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Exploring the Development of Attachment in Infants of Adult and Adolescent Mothers



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Introduction



- Maternal sensitivity is an important factor in the development of Secure attachment relationships (Ainsworth et al., 1978; De Wolff & van IJzendoorn, 1997; Juffer et al., 2007)
- Early research on the origins of attachment relationships was conducted using middle-class samples (Ainsworth et al., 1978)
- More recent work has explored the antecedents and developmental consequences of attachment relationships in high-risk groups (Bailey et al., 2007; Carlson, 1998; van IJzendoorn et al., 1999)
- One high-risk group that has received recent attention in attachment research is adolescent mothers (Cairns, Cairns, Xie, Leung, & Hearne, 1998; Camp, 1995)

Introduction: Adolescent Motherhood



- Adolescent mothers have been identified as a high-risk group for various reasons:
 - **Demographic Factors:**
 - ✦ **Education** (Coley & Chase-Lansdale, 1998; Corcoran, 1998; Tarabulsky et al., in press)
 - ✦ **Income** (Cairns, Cairns, Xie, Leung, & Hearne, 1998; Jaffee et al., 2001)
 - **Social Supports:**
 - ✦ **Partner Involvement** (Jaffee et al., 2003; Tarabulsky et al., 2005)
 - ✦ **Family supports** (Ward & Carlson, 1995)
 - **Stress:**
 - ✦ **Chaotic and stressful environments** (Cairns et al., 1998 ; Davis & Cummings, 1994; De Wolff & van Ijzendoorn, 1997; van Ijzendoorn et al.,)

Introduction: Adolescent Motherhood



- Infants born to adolescent mothers are subsequently at-risk for various detrimental outcomes:
 - **Attachment Relationships:**
 - ✦ Insecure attachment relationships (Broussard, 1995; Forbes et al., 2007; Lamb, Hopps, & Elster, 1987; Madigan et al., 2008; van Ijzendoorn et al., 1999)
 - ✦ Insecure attachment relationships are associated with later difficulties (Sroufe, 2005; Sroufe et al., 2005)
 - **Developmental Outcomes:**
 - ✦ Impulse control and behavioural problems (Jaffee et al., 2001)
 - ✦ Social and emotional functioning (Spieker et al., 1994)
- Thus, being raised by an adolescent mother places an infant at-risk for insecure attachment and subsequent developmental difficulties

Introduction: Adolescent Motherhood



- Mechanisms underlying the association between adolescent motherhood and insecure attachment:
 - Adverse circumstances and maternal sensitivity:
 - ✦ Adolescent mothers display higher levels of insensitivity than adult mothers (Bailey et al., 1999; Haskett, Johnson & Miller, 1994; Spieker et al., 1994; Tarabulsky et al., in press)
 - ✦ Adolescent mothers show greater variability, more atypical behaviours and a broader range of behaviour during interactions with their infants (Bailey et al., 2007; Forbes, Evans, Moran & Pederson, 2007)
 - Maternal sensitivity and attachment security:
 - ✦ Theoretical and empirical work has established maternal insensitivity as an important contributor to Insecure attachment relationships (Ainsworth et al., 1987; DeWolff & van Ijzendoorn, 1997)

Current Study



- While many studies have looked at the development of attachment relationships for adult and adolescent mothers separately, few studies have directly compared these two groups in a single study
 - The current study further explored the origins of attachment relationships for adolescent mothers and their infants by directly comparing the development of these processes with adult mothers and their infants
- The hypothesis that differences in the distributions of attachment classifications among these two populations is a result of low levels of sensitivity has yet to be tested in a mediational analysis
 - The current study will test a model whereby differences in the quality of attachment relationships between these two groups is, at least in part, mediated by maternal sensitivity

Methods: Participants



	Adult Mothers	Adolescent Mothers
Number of Participants	49	49
Average Age at Birth	30 (4.50)	18.5 (1.00)
Education Level	14.5 years	11 years
Average Annual Income	\$30,000 – 40,000	\$10,000 – 19,000
Marital Status	8 % single	54% single
Parenting Stress Index (PSI)	197 (33.40)	220 (33.96)

