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BACKGROUND

- Parenting is a cognitively demanding task, and emerging conceptual frameworks have turned to executive functions as a potential explanatory variable in determinants of parenting research (Crandall et al., 2015)
- Working memory** is a cognitive process that serves to facilitate goal-oriented behavior through maintaining information that is no longer perceptually present in consciousness and allowing for active manipulation of that information (Engle & Kane, 2004)
- Inhibitory control** plays a critical role in an individual's ability to self-regulate in challenging situations (Barkley, 1997)
- Set-shifting** includes changing perspectives and adjusting thoughts or behaviors in response to changing demands (Miyake et al., 2000)
- These cognitive processes may be especially important within a discipline framework, as they have the potential to facilitate more constructive practices and inhibit harsher, more reactive forms of discipline
- Maternal discipline practices in turn have implications for young children's adjustment, specifically as they transition to school settings where independent self-regulation becomes an increasingly stage-salient task

AIMS:

Examine how maternal executive functions may influence parental discipline practices, and how these discipline practices in turn are associated with children's school readiness in the early elementary years

➤ **Hypothesis 1: Maternal executive function variables (working memory, inhibitory control, and set-shifting) would be positively associated with maternal scaffolding discipline practices, and negatively associated with maternal use of harsh discipline**

➤ **Hypothesis 2: Maternal discipline practices would be associated with children's school readiness outcomes, such that scaffolding discipline would lead to better adjustment outcomes, and harsh discipline would lead to more negative adjustment outcomes**

METHODS

Participants: 235 families: mothers and their 5 year old children (55% female)

- Median family income ranged from \$0 - \$162,000 (M = \$35,200)

- European American (43%)
- African American (48%)
- Latino (16%)

Procedure:

Families visited the laboratory at University of Rochester for two waves of data collection spaced one year apart.

Construct	Method	Measure
Maternal Executive Function	Cognitive Tasks (Administered via computer or paper)	Tower of Hanoi (Humes et al., 1997)
Working Memory		GNAT-Child (Sturge-Apple et al., 2015)
Inhibitory Control		
Set Shifting		Trail Making Test (Strauss et al., 2006)
Maternal Discipline	Observational assessment in which mothers were tasked with discussing a discipline issue with their child for 5 minutes	Caregiving Around Discipline System (CADS; Sturge-Apple & Jones-Gordils, 2017)
Scaffolding Discipline		
Harsh Discipline		
Children's School Readiness Outcomes	Questionnaire completed by teachers at Wave 2	The MacArthur Health and Behavior Questionnaire (HBQ; Armstrong et al., 2003)
School Engagement		
Teacher-Child Relationship		
Peer Acceptance		

	1	2	3	4	5	6	7	8	9	10
1. Working Memory	-									
2. Inhibitory Control	-.34**	-								
3. Set-Shifting	-.34**	.35**	-							
4. W2 Harsh Discipline	-.05	.09	.04	-						
5. W2 Scaffolding Discipline	.16*	-.30**	-.20*	-.35**	-					
6. W3 Peer Acceptance	.07	-.14	-.14	-.03	.08	-				
7. W3 School Engagement	.05	-.13	-.16	-.14	.22**	.53**	-			
8. W3 Teacher-Child Relation	.06	-.07	-.22*	-.23*	.27**	.55**	.70**	-		
9. Income	.18*	-.32**	-.25*	-.17*	.40*	.18*	.30*	.29**	-	
10. Child Gender	-.06	.04	-.06	.20	.01	.03	.001	.001	.06	-
Mean	.85	.15	50.43	1.97	4.18	3.44	1.64	4.13	9.76	-
SD	.09	.14	24.76	1.89	1.84	.64	.40	.68	6.6	-

Table 1. Means, deviations, and bivariate correlations of primary study variables

