & Mash, Eric. Families of Children with Attention Deficit/Hyperactivity Disorder: Review and Recommendations for Future Research. *Clinical Child and Family Psychology Review*. 2001; (4); p. 183-207.
14. Theule, Jennifer & Wiener, Judith & Tannock, Rosemary & Jenkins, Jennifer. Parenting Stress in Families of Children with ADHD A Meta-Analysis. *Journal of Emotional and Behavioral Disorders*. 2013; (21); p 3-17. 10.1177/1063426610387433.
15. Anastopoulos A. D., Guevremont D. C., Shelton T. L., Du-Paul G. J. Parenting stress among families with attention deficit hyperactivity disorder. *Journal of Abnormal Child Psychology*. 2003; 20 (5); p. 503– 520.

16. Matthew, Resa & Randolph, Suzanne. Relation of maternal support and maternal stress to children's behavior problems in African American families. 2007.
17. Mash, E. J., & Johnston, C. Sibling interactions of hyperactive and normal children and their relationship to reports of maternal stress and self-esteem. *Journal of Clinical Child Psychology*. 1983a; (12); p. 91–99.
18. Levy F, Hay DA, Mc Stephen M, Wood C, Waldman I. Attention-deficit hyperactivity disorder: a category or a continuum? Genetic analysis of a large-scale twin study. *J Am Acad Child Adolesc Psychiatry*. 2007; p. 737-744.
19. Hadi, N. & Saghebi, Ali & Ghanizadeh, A. & Montazeri, Ali. Assessment of health-related quality of life in mothers of children with attention-deficit hyperactivity disorder (ADHD). 2013.
20. Turner, Blake & Turner, R. Social Relations, Social Integration, and Social Support. 2013; 10.1007/978-94-007-4276-5_17.
21. Jennifer Theule, Judith Wiener, Rosemary Tannock, Jennifer M. Jenkins. Parenting Stress in Families of Children with ADHD: Predicting parenting stress in families of children with ADHD. A Meta-Analysis. 2010; <https://doi.org/10.1177/1063426610387433>
22. Finzi-Dottan, Ricky & Triwitz, Yael & Golubchik, Pavel. Predictors of stress-related growth in parents of children with ADHD. *Research in developmental disabilities*. 2011; (32); 510-9. 10.1016/j.ridd.2010.12.032.
23. Bussing, Regina et al. "Parent and teacher SNAP-IV ratings of attention deficit hyperactivity disorder symptoms: psychometric properties and normative ratings from a school district sample. *Assessment*. 2008; 15, (3); p. 317-28. doi:10.1177/1073191107313888
24. Zimet, G. D., Dahlem, N. W., Zimet, S. G., & Farley, G. K. The Multidimensional Scale of Perceived Social Support. *Journal of Personality Assessment*. 1998; 52(1), 30–41. https://doi.org/10.1207/s15327752jpa5201_2
25. WHOQOL Group. Development of the World Health Organization WHOQOL-BREF quality of life assessment. *Psychol Med*. 1998; 28; p. 551-558.
26. Baron, R.M. and Kenny, D.A. The moderator–mediator variable distinction in social psychological research: conceptual, strategic, and statistical considerations. *Journal of Personality and Social Psychology*. 1986; 51 (6); pp. 1173-1182.
27. Sobel, M.E. Asymptotic confidence intervals for indirect effects in structural equation models. *Sociological Methodology*. 1982; 13 (1); pp. 290-312.
28. Li, J.C. Introduction to Statistical Inference. The Science Press, Ann Arbor, MI. 1957.
29. Xiang YT, Luk ES, Lai KY. Quality of life in parents of children with attention- Deficit hyperactivity disorder in Hong Kong: Department of Psychiatry, Chinese University of Hong Kong, Hong Kong. 2000.