

# Coping with family stress as a moderator of the association between childhood anxiety and adolescent depressive symptoms

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## Background

Symptoms of anxiety and depression are common and highly interrelated.

The development of anxiety tends to precede and predict the development of depression rather than the other way around.

Whether high levels of childhood anxiety predict depressive symptoms in late adolescence may depend, in part, on the ways in which children cope with stressful events.

Family stress (inter-parental conflict, parent-child conflict, sibling conflict) is a particularly common form of stress with which children and adolescents must cope.

**Voluntary coping responses:** Conscious volitional efforts to regulate emotion, cognition, behavior, physiology, and the environment in response to stressful events or circumstances

- Voluntary *engaged* vs. voluntary *disengaged*

**Involuntary coping responses:** Automatic or reflexive responses to changes in environmental demands

The present study examined coping responses to familial stress as potential moderators of the association between childhood anxiety and adolescent depressive symptoms.

## Methods

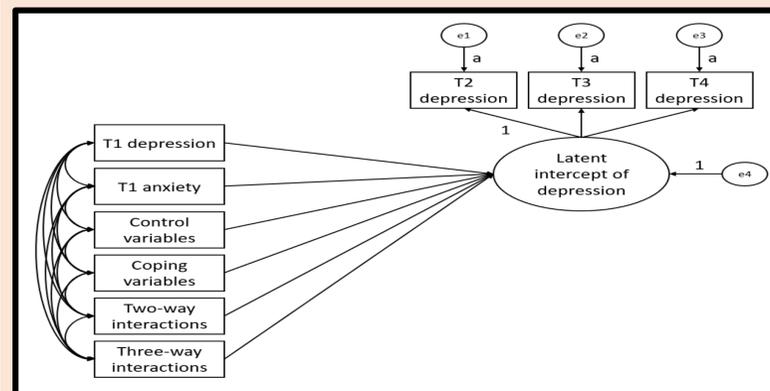
### Four waves of data collection as part of a larger study

- T1 Mean age = 10.26 years; T2 Mean age = 15.77 years; T3 Mean age = 16.75 years; T4 Mean age = 17.68 years

### Measures

- **Coping responses (Time 1):** Responses to Stress Questionnaire (RSQ) – Family Stress Version
  - Voluntary engaged composite score
  - Voluntary disengaged scale
  - Involuntary composite
- **Anxiety (Time 1 – Time 4):** Revised Children’s Manifest Anxiety Scale (RCMAS)
- **Depressive symptoms (Time 1 – Time 4):** Children’s Depression Inventory (CDI)

Latent intercept models were used in all analyses (see below)



## Figures

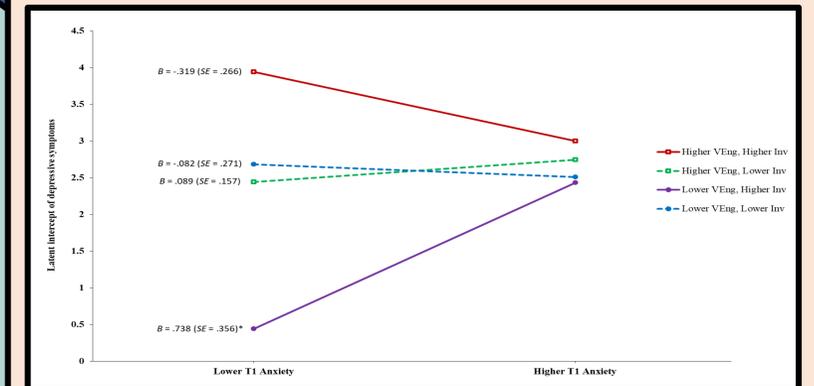


Figure 2. The association between childhood anxiety and the latent intercept of adolescent depressive symptoms moderated by voluntary engaged responses (VEng) and involuntary coping responses (Inv).

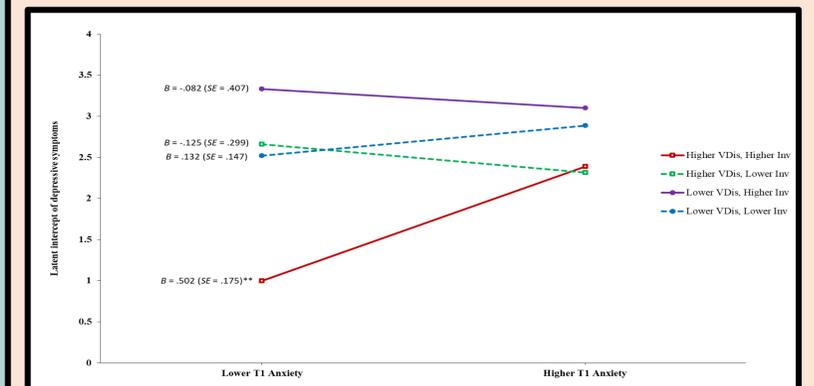


Figure 3. The association between childhood anxiety and the latent intercept of adolescent depressive symptoms moderated by voluntary disengaged responses (VDis) and involuntary coping responses (Inv).

## Hypotheses

**Diathesis-anxiety-involuntary response model:** Anxiety and involuntary responses function as chronic stressors that interact with the diathesis of specific voluntary coping response tendencies to predict future depressive symptoms.

Childhood anxiety will predict adolescent depressive symptoms when children report **high levels of involuntary coping** coupled with **low levels of voluntary engaged coping** or **high levels of voluntary disengaged coping**.

## Results

	Adolescent Depressive Symptoms	
	B (SE)	β
<b>Model 1: Main Effects</b>		
Sex	-.26 (.15) <sup>+</sup>	-.13 <sup>+</sup>
Income	-.09 (.06)	-.13
T1 Anxiety	.19 (.09) <sup>*</sup>	.25 <sup>*</sup>
T1 Depressive Symptoms	.31 (.09) <sup>**</sup>	.35 <sup>**</sup>
<b>Model 2: Two-way Interactions</b>		
No significant interactions		
<b>Model 3: Three-way Interactions</b>		
T1 Anxiety x VEng x VDis	.19 (.29)	.11
T1 Anxiety x VEng x Inv	-.74 (.32) <sup>*</sup>	-.48 <sup>*</sup>
T1 Anxiety x VDis x Inv	.46 (.24) <sup>+</sup>	.35 <sup>+</sup>
ΔR <sup>2</sup> / Total R <sup>2</sup>	4.3% / 34.5%	

## Discussion

We found support for our primary hypotheses and the proposed diathesis-anxiety-involuntary response model.

Adolescents may feel **defeated** and **helplessness** (more depressed) if they have struggled to navigate family stressors in a way that reduces the chronic stress caused by high levels of anxiety and involuntary coping responses.

- Learned helplessness and conditioned defeat
- Increased allostatic load and altered reward processing