PREDICTING SEXUAL INTEREST IN CHILDREN AMONG A COMMUNITY SAMPLE OF MEN AND WOMEN

by

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A thesis submitted to the Graduate Faculty of the University of Colorado Colorado Springs in partial fulfillment of the requirements for the degree of Master of Arts Department of Psychology 2016
This thesis for the Master of Arts degree by

May 13, 2016
Parker, Leah J. (M.A., Psychology)

Predicting Sexual Interest in Children Among a Community Sample of Men and Women

Thesis directed by Associate Dean Sandy Wurtele

This study will investigate how developmental experiences in childhood may predict sexual interest in children (SIC) reported by a community sample. A secondary analysis was conducted on the data collected during the Wurtele, Simons, and Moreno (2014) study assessing the sexual attitudes and behaviors of 435 adults (262 females and 173 males) aged 18 to 79 years. Predictor variables included a wide variety of childhood experiences found on the Childhood Experiences and Behavior Questionnaire (CEBQ; Simons, Wurtele, & Durham, 2008). The relationship between predictor variables (e.g., poor parent-child attachment, adverse childhood experiences, and early sexual experiences) and the outcome variable (SIC) were explored using hierarchical multiple regression. For males, early sexual experiences contributed the most to the prediction of SIC scores; for females, insecure attachment and emotional abuse accounted for larger variance on SIC scores, than any other predictor. The hierarchical multiple regression analyses indicated that developmental predictor variables explained 16% of the variance in male SIC scores and 4% of the variance in female SIC scores, respectively. Theoretical implications of the findings for risk assessment and suggestions for prevention are discussed.

*Keywords:* children, development, pedophilia, sexual interest
# TABLE OF CONTENTS

## CHAPTER

1. **INTRODUCTION** .......................................................................................1

2. **REVIEW OF THE LITERATURE** .............................................................2  
   Defining Sexual Interest in Children .........................................................2  
   Extent to Which Adults Endorse Sexual Interest in Children ...............3  
   Community Samples .............................................................................4  
   Common Risk Factors Reported by Adults Endorsing SIC.................8  
   Parent-Child Attachment .....................................................................9  
   Adverse Childhood Experiences ............................................................12  
      Sexual Abuse ..................................................................................13  
      Emotional Abuse ...........................................................................15  
   Early Sexual Experiences ....................................................................16  
   Multi-factor Studies of SIC ................................................................19  
   The Current Study ...............................................................................21  

3. **METHOD** ..................................................................................................23  
   Participants and Sample ........................................................................23  
   Procedure ...............................................................................................24  
   Measures ...............................................................................................24  
      The Childhood Experiences Behavior Questionnaire..................25
4. RESULTS ..................................................................................................30
   Data Analysis ......................................................................................30
   Moderation of SIC Scores by Emotional Abuse .............................33
   Male Sexual Interest in Children .....................................................34
   Female Sexual Interest in Children .................................................35

5. DISCUSSION ............................................................................................37
   Insecure Attachment .......................................................................38
   Sexual and Emotional Abuse Experiences .....................................39
   Sexualized Childhood .................................................................40
   Limitations of the Current Study ..................................................41
   Implications for Future Research ..................................................43

REFERENCES ............................................................................................46

APPENDIX

A. IRB APPROVAL FORM .................................................................53
TABLES

TABLE

1. Studies of SIC Prevalence Rates in Community Samples....................... 4-6
2. Outcome and Predictor Variables for Males and Females.......................30
3. Correlations Between Variables for 173 Male Participants.....................32
4. Correlations Between Variables for 262 Female Participants..................32
5. Hierarchical Regression of Predictor Variables on SIC Scores, Males .......35
6. Hierarchical Regression of Predictor Variables on SIC Scores, Females ...36
CHAPTER 1

INTRODUCTION

The sexual abuse of minors is a social, human rights, and global public health problem. Recent meta-analyses have documented the prevalence of childhood sexual abuse (CSA) around the world. Based on samples including almost 10 million individuals, Stolenborgh, van IJzendoorn, Euser, and Bakersman-Kranenburg (2011) found an overall prevalence rate of 13%. Experiencing CSA has been associated with a range of negative sequelae to include an increased rate of adult-reported sexual interest in children, prompting the question: what explains SIC? Etiological explanations of sexual offending have been categorized into individual-factor and multi-factor theories. Single-factor theories consider sexual offending to arise from genetic or organic origins, psychological deficits, neurocognitive characteristics, learning and attachment processes, and atypical sexuality development. Multi-factor theories conceptualize sexual offending through the interaction of individual, relational, and contextual variables. As will be reviewed in this paper, specific factors associated with SIC include insecure parent-child attachment, adverse childhood experiences (including sexual and emotional abuse), and early sexual experiences. The etiology of SIC is likely multi-dimensional, influenced by a host of biopsychosocial characteristics, especially those previously mentioned. The purpose of this study is to identify which factors predict SIC in a community (non-clinical, non-incarcerated) sample of men and women.
CHAPTER 2

REVIEW OF THE LITERATURE

Defining Sexual Interest in Children

Academic and medical communities are not in full agreement about the inclusion of *Pedophilic Disorder* in the most recent version of the *Diagnostic and Statistical Manual of Mental Disorders* (DSM-5: American Psychiatric Association, 2013).

Pedophilia and Pedophilic Disorder is contained in the section *Paraphilic Disorders* in the DSM-5, a section referring to disorders related to “any intense and persistent sexual interest other than sexual interest in genital stimulation or preparatory fondling with phenotypically normal, physically mature, consenting human partners” (APA, 2013).

Eight paraphilic disorders are included in the DSM-5 because they are relatively common (compared to other paraphilias), and some paraphilias are illegal when acted upon, holding potential for nuisance or harm to others (p. 685).

The DSM-5 diagnostic criteria for Pedophilic Disorder include:

A. Over a period of at least 6 months, recurrent, intense sexually arousing fantasies, sexual urges, or behaviors involving sexual activity with a prepubescent child or children (generally 13 years or younger);

B. The individual has acted on these sexual urges, or the sexual urges or fantasies cause marked distress or interpersonal difficulty; and
C. The person is at least age 16 years and at least 5 years older than the child or children in Criterion A.

The inclusion of these criteria in the DSM-5 makes sexual attraction to children pathological. Seto (2012) has argued that pedophilia is not a mental disorder, but instead a sexual age orientation due to the early age of onset of sexual attraction to minors, sexual and romantic behaviors in these adults, and the persistence of these individuals’ sexual attraction through time. There are many questions that remain regarding the etiology of adult SIC and studies have been undertaken in a variety of populations to identify the prevalence of attitudes, thoughts, and behaviors of adults endorsing SIC.

**Extent to Which Adults Endorse Sexual Interest in Children**

The knowledge base concerning men and women who have sexual interest in children contain two categories of adults: detected (i.e., criminal or clinical individuals) and undetected. Sexual offenders who have been detected and prosecuted by law enforcement comprise the largest studied population of adults with SIC. Criminal offenses can range from exposure and contact offenses to online viewing, distributing, and/or producing child pornography. Undetected adults are referred to in Germany as Dunkelfeld ("dark field") offenders (Schaefer et al., 2010). In Germany, public health initiatives exist to identify both dark field and potential offenders to direct them toward free, voluntary treatment services accompanied by the promise of confidentiality. In the United States, research to determine prevalence of SIC in community adults has been primarily been conducted with college students. Males comprise the majority of samples with few representative studies including women.
Community Samples

Summarized in Table 1 are findings from 14 studies that measured SIC in non-clinical, non-forensic participants. This table describes the author(s) of the study, number of participants, how the authors measured SIC, the scale (behavioral and/or attitudinal) used to measure SIC, the age/gender of the targets of SIC, and the various percentages of individuals endorsing SIC.

