The Effect of Maternal Physical Illness on Reporting Child Problem Behavior

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ABSTRACT

- The purpose of this study is to investigate the influence of physical restrictions and the comorbidity of physical restrictions with depressive symptoms on biological mother's reporting of their child's behavior problems using the ECBI and the CBCL scales during treatment intake.
- The sample consisted of 129 mother-child dyads referred to the UC Davis CAARE Diagnostic and Treatment Center for Parent-Child Interaction Therapy (PCIT). Children were referred to the PCIT program for treatment of their externalizing behavior problems; most had a maltreatment history.
- Results of analyses revealed that the presence of health problems and depressive symptoms both significantly predicted higher levels of behavior problems in their children. However, analyses also showed that the effect of their health problems on mothers' tolerance of their children's behavior problems was largely a result of differences in their depressive symptoms.

INTRODUCTION

- Research has shown that when mothers have physical illnesses, their children have impaired psychosocial functioning (Hammen et al., 1987). These mothers reported higher levels of internalizing and externalizing behavior problems in their children, as well as lower social competence (Siegel et al., 2002).
- Of the aspects of physical illness that may contribute to lower psychosocial functioning, only illness-related activity restrictions have been found to relate significantly to child behavior problems (Bauman, et al., 2002).
- Many physical illnesses that cause activity restrictions often present comorbidly with depression (Cassano & Fava, 2002). This finding led us to run a preliminary analysis of our sample, which revealed that 50% of our sample of health restricted mothers showed depressive symptoms compared to only 10% of non-health restricted mothers, which was similar to the rates reported in the established literature (Cassano & Fava, 2002).
- As with activity restrictions, maternal depression has been shown to have a negative impact on child psychosocial functioning, including increased behavior problems (Luomo et al., 2001).
- It is possible that effects of mothers' physical restrictions on children's behavior problems result from their increased likelihood of depression rather than the restrictive effects of their health problems, per se.
- Depressed mothers tend to be more negative and coercive in mother-child interactions when compared to non-depressed mothers (Loverjoy et al., 2000). In addition, depressed parents exhibit more intrusive or withdrawn parenting styles. Mothers are less positive, less sensitive, and less engaged with their children (Langrock et al., 2002).
- Significantly more behavior problems were perceived by mothers with depression than their non-depressed counterparts. Furthermore, externalizing behavior was reported as higher on the Child Behavior Checklist (CBCL) by depressed mothers (Webster-Stratton & Hammond, 1998).
- Mothers with depression make more negative assessments of their child's behavior (Forehand et al., 1986). Specifically, mothers presenting with depressive symptoms reported more externalizing behaviors in their children than other informants such as teachers (Briggs-Gowan, Carter, & Schwab-Stone, 1996).
- The purpose of this study is to investigate the influence physical health restrictions and the comorbidity of physical restrictions with depressive symptoms on biological mothers reporting of their child's behavior problems.

HYPOTHESES

- We hypothesized that mothers with physical health restrictions would report higher levels of child problem behaviors than mothers who do not report that their daily lives are affected by physical illness.
- Furthermore, we hypothesized that mothers who have both health restrictions and depressive symptoms would report even higher levels of child problem behaviors due to the confounding effects of physical and mental illness.

METHODS

Participants

- 129 biological mother-child dyads were referred to the UC Davis CAARE Center for Parent-Child Interaction Therapy (PCIT). Mother-child dyads were assessed prior to the start of PCIT treatment.
- Mothers entered treatment with children ranging in age from 2-8 with an average age of 4.42 years. Mothers in our sample had an average age of 28.4 years. The sample of children was diverse with 32.4% of the sample reporting to be Caucasian, 38% African American, 23.3% Latino, and 4.6% other race. 40.5% of the children had a history of physical abuse and 61.3% had a history of neglect.

Measures:

- The biological mothers' physical health restrictions were determined by the use of the Family Life Questionnaire. The Family Life Questionnaire is a series of 30 questions that collects information about the family demographics.
  - Mothers were determined to be Health Restrictions/ No Health Restrictions based on two questions within the Family Life Questionnaire. The questions regarding their health were:
    - Does your health limit you in your daily activities?
    - In the past 6 months, how much of the time has your physical health interfered with your social activities?
  - If mothers reported any restrictions due to their health problems, they were placed in the "Health Restrictions" group (n = 50), while those who reported no restrictions were placed in the "No Health Restrictions" group (n = 79).
- Children's behaviors were rated using the Child Behavior Checklist (CBCL; Achenbach, 2001). The CBCL consists of 140 items which inventory the child's daily behaviors and is completed by the mothers prior to the start of treatment. The Externalizing behavior subscale of the CBCL was used in determining the level of child problem behaviors.
- We further measured children's behavior problems using the Eyberg Child Behavior Inventory (ECBI; Eyberg & Pincus, 1999). The ECBI is a 36-item inventory of common child behavior problems designed for 2 – 17 year olds. The caregiver is asked to rate the frequency of behaviors on a 1-7 scale, and whether the behavior is a problem for them. We used data from the ECBI administered prior to beginning treatment. The results are divided into an intensity scale which describes the frequency of problem behavior (ECBI Intensity Scale) and a problem scale which describes how much of a problem these behaviors are in the mother's daily life (ECBI Problem Scale).