* p < .05, ** p < .01

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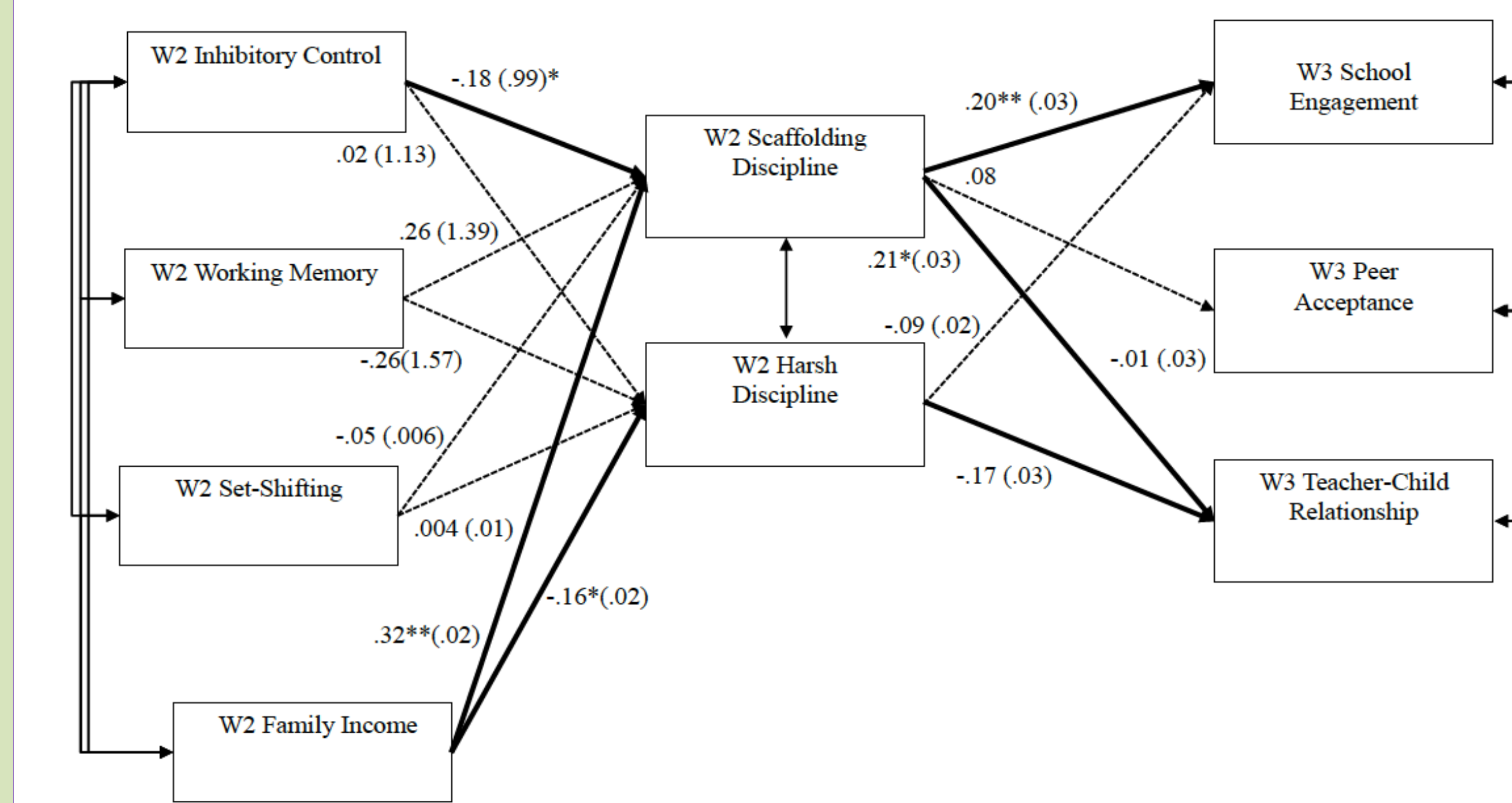


Figure 1. Path model examining associations among maternal executive function, maternal discipline, and children's school readiness. All structural paths with standardized path coefficients are shown, and standard errors are given in parentheses. Pathways in bold are significant. Dotted lines indicate that the paths did not reach statistical significance. W2=Wave 2; W3= Wave 3. *p < .05. **p < .01

RESULTS & DISCUSSION

- Inhibitory control was significantly associated with mother's use of scaffolding discipline, $\beta = -.18$, $B = -2.31$ ($SE = .99$), $p = .02$, even when family income was included in the model
- Scaffolding discipline was significantly associated with children's school engagement, $\beta = .20$, $B = .04$ ($SE = .03$), $p = .01$, and the teacher child relationship, $\beta = .22$, $B = .08$ ($SE = .03$), $p = .005$
- Harsh discipline was significantly associated with teacher-child relationships, $\beta = -.17$, $B = -.06$ ($SE = .03$), $p = .03$

Discussion:

- All three domains of the executive suite were associated with scaffolding discipline at the bivariate level, suggesting that mothers may utilize a broad array of cognitive capacities towards enacting playful, explanatory, and effortful discipline practices
- Moving towards specificity, it appears that maternal inhibitory control may be the most predominant cognitive skill for maintaining sensitivity in a discipline context
- More scaffolding discipline provided at age 5 led to higher levels of school engagement and more positive teacher-child relationships at age 6
 - Scaffolding discipline may facilitate independent problem solving skills in children, or potentially improve social skills
- Higher levels of harsh discipline at age 5 were associated with more negative teacher-child relationship at age 6