Table 1

<table>
<thead>
<tr>
<th>Author (Date)</th>
<th>Participants and sample characteristics</th>
<th>SIC measure</th>
<th>Scale/ criteria</th>
<th>Gender/ Age of Target</th>
<th>Percentage Expressing SIC</th>
</tr>
</thead>
<tbody>
<tr>
<td>Briere and Runtz (1989)</td>
<td>Student sample N = 193 male</td>
<td>Little children sometimes attract me sexually; How often do you have sexual fantasies about having sex with a child? Masturbation to sexual fantasies involving children; Likelihood of sex with child</td>
<td>Behavioral and Attitudinal scales Questions were dichotomized into No endorsement of item (0) or Some endorsement of item (1)</td>
<td>No specified age or gender; little children</td>
<td>n = 41 (e.g. 23% some endorsement of SIC) n = 17 (e.g. 9% reported fantasies about sex with a child) n = 10 (e.g. 5% masturbated to fantasy involving child at least once) n = 14 (e.g. 7% hypothetical sex with child)</td>
</tr>
<tr>
<td>Templeman and Sinnett (1991)</td>
<td>Heterosexual student sample N = 60 male</td>
<td>Desire for sexual contact with a child</td>
<td>Attitudinal scale</td>
<td>Girls &lt; 12 years old Girls 13-15 years old</td>
<td>n = 2 (e.g. 3% sexual misconduct with girls &lt;12) n = 3 (e.g. 5% girls &lt;12) n = 7 (e.g. 12% girls 13-15)</td>
</tr>
<tr>
<td>Briere, Henschel, and Smiljanich (1992)</td>
<td>Student sample N = 318 n = 106 male n = 212 female</td>
<td>Hypothetical likelihood of sexually abusing a child (i.e., “having sex with a child”)</td>
<td>Behavioral scale Questions were dichotomized into No likelihood (0) or 1 Some likelihood (1)</td>
<td>No specified age or gender</td>
<td>n = 7 (e.g. 4.7% endorsed by males) n = 6 (e.g. 4.2% endorsed by females)</td>
</tr>
<tr>
<td>McConaghy, Zamir, and Manicavasagar (1993)</td>
<td>Student sample N = 117 n = 66 male n = 51 female</td>
<td>Likelihood of performing coercive sexual behaviors with a pre-pubertal male or female</td>
<td>Behavioral scale</td>
<td>Pre-pubertal male/ female</td>
<td>n = 8 (e.g. 12% some hypothetical likelihood of coercive sexual behavior with prepubescent child endorsed by males) n = 2 (e.g. 4% some hypothetical likelihood of coercive sexual behavior with prepubescent child endorsed by females)</td>
</tr>
<tr>
<td>Bagley, Wood, and Young (1994)</td>
<td>Community sample N = 750 male</td>
<td>Interest in sexual activity with a boy or girl under the age of 13 Sexual interests in or contact with a male or female under age 16</td>
<td>Attitudinal scale</td>
<td>Males &lt; 13 years old Females &lt; 13 years old Males 13-15 years old Females 13-15 years old</td>
<td>n = 121 (e.g. 16.1 % endorsed any sexual interest in children &lt;15 years)</td>
</tr>
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Table 1 (continued)

<table>
<thead>
<tr>
<th>Study</th>
<th>Sample Type</th>
<th>Sample Size</th>
<th>Sexual Attraction to Children</th>
<th>Attitudinal and Behavioral Scales</th>
<th>No Specified Age or Gender</th>
<th>Males</th>
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</thead>
<tbody>
<tr>
<td>Briere (1996)</td>
<td>Student sample</td>
<td>N = 279</td>
<td>Sexual attraction to children</td>
<td>Sexual fantasies about children</td>
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<td></td>
<td></td>
<td>n = 99</td>
<td></td>
<td>Masturbation to sexual fantasies</td>
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<td></td>
<td></td>
<td>n = 180</td>
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<td>involving children</td>
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<td>Hypothetical likelihood of sex</td>
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<td>with a child</td>
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<td>Fromuth and Conn (1997)</td>
<td>Student sample</td>
<td>N = 546</td>
<td>Sexual attraction to children</td>
<td>Behavioral scale</td>
<td>Sexual contact with</td>
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<td>n = 113</td>
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<td>individuals under 13</td>
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<td></td>
<td>n = 58</td>
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<td>the perpetrator was at least 5</td>
<td>For victims 13-16 the</td>
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<td>years older</td>
<td>perpetrator needed to</td>
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<td>be 10 years older</td>
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<td>Byers, Purdon and Clark (1998)</td>
<td>Student sample</td>
<td>N = 171</td>
<td>Sexual intrusive thought:</td>
<td>Behavioral scale</td>
<td>No specified age or</td>
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<td></td>
<td></td>
<td>n = 113</td>
<td>Sexual act with child or</td>
<td></td>
<td>gender</td>
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<td></td>
<td></td>
<td>n = 58</td>
<td>minor</td>
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<tr>
<td>Santtila et al. (2010)</td>
<td>Community sample</td>
<td>N = 1,312</td>
<td>Felt sexually interested</td>
<td>Attitudinal scale</td>
<td>Children under the age</td>
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<td></td>
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<td>male twins</td>
<td>in, or thought of child in</td>
<td>Response categories were age</td>
<td>of 16</td>
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<td>your sexual fantasies</td>
<td>categories</td>
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<td>Thought of child when</td>
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<td>masturbatong</td>
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<td>Sexual contact with child in</td>
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<td>the last 12 months</td>
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<td>Ahlers et al. (2011)</td>
<td>Community sample</td>
<td>N = 1,915</td>
<td>Sexual fantasy (general</td>
<td>Attitudinal scale</td>
<td>DSM-IV-TR definition of</td>
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<td>fantasies, daydreams, or</td>
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<td>pedophilia</td>
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<td>thoughts)</td>
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<td>n = 35 (e.g., 9.5% sexual</td>
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<td>Masturbation fantasies</td>
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<td>fantasy)</td>
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<td></td>
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<td></td>
<td>Real-life sociosexual</td>
<td></td>
<td>n = 22 (e.g., 6.0%</td>
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<td>behavior</td>
<td></td>
<td>masturbation fantasies)</td>
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<td>n = 14 (e.g., 3.8%</td>
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<td>real-life sociosexual</td>
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<tr>
<td>Dawson, Bannerman, and</td>
<td>Community sample</td>
<td>N = 1,915</td>
<td>Rated arousal/ repulsion to</td>
<td>Attitudinal scale</td>
<td>Boy below the age of</td>
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<tr>
<td>Lahamière (2014)</td>
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<td>questions about sex with</td>
<td></td>
<td>12 (pedophilia)</td>
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<td>prepubescent and</td>
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<td>n = 27 (e.g., 0.9%</td>
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<td></td>
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<td>pubescent children</td>
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<td>hebephilia of boys or</td>
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<td>girls endorsed by males)</td>
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<td>n = 7 (e.g., 0.1%</td>
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<td>hebephilia of boys or</td>
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<td>girls endorsed by males)</td>
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<td>n = 18 (e.g., 0.6%</td>
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<td>pedophilia of boys or</td>
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<td>girls endorsed by males)</td>
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<td>n = 0 (e.g., 0.0%</td>
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<td>pedophilia of boys or</td>
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<td>girls endorsed by males)</td>
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<td>Wurtele, Simons, and Moreno (2014)</td>
<td>Student sample</td>
<td>N = 435</td>
<td>Sexual attraction to little</td>
<td>Attitudinal scale</td>
<td>All items referring to</td>
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<td></td>
<td></td>
<td></td>
<td>children</td>
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<td>children were anchored</td>
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<td>Fantasies about having sex</td>
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<td>to represent children</td>
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<td>with a child</td>
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<td>below the age of 17</td>
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<td>Masturbation to fantasies</td>
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<td>about having sex with a</td>
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<td>child</td>
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<td>Likelihood of viewing child</td>
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<td>pornography on the Web</td>
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<tr>
<td>Santtila et al. (2015)</td>
<td>Community sample</td>
<td>N = 1,312</td>
<td>Felt sexually interested</td>
<td>Attitudinal scale</td>
<td>&gt;15 years old (pedo-</td>
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<td>male twins</td>
<td>in, or thought of in your</td>
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<td>hebephilia)</td>
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<td></td>
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<td></td>
<td>sexual fantasies</td>
<td></td>
<td>13-15 years old (hebephilia)</td>
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<td>Thought of when</td>
<td></td>
<td>&gt;12 years old (pedephilia)</td>
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<td>masturbating</td>
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<td>Sexual contact with in</td>
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<td>the last 12 months</td>
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Table 1 (continued)