RESULTS

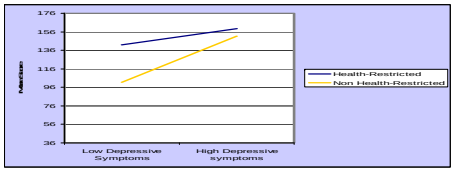
Demographic Differences

Characteristic	Health Restrictions n = 50	No Health Restrictions n = 79	
Sex of child (% male)	64.0	58.2	ns
Mean age of child (in yrs)	4.59 (1.54)	4.31 (1.46)	ns
Ethnicity of their child (%)			ns
Caucasian	3 .2	33.8	
African Am.	41.9	35.4	
Latino/a	23.3	26.2	
Other	4.7	4.6	
Mean age of mother (in yrs)	28.76 (5.79)	31.0 (14.1)	ns
Mother's education (in yrs)	11.66 (2.24)	11.86 (1.85)	ns
Mother's history of DV	60.5	72.5	ns
Mother's marital status (% single)	73.5	69.6	ns
Mother's Criminal History (% with)	17.9	41.2	ns
Child Risks (%)			
Neglect History	35.7	76.8	***
Physical Abuse History	38.1	42.0	ns
Prenatal Drug Exposure	45.0	41.2	ns
Previous Foster Care	40.5	82.4	***
Sexual Abuse History	9.5	11.6	ns

***Neglect History: χ^2 (1, n = 111) = 18.581, p = .000
***Foster Care History: χ^2 (1, n = 110) = 20.397, p = .000

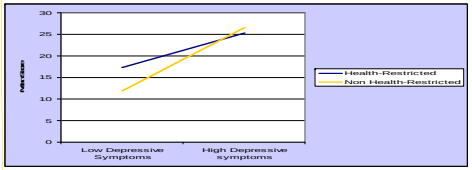
- There were no significant demographic differences found except for child neglect history and child history of foster care.

Graph 1: ECBI Intensity Scale



F (2, 118) = 23.357, p = .000

Graph 2: ECBI Problem Scale



F (2, 118) = 7.38, p = .001

Table 2: OLS Hierarchical Regression Results

	CBCL-Ext Beta	R2	ECBI-Intensity Beta	R2	ECBI-Problems Beta	R2
Model 1: Health	.36***	.12	.45***	.20	.23*	.04
Model 2: Health	.26**	.16	.31***	.27	.10	.10
Depress	.24*		.31***		.27**	

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

SUMMARY OF RESULTS

- OLS Regression analyses were performed on the ECBI Intensity, ECBI Problem, and CBCL Externalizing scales testing the predictive power of mothers' health restrictions, then adding mothers' depressive symptoms, and finally adding the interaction between mothers' health and depressive symptoms. Results showed unique and significant effects of mothers' health restrictions and depressive symptoms on their reports of the frequency and intensity of children's behavior problems.
- However, in the analysis of their tolerance of their children's behaviors (as measured by the ECBI Problem scale), the significant effect of mothers' health restrictions was rendered non-significant when her depressive symptom levels were entered into the equation.
- Graph 1 shows the unique contribution of mothers' health restrictions and depressive symptoms to their reports of the intensity of their children's behavior problems. Mothers with health restrictions report more child behavior problems than those with no health restrictions; and increased numbers of depressive symptoms predict more behavior problems in both groups of mothers.
- Graph 2 shows the significant effect of mothers' depressive symptoms on their tolerance for their children's behavior problems (as measured by the ECBI Problem Scale) for mothers with and without health restrictions.

DISCUSSION

- The purpose of this study was first to investigate the influence of mothers' physical restrictions on their reporting of their children's behavior problems, then asking whether the effects of mothers' health problems on their children's behavior is attributable to their restricted activity or possible comorbid depression.
- Results of regression analyses confirmed our second hypothesis, showing that both restrictions in mothers' activity and the level of their depressive symptoms predict increased levels of problem behavior on the CBCL Externalizing and ECBI Intensity scales. In contrast, we found that the effect of mothers' health restrictions on their tolerance for their children's behavior problems was partially mediated by the level of their depressive symptoms.
- These findings suggest that while mothers with health restrictions have more problems with their children's behavior, if they also have depressive symptoms they will report even higher intensities of behavior problems in their children.
- The findings also suggest that mothers' depressive symptoms, more than health restrictions, influence mothers' tolerance for their children's behavior. We speculate that heightened irritability and altered perceptions from the depression (Webster-Stratton & Hammond, 1998) may cause mothers to respond more negatively to their children's annoying behaviors.
- The results of this study reinforces our understanding of the interconnectedness of mothers' health and mothers' mental health. We found that 50% of our sample of health restricted mothers showed clinical levels of depressive symptoms compared to only 10% of non-health restricted mothers.

CLINICAL IMPLICATIONS

- This study reminds us that mothers' health and mental health are strongly connected; both can affect their children's mental health. While PCIT has demonstrated effectiveness in a variety of populations, mothers' health problems may interfere with treatment progress and adherence.
- PCIT therapists could help caregivers work out a comfortable way for them to play with their children at home.
- PCIT therapists may want to help link caregivers with physicians if their health problems are unattended.

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