

Children's behavioral problems and their relationship with maternal mental health

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Abstract

Introduction:

Children's behavioral problems are a reflection of their parents' psychological problems, especially mothers, and mental illness in one of the parents increases the likelihood of mental illness in the children. With regard to the negative interaction between parents and their children's diseases, this study aimed to assess the relationship between the child's behavioral problems and maternal mental health.

Material and Methods:

This study was conducted on 80 mothers with children with behavioral problems. They were referred to the pediatrics clinic of psychiatric ward in Golestan Hospital, Ahwaz city and selected through successive sampling. The instrument used contained a mental health questionnaire (SCL-90- R) and children's behavioral problems questionnaires (CBCL). Pearson correlation and regression analysis were used to analyze the data. .

Results:

The results showed that there was a significantly positive relationship among all the children's behavioral problems with all subscales of maternal mental health. There was a significant positive relationship between external behavioral problems of children with all subscales of maternal mental health. A significantly positive relationship was obtained between internal behavioral problems of children with all subscales of the mothers' mental health except for the interpersonal sensitivity.

Conclusion:

With regard to the high correlation between children's behavioral problems and maternal mental disorders, measures should be taken to reduce the effects of the mothers' psychological problems on children.

Keywords: Behavior, Mental Health, Child, Mother

Introduction:

Since mother is the first person to bond with a child, she will assume the most important role in development of his mental and emotional characteristics, and may be considered the source of his health

or disease. A person who copes with his deep issues, is compatible with himself and others, and avoids incapacitation by his inevitable internal conflicts and expulsion by the society may be said to be mentally healthy (1). Children with

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behavioral problems and parents not only interact with each other, but also influence other family members – i.e. other children. Previous studies indicate a close correlation between children's behavioral disorders and parental mental problems. In other words, the more intense the parental mental issues are, the faster the child will develop behavioral problems (2). Previous findings highlight the importance of maternal mental health for children's well being, stating that parents and children with similar disorders probably have a negative impact on each other. Mental disorders in a parent increases the risk of mental diseases for the child (3).

A study conducted on 6552 mothers from January 1992 to December 2002 indicated that maternal depressive symptoms affect the course of behavioral problems in their children and the fathers' positive involvement modifies this interaction (4). Another study on a group of mothers with poor mental health revealed that depression and anxiety on mothers is associated with an increase in disorders such as anxiety, depression, attention deficit and oppositional defiant disorder in children (5).

Regarding the difference in children from depressed and health mothers in terms of source of control, anxiety, and self-esteem and the impact of maternal depression on child's self-esteem, the study indicated a considerable difference between children of the two groups in terms of anxiety status and overall self-esteem score. In other words, children with depressed mothers tend to have more stress and less self-esteem compared to those with healthy mothers, and maternal depression is related with child's anxiety. Moreover, the study suggested that maternal depression influences the behavioral problems before school years (6). Another study indicated a relationship between emotional disorders and household tension and nocturnal enuresis

in children under 5; i.e. children with depressed and stressful mothers are more likely to suffer from bedwetting. Douglas found that children who have lived without stress in their first four years of life are less likely to wet their beds and 1/3 of enuresis events are related to stressful accidents (2).

Cross-sectional and longitudinal studies on parents with panic disorder and major depression revealed that parental panic disorder increases the risk of stress, and parental major depression increases the risk of major depression and dissociative behavioral disorders in children (7,8).

One report states that school age children of parents with poor mental health or high aggression experience severe behavioral-emotional problems five times more than other children (9). Thus, an environmental stress factor in family may lead to behavioral problems in children. The present study aims to define the relationship between maternal mental health and internal and external aspects of children's mental health, determine the aspect of maternal health in mothers which requires serious intervention, as well as discover which internal and external aspects of the child require special attention in children of mothers with poor mental health. The lack of such an experience in the milieu of Khuzestan which discriminates between the internal and external problems based on the child behavior checklist, necessitates the present study. Considering the gravity of the issue, the present study attempts to find out whether there is a relationship between maternal mental health and children's internal and external behavioral problems.

