

Associations of Conscience to Childhood Internalizing Symptoms from ages 3 to 10

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Abstract

This study examined the associations of conscience development (self-regulation of morality) to internalizing symptoms during early childhood. Results indicate that in children who had high affective discomfort at age 3, that co-occurring high moral regulation predicted higher internalizing symptoms at ages 3, 6, and 10. For children with low affective discomfort, children with higher moral regulation had less internalizing symptoms at age 3, but this effect reversed at age 6. Thus, higher moral regulation may contribute to higher internalizing symptoms in the context of high affective discomfort across development, but may have a differential effect across development in the context of low affective discomfort.

Background Research

- Internalizing problems are related to emotion regulation difficulties (e.g., Zahn-Waxler, Klimes-Dougan, & Slattery, 2000).
- As conscience development may be related to emotion regulation (Eisenberg, 2000), it is possible that there is a link between internalizing problems and conscience.
- Conscience (self-regulation of morality) has two components (Korchanska, 1994):
 - Affective discomfort (e.g., arousal, guilt, remorse over wrongdoing)
 - Moral regulation (e.g., child's concern with wrongdoing itself and reparations after wrongdoing)
- The current study investigates early conscience at age 3 and associations with internalizing symptoms from ages 3 to 10.
- **Hypotheses:**
 - Higher affective discomfort at age 3 will be associated with greater internalizing symptoms at ages 3, 6, and 10.
 - Higher moral regulation at age 3 will be associated with greater internalizing symptoms at ages 3, 6, and 10.

Methods

Participants: 229 children assessed longitudinally at ages 3, 6, and 10.

Measures:

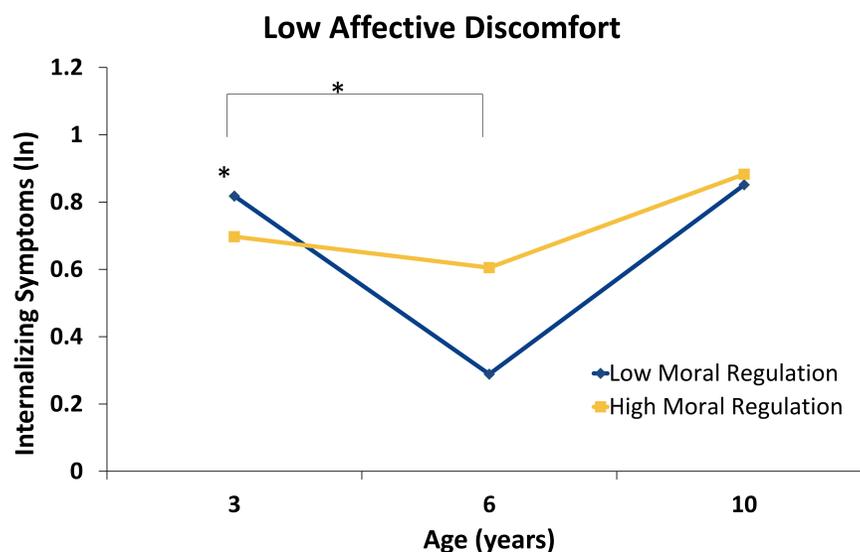
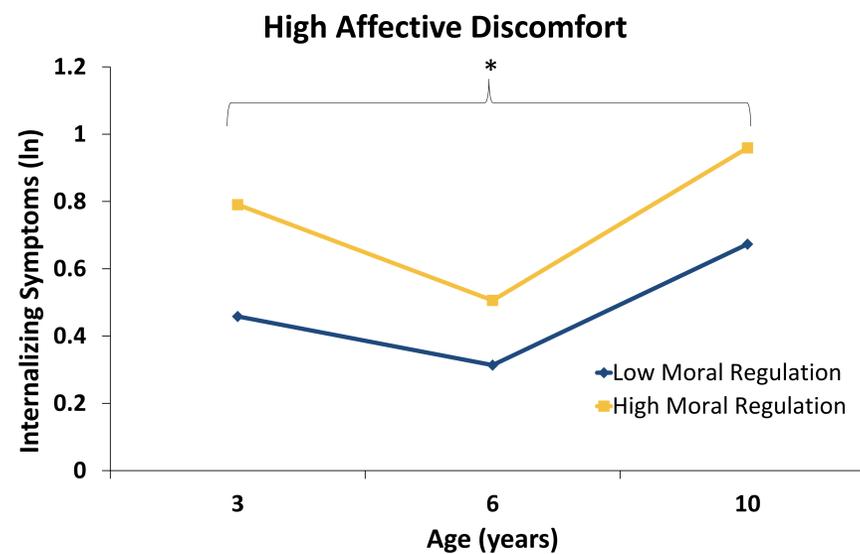
- **My Child Questionnaire** (Korchanska, 1994): mother report of moral regulation and affective discomfort at age 3.
- **Teacher Report Form** (Achenbach, 1991): teacher report of internalizing and externalizing symptoms at ages 3, 6, and 10.