<table>
<thead>
<tr>
<th>Community sample</th>
<th>Watched pornographic depictions of children to get sexually aroused</th>
<th>Attitudinal scale</th>
<th>All items referring to children were anchored to represent prepubescent children (&lt;12 years)</th>
</tr>
</thead>
<tbody>
<tr>
<td>N = 8,718 male</td>
<td>Paid a child for sexual services</td>
<td></td>
<td>n = 482 (e.g. 5.5% any indication of SIC)</td>
</tr>
<tr>
<td></td>
<td>Traveled to a foreign country in order to have sex with a child</td>
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<td>DSM-5 Pedophilic disorder criteria</td>
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<tr>
<td></td>
<td>Participant estimated their likelihood of ever sexually acting out on a child</td>
<td></td>
<td>n = 8 (e.g. &lt;0.1% met criteria for pedophilic disorder criteria A and B)</td>
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<td></td>
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<td></td>
<td>n = 52 or 55 (e.g. 0.6% met less stringent criteria for pedophilic disorder)</td>
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</table>

Briere and Runtz (1989) were among the first to examine characteristics of community adults reporting SIC. To conduct this research they recruited 193 male undergraduate students and asked participants about various developmental experiences related to abuse, sexual experiences, and SIC. The authors recorded non-zero answers as an indication of adult sexual interest in children. Briere and Runtz found that 21% of participants endorsed at least one SIC item. Of their sample, 9% indicated some endorsement of fantasies about sex with a child and 5% reported some endorsement of fantasies and masturbation. Finally, 7% of participants indicated some endorsement of hypothetical likelihood of sex with a child. It was theorized that about 5% of the sample were “true pedophiles,” based on models of pedophilia available, due to the fact that they had masturbated during thoughts about sex with children.

This study set the precedent for studying sexual interest in children; many studies have replicated Briere and Runtz, using similar definitions of SIC (any non-zero answer on SIC items) in the process. Determining how and to what extent adults report sexual interest in children is complex. Historically, SIC has been measured using both attitudinal and behavioral scales. Using attitudinal scales, two other studies have found rates of SIC in community males ranging from 5% to 12% (Bagley, Wood, & Young, 1994;
Templeman & Sinnett, 1991). Both studies found smaller percentages of men interested in children younger than 13 years of age versus children between 13-15 years of age. Additionally, men who reported a history of child sexual abuse (CSA) endorsed SIC at higher rates than those who did not experience CSA.

Missing from the literature until 1992 were prevalence estimates of female sexual interest in children. Briere, Henschel, and Smiljanich (1992) recruited 318 university participants (106 males, 212 females) who answered a variety of questions about developmental experiences, abuse history, and offense-supportive cognitions. Approximately four percent of the sample (4.7% males and 4.2% females) endorsed items consistent with some hypothetical likelihood of engaging in sexual contact with a child. Other researchers found similar rates in community populations, ranging from 2.8% to 6% of females endorsing SIC (Fromuth & Conn, 1997; Smiljanic & Briere, 1996). With the exception of some studies that have found similar rates of SIC between males and females (Briere et al., 1992; Dawson, Bannerman, & Lalumière, 2014), the general trend is for males to report more SIC than females.

At the turn of the 21st century, researchers began to re-examine prevalence rates of SIC in community men and women. Wurtele, Simons, and Moreno (2014) surveyed 435 university and community participants online. Twenty-eight individuals (6.4%) endorsed at least one sexual interest in children item. Of those reporting SIC, there were more males (9.8%) than females (4.2%), in keeping with previous research. Two recent studies on community males have estimated the prevalence of SIC between 3.5% and 5.5% (Dombert et al., 2015; Santtila et al., 2010), consistent with past research. In contrast, Dawson, Bannerman, and Lalumière (2014) found SIC in less than <1% of the
305 men they sampled and in 0% of the 710 women sampled. These numbers are far lower than other community samples; this inconsistency may be due to how sexual interest in children was assessed. Specifically, if a participant marked -3 (very repulsing) on the male SIC question and +3 (very arousing) on the female SIC question, it would register a 0 on the authors’ scale, indicating that the participant did not have SIC, when in fact they had indicated interest in females. This methodological limitation calls into question the prevalence of SIC that these authors put forward.

Taken together, the meager research base suggests that a minority of non-incarcerated, non-clinical men and women report sexual interest, arousal, and fantasies about children. The average prevalence estimates of SIC in non-clinical, non-incarcerated adults are estimated at 5% for males and 2-4% for females. As can be seen in the next section, developmental correlates of SIC have been studied among offending and non-criminal populations to better understand this minority group.

**Common Risk Factors Reported by Adults Endorsing SIC**

Extensive psychological and epidemiological research has supported the association between adverse childhood experiences (ACEs) and adult physical and mental health outcomes (see Monnat & Chandler, 2015). Developmental theory conceptualizes that certain ACEs may increase the risk of sexual offending (Lee, Jackson, Pattison, & Ward, 2002). Risk factors comprise “any event, condition, or experience that increases the probability that a problem will be formed, maintained, or exacerbated” (Barron, Miller, & Kelly 2015, p. 84). This section reviews the various developmental experiences correlated with SIC to include parent-child attachment bonds, adverse childhood experiences (ACEs), and early sexual experiences, as factors that may provide
invaluable information for researchers hoping to determine the developmental pathways of adult SIC. Male sexual offending behavior has been studied far more often than female sexual offending behavior and has driven the variables of interest that now characterize risk factors for sexual offending behaviors against children. Investigations into female sexual offenders (FSOs) has largely been ignored for a variety of reasons including a widespread belief that sexual abuse is only perpetrated by males, low prevalence rates of FSO abuse reported to authorities, and a perception that offenses committed by women are less harmful to children (Oliver & Holmes, 2015).

**Parent-Child Attachment**

Attachment theory concerns the patterns of repeated interaction within interpersonal relationships thought to be necessary for positive human development (Cantón-Cortés, Cantón, & Cortés, 2015; Lyons-Ruth & Jacobvitz, 2008). Generally thought to be a product of nurture, three types of attachment styles have been identified in parent-child relationships: secure, and two types of insecure attachment (avoidant, and anxious/ambivalent) (Ainsworth & Bowlby, 1991; Alexander, 1992). Caregivers provide secure attachments to children when they are consistently responsive to their needs. Insecure parent-child attachments arise when caregivers are inconsistent or neglectful in their caregiving; when children are unable to count on their caregiver for support and protection. Two types of attachment styles are of interest in this investigation: avoidant attachment and anxious/ambivalent attachment. Both are characterized under the broad category of *insecure attachment processes*. Avoidant attachment is characterized by caregiver behaviors such as limited emotional expression, and rejecting or ignoring the child’s distress. Anxious/Ambivalent (anxious) attachment is more likely when a
caregiver exhibits inconsistent responding toward the child as they grow (Ainsworth & Bowlby, 1991).

When children are reared without safe, secure, consistent caregiving the probability of problematic developmental outcomes increase; anxious and avoidant attachment styles are reported by adults with histories of abuse and neglect significantly more than adults without those histories (Alexander, 1992; Shapiro & Levendosky, 1999). Generally, studies of attachment have included adults who have developed outside a normative trajectory (e.g., adult sexual offenders, adults with psychopathology, incarcerated individuals); parents at-risk for insecure caregiving who are given interventions to increase secure attachment with their children; children who have been raised in institutional settings; and individuals (children and adults) who have suffered maltreatment.

Maniglio’s (2012) review of the attachment literature generally supports that insecure parent-child bonds come out of dysfunctional family households and suggests that “an insecure child attachment might result in an enduring set of social difficulties and interpersonal problems” (p. 85) that may affect the trajectory of sexual offending. Maniglio concluded, in concert with other findings (see Simons, Wurtele, & Durham, 2008), that different types of insecure attachment bonds have been associated with sexual offender type. Specifically, avoidant attachment bonds have been found in rapists who tend to use hostile means to coerce adult victims, whereas anxious attachment bonds have been found in child sexual abusers who use children to meet their emotional needs.

