Stress Response and Emotional Security in the Intergenerational Transmission of Depressive Symptoms

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Abstract

The aim of this study is to focus on stress reactivity as a moderator of the transmission of depression from mothers to adolescents through emotional insecurity. One hundred mother-adolescent dyads living in the Northeast of the United States were examined, with adolescents between the ages of 13 to 17. Data was collected in the home through surveys, a mother-adolescent interaction task and physiological measures from the adolescent to examine stress response. Results suggested that adolescents' emotional insecurity mediated the relationship between maternal and adolescent depressive symptoms. Findings also provided some support that adolescents who evidenced a higher stress response to the conflict interaction task appeared more vulnerable to the transmission of depression through emotional insecurity. These findings can help in the understanding the intergenerational transmission of depressive symptoms from mothers to adolescents through important factors such as quality of attachment and stress reactivity.

Keywords: Adolescence; Depressive symptoms; Emotional insecurity; Stress response

Introduction

Depressive disorders are accountable for several deaths a year with about seven in every 100,000 adolescents committing suicide in America every year due to depression [1]. The risk for depressive disorders during adolescence may be influenced by genetic and intergenerational components; studies indicate that a correlation exists between maternal depression

between the parent and child that the child uses to cope with certain

depressed mothers put the girls at risk for depressive symptoms. Girls that had a dysregulated stress response and experienced more negative affect from their mothers displayed higher depressive symptoms. This research provides preliminary evidence that the transmission of maternal depressive symptoms to adolescents through emotional insecurity is exasperated for adolescents who evidence a heightened stress response.

Hypotheses

There are several studies that support the relationship between adolescent depression and maternal depression. These studies are limited, however, because they do not focus on emotional security as a

Winsoring was used for the stress reactivity measures that were three standard deviations away from the mean. Past literature supports the use of winsoring to deal with large outliers [29].

Adolescent depressive symptoms: Adolescent depressive symptoms were measured with the Child Behavior Checklist Scale [30,31] from both the mother's and the adolescent's survey. Statements included "I feel confused or in a fog" and "I am overtired." Responses range from 1 (Not true) to 3 (Very/Often true) where higher scores represent a

Mediation

In the direct effect model we found a significant association between maternal depressive symptoms and adolescent depressive symptoms (β = 0.22, p = 0.02), 95% CFI [0.02, 0.37] indicating that higher maternal reports of depressive symptoms were correlated with higher reports of adolescent depressive symptoms. When emotional insecurity was included into the model, the direct effect between maternal and adolescent depressive symptoms was reduced to non-significance (β = 0.18, p = 0.06), 95% CFI [0.01, 0.31] indicating mediation (Figure 1). Sobel's test was used to test for mediation and approached significance at z = 1.69 p = 0.05. Comparative fit index (CFI) = 0.93 indicated a good model fit

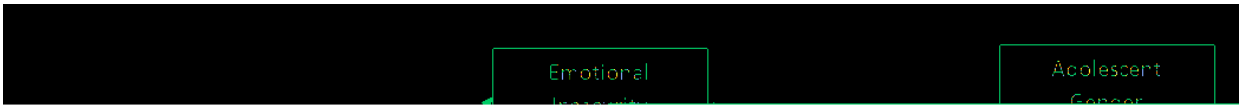

Figure 3: Negative Affect as a Moderator This model demonstrates the multiple group analysis of individuals with higher ANS response (represented by first number) and individuals with no elevated ANS response (represented by second number) when groups are allowed to differ. Error variances on dependent variables are estimated but not represented here. * indicates pathway is significant at $p < 0.05$. N = 100 participants.

	Higher ANS	**95% CI**		**Lower ANS**	95% CI	
Effect (standardized path)	Parameter	Lower	Upper	Parameter	Lower	Upper
Direct Effect of Maternal Depression Symptoms on Adolescent Depressive Symptoms	0.1	0.001	0.39	.28*	0.001	0.38
Direct Effect of Adolescent Gender on Adolescent Depressive Symptoms	0.32*	0.02	0.41	0.13	-0.003	0.57
Direct Effect of Maternal Depressive Symptoms on Adolescent Emotional Security	0.21*	0.02	0.4	0.16	0.01	0.37
Direct Effect of Adolescent Emotional Security on Adolescent Depressive Symptoms	0.24*	0.06	0.48	0.24	0.02	0.38
Indirect Effect of Maternal Depression Symptoms on Adolescent Depressive Symptoms	0.09	0.01	0.14	0.03	0.002	0.13
	Higher NA	95% CI		Lower NA	95% CI	
Effect (standardized path)	Parameter	Lower	Upper	Parameter	Lower	Upper
Direct Effect of Maternal Depression Symptoms on Adolescent Depressive Symptoms	0.21	-0.1	0.54	0.19	-0.08	0.44
Direct Effect of Adolescent Gender on Adolescent Depressive Symptoms	0.15	-0.19	0.56	0.29*	0.07	0.49
Direct Effect of Maternal Depressive Symptoms on Adolescent Emotional Security	0.29*	0.1	0.49	0.14	0.06	0.34
Direct Effect of Adolescent Emotional Security on Adolescent Depressive Symptoms	0.32*	0.01	0.5	0.15	0.06	0.33
Indirect Effect of Maternal Depression ymptoms on Adolescent Depressive Symptoms	0.1	0.01	0.19	0.02	0.02	0.06
N Parameter values represent standardized regression weights. Confidence intervals were obtained from Bootstrapping in AMOS. *Indicates that the direct effect was significant at $p < 0.05$.						

Table 2: Betas and confidence intervals for moderating models.

Negative affect: Results from the group difference test indicated that there was a trend level of significant change in chi-square when the paths were allowed to differ for those high in negative affect and those low in negative affect, $\Delta\chi^2 = 8.62$, df = 4, p = 0.07. Critical ratios indicated that the structural pathways from maternal depressive

Figure 4: This model demonstrates the multiple group analysis of individuals with higher negative affect (represented by first number) and individuals with lower negative affect (represented by second number) when groups are allowed to differ. Error variances on dependent variables are estimated but not represented here. * indicates pathway is significant at $p < 0.05$. N = 100 participants.

Discussion

Findings from this study support that maternal depressive

affect

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