Materials and Methods:

This is a correlation study. The sample population consists of 80 mothers who referred to the pediatric clinic of the psychiatric ward of Golestan Hospital over a period of nine months (October 2008 to July 2009) due to behavioral problems in their children. Mothers completed the

questionnaire regarding the maternal disease symptoms and behavioral symptoms of children aged 4-18 years. Sampling was performed using the convenience method based on the successive referral. The inclusion criteria were literacy, lack of maternal psychosis (based on DSMIV-TR in an interview by a psychiatrist), and willingness to participate in the study. The exclusion criterion was deficient completion of questionnaire. In order to minimize the possible problems with questionnaire completion, a psychologist professional explained the correct method of completing the questionnaires to the participants. He was also charged with answering the questions during the process of completing questionnaires by mothers.

Study Tools

A- In order to evaluate the mental health of participants and assess their mental symptoms, we used the revised version of SCL90-R questionnaire. The questionnaire consisted of 90 items. The response to each item quantifies the degree of complaint on a scale of 0 to 5. According to the developers, the scale uses nine dimensions of independent, interactive, or active symptoms. The nine dimensions include somatization, obsession-compulsion, interpersonal sensitivity, depression, anxiety, hostility, phobic anxiety, paranoia and psychoticism, which account for 83 items. 7 other items, named "additional items", exist which are not scored as a dimension but will be included in the global scoring. The sum of non-zero item scores yields the quantity of pathologic symptoms. The final version of this questionnaire was prepared by Derogatis in 1983 (10). In 1997, Rezapour standardized the revised symptom checklist for students of Chamran University and Islamic Azad University of Ahvaz. The checklist has been extensively used, in Iran as well as internationally, in different studies, all of which have reported different levels of reliability for

the instrument. Studies abroad have reported reliability coefficients ranging from 0.77 to 0.90, while in Iran, the reliability coefficients are reportedly 0.57 to 0.90, all of which are satisfactory (11). The validity of the questionnaire is reportedly 0.36-0.73 in international studies and 0.27-0.66 in Iranian studies (12). A score of 60 or higher indicates mental disease.

B- The Child Behavior Checklist (CBCL) for children aged 4-18 years is a component of the Achenbach System of Empirically Based Assessment. It comprises a comprehensive collection of forms developed for evaluating the competences, compatible interaction and behavioral problems of children/adolescents. The forms consist of 113 items and are completed by parents, replacements of parents, adolescents or teachers. In this study, we used the parents' form which evaluates the problems in three groups of externalizing, internalizing and total problems (13).

The questionnaire is standardized for age and sex and is scored from 0 to 120. The scoring based on factor analysis uses 3 scales and nine subscales, and the child's behavioral problems are determined using the subscales of Anxiety / Depressed, Withdrawn / Depressed, Somatic Complaints, Social Problems, Thought Problems, Attention Problems, Rule-Breaking Behavior, Aggressive Behavior and Other Problems. The sum of subscales Anxiety/Depressed, Withdrawn/Depressed, and Somatic Complaints yields the score for internalizing problems (a), while the sum of subscales Rule-Breaking Behavior and Aggressive Behavior yields the score for externalizing problems (b). The sum of subscales Social Problems, Thought Problems, Attention Problems, and Other Problems yields the score for other problems (c) of the child. The total score is the sum of a, b and c scores, representing the behavioral problems of the child. The classification may then be accomplished as

follows: scores of 60 or higher represent clinical behavioral problems which require professional assistance, while scores lower than 60 are deemed normal. In Iran, the psychometric characteristics of the questionnaire were evaluated in 1998 (Alagheband et al., unpublished data, quoted from Shushtari et al, 2004). The results of the study conducted on 204 individuals indicated 79.1% sensitivity and 98.5% specificity.

Results:

It must be noted that two parents abstained from participating at the onset and no cases were withdrawn during the study.

In order to investigate the relationship between maternal mental health and children's behavioral problems, we started by calculating the correlation coefficient of items of the symptoms checklist with internalizing, externalizing and total behavioral problems. The matrix of item correlation is depicted in Table 1.