Methods: Materials



- **Maternal Behaviour Q-Sort (MBQS, Pederson & Moran, 1995):**
 - 90 items on individual index cards that provide descriptions of a mother's interactions with her infant.
 - ✦ “Responds to baby's signals” and “Scolds and criticizes baby”.
 - Q-Sort methodology is used by experienced sorters to arrange the cards into nine piles of ten cards each, ranging from pile 1 (*Least like the mother*) to 9 (*Most like the mother*).
 - Global sensitivity represents the correlation between the scores of the observers Q-sort with those of a theoretically constructed sort of a prototypically sensitive mother.
- **Strange Situation Procedure (SSP, Ainsworth et al., 1978).**

Methods: Procedures



- **Home Visit (12 Months):**
 - Toy interaction
 - Maternal report and child developmental assessment
 - Maternal divided attention task
- **Q-Sort of the MBQS**
- **Laboratory Visit (13 Months):**
 - Strange Situation Procedure

Results



Mean Levels of Maternal Sensitivity

	Adult Mothers	Adolescent Mothers
Maternal Sensitivity	.51 (0.49)	.09 (0.63)

$t(1,49) = 7.06, p < .001$

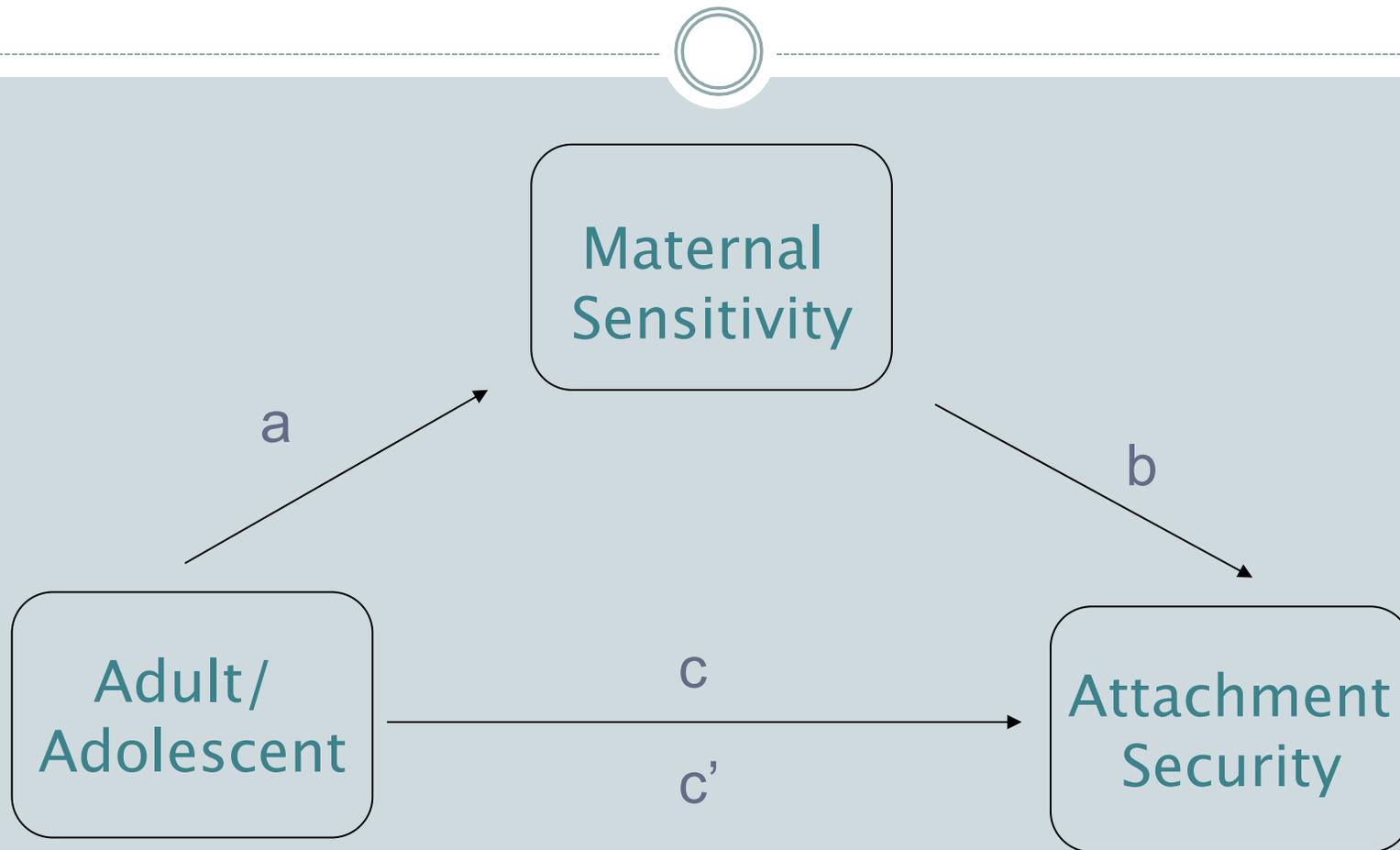
Results



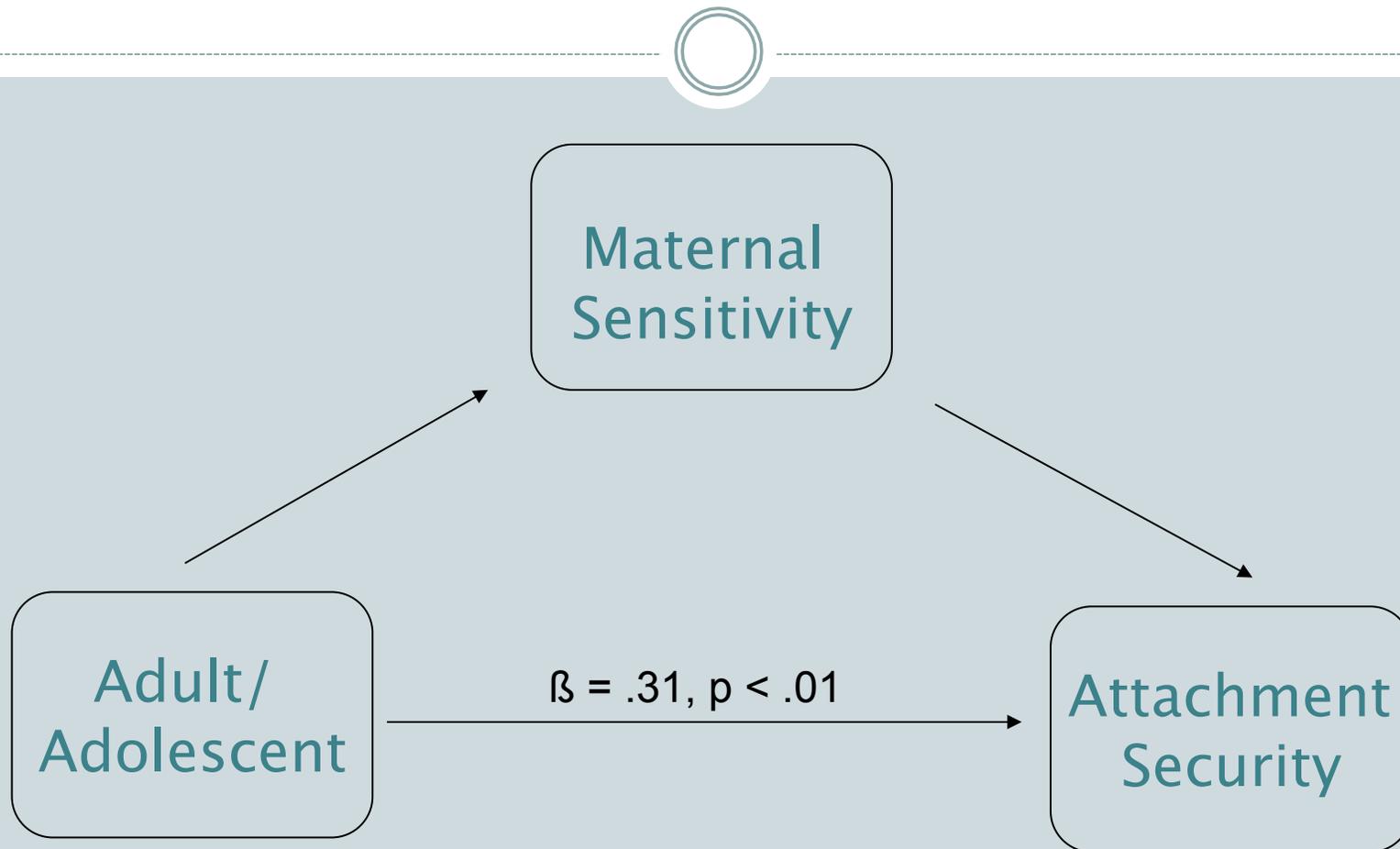
Distributions of Attachment Classifications