Smallbone and McCabe (2003) explained the etiology of sexual offending by focusing on attachment and conditioning theories. They hypothesized that sexual
offenders would more likely have experienced insecure attachment and that those with insecure attachment would also report a history of CSA. To test this theory they analyzed the written autobiographies of 48 incarcerated adult male sexual offenders (i.e., 22 rapists, 13 intra-familial child molesters, and 13 extra-familial child molesters). Compared to extra-familial child molesters, intra-familial child molesters and rapists were more likely to report insecure paternal attachment; additionally, those who reported insecure paternal attachment were more likely to report a history of CSA. The authors hypothesize that unstable relationships between children and their fathers may leave children open to abuse (specifically CSA) by other males. These findings suggest that a combination of factors specific to parent-child attachment bonds may be predictive of later sexual offenses.

Ward, Hudson, and Marshall (1996) conducted seminal research on attachment processes in prisoners and found insecure attachments were prevalent. Since that time, many more studies have been conducted on forensic populations concerning environmental adversities, including attachment style. In a meta-analysis, Whitaker et al. (2008) reviewed 89 studies between 1990 and 2003 and compared the risk factors for the perpetration of child sexual abuse across four groups: child sexual offenders (CSOs), sexual offenders against adults, non-sex offenders, and non-offending adults. Sexual offenders against children were more likely to report adverse family factors (history of physical and sexual abuse), and poorer histories of family functioning (including poorer attachment bonding and harsher discipline) compared to non-offending and non-sexual offenders.

Studies put forth by researchers specific to the relationship between parent-child
attachment characteristics and SIC have included multiple developmental factors thought to be at work in creating the pathway toward SIC, but generally tend to involve only males. The results of these studies generally support the theory that insecure attachment processes (including anxious and avoidant attachment patterns) underlie aspects of adult SIC and the multi-factored nature of these findings will be covered in more detail later in this manuscript.

**Adverse Childhood Experiences**

Maltreated children are more susceptible to experiencing psychiatric disorders over the course of their lifetime and may represent a distinct group of adults who manifest psychiatric disorders and poorer outcomes in adulthood (Teicher & Samson, 2013). In the 1990's, in response to public health inquiries, a team of researchers investigated ten adverse childhood experiences (ACEs) and poor outcomes related to health (e.g. disorders, disease, disability, and premature death). In the initial study, Felitti et al. (1998) surveyed 9,508 adults receiving healthcare about their adverse childhood experiences, adult risk behaviors, health status, and disease. Many studies have mined these data and have revealed ACEs to be associated with a dose-response relationship, where a greater number of childhood ACEs correlates with a wide array of health and social problems in adulthood (Larkin, Shields, & Anda, 2012). Adults experiencing multiple adverse childhood experiences were more likely to report poorer physical, emotional, mental, and sociocultural outcomes (Bick & Nelson, 2016; Das & Otis, 2015; Monnat & Chandler, 2015).

Children raised in adverse family environments may experience compounded adversities, occurring “at a point in development when the brain is highly sensitive to
caregiving input” (Bick & Nelson, 2016, p. 179) with implications for attachment processes and long-term outcomes. Child maltreatment prevention efforts have relied on research compiled through retrospective self-reports of child sexual offenders (CSOs) to determine the developmental experiences associated with an increased risk of offending. Overwhelming evidence maintains the role of specific ACEs related to sexual offending against children and, additionally, where sexual interest in children is concerned.

**Sexual Abuse.** Retrospective reports of childhood sexual abuse find girls and women reporting more CSA than boys and men (Levenson & Socia, 2015; Levenson, Willis, & Prescott, 2015). A strong relationship exists between CSA and psychopathology in both genders (Molnar, Buka, & Kessler, 2001). Specifically, males reporting CSA who were subjected to long-term or multiple CSA events have been found “particularly likely to manifest psychological problems, especially those taking the form of internalizing disorders, manifested as depression and suicidal behavior” (Bagley et al., 1994, p. 694), and have higher odds for attempting suicide (Das & Otis, 2015). A meta-analysis conducted by Molnar, Buka, and Kessler (2010) found that 78% of women reporting CSA qualified for a DSM-IV mental health diagnosis versus 49% qualifying for a diagnosis who did not report sexual abuse in childhood. Irrespective of gender, there is an increased likelihood of poorer outcomes that stem from sexual abuse in childhood.

Studies of child sexual offenders (CSOs) are often drawn from incarcerated samples who are predominately male, regardless of the victim’s gender. As a group, both male and female CSOs tend to report more CSA than other incarcerated populations; specifically, female perpetrators report higher instances of sexual abuse in childhood than male counterparts (Bourke et al., 2014). High rates of CSA in CSOs led researchers to
investigate the *sexually abused—sexual abuser hypothesis*, defined as “a specific relationship between sexual abuse history and sexual offending, such that individuals who experience sexual abuse are significantly more likely to later engage in sexual offenses” (Jesperson, Lalumière, & Seto, 2009, p. 179). This theory originated from observations that sexual offenders tended to report higher-than-average instances of CSA (Spatz Widom & Massey, 2015). By comparing the rates of sexual and other forms of abuse in 17 studies of sexual and non-sexual offenders, and 15 studies of adult sexual offenders versus child sexual offenders, Jesperson, Lalumière, and Seto (2009) attempted to test the sexually abused—sexual abuser hypothesis. Results supported their hypothesis of a relationship between sexual abuse history and later sexual offending. The authors observed a significantly lower prevalence of sexual abuse history among sexual offenders against adults compared to sexual offenders against children.

Building on previous research, Santtila et al. (2015) conducted analyses to assess the links between self-reported sexual abuse and non-sexual abuse (i.e., physical neglect, physical abuse, psychological neglect, and psychological abuse) on sexual interest in children in their large sample of male, Finnish twins ($N = 1,312$). The authors discovered that both sexual abuse and non-sexual abuse types were positively correlated with one another ($r_p = .293, p < .001$) and both were significantly associated with an overall increased probability of SIC in adulthood (sexual abuse $B = .244$, $SE = .073$, Wald $\chi^2 = 11.161$; non-sexual abuse $B = .285$, $SE = 0.090$, Wald $\chi^2 = 9.981$), accounting for nearly 30% of the variance in SIC scores. When both abuse types were entered separately, neither sexual abuse ($B = 0.197$, $SE = .102$, Wald $\chi^2 = 3.376$) nor non-sexual abuse experience ($B = .714$, $SE = .136$, Wald $\chi^2 = 1.643$) contributed unique variance to the
prediction of SIC in adults. These findings help indicate that abuse alone is not sufficient to explain later SIC, underscoring the possibility of other variables that work in tandem to produce SIC in adults.

The prevalence of female-perpetrated CSA is a contested figure with some estimates closer to 20% (McLeod, 2015). A limited number of studies have explored the victim-to-victimizer link among women and what is known comes from studies of adult and juvenile female sexual offenders (FSOs). Frequent background characteristics of incarcerated juvenile FSOs include: prior sexual victimization, maltreatment (e.g. physical, sexual, and neglect), dysfunctional families, inadequate social skills, and psychopathology (Oliver & Holmes, 2015). Perpetrator characteristics reveal that most female CSOs are between the ages of 16-25 years of age (45%) with a four-fold increase in preference for male victims versus female victims (7 versus 40) for these women (Oliver & Homes, 2015). With only limited research available, differential developmental experiences of both adult and juvenile FSOs call for the continued investigation into the gender differences that relate to sexual interest in children.

**Emotional Abuse.** Adults with psychosocial disturbances in adulthood (i.e., identity disturbance, affect dysregulation, and relational disturbance) often report adverse interpersonal relationships in childhood. Experiencing emotional abuse has been theorized to correlate with self-disturbance in adulthood. Self-disturbance can be characterized by engaging in chaotic relationships, an inability to form intimate adult attachments, and the fear of abandonment by others (Briere & Rickards, 2007). Paired with other psychological symptoms that manifest in response to ACEs, it is not
unreasonable to investigate emotional abuse as a moderating variable contributing to an increased risk of endorsing SIC in men and women.