Table 1: Correlation of items and scores of maternal symptoms with items and scores of total behavioral problems of children

Behavioral Problems Symptoms	Total Behavioral Problems	Internalizing Problems	Externalizing Problems
Total score	0.34**	0.26*	0.29*
Somatic Complaints	0.27*	0.26*	0.26*
Obsession-Compulsion	0.41*	0.25*	0.38**
Personal Sensitivity	0.31**	0.18	0.25*
Anxiety	0.26*	0.30**	0.23*
Hostility	0.29**	0.18	0.25*
Phobia	0.30**	0.24*	0.30**
Depression	0.39**	0.32**	0.34**
Paranoid Thoughts	0.28*	0.23**	0.22**
Psychoticism	0.34**	0.26**	0.34**

* p<0.01, ** p<0.05

As the figures in correlation matrix depict, maternal symptoms and children's behavioral problems are often seen to have significant, positive relationships at levels of p<0.01 and p<0.05. In other words, an increase in maternal symptoms increases the children's behavioral problems.

We used stepwise regression to find out which items of maternal symptoms are better predictors of the total score of children's behavioral problems. The summary of regression analysis is presented in Table 2.

Table 2: Summary of stepwise regression analysis of maternal symptoms and children's behavioral problems

Variable	Predicting Item	R	R ²	dF _{1,2}	F	P	β	t	P
Total Behavioral Problems	Obsession-Compulsion	0.41	0.17	1,78	15.36	P<0.001	0.41	3.92	P<0.001
Internalizing Problems	Depression	0.32	0.10	1,78	8.96	P<0.004	0.32	2.99	P<0.004
Externalizing Problems	Obsession-Compulsion	0.38	0.15	1,78	13.47	P<0.001	0.38	3.67	P<0.001

As the results of regression in Table 2 indicate, the only item of symptoms to act as an appropriate predictor for children's behavioral problems is "Obsession-Compulsion" which yields a significant linear regression relationship at $P < 0.001$. Moreover, given the correlation coefficient (R) and determinant coefficient (R^2), this item may predict some 17% of the changes in children's behavioral problems alone. In addition, the linear regression model yields a regression coefficient of 0.41 for the obsession-compulsion item, which corroborates the position of this variable as the most important predicting factor for children's behavioral problems among all symptoms at $P < 0.001$.

This analysis was completed separately for each of the children's behavioral problems. The results indicated that among all symptom items, only maternal depression proved a proper predictor for internalizing problems of children: at $P < 0.004$, it yielded a significant linear regression and predicts some 10% of changes in children's internalizing problems alone. Furthermore, linear regression model yields a regression coefficient of 0.32 for the depression item, which represents it as the most efficient predicting factor for internalizing problems of children among all symptom items at $P < 0.004$. As for the externalizing problems, only the "Obsession-Compulsion" item was found to be a proper predictor for the externalizing problems with a significant linear regression at $P < 0.001$. Moreover, it predicts some 15% of changes in children's externalizing problems. In addition, linear regression model indicates a regression coefficient of 0.38 for the "Obsession-Compulsion" coefficient, presenting it as the most efficient predictor of externalizing problems of children at $P < 0.001$.

Discussion:

The present study investigates the relationship between maternal symptoms and children's behavioral problems in a

group of mother referring to the pediatric clinic of psychiatric ward of Golestan Hospital. The findings of the study indicate a positive correlation between maternal symptoms and children's behavioral problems; in other words, an increase in maternal symptoms increases the children's behavioral problems and vice versa.

These findings are consistent with those of previous studies (2-3, 15-16). Green states that mental lesions of mothers leads to emotional disorders and educational challenges for their children. If a mother is afflicted by major depression or panic disorder, her child will most probably suffer from emotional behavioral problems. Maternal depression is associated with depressive disorder, social phobia, disruptive behavior, separation anxiety, multiple anxiety disorder or compromised social function in children. Maternal panic disorder is associated with panic disorder, acrophobia, separation anxiety and multiple anxiety disorder in children (17). Considering these facts, it may be said that a mother with low spirits will lean towards rage and depression when under stress, and these feelings will affect the child directly. Since young children derive their energy from their mothers and depressed mothers fail to respond to their children's needs, this situation will lead to behavioral problems in the children.