	Secure	Avoidant	Resistant	Total
Adult Mothers	34 (69.39%)	10 (20.41%)	5 (10.20%)	49 (100%)
Adolescent Mothers	19 (38.78%)	21 (42.86%)	9 (18.37%)	49 (100%)

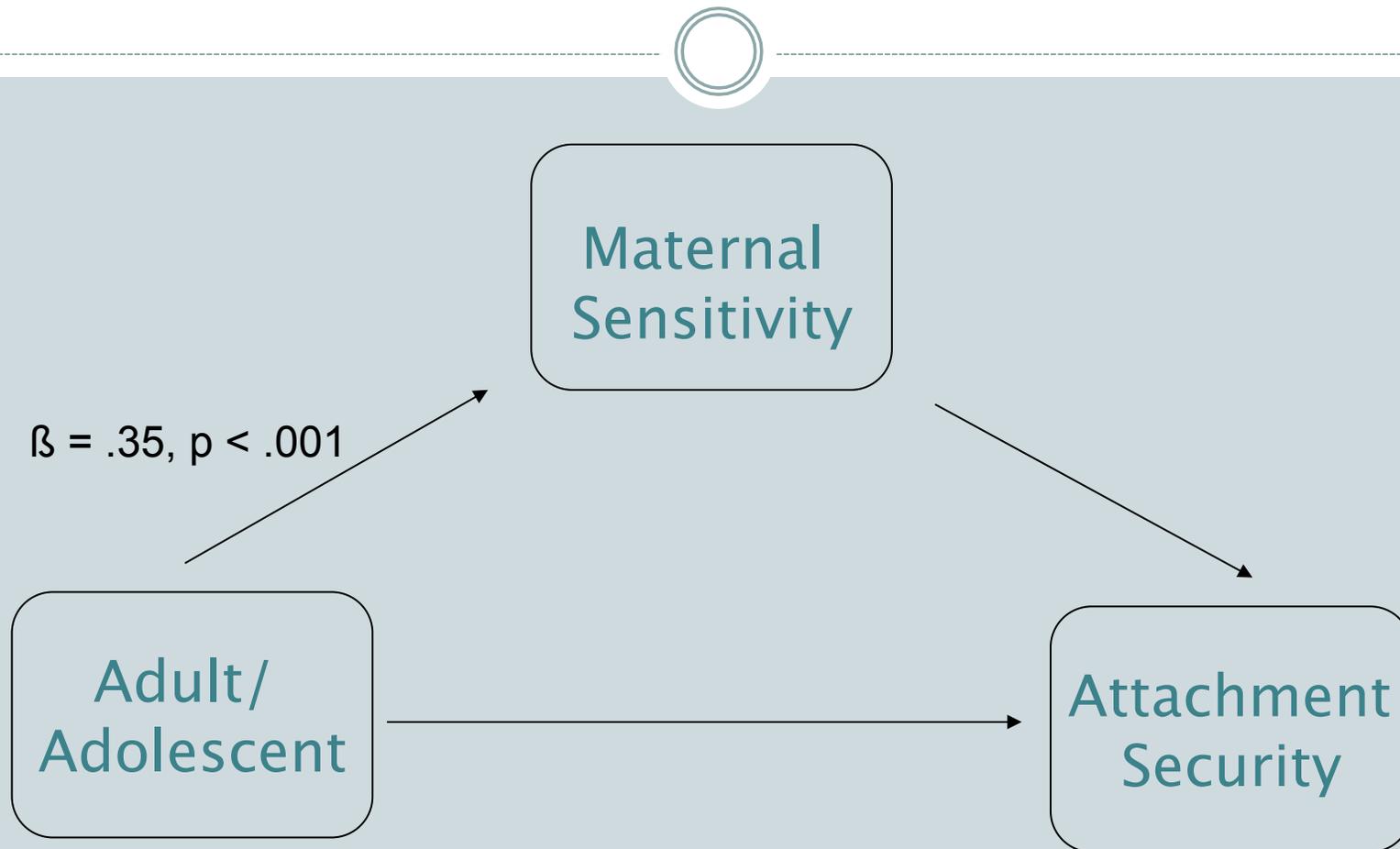
Results: Mediation Analyses



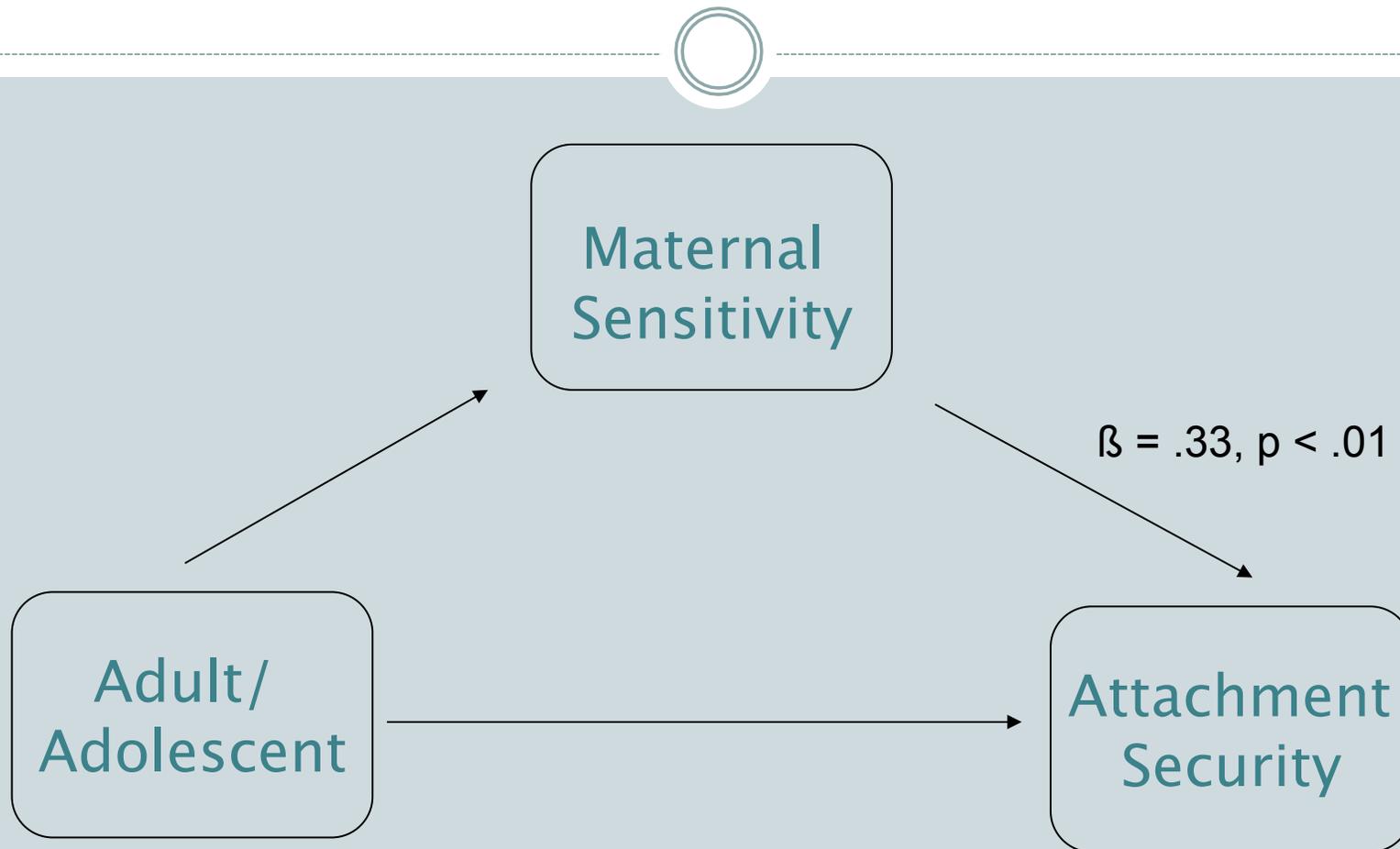
