

The Effects of Child Birth Order and Number of Children on Mothers' Supervision Beliefs and Practices

Thesis honors project for the degree of Bachelor
of Science with an emphasis in Psychology

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April 24, 2014

Rational

- Unintentional injuries are the leading cause of death for children between the ages of 0 and 19.
- Approximately 12,175 children die annually as a result of accidental injuries (Borse et al., 2008)

Known Contributors to Accidental Injuries in Children

- **Child Factors** (Schwebel et. al., 2002, & Kohen et. al., 2000)
 - Behavior disorders
 - Childs' sex
- **Parental Factors** (Damashek et al., 2009, Haynes et al., 2003, Hippisley-Cox et al., 2002, & Schwebel et al., 2005)
 - Mental health
 - Marital status
 - Alcohol use
 - Social support
- **Family Factors** (Damashek et al., 2013, Margolin, 1990, Nathens et al., 2000, Hippisley-Cox et. al., 2002, & Overpeck et al., 1997)
 - Single adult families
 - Number of children in the home
 - Socio-economic status

The Importance of Parental Supervision

- Research suggests that mothers who report engaging in more preventative measures generally have children who are injured less (Morrongiello et al., 2004)
- Proximity and visual supervision impact injuries sustained in the home and the store (Harrell, 1993, Morrongiello et al., 2004)

Identified Factors Influencing Supervision

- Mothers' perceived risk for injury, which is affected by:
 - Child's age – the younger the child, the more supervision the mother is likely to give
 - Child's gender – girls are supervised more closely than boys (Damashek et al., 2013, Morrongiello et. al., 2009)
- Less direct evidence suggests:
- Childs' birth order – having an older sibling decreases the likelihood of child having supervision at all times (Averett et. al., 2009)
- The number of children in the home - The more children, the harder it is for parents to spread their attention (Damashek et al., 2013, Hao et al., 2008, Leong et al., 2001)
- We do not know whether or not the child's birth order affects mothers attitudes about supervision or the level of supervision provided

Present Study Goals

1. Whether mothers' attitudes about supervision differ based on:
 - a) the number of children in the home and
 - b) the birth order of the child
2. Whether mothers' reported supervision levels differ based on:
 - a) the number of children in the home and
 - b) the birth order of the child
3. Whether children in families with more than one child sustain more injuries than children in families with fewer children.
- I expected to find more lax attitudes and less supervision for younger children and in homes with more children, and that more children in the home increases the risk for unintentional injury

Methods

- *Participants*
- 36 mothers with children ranging between ages 1 and 5 reported to child protective services for maltreatment
- Eligibility criteria included:
 - a) being fluent in English
 - b) being the primary caregiver of at least one child between the ages of 1 and 5
- Exclusionary criteria included:
 - a) children with autism or pervasive developmental disorder
 - b) any sensory disabilities (e.g., deafness, blindness)
 - c) physical disabilities (e.g., cerebral palsy, epilepsy)
 - d) serious chronic illness (e.g., cancer, sickle cell anemia, severe asthma)

Methods

- ***Participants***
- Participants were referred from the Great Start in-home visiting program
- The majority of the mothers were married (39.4%)
- The most common ethnicity reported was Caucasian (44.1%), followed by African-American (35.3%)
- A majority reported some college (38.2%)
- Most were unemployed (29.4%)
- A large majority reported the annual family income to be less than \$5,000 (30%)
- The median number of hours per week day the child is cared for by the mother was 24 ($SD=20.73$)

Methods

- *Procedures*
- During the initial in-home meeting, mothers completed three questionnaires to collect information concerning
 - The child's behavior
 - The mother's supervision practices
 - Demographic data
- Following the in-home meeting for approximately 8 weeks, research assistants contacted the mothers in intervals of 3-10 days for a 10-15 minute phone interview
- Structured interviews were conducted to gather data on injury events the child may have sustained during the previous week

Methods

- ***Injury Events***
- Using a list of 19 injury types, research assistants asked mothers if their child had sustained any injuries.
- If the child had, and the mark lasted for at least 1 hour or more, the data collector would then collect detailed information concerning the events surrounding the injury.
- ***Control Conditions***
- Mothers were also asked detailed questions about times in which no injuries occurred, which served as control conditions, however they were not compared to injury conditions for the present study

Measures

- ***Injury Frequency***
- Unintentional injuries, defined as any mark or bump that could be seen or felt by the mother or the child for at least an hour or more, were recorded by assistants during weekly phone interviews
- ***Ratings of Maternal Supervision***
- For each injury and non-injury event, the mothers were asked detailed questions about where she and the child were prior to the injury, what each of them were doing, and whether she could see or hear the child prior to the injury. They were then given a rating between 1 and 5 for categories of proximity to the child, visual supervision, and auditory supervision

Measures

- *Maternal Reports of Supervision Behaviors*
- Mothers completed the Parent Supervision Attributes Profile Questionnaire (PSAPQ) (Morrongiello et al., 2004) at baseline
- Measure includes four scales
 - Protectiveness
 - Supervision
 - Fate
 - Risk Tolerance

