

Becoming an older sibling:  
Cooperative caregiving and  
conflict among young children  
in Central Africa



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# Purpose



1. Explore the importance of transitions in siblinghood to child flourishing
  - ☞ Trends in research and theory
2. Consider cultural, biological, and socio-ecological features that surround transitions in siblinghood
3. Provide a perspective of transitions in siblinghood among the Aka and Bofi foragers in Central Africa

# Transitions in Siblinghood and Child Flourishing



- ❧ Normative transition for most children in many parts of the world
- ❧ Prevalent assumption by developmental researchers, theorists, clinicians, and physicians that becoming an older sibling is stressful for children and parents
  - ❧ Historically, often depicted as one of the most traumatic experiences that young children experience (e.g., Adler, 1957; A. Freud, 1946; S. Freud 1900/1953)
- ❧ Family crisis and stressful life event perspective
- ❧ Tremendous popular literature (i.e., books for parents) that lend advice on how to help children through the transition

# Is it safe to assume that becoming an older sibling is stressful?



## Trends in Transitions in Siblinghood Research

- ❧ Mostly among White, middle-class families in U.S. or Europe
  - ❧ Extremely limited information on siblinghood transitions in other contexts and other parts of the world
  
- ❧ Mostly only mothers included in studies
  - ❧ In Volling's (2012) systematic review of the literature, she found that only 20% of studies included fathers
  - ❧ None have included other caregivers
  
- ❧ Mostly studies of first born children
  - ❧ First born children are assumed to experience the most stress as they arguably undergo a more dramatic transition than later born children

# Is it safe to assume that becoming an older sibling is stressful?



## Common themes in findings

- ❧ After birth of new sibling, mother-child interactions change (e.g., Bayder, Greek, & Brooks-Gunn, 1997; Dunn & Kendrick, 1980, 1982; Trause, 1978)
  - ❧ Maternal warmth and involvement tends to decrease
  - ❧ Maternal punitive and restrictive behavior tends to increase
  
- ❧ Limited studies with fathers
  - ❧ Warm and involved fathers relate to lower stress for children during the transition (e.g., Legg, et al. 1974)
  
- ❧ Some children experience stress/conflict, some experience developmental growth, and for some children no behavioral changes are associated with the transition (Volling, 2012)
  
- ❧ Considerable individual variation in family and child patterns

# Neo-Evolutionary Perspective



- ❧ Parental investment theory and parent-offspring conflict theory (Trivers, 1972, 1974)
  - ❧ Tradeoff between current and future offspring
  - ❧ During pregnancy and after arrival of new baby → shift in allocation of investment, decrease through transition for young child as investment in new baby increases
  - ❧ Children likely to resist any decrease in parental investment, as might occur during pregnancy and with new sibling (Parent-Offspring Conflict Theory; Trivers, 1974)
  - ❧ Sibling competition for parent investment
  
- ❧ Grandmothers provided support to families at key times, like during pregnancy or after infant arrives to supplement decreases in provisioning from mothers (e.g., Hawkes, O'Connell, & Blurton Jones, 1997; Hawkes, 2003)

# Cultural Perspective



- ❧ Developmental Niche (Super & Harkness, 1997)
- ❧ Children's development is structured by culture
  - ❧ Social and physical settings
  - ❧ Child care practices
  - ❧ Psychology of caregivers (e.g., cultural models of child development)
- ❧ Transitions in siblinghood are embedded in these contexts
- ❧ Important to consider cultural factors related to transitions in siblinghood

# Exploratory Questions informed by trans-disciplinary perspective



1. What are Aka and Bofi forager cultural models related to the transition to older siblinghood?
2. Does pregnancy and the arrival of an infant sibling coincide with a shift in caregiving and social experiences?
3. Does pregnancy and the arrival of an infant sibling coincide with changes in child distress or conflict or in children's positive social behavior?



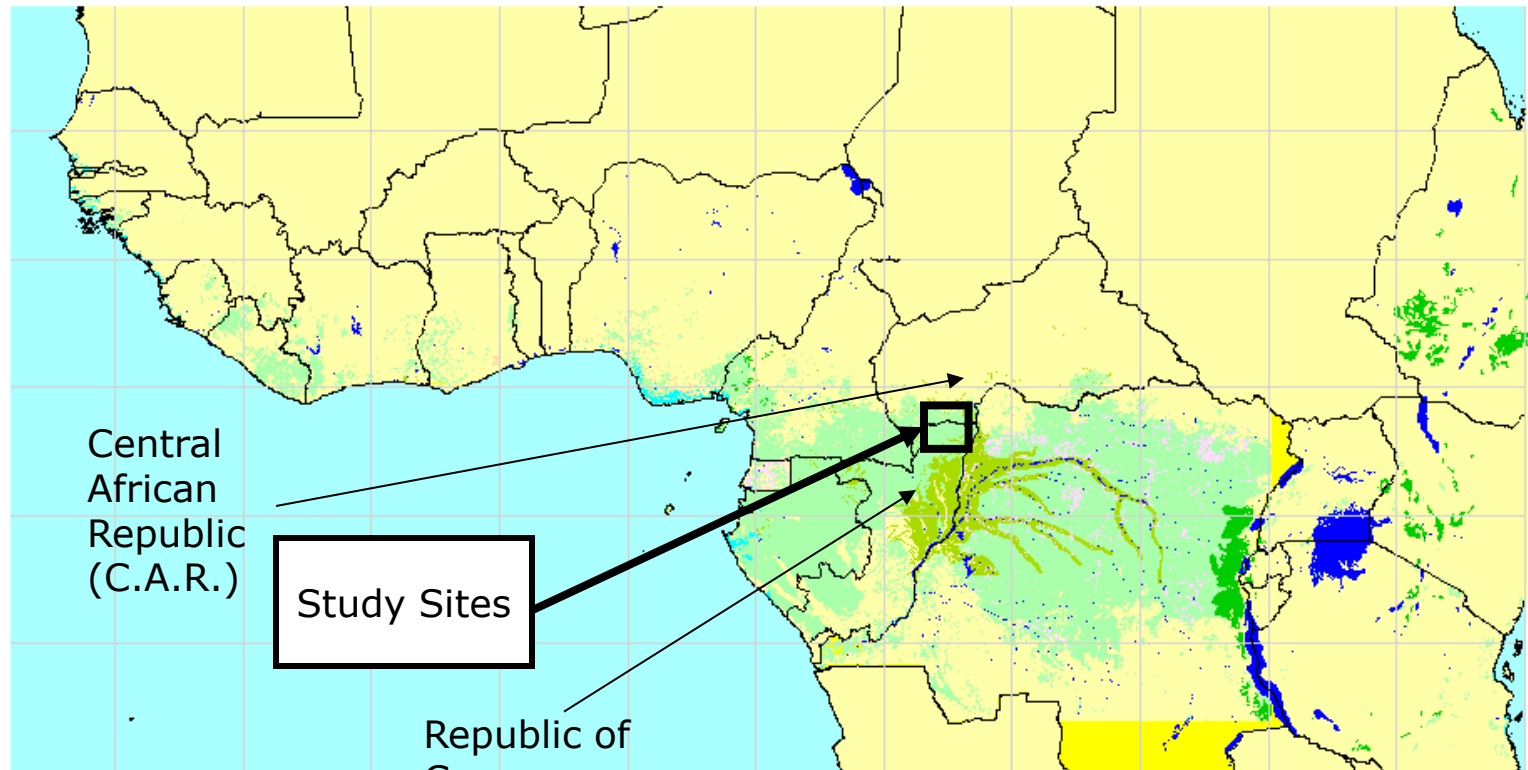
# Methods



- ❧ Collected for a larger study related to social-emotional aspects of child rearing
- ❧ Data Collection
  - ❧ Focal child observations
    - ❧ 12 daylight hours (6-10 am, 10am-2pm, 2-6pm on 3 different days)
    - ❧ On-the-mark coding at 30-second intervals
  - ❧ Demographic interviews
  - ❧ Qualitative interviews related to child rearing, pregnancy, and transitions in siblinghood
  - ❧ Ethnographic fieldwork (25 months)
- ❧ Sample
  - ❧ 58 families (Bofi foragers n=35; Aka n=23) with a child between 1½ - 4 years of age (i.e., the 'focal child')
  - ❧ Bofi foragers in Lobaye region of Central African Republic
  - ❧ Aka foragers in Likouala region of the Republic of Congo

# Field Sites

## Tropical Forests of Africa



300 0 300 600 Kilometers  
at equator



### Vegetation Type

Mangrove  
 Inland Swamp Forest  
 Lowland Rainforest  
 Montane Rainforest  
 Degraded Rainforest

Cloud Covered (Obscured)  
 Non-Forest  
 No Data  
 Open Water

Source: World Conservation Monitoring Centre's Biodiversity Map Library and The World Bank.