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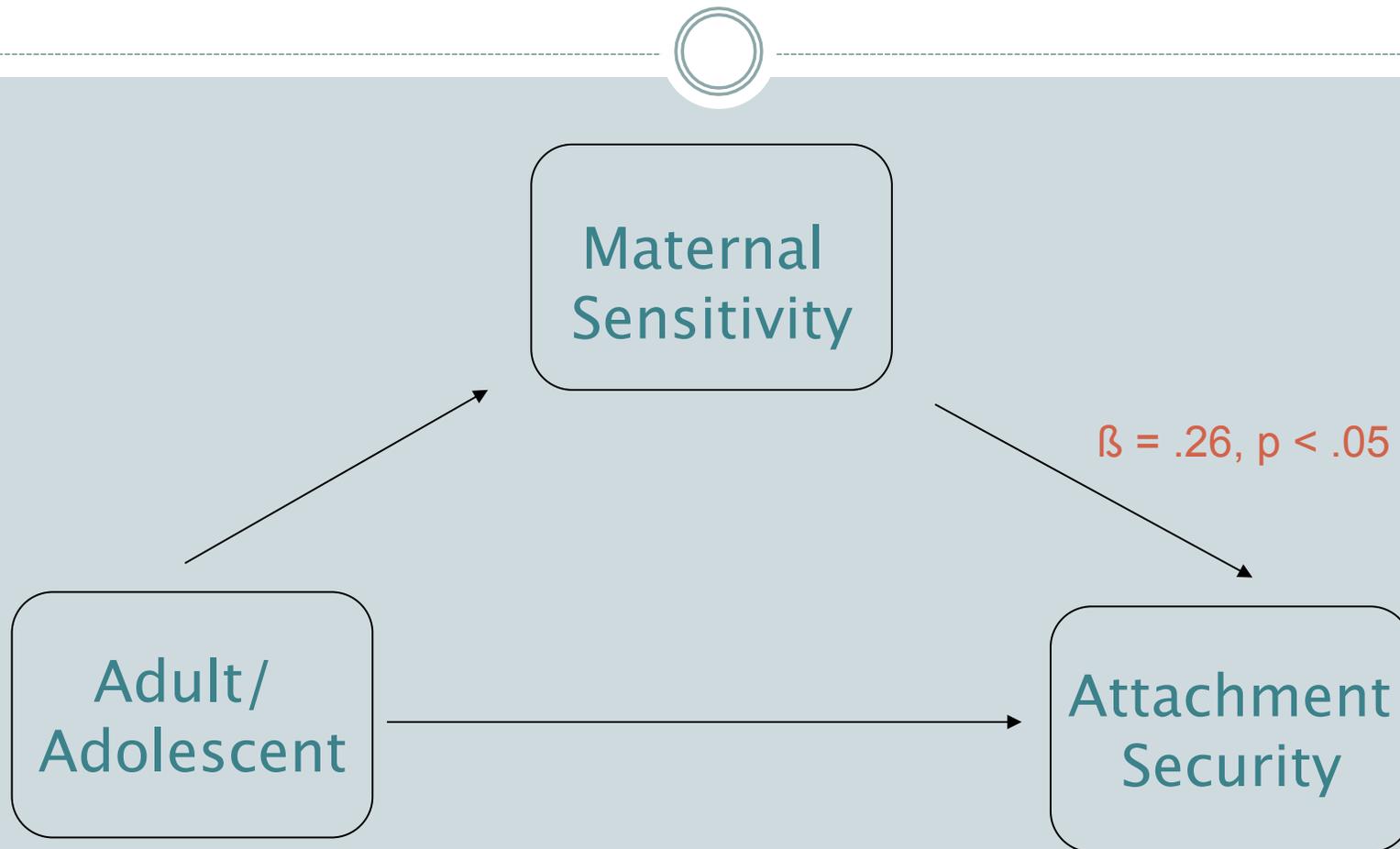
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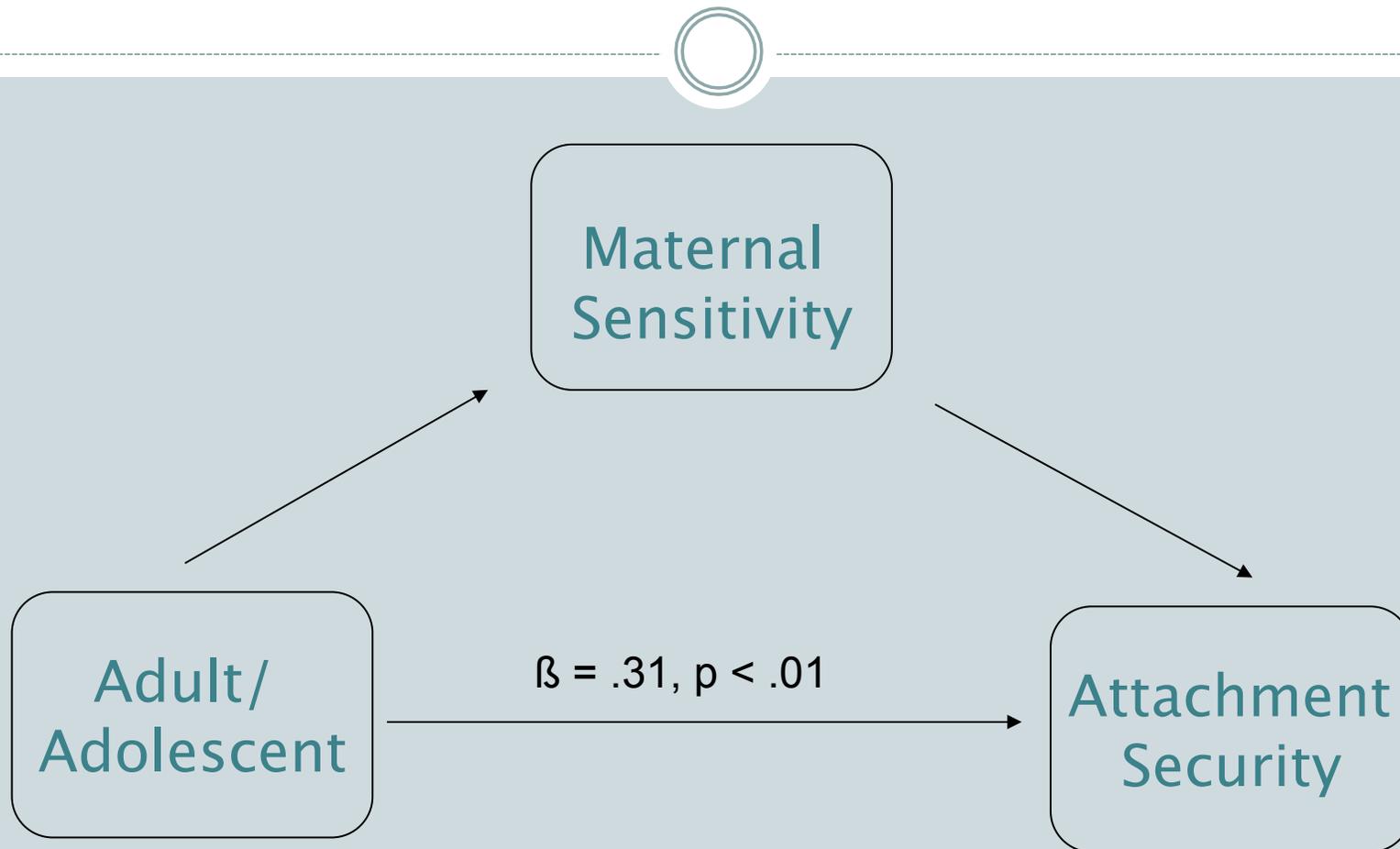