Bagley, Wood, and Young (1994) investigated a sample of 750 men and their likelihood of performing coercive sexual behaviors with pre-pubertal males or females. Childhood abuse (e.g., sexual, physical, emotional) variables, parent-child attachment, and psychological variables (e.g., depression, suicidal behaviors) were included in their analysis to attempt to explain adult SIC. Bagley and colleagues found that, of those participants who were sexually abused, none endorsed SIC involving children under the age of 13; only those individuals who were both sexually and emotionally abused reported SIC, suggesting that emotional abuse, in tandem with other abnormal developmental experiences (e.g. sexual abuse, early sexual experiences), may tip the balance toward the expression of sexual interest in children during adulthood, where those abnormal experiences may not alone lead toward SIC.

**Early Sexual Experiences**

Specific to sexual offenders, researchers conceptualize early sexual experiences to include behaviors such as sexual contact with other children, early masturbation, and early viewing of sexually explicit content. Early atypical sexual interactions and early sexual experiences are developmental factors that have been linked to deviant sexual interest in adulthood especially among males. Houtepen, Sisjtsema, and Bogaerts (2016) interviewed self-identified male pedophiles to uncover common developmental experiences. Fifteen Dutch pedophiles answered questions in a semi-structured interview format with regards to their sexuality, coping skills, and sexual self-regulation. Over half of the participants \((n = 8)\) reported early sexual experiences (ages 6 to 11). These
experiences ranged from “playing doctor” with other children, to more mature sexual play with others, to actual penetration. Five other participants acknowledged having their first sexual experience before the age of 12 with behaviors to include sexual intercourse \( (n = 1) \) and discovering masturbation \( (n = 4) \). Though based on a small, select sample, the commonalities among them warrant further exploration.

Sexual offenders and individuals reporting SIC view pornography at high rates. Seto, Cantor, and Blanchard’s 2006 study of child pornography offenders (CPOs) confirmed the relationship between the viewing of child pornography and persistent SIC through measurement of sexual arousal. The authors employed the use of phallometric testing to quantify sexual arousal in their participants. Seto et al. (2006) confirmed that adult CPOs were more likely to show pedophilic sexual arousal than other types of offenders when shown images of children. Among adult incarcerated sexual offenders (e.g., child molesters and rapists), child sexual offenders reported more exposure to pornography before the age of 10 and to violent media during their childhoods than rapists (Simons, Wurtele, & Durham, 2008), suggesting a hyper-sexualized childhood environment. Others have found links between viewing of pornography and SIC (Wurtele, Simons, & Moreno, 2014), leading researchers to hypothesize the role of hypersexuality, sexual fantasy involving children, and antisociality as possible predictors for sexual offending behaviors against children (Klein, Schmidt, Turner, & Briken, 2015).

Females are not routinely studied as consumers of pornography, child or otherwise, especially as related to SIC. One study of university students found that frequency of consumption of pornography is much higher for males than females and that
exposure to pornography at a younger age is associated with a greater inclination to seek out casual partners and sexual activity at a younger age (Bulot, Leurent, & Collier, 2015). Given the links between SIC and early exposure to explicit media and use of child pornography, it is conceivable that viewing explicit material in childhood could qualify as an experience characterizing a sexualized childhood and may be predictive of SIC, especially for males.

Masturbation to sexually deviant fantasies has been hypothesized to arise from disrupted parent-child bonds and social skills deficits (Maniglio, 2012). Researchers have attempted to explain the relation of these developmental experiences with theories of conditioned sexual arousal. Human sexuality studies have indicated that a conditioned response exists between masturbation and sexual arousal and as such, reconditioning sexual arousal patterns has been attempted as part of sexual offender rehabilitation (Brom, Laan, Everaerd, Spinhoven, & Both, 2015) with mixed results.

A limited number of studies have indicated a relationship between CSA and early onset of masturbation (Smallbone & McCabe, 2003), and also between early masturbation (before age 11) and later adult SIC (Simons, Wurtele, & Durham, 2008). Santtila et al. (2010) explored the association between early childhood sexual interactions (with other children) and SIC in a sample of over 1300 male twins from Finland; the authors included fraternal twin pairs to investigate the effects of availability to an opposite-sex child during childhood on SIC. These authors approached the etiology of sexual offending from the *sexual arousal model* of adult SIC. The *sexual arousal model* pertains to sexual interactions during childhood in which individuals associate features of their child partners with the sexual pleasure they experience. Specific to this study,
participants answered nine questions pertaining to their sexual interactions during childhood (i.e., *another child touched my genitals, kissed and hugged another child, etc.*). Santtila and colleagues found that childhood sexual interactions were associated with an increased likelihood of SIC and the presence of a female co-twin was associated with higher levels of early sexual interactions. Experiences of both physical and sexual abuse in childhood were positively related to sexual interactions with other children.

Theories of conditioned arousal provide an interesting dimension on the pathway from adverse childhood experiences to later SIC. Although further examination of early sexual experiences in females is needed, preliminary evidence suggests that these experiences are most important in predicting SIC among males.

**Multi-factor Studies of SIC**

It is very likely that a host of biological, psychological, and social influences underlie the development of sexual interest in children. Wurtele, Simons, and Moreno (2014) explored how developmental factors in adults were associated with any indication of SIC in the domains of parent-child attachment, adverse childhood experiences, and early sexual experiences in a sample of non-clinical, non-incarcerated adults. These authors surveyed a total of 435 community individuals, 262 females and 173 males through online. The Childhood Experiences Behavior Questionnaire (CEBQ; Simons et al., 2008) was utilized to measure eight developmental variables, including ACEs (e.g., witnessing domestic violence; emotional, physical and sexual abuse, etc.), attachment characteristics, and exposure to violence and sexually explicit media participants experienced before the age of 17.
The authors estimated SIC prevalence for both males and females (see Table 1) and, similar to other studies, SIC was found to be more prevalent in males than females. Chi-square tests were conducted to examine the differences between males and females expressing SIC on the independent variables of interest. Wurtele et al. found the interaction of Sexual Interest and Gender to be significant (Pillai’s Trace = .063, $F(8, 422) = 3.53$, $p = .001$, $\eta^2 = .06$). Univariate tests on the dependent developmental measures indicated significant differences for males and females reporting SIC on attachment variables (anxious or avoidant) and childhood sexual abuse. Related to child sexual abuse, they found twice as many females with sexual interest in children reported CSA histories compared to females without sexual interest (82% vs. 42%), and almost three times more males with SIC reported CSA histories compared to males without sexual interest (65% vs. 24%). Physical abuse and emotional abuse histories were significant correlates of SIC for males, but did not reach significance in for females. Males with SIC were found to be more likely than females with SIC to masturbate to fantasies involving little children and endorse viewing child pornography online. Other adverse experiences such as early exposure to pornography, perpetrating animal abuse, and witnessing domestic violence were also associated with SIC in males. Males and females who endorsed at least one SIC item were more likely to report a willingness to engage in criminal activities and high-risk sexual activities than those participants who reported no SIC.

Santtila et al. (2010) were interested in the various environmental factors surrounding the developmental of SIC. They explored the possibility that sexual desire was a third variable mediating sexual interaction with youth and SIC, and employed a
logistic regression to test this possibility. They found childhood sexual interactions significantly predicted adult sexual interest in children even when controlling for sexual desire, \( B = 2.05 \) (SE = 0.50; 95% C.I. [1.06, 3.03], \( p < 0.001 \)). These findings suggest that sexual desire does not wholly explain the relationship between early sexual experiences and later SIC. The authors postulate that a combination of learning experiences and conditioning, along with other psychosocial factors, may be influencing the development of SIC.