# Ethnographic Background

- ❧ Semi-nomadic foragers
- ❧ Cooperative net-hunting – men, women, children together
  - ❧ Couples gather together
  - ❧ Some gendered division of labor, but flexibility
- ❧ Men and women make relatively balanced contributions to child care
  - ❧ Cooperative caregiving
- ❧ Core cultural values: egalitarian (gender and age); extensive sharing; respect for personal autonomy
- ❧ On average, women give birth to about 6 children
- ❧ High child mortality rates (approximately 40%)

# Focal Child Characteristics

|   |       |
|---|-------|
| N   | 58    |
| Mean Age<br>(months)                            | 39.9  |
| Mother<br>Pregnant                              | 32.8% |
| Infant Sibling                                  | 25.9% |
| Mother not<br>pregnant and no<br>infant sibling | 41.4% |
| Gender (female)                                 | 48.3% |
| First born                                      | 44.8% |
| Monogamy  | 81.0% |

# Question 1



What are Aka and Bofi forager cultural models of pregnancy and transition to older siblinghood?

# Cultural Models of Pregnancy and Becoming an Older Sibling

## Child Agency

- Parents don't lead the process, children do
- Seeing the big belly or growing belly causes children (due to fear) to move away from mothers and play more with other children
- Some (few) children like the new baby and want to be near the baby and stay close to mother and new infant

## Dangerous and Fearful Time

- Mother's pregnancy causes breast-milk to go "bad" and makes children sick
- "Bad" milk (because of pregnancy) causes children to stop nursing and this makes them sick and potentially die
- When baby in womb touches/kicks the child, this causes serious illness in child and potential death
- Most children are afraid of growing belly and of new infant sibling

## Cooperative Care

- Father and grandmothers help with young child, especially after new infant sibling is born
- Child co-sleeping with father or grandmother after birth of new infant sibling

# Question 2



❧ Does pregnancy and the arrival of an infant sibling coincide with a shift in caregiving and social experiences?

# Children's Experiences with Various Caregivers and Social Partners



- ❧ Caregivers and social partners
  - ❧ Mothers
  - ❧ Fathers
  - ❧ Adult alloparents (predominantly grandmothers and aunts)
  - ❧ Child alloparents and social partners
- ❧ Involvement with Focal Children
  - ❧ Vocal interactions
  - ❧ Holding
  - ❧ Close proximity (within one foot)
- ❧ Factors considered
  - ❧ Children's age
  - ❧ Sibling transition stage (m not-pregnant, m pregnant, infant sibling)
  - ❧ Birth order (first born, later born)
  - ❧ In preliminary analyses only - cultural group and child gender



# Maternal Involvement



## MANOVA of Maternal Involvement

Vocalizing to child, **Holding** child, In **Close Proximity** to child (within a foot)

Fixed factors:

Children's age

Sibling transition stage

Birth order

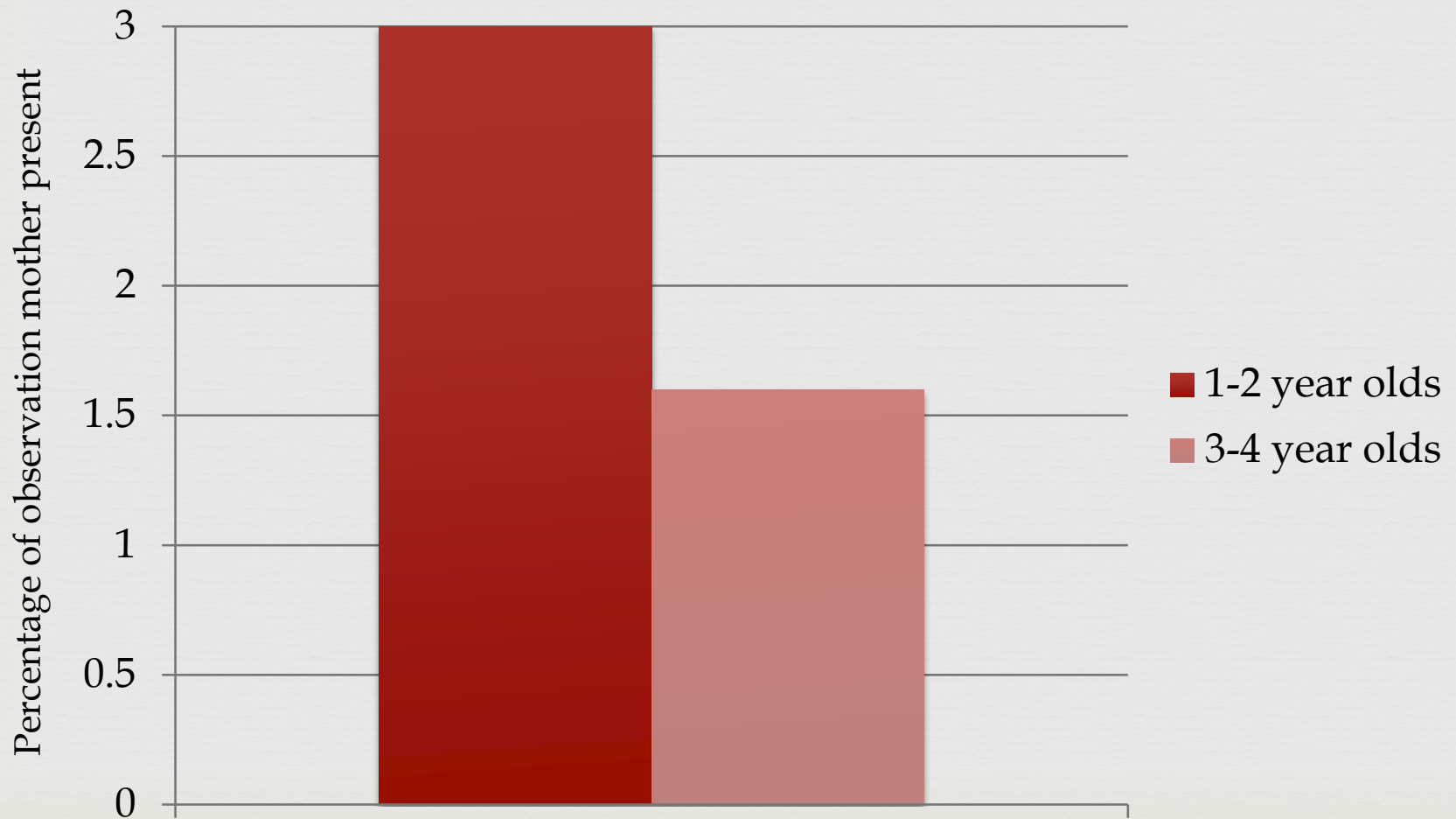
## Main Effects for:

Children's age, Wilks'  $\lambda = .87$ ,  $F[2,51]=3.72$ ,  $p=.03$

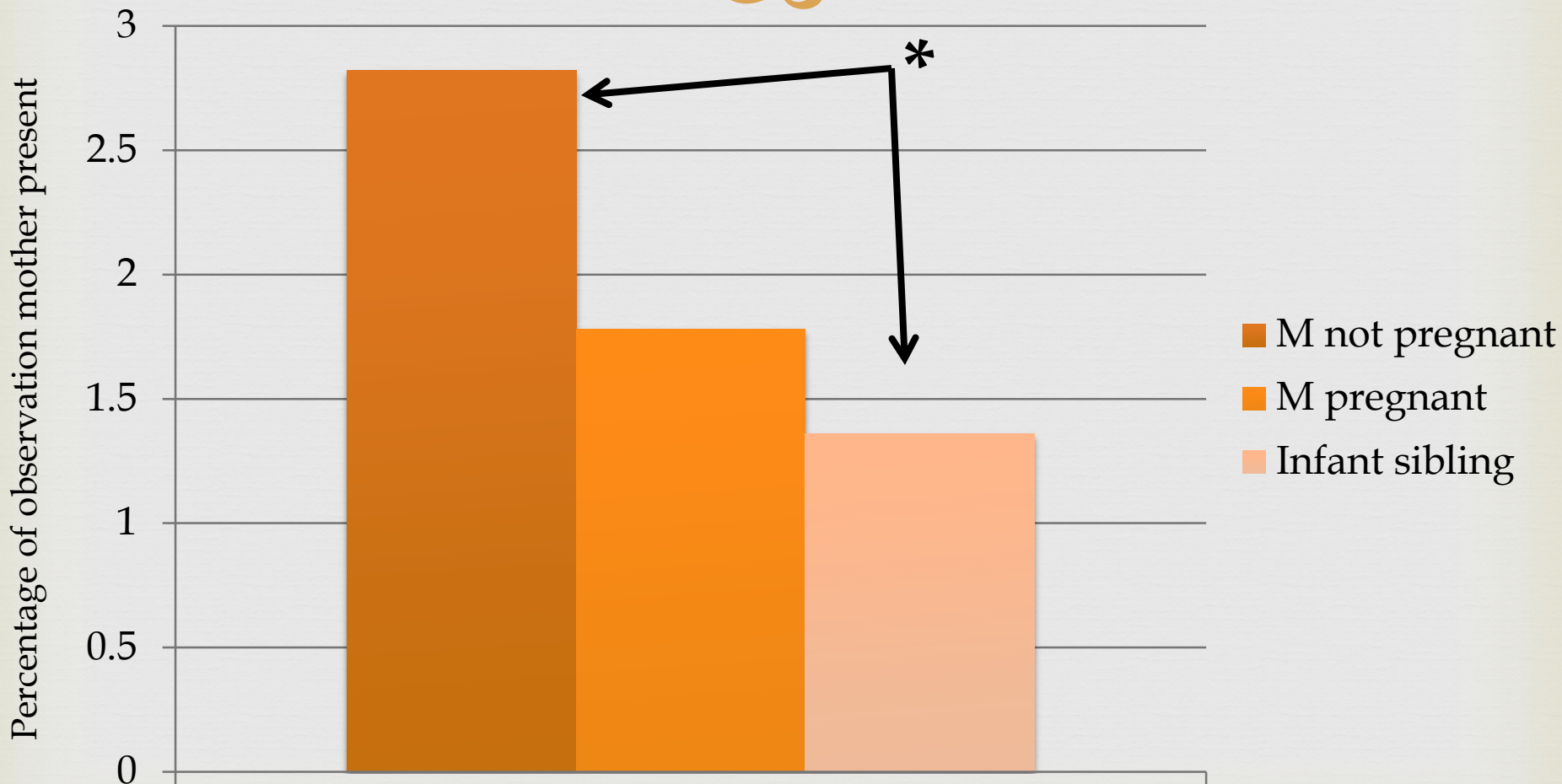
Sibling transition stage, Wilks'  $\lambda = .78$ ,  $F[2,51]=3.35$ ,  
 $p=.01$

No birth order effects

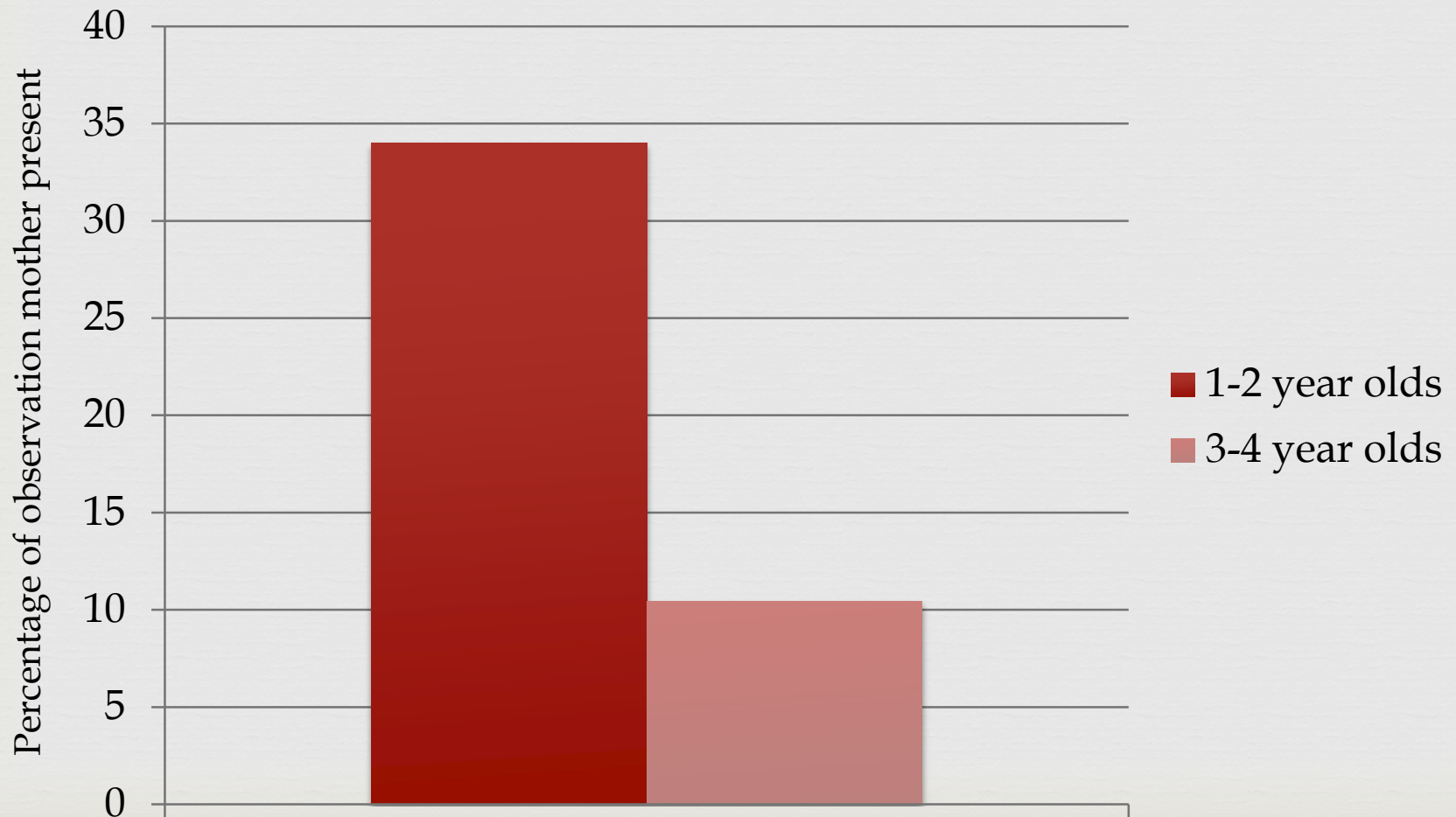
# Mother Vocalizations to Child in relation to Age