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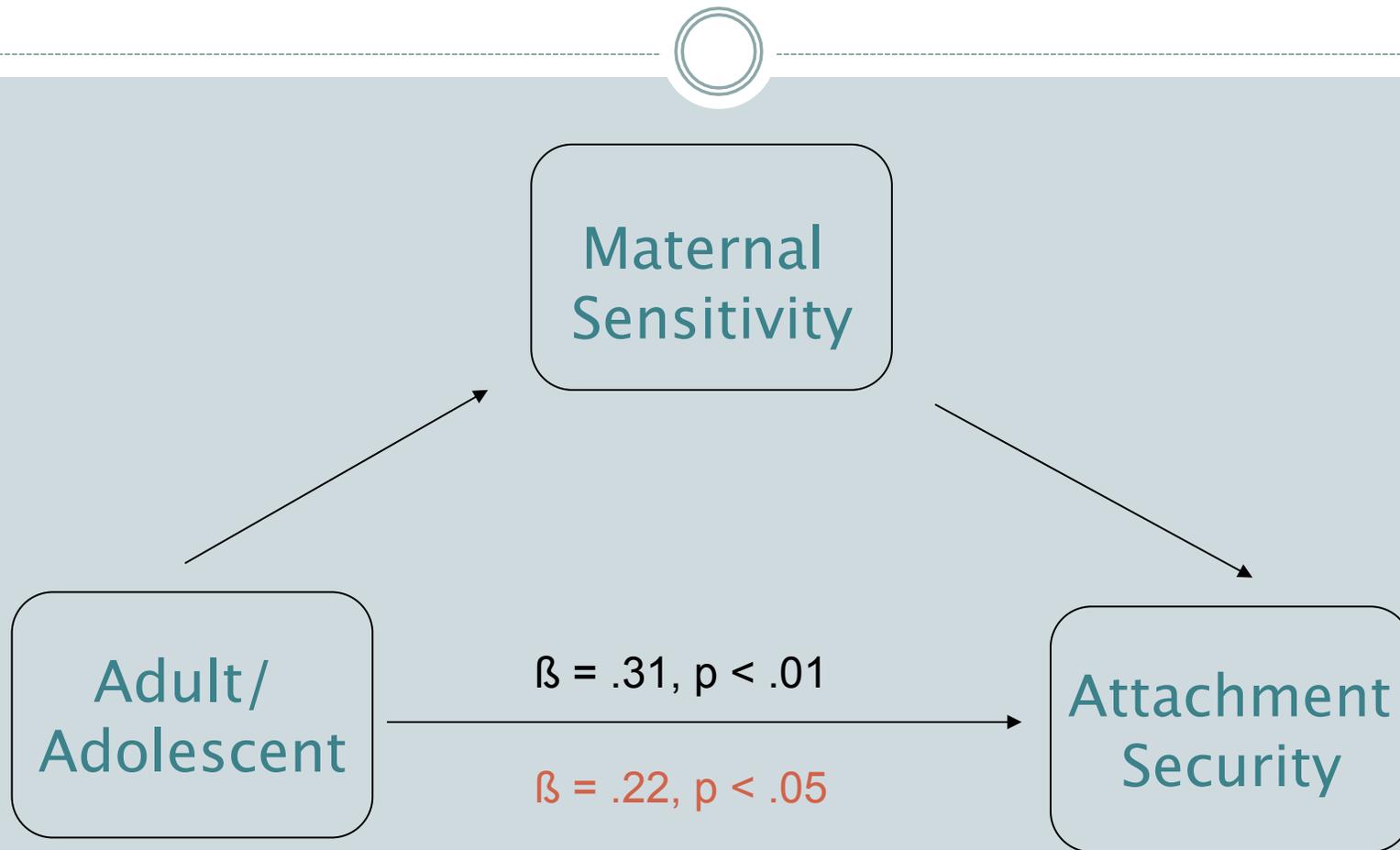
Results: Mediation Analyses