**The Current Study**

Based on research findings and community sample studies (Table 1), it is clear that an exploration of the various experiences common to adults expressing sexual interest in children is warranted. Studying sexual interest in children has generally involved the investigation of relationships between single variables and SIC without the exploration of whether a combination of variables may be related to the dependent variable. The unique contribution of this study is the utilization of a hierarchical multiple regression to investigate the strength of each independent predictor when accounting for other predictors in same model with the ultimate goal of determining which developmental experiences are important predictors of SIC for males and females.

The purpose of this study was to conduct a secondary analysis on data collected by Wurtele, Simons, and Moreno (2014) to further the investigation of known risk factors for SIC in the domains of parent-child attachment characteristics (i.e., high levels of avoidant and/or anxious attachment), adverse childhood experiences (i.e., child sexual abuse and emotional abuse), and early sexual experiences (i.e., early masturbation and exposure to explicit media) to determine the strength of the predictive relationships.
between the predictor variables and the outcome variable (SIC). The a priori, summed variable of insecure attachment (scores on anxious and avoidant subscales) was included to examine how an insecure attachment environment in childhood may affect later SIC. In addition, summation of early pornography exposure and early masturbation behaviors (*early sexual experiences* variable) will embody aspects of a sexualized childhood as a risk factor of later SIC. There was a significant effect of gender on SIC scores, as measured by a one-way analysis of variance $F(1, 433) = 7.80, p < .01$, aligning with previous research indicating gender differences in SIC exist; therefore, analyses will be conducted by gender to highlight these differences. In an effort to extend previous research by Wurtele et al. (2014) the research questions and hypotheses are:

A. The importance of emotional abuse in predicting SIC will vary depending on sexual abuse scores, indicating emotional abuse as a moderator in the relationship between sexual abuse and SIC scores. Emotional abuse will account for a larger moderation effect for females than males. Additionally, we will explore the importance of emotional abuse in predicting SIC scores will be examined for males and females.

B. Different predictor variable combinations will predict SIC in males versus females, where 1.) Male SIC will be predicted by insecure (the summation of avoidant and anxious) attachment, emotional abuse, sexual abuse, and early sexual experiences; 2.) Female SIC will be predicted by insecure attachment, emotional abuse, and sexual abuse.
CHAPTER 3

METHOD

Participants and Sample

In the original study by Wurtele, Simons, & Moreno (2014), a total of 435 participants were invited to participate in an online study. Two hundred and forty-six participants were recruited from undergraduate psychology courses, and 189 were recruited through Amazon’s Mechanical Turk (MTurk), an Internet marketplace where adults are paid for performing Human Intelligence Tasks (HITS), including completing surveys. The sample was comprised of adult males ($n = 173$) and adult females ($n = 262$); no significant differences were found between genders with respect to demographic variables. The MTurk participants were compared to the national population (United States Census Bureau, 2011) with respect to demographics. MTurk participants were significantly younger (average of 32.7 years) compared with the U.S. population (average of 37.2 years), $t(188) = 5.64$, $p = .0001$. MTurk participants were more highly educated (completed 14.7 years) compared with the population (completed 12.7 years), $t(188) = 11.71$, $p = .0001$. Fifty-nine percent of the MTurk participants reported income of less than US $40,000 per year, which is significantly lower than the national average of $52,762. Seventy-four percent of the sample were Caucasian; 9% were Hispanic/Latino/a; 10% were Asian/Pacific Islander; 3% African American, and 1% of the sample
was Native American. The sample was less likely to report African American ethnicity (3%) in comparison with the national population of 13%.

Procedure

In the original study, conducted in 2011, participants were invited to partake in a study titled, *Sexual Experiences and Attitudes*. Data were collected online; participants’ identities and email addresses were not asked for nor recorded to maintain confidentiality and anonymity. This study limited participation to U.S. adults (18 years of age and older); however, demographic characteristics (including age and gender) were not verified to maintain anonymity. The Institutional Review Board at the University of Colorado, Colorado Springs approved all study procedures, including the informed consent waiver. Participants were presented with a consent form that included a description of the study, associated benefits and risks, as well as an anonymity statement that asserted the study was completely anonymous and that no identifying information would be collected. Participants indicated their consent to participate voluntarily by clicking an “I agree” button that took them to the survey. Upon survey completion, extra credit was awarded to the university participants and MTurk participants were paid US $1 through the payment portal on Amazon’s Mechanical Turk.

The current study received approval from the Institutional Review Board at the University of Colorado, Colorado Springs to conduct a secondary data analysis (Protocol # 116-13; Appendix A).

Measures

Participants’ demographic information was collected regarding: age, education level, sex, occupation, annual income, marital status (i.e., single, separated, married, etc.),
and sexual orientation (e.g., “to whom are you sexually attracted?: males, females, children, etc.”). Due to the online platform for data collection, the authors were not able to verify these demographics.

**The Childhood Experiences Behavior Questionnaire.** The Childhood Experiences Behavior Questionnaire (CEBQ; Simons et al., 2008) is a 271-item questionnaire that assesses the frequency and severity of developmental experiences. The CEBQ items are behavioral descriptions of adverse experiences; the items do not use emotionally laden terms (e.g., abuse, assault). Types of bonding characterizing parent-child attachment described by Ainsworth and Bowlby (1991) were assessed on the CEBQ including secure, anxious/ambivalent (anxious) and avoidant attachment. Likert-type scale items were used to assess both behavioral and attachment items on the CEBQ. The behavioral scales measured frequency of occurrence, ranging from 0 (never) to 6 (more than 20 times a year). The items comprising the attachment scales also indicated frequency of occurrence and ranged from 0 (never) to 6 (always). CEBQ subscales are described in the following sections.

Responses on the CEBQ subscales were summed to create six developmental variables (i.e., anxious and avoidant attachment, sexual abuse, emotional abuse, early masturbation and exposure to pornography at an early age) of interest in this study. The CEBQ has strong internal consistency, with Cronbach’s alphas of .82 or greater for the developmental variables and convergent validity of $r \geq .73$ (Simons et al., 2008).

**Parent–child Attachment.** Included in the CEBQ was the Childhood Attachment Questionnaire (Hazan & Shaver, 1987). This measure was developed to assess parental-bonding styles and rate the extent to which different attachment styles characterized the
respondent’s relationships with caregivers (male and female) during childhood. For each item, participants rated the frequency of occurrence from 0 (never) to 6 (always). Examples of sample items include: *I could not depend on my mother/father to protect me; My mother/father was responsible.* For female and male caregivers, two attachment styles were measured: avoidant (8 items; Cronbach’s α = .75), and anxious (12 items; Cronbach’s α = .87) attachment. These items were summed before the analysis to create the continuous variable *insecure attachment* (Cronbach’s α = .90). Participants with scores closest to zero represent individuals with childhoods characterized by more secure parent-child attachment processes.

**Sexual abuse.** Participant’s history of child sexual abuse was measured in two ways. First, participants were asked to self-report sexual abuse history (i.e., *Were you ever sexually abused as a child [before age 17]?*). Second, ten sexual abuse items from the Sexual Experiences Scale (modified from Briere, 1992) were used to measure the frequency of experiencing seven types of contact sexual abuse. Participants were asked seven sample items pertaining to the question: “At age 14 or younger did someone 4 years or older…” *kiss you in a sexual way; touch his or her body in a sexual way* (contact sexual abuse). Three additional items measured noncontact sexual abuse experiences (e.g., *expose himself or herself to you; expose yourself to someone*). These 10 sexual abuse items were summed to create a continuous variable, *sexual abuse* (Cronbach’s α = .89).

**Emotional Abuse.** Emotional abuse was assessed with 10 items (Cronbach’s α = .90) and measured on a behavioral scale from *never (0)* to *More than 20 times (6).* Emotional abuse was assessed through items such as *Did your parent/caregiver: make*
you feel like you were worthless or a bad person, and threaten to hurt, hit, or kill you?

These 10 items were summed to create the continuous variable emotional abuse.