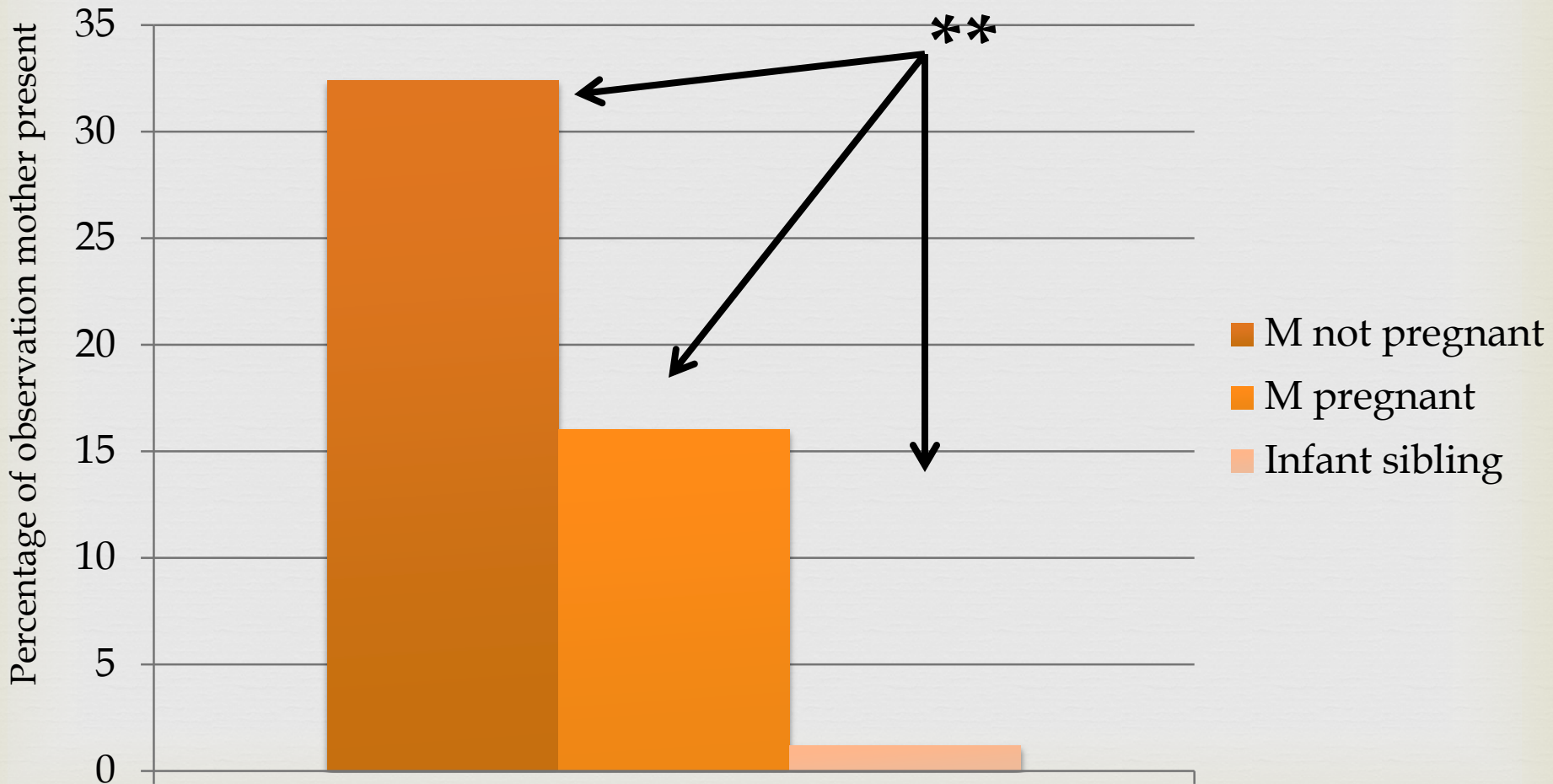
# Mother Vocalizations to Child in relation to Sibling Transition Stage



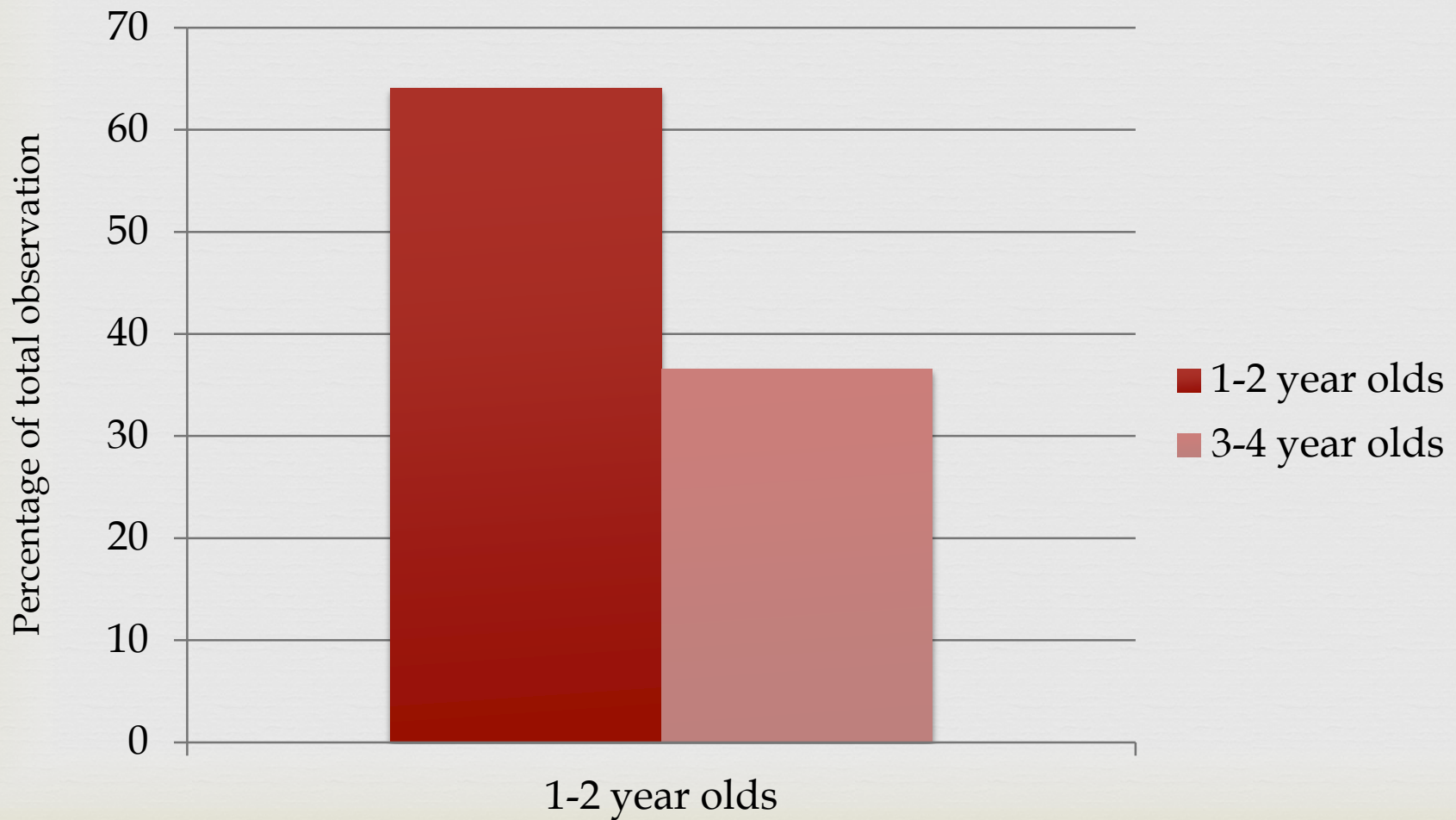
# Mother Holding Child in relation to Age