The results of regression in table 2 indicate that among all maternal symptoms, only maternal obsession is a strong predictor of total behavioral problems and externalizing problems of children, while maternal depression may predict the internalizing problems of children. These findings are in line with those of previous studies (4-5, 7-8). This may be accounted for by the observation that the obsessive and perfectionist behaviors of parents who seek to achieve their desires through extreme measures, as well as parents who are interested in power, control and autonomy, will bring about the hostile and defiant behaviors in their children. In

addition to the role of genetics in development of depression and anxiety, the attachment theory states that insufficient maternal care resulting from maternal mental conditions (e.g. depression) will cause emotional injuries in the child. On the other hand, according to the social learning theory which emphasizes copying roles, simulations and human interactions, the child may learn negative cognitive and autonomous thoughts from his mothers, internalize them and communicate with his surrounding world based on these negative thoughts, which will lead to internalizing problems (18).

Limitation and Suggestions: The most prominent limitation of this study is assessment of mother and child symptoms without a structured instrument which makes diagnosis based on DSMIV-TR. We recommend future studies to use standardized instruments based on DSMIV-TR for making psychiatric diagnoses as well as larger sample sizes.

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References:

1. Sadock BJ, Sadock VA. Kaplan and Sadock's synopsis of psychiatry: behavioral sciences/clinical psychiatry. Trans. Purafkary N. Tehran: Omide Enghalab Publ; 2000: 9. (Persian)
2. Douglas J. Behavioral problems in children. Trans. Yasaei M. Tehran: Markaze Nashr Publ; 1995: 38. (Persian)
3. Sanders MR. Parenting interventions and the prevention of serious mental health problems in children. *Med J Aust* 2002; 177(7): 87-92.
4. Zeller JL. Maternal depressive symptoms, father's involvement, and the trajectories of child problem behaviors in a US National Sample. *J Am Med Assoc* 2007; 298(11): 1262.
5. Meadows SO, McInahan SS, Brooks-Gunn J. Parental depression and anxiety and early childhood behavior problems across family types. *J Marriage Fam* 2007; 69(5): 1162-77.
6. Abdi M. Investigating the relationship between maternal depression with child depression. (dissertation). Tehran: Iran Univ Med Sci; 1993: 1. (Persian)
7. Biederman J, Petty C, Faraone SV, et al. Effects of parental anxiety disorders in children at high risk for panic disorder a controlled study. *J Affect Disord* 2006; 94(1-3): 191-7.
8. Biederman J, Petty C, Hirshfeld-Becker DR, et al. A controlled longitudinal five year follow-up study of children at high and low risk for panic disorder and major depression. *Psych Med* 2006; 36: 1141-52.
9. Washington Kids Count, Human Services Policy Center. Family matters: mental health of children and parents. Washington: Univ Washington; 2001. Accessed October 28, 2010. Available from: <http://www.aecf.org/upload/publicationfiles/family%20matters.pdf>.
10. Najarian B, Davodi I. Structure and validation of SCL-25. *J Psychol* 2001; 5(2): 136-49. (Persian)
11. Rezapour M. Standardization of the SCL90-R on students in Shahid Chamran and Islamic Azad University of Ahvaz. (dissertation). Tehran: Allameh Tabatabaei Univ; 1997: 1. (Persian)
12. Homaei R. The relationship between stress and mental health due to the moderating role of psychological hardiness in the pre-university in Ahvaz Girls (dissertation). Ahvaz: Shahid Chamran Univ; 2000: 1. (Persian)
13. Achenbach TM. Manual for the child behavior checklist 2-3, 1992 profile. Burlington: Univ Vermont/Dept Psychiatry; 1992.
14. Hakim Shushtari M, Khajeh Din N, Arabgol F, et al. The relationship between burnout syndrome of nurse mothers and their children's behavioral problems. *Cognitive Sci Bull* 2004; 1-2: 67-72. (Persian)
15. Shahinfar A, Fox NA, Leavitt LA. Preschool children's exposure to violence: relation of behavior problems to parent and child reports. *Am J Orthopsychiatry* 2000; 70(1): 115-26.
16. Sanders MR, Ralph A, Thompson R, et al. Every family: a public health approach to promoting children's wellbeing. Final report. Brinsbane, Australia: Univ Queensland; 2007: 7.
17. BBC News. Mother's anxiety affects baby's brain. Accessed October 28/2010. Available from: <http://news.bbc.co.uk/1/hi/health/1517520.stm>
18. Sadock BJ, Kaplan H, Sadock VA. Kaplan and Sadock synopsis of Psychiatry. 10th ed. Philadelphia: Lippincott Williams & Wilkins; 2007: 1218-78, 140-6.