**Early Sexual Experiences.** Participants answered questions about early sexual experiences, beginning with experiences of childhood sexual abuse (e.g., who perpetrated, how many incidents, gender of abuser, relationship to perpetrator, age and duration of abuse). Childhood and adolescent masturbation was measured on a behavioral scale from never (0) to More than 20 times (6). The time period was during a typical week and frequency was assessed across different age groups ranging from 6-8 years of age; 9-11 years of age; 12-14 years of age; 15-17 years of age (e.g., *How many times did you masturbate when you were between the ages of 6 and 8 during a typical week?*). Early masturbation questions encompassed the frequency of masturbation, thoughts about one’s own abuse while masturbating, and use of objects or pictures to masturbate. Previous studies have found masturbation before age 11 to be associated with sexual abuse of children (Simons et al., 2008; Smallbone & McCabe 2003), therefore early masturbation was defined as the sum of the frequency of masturbation activities occurring before 11 years of age (9 items; Cronbach’s α = .78).

Previous research has shown that exposure to pornography prior to age 10 is associated with the development of sexually abusive behaviors (Ford & Linney, 1995; Simons, Wurtele, & Heil, 2002). Exposure to pornography (before age 10) was measured using the Sexually Explicit Media Questionnaire (Wryobeck & Wiederman, 1999) that asks 11 questions about the frequency of utilizing four types of media: magazines with nude women (e.g., explicit magazines), magazines or books with explicit intercourse depictions, videos or video games with sexually stimulating scenes, and media showing
actual intercourse (e.g., *Have you watched a home video or viewed pictures of people whom you know having sexual intercourse?*). A Likert-type scale measured the utilization of sexualized media where participants rated their use per week from 0 (*never*) to 6 (*daily*). The frequencies of their exposure to explicit media items were summed to create a continuous variable, *early exposure to pornography* (Cronbach’s α = .86). Early sexual experiences have been implicated in the research as a correlate to SIC especially when conditioning theories of arousal are taken into consideration; thus, early masturbation and early exposure to pornography items were summed a priori to create a variable representative of sexualized childhood experiences, *early sexual experiences* (Cronbach’s α = .84).

### Sexual Interest in Children and Antisocial Behaviors

Participants’ antisocial behaviors were measured on a 14-item scale with a format similar to Malamuth’s (1989) *Attraction to Sexual Aggression Scale* in which respondents were asked to rate their likelihood of committing criminal offenses (e.g., robbing a bank), and noncriminal, nonaggressive behaviors (e.g., driving faster than the posted speed limit) if they could be assured “that no one would know and that you would not get caught or be punished.” Likelihood of engagement in antisocial behaviors was rated on an attitudinal scale (Cronbach’s α = .78) ranging from 1 (*highly unlikely*) to 6 (*highly likely*). Embedded within the list of 14 antisocial behaviors were two items measuring sexual interest in children (e.g., *view child porn on the Web; engage in sexual activity with a child*).

As a replication of previous research (Briere & Runtz, 1989; Hayashino et al., 1995; Smiljanich & Briere, 1996), participants were then asked to rate the extent to which they agree or disagree with three statements: *I am sexually attracted to little children; I*
fantasize about having sex with a child; and I masturbate to fantasies about having sex with a child on a Likert-type, attitudinal scale ranging from 1 (strongly disagree) to 6 (strongly agree). Participants who indicated any non-zero response were considered to endorse some likelihood of SIC. The two embedded SIC questions (e.g., View child porn on the Web; Engage in sexual activity with a child) and the three statements pertaining to SIC (e.g., I am sexually attracted to little children; I fantasize about having sex with a child; and I masturbate to fantasies about having sex with a child) were summed to create the continuous outcome variable sexual interest in children (Cronbach’s α = .83).

Participant responses on the variables of interest were summed to create continuous predictor and outcome variables. With regards to the sexual interest in children responses, participants were categorized as having SIC when their summed score was 6 or above.
CHAPTER 4

RESULTS

Data Analysis

Data were analyzed using SPSS Version 23. Data were obtained from Wurtele, Simons & Moreno (2014). Preliminary tests were conducted on the predictor variables (e.g., parent-child attachment and emotional abuse, sexual abuse, and early sexual experiences) and the outcome variable, sexual interest in children (SIC). Descriptive statistics of the sample are illustrated in Table 2.

Table 2
Outcome and Predictor Variables for Males (n = 173) and Females (n = 262)

<table>
<thead>
<tr>
<th></th>
<th>Males</th>
<th>Females</th>
<th>Males</th>
<th>Females</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Mean (SD)</td>
<td>Range of scores</td>
<td>Mean (SD)</td>
<td>Range of scores</td>
</tr>
<tr>
<td>SIC</td>
<td></td>
<td>Min - Max</td>
<td>Insecure attachment</td>
<td>Min - Max</td>
</tr>
<tr>
<td>Sexual Emotional Abuse</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Sexual</td>
<td>5.40 (1.57)</td>
<td>5 - 18</td>
<td>34.32 (20.66)</td>
<td>5 - 113</td>
</tr>
<tr>
<td>Emotional</td>
<td>3.57 (7.08)</td>
<td>0 - 45</td>
<td>2.57 (7.08)</td>
<td>0 - 45</td>
</tr>
<tr>
<td>Frequency of early sexual behavior</td>
<td></td>
<td>0 - 66</td>
<td>15.73 (13.31)</td>
<td>0 - 66</td>
</tr>
<tr>
<td></td>
<td>10.22 (11.37)</td>
<td>0 - 120</td>
<td>5.44 (6.84)</td>
<td>0 - 120</td>
</tr>
<tr>
<td></td>
<td>Skewness</td>
<td>SD</td>
<td>Skewness</td>
<td>SD</td>
</tr>
<tr>
<td>Males</td>
<td>5.16</td>
<td>3.74</td>
<td>Males</td>
<td>5 - 10</td>
</tr>
<tr>
<td>Females</td>
<td>6.13</td>
<td>3.28</td>
<td>Females</td>
<td>0 - 45</td>
</tr>
</tbody>
</table>

Note. All parameters bootstrapped at 1000 from sample data
Males with SIC, 19; Females with SIC, 11.
SD = Standard deviation
* Exposure to explicit media before age 10 and masturbation before age 11.
This analysis included 435 participants and up to four predictor variables based on the model (i.e., male or female), meeting Tabachnick and Fidell’s (2013) sample size requirement for multiple regression: \( N > 50 + 8m \).

Sexual interest in children is positively skewed in this sample with far more adults endorsing no SIC. To produce a robust regression, bootstrapping was conducted to estimate model parameters of the sample distribution from the sample data (Field, 2013) due to multiple regression assumption violations. Case-wise diagnostics concerning all 435 participants identified 11 outliers on the dependent variable, SIC; however, when these case-wise diagnostics were completed on the 29 participants endorsing some likelihood of SIC, no outliers were revealed and thus no cases were excluded. The dependent variable was expected to be observed outside the standard distribution so to exclude these cases would make the phenomena unobservable and the findings meaningless.

Multicollinearity was diagnosed by examining a matrix of variables that correlated very highly \((r > 0.8)\) for males and females, among other methods of investigation (e.g., variance inflation factors [VIFs] and tolerance). Variables included in the present analysis are presented in Tables 3 and 4. The independent variables anxious attachment and avoidant attachment were combined a priori to create a new variable, *insecure attachment* due to highly significant correlations for both males \((r = .80, p < .05)\) and females \((r = .81, p < .05)\). High scores on this combined variable represent attachment processes between and individual and their caretaker that are highly caustic, negligent, ambivalent, or dismissive. This variable, *insecure attachment*, will be included in the final analyses for males and females.
Table 3  
**Correlations Between Variables for 173 male Participants**

<table>
<thead>
<tr>
<th>Variables</th>
<th>1.</th>
<th>2.</th>
<th>3.</th>
<th>4.</th>
<th>5.</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. SIC scores</td>
<td>1</td>
<td>.193*</td>
<td>.222*</td>
<td>.167*</td>
<td>.383*</td>
</tr>
<tr>
<td>2. Insecure Attachment</td>
<td>1</td>
<td>.199*</td>
<td>.691*</td>
<td>.130</td>
<td></td>
</tr>
<tr>
<td>3. Sexual abuse</td>
<td></td>
<td>1</td>
<td>.212*</td>
<td>.281*</td>
<td></td>
</tr>
<tr>
<td>4. Emotional abuse</td>
<td></td>
<td></td>
<td>1</td>
<td>.165*</td>
<td></td>
</tr>
<tr>
<td>5. Early sexual experiences</td>
<td></td>
<td></td>
<td></td>
<td>1</td>
<td></td>
</tr>
</tbody>
</table>