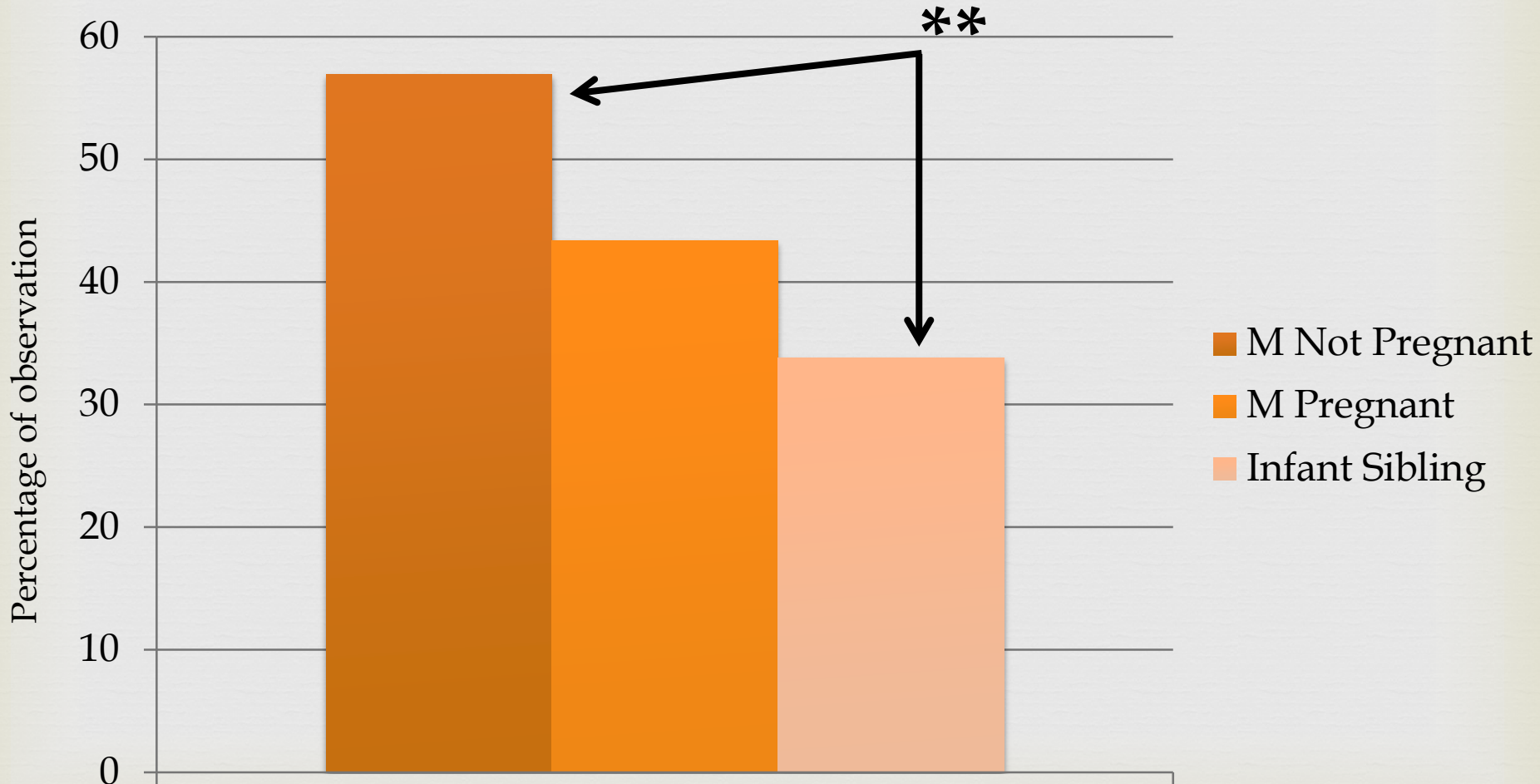
# Mother Holding Child in relation to Sibling Transition Stage



# Mother Close Proximity to Child in relation to Age



# Mother Close Proximity to Child in relation to Sibling Transition Stage



# Paternal Involvement



## MANOVA of Paternal Involvement

Vocalizing to child, **Holding** child, **In Close Proximity** to child (within a foot)

Fixed factors:

Children's age

Sibling transition stage

Birth order

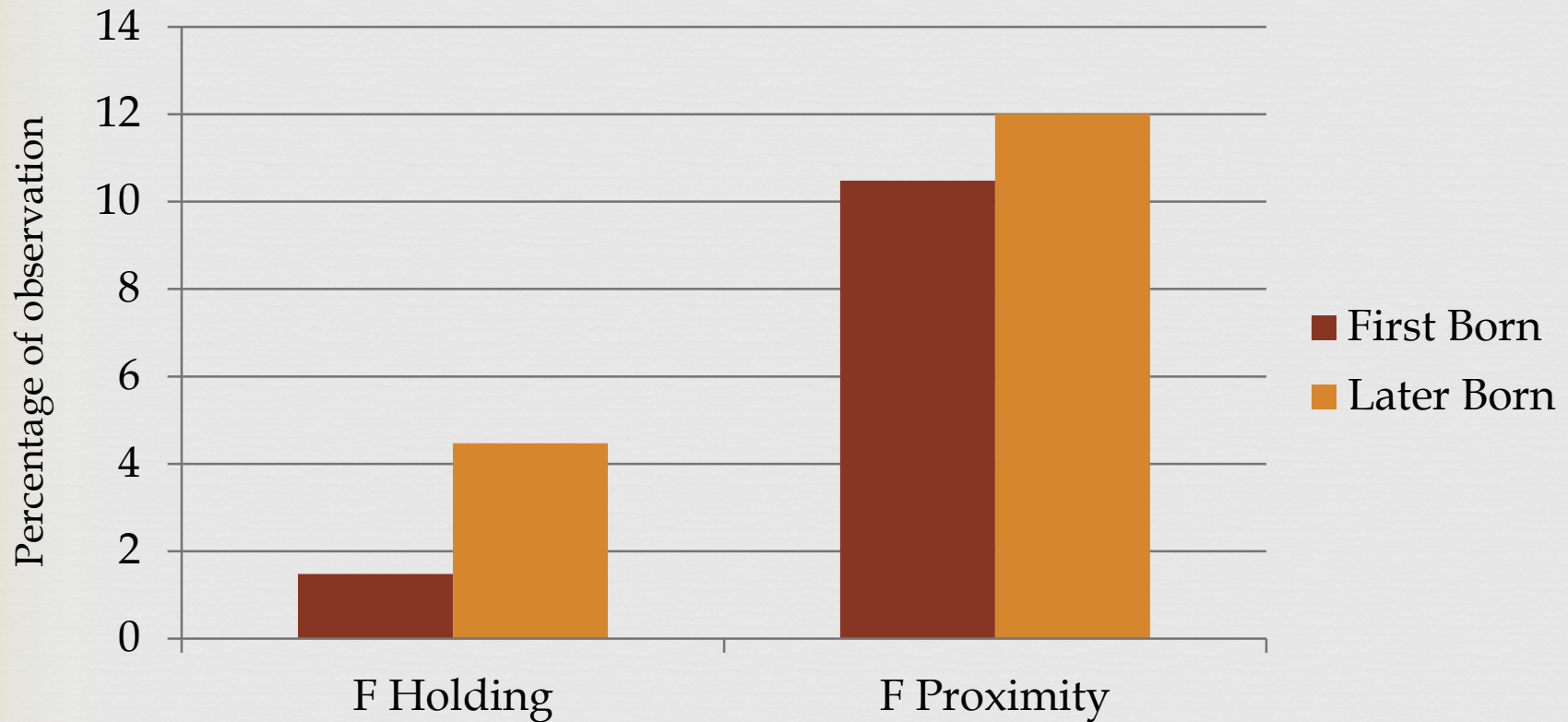
## Main Effects for:

Birth order, Wilks'  $\lambda = .87$ ,  $F[2,46]=3.56$ ,  $p=.04$  [*holding and proximity*]

No child age or sibling transition effects



# Paternal Involvement relative to Birth Order

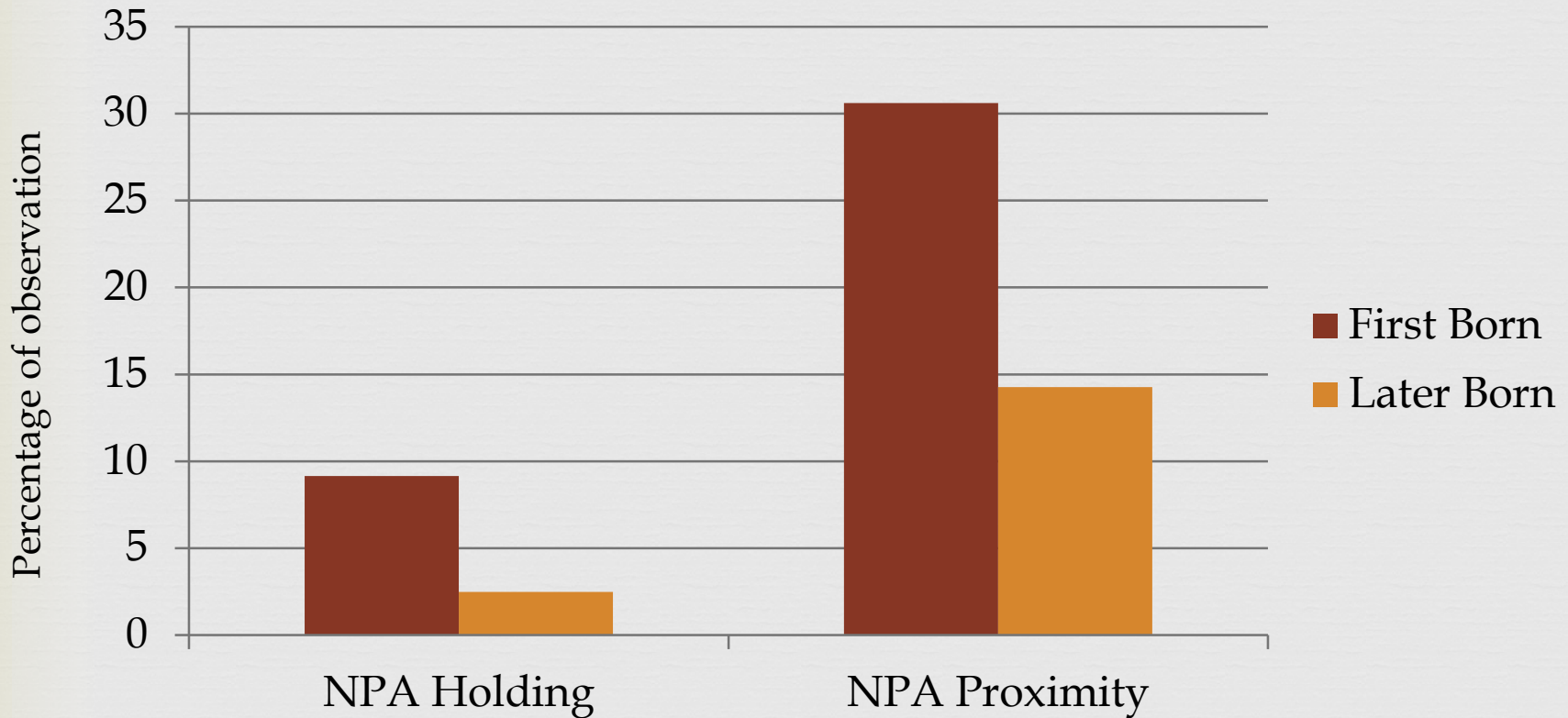


# Non-Parental Adult (NPA) Involvement



- ❧ MANOVA of NPA Involvement
  - ❧ **Vocalizing to child, Holding child, In Close Proximity to child (within a foot)**
  - ❧ Fixed factors:
    - ❧ Children's age
    - ❧ Sibling transition stage
    - ❧ Birth order
- ❧ Main Effects for:
  - ❧ Birth order, Wilks'  $\lambda = .87$ ,  $F[2,46]=3.56$ ,  $p=.04$  [*holding and proximity*]
  - ❧ No child age or sibling transition effects