Results: Mediation Analyses



Results: Mediation Analyses



Sobel Test = $-2.08, p < .05$

Conclusions



- Adolescent mothers experienced challenges not faced by adult mothers:
 - Income level
 - Education level
 - Single parenthood
 - Parenting Stress
- Adolescent mothers were significantly less sensitive in their interactions with their infants than adult mothers
- Adolescent mothers were characterized by higher rates of Insecure relationships with their infants than adult mothers
- Challenges associated with adolescent motherhood appear to lower sensitivity during mother-infant interactions, contributing to the development of Insecure attachment relationships

Discussion



Theoretical Implications

- Differences in attachment classifications for infants of adult and adolescent mothers are, at least in part, accounted for by variation in the quality of maternal interactions
- In contrast, there is some research to suggest other aspects of a high-risk environment prevent the development of Secure attachment relationships, in spite of high maternal sensitivity
 - Ie. Repeated separations (Sagi, van Ijzendoorn, Aveizer, Donnell, & Mayseless, 1994)
 - Ie. Domestic fighting (Davis & Cummings, 1994)

Discussion



Theoretical Implications

- The current findings suggest this is not the case for adolescent mothers
- However, it is possible that these characteristics of high-risk environments may impact attachment security by lowering levels of maternal sensitivity, or contributing to the development of insecure attachment relationships through another pathway

Discussion



Clinical Implications

- These findings suggest that maternal sensitivity is an important target for clinical interventions aimed at improving the quality of attachment, and subsequent developmental outcomes, for infants of adolescent mothers.
- This is consistent with intervention studies that have found that increasing levels of maternal sensitivity also leads to improvements in attachment security (Juffer, Bakermans-Kranenburg, & van IJzendoorn, 2007; Moran, Pederson & Krupka, 2005).

Discussion



Clinical Implications

- However, more research is necessary to understand specific factors associated with adolescent motherhood that are impacting the quality of their interactions.
 - This may help further inform clinical interventions specifically targeting adolescent mothers.