Measures

- ***Mothers Beliefs About the Need for Supervision***
- The BAS (Morrongiello & Hogg, 2004) asked mothers to report their beliefs about appropriate levels of supervision
- The questionnaire asks mothers to indicate at what age they would feel comfortable leaving children unsupervised in various scenarios
- Each question was divided in to two portions, part A (the age a mother would allow her child to engage in a particular activity) and part B (the time she would allow her child to engage in that activity unsupervised)
- The BAS was administered as a filler questionnaire when the interview lasted less than 10 minutes

Results

- ***Descriptive Statistics***
- Median number of children in home was 2 ($SD=1.50$)
- Average age of children in the study was 2 years old ($SD=0.90$)
- The majority of children (66.7%) had at least one sibling
- Mothers overall reports on the PSAPQ were fairly high. Scores averaged:
 - 36.67 ($SD=4.65$) for protectiveness (Scale from 1 to 45)
 - 34.61 ($SD=4.11$) for supervision (Scale from 1 to 37)
 - 24.42 ($SD=5.52$) for risk tolerance (Scale from 1 to 40)
 - 5.92 ($SD=2.99$) for fate (Scale from 1 to 15)

Results

- ***Descriptive Statistics cont.***
- On the BAS:
 - the average age a mother reported she would leave a child unattended was 5.15 years ($SD=2.96$),
 - the average number of minutes she reported she would be willing to leave a child unattended at various ages was 10.26 minutes ($SD=9$)
- The average number of accidental injuries lasting one hour or more for each child was 0.39 ($SD = 0.47$) per 3-10 day period
- There was no relation between gender and the children's injury frequency ($t = -1.59, p = 0.13$)

Results

- *Descriptive Statistics cont.*
- Child gender was not associated with mothers' scores on the PSAPQ
- Gender was also not associated with mothers' answers on the BAS

Results

- ***Descriptive Statistics cont.***
- Overall, the mothers received high scores across all measures of supervision ratings
 - proximity ($M=4.38$, $SD=0.45$)
 - visual supervision ($M=4.04$, $SD=0.52$)
 - auditory supervision ($M=4.35$, $SD=0.41$)
 - scales ranged from 1-5
- Child age was not associated with injury frequency
- On the PSAPQ, we found that the older the child, the higher score the mother would receive for the fate category

Results

- **Objective 1(a)**
- Did mothers' attitudes about supervision differ based on the number of children in the home?
 - No statistically significant difference between singleton children and those with siblings on the PSAPQ (Protectiveness: $t = 0.16$, $p = 0.87$, Supervision: $t = 0.48$, $p = 0.64$, Risk Tolerance: $t = 0.77$, $p = 0.45$, Fate: $t = -1.01$, $p = 0.32$).
 - No statistically significant relationship between children's status as a singleton and the age that mothers would leave a child unattended ($t = 1.4$, $p = 0.18$), or the length of time she reported she would leave them unattended ($t = -0.75$, $p = 0.46$) on the BAS
 - No significant relations between the BAS and the number of children in the home

Results

- *Objective 1(b)*
- Did mothers' attitudes about supervision differ based on birth order?
 - On the PSAPQ, only significant relation was between protectiveness and birth order. There was a higher protectiveness for children born more recently.
 - On the BAS, no significant correlations were found

Results

- *Objective 2(a)*
- Did mothers' reported supervision levels differ based on the number of children in the home? Examination of the correlation between the supervision levels recorded by the research assistants during the weekly phone interviews and the number of children in each household
 - Supervision levels were unrelated to the number of children in the home for all scales except for auditory supervision
 - We found that the more children in the home, the less auditory supervision their mothers provided

Results

- *Objective 2(b)*
- Did mothers' reported supervision levels differ based on the birth order of the child?
 - None of the coded supervision levels were significantly correlated with the child's birth order.

Results

- *Objective 3*
- Did children in families with more than one child sustain more injuries than children in families with fewer children?
 - The number of children in the home was not significantly correlated with the total injuries the child sustained in the study.
 - However, we did find that the younger child age they reported willing to leave their child unattended, the more likely the child was to sustain an injury in the study

Discussion

- Addresses whether or not the child's birth order and the number of children in the home affects mothers' attitudes about supervision or the level of supervision provided
- Found that the more children in the home, the less auditory supervision the mother provided
 - Supports previous studies suggesting that parents with more than one child may be more lax (Hao et al., 2008, Leong et al., 2001)
- With regard to the relation of birth order to mothers' supervision practices;
 - Higher levels of protectiveness toward younger children
 - Birth order and the number of children in the home did not correlate with supervision on the PSAPQ or the amount of injuries the child sustained
- We also found that the younger the age the mother reported willing to leave a child unsupervised on the BAS, the more injuries her child was likely to sustain
 - Indicates potential need for mother's education on proper ages to leave children unsupervised

Discussion

- ***Strengths***
- Low-income population
- ***Limitations***
- Small sample size
- Limited retention rate
- Self-Reports
- ***Implications for Future Research***
- Larger sample size
- A direct observation component in addition to self-reports

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Thank you!

Questions/comments?