# NPA Involvement relative to Birth Order

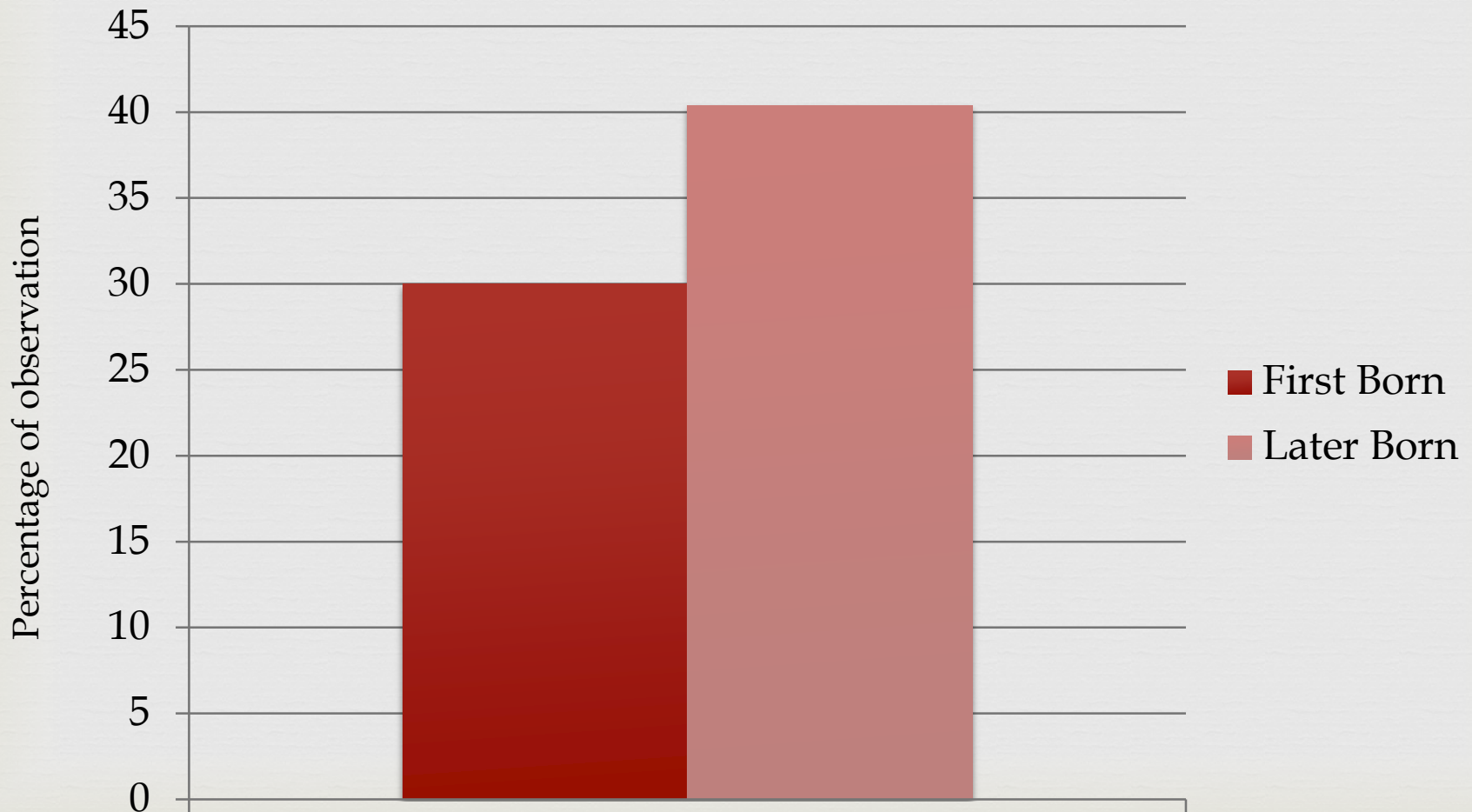


# Child Caregivers and Social Partners

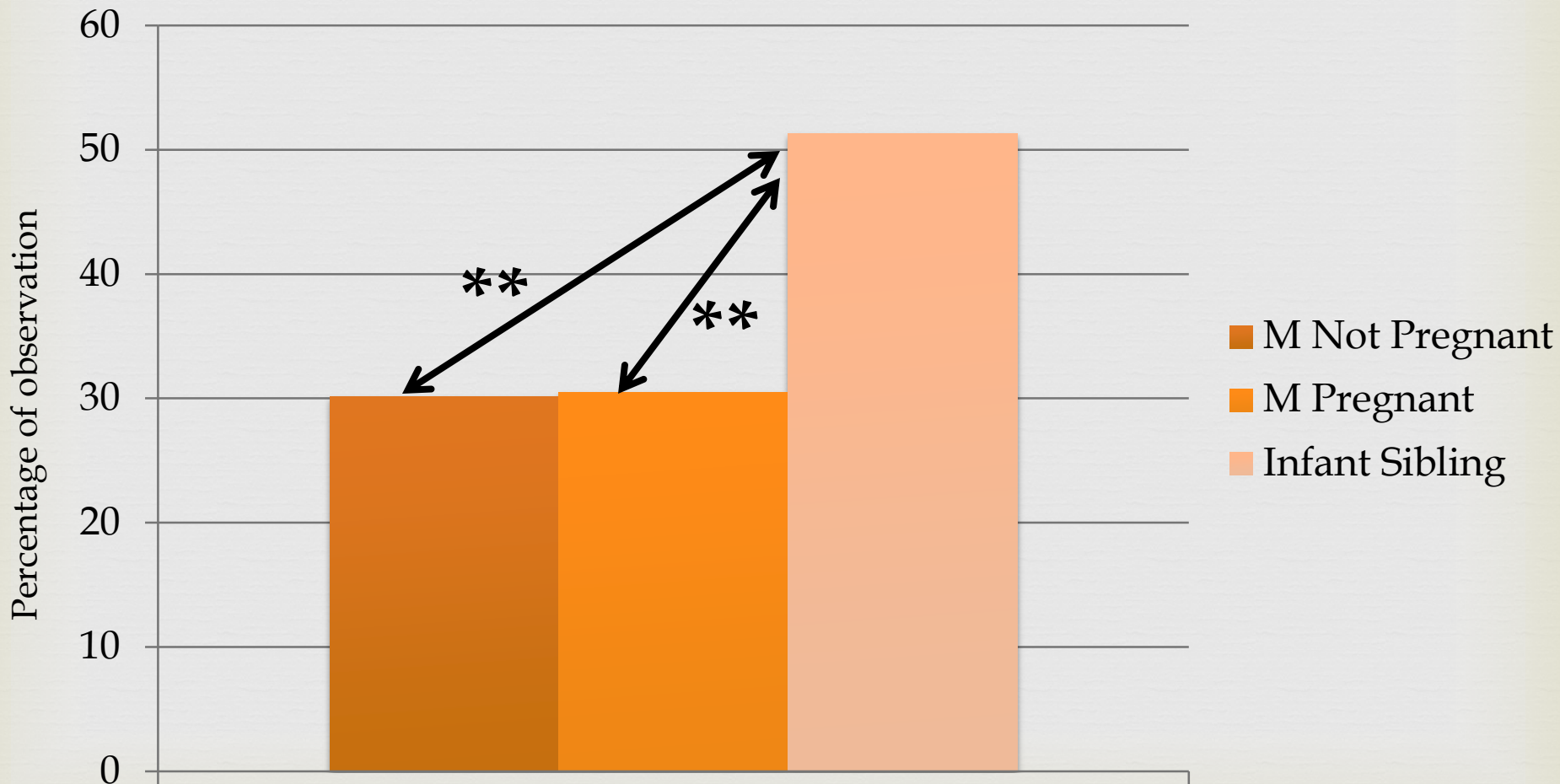


- ❧ MANOVA of Child Caregiver/Social Partner Involvement
  - ❧ **Vocalizing** to child, **Holding** child, **In Close Proximity** to child (within a foot)
  - ❧ Fixed factors:
    - ❧ Children's age
    - ❧ Sibling transition stage
    - ❧ Birth order
- ❧ Main Effects for:
  - ❧ Birth order, Wilks'  $\lambda = .80$ ,  $F[4,92]=2.74$ ,  $p=.03$  [*Proximity*]
  - ❧ Sibling transition stage, Wilks'  $\lambda = .88$ ,  $F[4,92]=3.17$ ,  $p=.05$  [*Proximity*]
  - ❧ No child age effects

# Close Proximity to Other Child in relation to Birth Order



# Close Proximity to Other Child in relation to Sibling Transition Stage



# Question 3



- Does pregnancy and the arrival of an infant sibling coincide with changes in child distress or conflict or in children's positive social behavior?