Data Analysis:

- Random effects mixed model analysis
- **Dependent variables:** Internalizing symptoms at ages 3, 6, and 10
- **Independent variables:** Moral regulation and affective discomfort at age 3
- **Covariates:** Gender and externalizing symptoms at ages 3, 6, and 10
- Time defined as a categorical variable
- Intercept and linear slope were allowed to vary across individuals.
- Analyses were split into high and low affective discomfort (+1 SD, -1 SD, respectively) in post hoc analyses

Results

Descriptives	Time 1	Time 2	Time 3
Number of participants	187	190	194
Age in years (sd)	3.13 (.23)	5.29 (.22)	10.42 (.64)
Gender	51.9% male	52.1% male	52.1% male
Internalizing symptoms (ln)	1.48 (.97)	.84 (.86)	1.26 (.98)
Externalizing symptoms (ln)	1.71 (1.26)	.95 (1.12)	.85 (1.02)
Moral Regulation	17.65 (2.24)	-	-
Affective Discomfort	18.40 (2.40)	-	-



Models Predicting Internalizing Symptoms

Full Model			
Type III Test of Fixed Effects	F	df	p
Intercept	.9446	(1, 303.2)	.000
Time	12.32	(2, 403.7)	.000
Externalizing Symptoms	181.72	(1,509.4)	.000
Gender	.390	(1, 216.4)	.533
Affective Discomfort	.749	(1, 199.2)	.388
Affective Discomfort * Time	.161	(2, 377.6)	.851
Moral Regulation	3.645	(1, 213.8)	.058
Moral Regulation * Time	.298	(2, 388.9)	.743
Affective Discomfort * Moral Regulation	2.988	(1, 277.7)	.085
Affective Discomfort * Moral Regulation * Time	2.913	(2, 402.3)	.055

Post Hoc: High Affective Discomfort (>1 SD; n = 33)			
Type III Test of Fixed Effects	F	Df	p
Intercept	11.81	(1, 41.44)	.001
Time	.874	(2, 59.48)	.422
Moral Regulation	12.03	(1, 42.90)	.001
Moral Regulation * Time	.571	(2, 61.47)	.568

Post Hoc: Low Affective Discomfort (<1 SD; n =31)			
Type III Test of Fixed Effects	F	df	p
Intercept	14.59	(1, 81)	.000
Time	1.53	(2, 81)	.223
Moral Regulation	.49	(1, 81)	.484
Moral Regulation * Time	3.446	(2, 81)	.037

Discussion

- Overall there was an association of conscience to internalizing symptoms.
- High levels of affective discomfort and moral regulation in children at age 3 was associated with higher internalizing symptoms across time.
- This may suggest that higher control or over-regulation is associated with increased internalizing symptoms in the context of increased emotional discomfort.
- Consistent with this, other studies have suggested that children with internalizing symptoms may over-control their behavior, although results have been mixed (Eisenberg, 2001).
- Conflicting results may be due to not taking into account other child factors, such as intensity of emotional response. As seen here, children with low affective discomfort and high levels of moral regulation had lower internalizing symptoms at age 3 compared to those with low levels of moral regulation. This effect reversed at age 6, and disappeared at age 10.
- Future research should look more closely at conscience development and the interaction between emotional intensity and regulation in internalizing symptoms.

- Eisenberg et al., (2001). The relations of regulation and emotionality to children's externalizing and internalizing problem behavior. *Child Development*, 72(4), pp. 1112-1134.
 - Eisenberg (2000). Emotion, regulation and moral development. *Annu. Rev. Psychol.*, 51, pp. 665-697.
 - Kochanska, DeVet, Goldman, Murray & Putnam (1994). Maternal reports of conscience development and temperament in young children. *Child Development*, 65(3), pp.852-868.
 - Zahn-Waxler, Klimes-Dougan, Slattery (2000). Internalizing problems of childhood and adolescence: prospects, pitfalls, and progress in understanding the development of anxiety and depression. *Development and Psychopathology*, 12, pp. 443- 466.