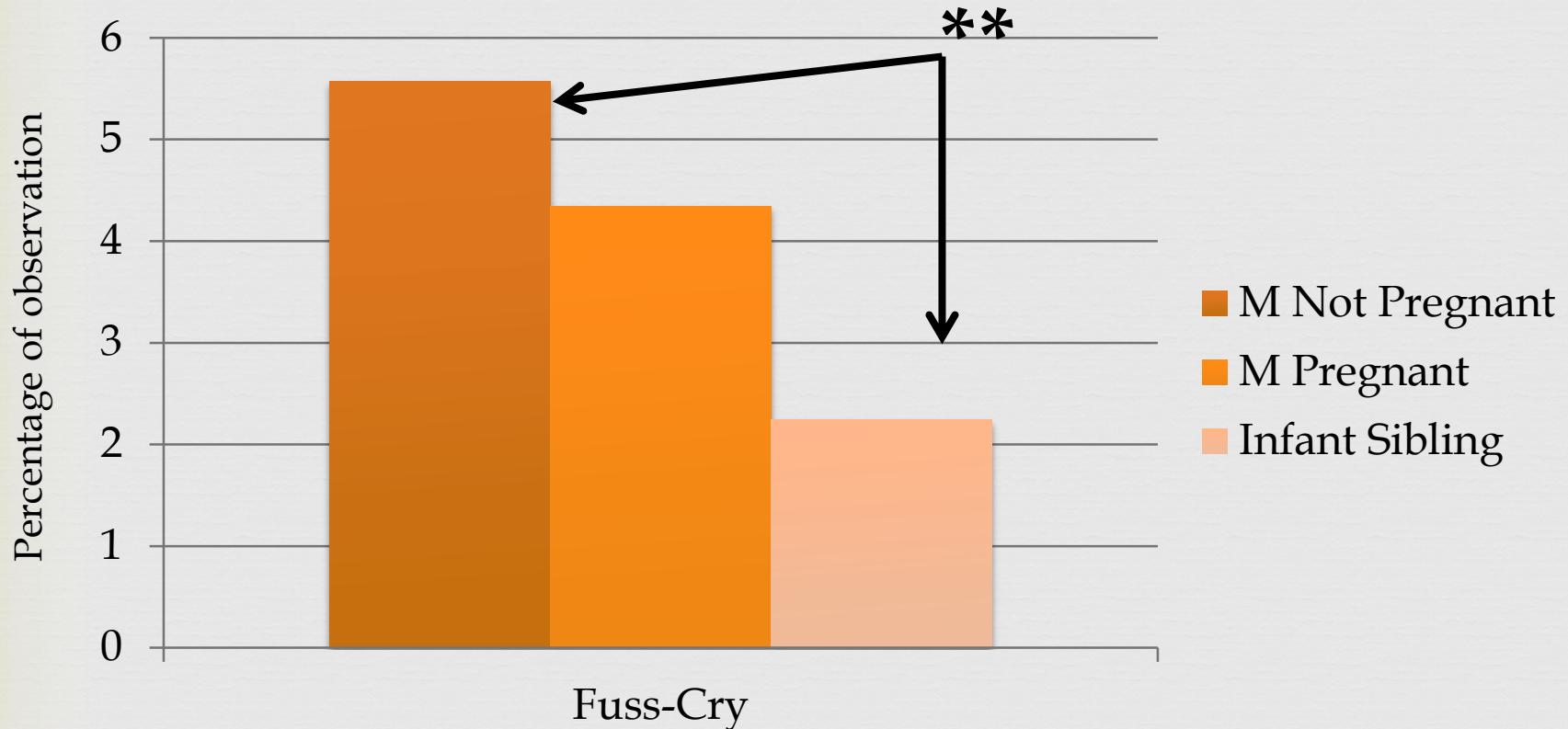
# Child Behaviors



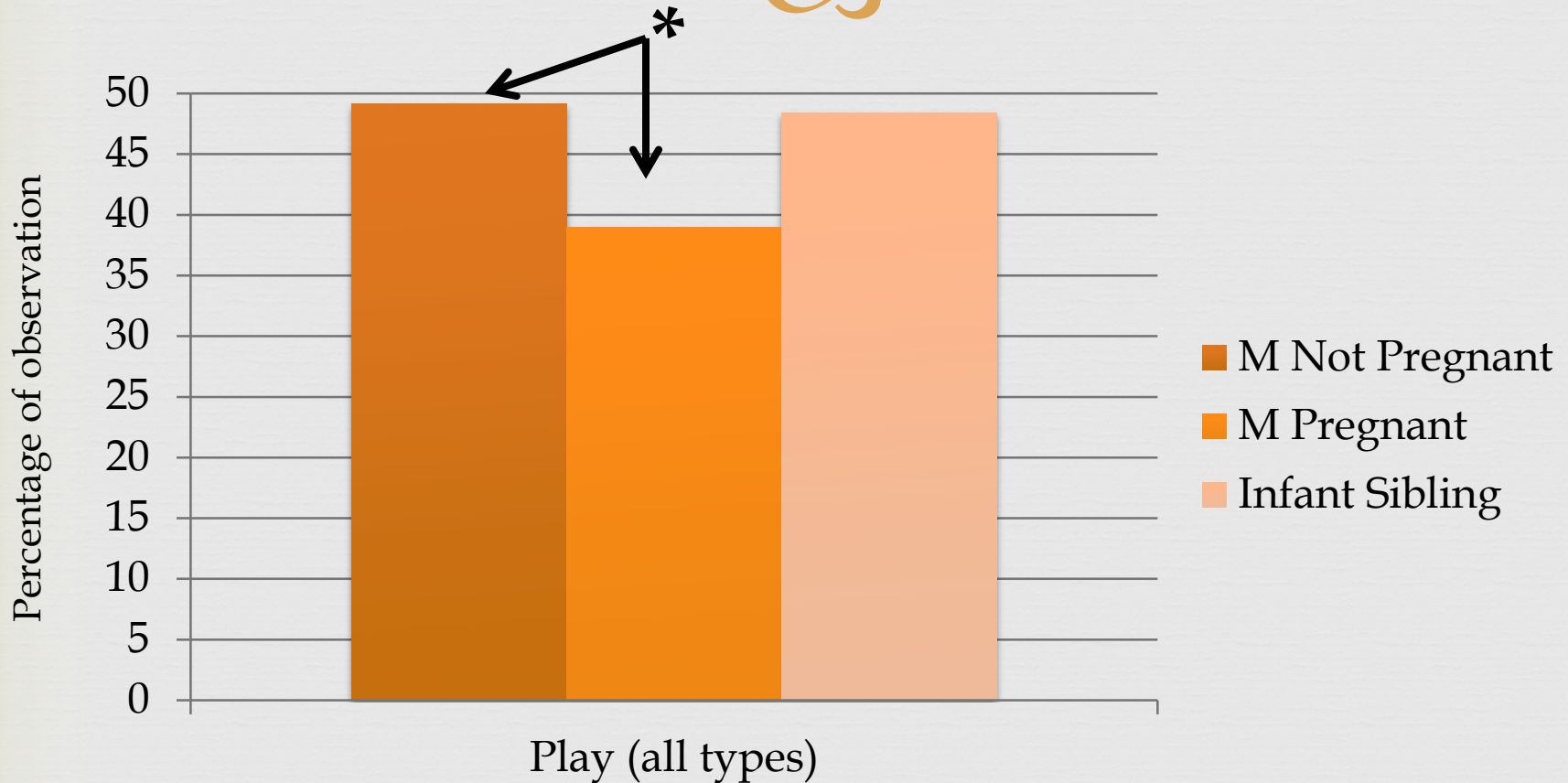
- ❧ MANOVA of Child Behaviors: fussing & crying, smiling & laughing, play
  - ❧ Fixed factors:
    - ❧ Children's age
    - ❧ Sibling transition stage
    - ❧ Birth order
- ❧ Main Effects for:
  - ❧ Sibling transition stage, Wilks'  $\lambda = .75$ ,  $F[6,104]=2.75$ ,  $p=.02$  [*fuss-cry and play only*]
  - ❧ No child age or birth order effects



# Child Conflict/Distress-Related Behaviors in relation to Sibling Transition Stage



# Play in Relation to Sibling Transition Stage



# Summary



- ❧ Transition to becoming an older sibling isn't necessarily stressful
  - ❧ Fussing and crying was less frequent through subsequent stages
  - ❧ Play was lowest among children whose mothers were pregnant
- ❧ Cultural perspectives are important and help to explain behavioral patterns
  - ❧ Aka and Bofi parents believe that children are very afraid of the "growing belly;" this may relate to the lower levels of play that children whose mothers were pregnant exhibited

# Summary



- ❧ Relative stability of father involvement through the transition may help children in their transition (consistent with developmental research)
- ❧ Non-parental adults (mostly grandmothers and aunts) showed especially high involvement with first born children (who are likely to be most upset by the transition); this may help lessen potential stress through the transition
- ❧ Integrating cultural, biological and development perspectives is important in addressing complex phenomenon such as transitions in siblinghood

# Thank you!



- ❧ The Aka and Bofi forager communities
- ❧ National Institute of Child Health and Human Development
- ❧ University of Tennessee, Department of Child and Family Studies
- ❧ Collaborators and mentors: Barry Hewlett and Michael Lamb
- ❧ Graduate students: Lauren Bader, Min-Jung Jung