*Note. All parameters bootstrapped at 1000  
*Correlation is significant at $p < .05$

Table 4  
**Correlations Between Variables for 262 Female Participants**

<table>
<thead>
<tr>
<th>Variables</th>
<th>1.</th>
<th>2.</th>
<th>3.</th>
<th>4.</th>
<th>5.</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. SIC scores</td>
<td>1</td>
<td>.158*</td>
<td>.102</td>
<td>.013</td>
<td>-.023</td>
</tr>
<tr>
<td>2. Insecure attachment</td>
<td>1</td>
<td>.302*</td>
<td>.709*</td>
<td>.280*</td>
<td></td>
</tr>
<tr>
<td>3. Sexual abuse</td>
<td></td>
<td>1</td>
<td>.303*</td>
<td>.153*</td>
<td></td>
</tr>
<tr>
<td>4. Emotional abuse</td>
<td></td>
<td></td>
<td>1</td>
<td>.307*</td>
<td></td>
</tr>
<tr>
<td>5. Early sexual experiences</td>
<td></td>
<td></td>
<td></td>
<td>1</td>
<td></td>
</tr>
</tbody>
</table>

*Note. All parameters bootstrapped at 1000  
*Correlation is significant at $p < .05$

The rate of multicollinearity is acceptable for the variables queued for inclusion (e.g., insecure attachment, sexual abuse, emotional abuse, and early sexual experiences). The tolerance values were above .2 and the VIF values were all well below 10, indicating limited multicollinearity and thus more accurate regression coefficients (Field, 2013).

Results of the multicollinearity tests require the use of compensatory measures, typically transformation of variables or some other robust measures for regression. For this study, a robust technique, bootstrapping, was performed on the outcome and predictor variables. Bootstrapping estimates the properties of the sampling distribution by
taking random samples from the data collected to increase the accuracy of results provided by this analysis (Field, 2013).

Multiple hierarchical regression involves the addition of independent (predictor) variables into the statistical analysis in an order based on theory (Field, 2013). In this study, predictor variables were entered into the model based on developmental theory (beginning with experiences most proximal to birth): first, parent-child attachment and emotional abuse (to account for covariance), followed by sexual abuse, and finally early sexual experiences to see how they predict the continuous dependent variable (sexual interest in children). The entry of these variables in a calculated method should allow for the determination of which predictors account for unique variance in the dependent variable.

It was predicted that the results of the study would identify the distinct combination of risk factors increasing the reported degree of SIC within the community participants. It was predicted that insecure parent-child attachment, sexual and emotional abuse, and early sexual experiences would be strong predictors whose combination would vary by gender.

**Moderation of SIC Scores by Emotional Abuse**

To discover if emotional abuse had an interaction effect with sexual abuse on SIC scores for males and females, the interaction between the variables sexual and emotional abuse was tested in a regression model against SIC scores. Hayes (2012) developed the macro versatile modeling tool, PROCESS, for use with SPSS. PROCESS was utilized to determine if the moderation of SIC scores by the interaction of emotional and sexual abuse was evident for the total sample, and males and for females separately. Testing
moderation within the total sample \((N = 435)\) revealed a moderation effect of emotional abuse on SIC scores that barely reached significance \((p = .038)\); however the interaction between sexual abuse and emotional abuse was not significant \(p = 1.42\) and the coefficient for this product crossed zero \(b = -.001, CI (-.003, .000)\) indicating the moderation effect may be very small in this sample or nonexistent. Next, the macro was utilized to examine a moderation effect of emotional abuse on SIC scores for males and females separately. With the mean-centered variable emotional abuse entered into the equation as the constant for males, the macro indicated a non-significant interaction between the moderator and sexual abuse \((R^2 = .001, F_{inc} (1, 169) = .058, p = .810)\). The PROCESS script revealed that the interaction between emotional and sexual abuse, and thus moderation of SIC scores by emotional abuse was not present for females \((R^2 = .013, F_{inc} (1, 258) = 1.732, p = .189)\). Emotional abuse did not moderate SIC scores through the interaction with sexual abuse for neither males nor females in this sample.

**Male Sexual Interest in Children**

Table 5 displays the unstandardized regression coefficients \((B)\) and the intercept, \((SE B)\) unstandardized standard error of the regression coefficients, the standardized regression coefficients \((\beta)\), the 95% confidence intervals and \(R, R^2\), and adjusted \(R^2\). All parameters were bootstrapped and after entry of the four variables of interest in the male model in three blocks: (1) insecure attachment and emotional abuse, (2) sexual abuse, and (3) early sexual experiences, \(R^2\) were significantly different than zero after each step. After the addition of the third block, with all of the IVs in the equation, \(R^2 = .177\) with 95% CIs \([.027, .067]\), \(F(3, 169) = 9.035, p = .001\). The adjusted \(R^2\) value of .157 indicates
that 15.7% of the variability in SIC scores is predicted by the addition of emotional abuse and insecure attachment, sexual abuse, and early sexual experiences.

Table 5

_Hierarchical Regression of Predictor Variables on SIC scores for Males (n = 173)_

<table>
<thead>
<tr>
<th>Variables</th>
<th>SIC scores (DV)</th>
<th>Insecure Attachment</th>
<th>Emotional Abuse</th>
<th>Sexual Abuse</th>
<th>Early Sexual Experiences</th>
<th>B</th>
<th>SE</th>
<th>β</th>
<th>ΔR²</th>
<th>95% confidence intervals</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Step 1</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Insecure Attachment</td>
<td>.193*</td>
<td>1</td>
<td></td>
<td></td>
<td></td>
<td>.011</td>
<td>.008</td>
<td>.148</td>
<td>[.004, .027]</td>
<td></td>
</tr>
<tr>
<td>Emotional Abuse</td>
<td>.167*</td>
<td>.691*</td>
<td></td>
<td></td>
<td></td>
<td>.008</td>
<td>.012</td>
<td>.065</td>
<td>.039*</td>
<td>[.017, .032]</td>
</tr>
<tr>
<td><strong>Step 2</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Sexual Abuse</td>
<td>.222*</td>
<td>.199*</td>
<td>.212*</td>
<td>1</td>
<td></td>
<td>.042</td>
<td>.017</td>
<td>.188</td>
<td>.034*</td>
<td>[.008, .075]</td>
</tr>
<tr>
<td><strong>Step 3</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Early Sexual Experiences</td>
<td>.383*</td>
<td>.13067*</td>
<td>.165*</td>
<td>.281*</td>
<td>1</td>
<td>.047*</td>
<td>.010</td>
<td>.338</td>
<td>.104*</td>
<td>[.027, .067]</td>
</tr>
</tbody>
</table>

_Intercept: 4.898

*Note: B = unstandardized regression coefficient; SE B = standard error; β = standardized regression coefficient; ΔR² = change in R²

* p < .05

After step 1, with insecure attachment and emotional abuse in the equation, $R^2 = .039$, $F_{inc}(2, 170) = 3.482, p = .033$. After step 2, with the addition of sexual abuse added to the equation, $R^2 = .073$, $F_{inc}(1, 169) = 4.435, p < .01$. The addition of this variable to the equation with insecure attachment and emotional abuse resulted in a significant incremental increase in $R^2$. After step 3, the addition of early sexual experiences added to the prediction of SIC scores, $R^2 = .177$, $F_{inc}(1, 168) = 9.032, p < .001$. Addition of early sexual experiences significantly improved $R^2$. For males, sexual interest in children is predicted by the amount of insecure parent-child attachment and emotional abuse reported by an individual, sexual abuse history, and frequency of early sexual experiences during development.

**Female Sexual Interest in Children**

Table 6 is specific to the three predictor variables in two blocks for the female model: (1) insecure attachment and emotional abuse, and (2) sexual abuse. This table
displays the same regression parameters as previously mentioned. $R^2$ was found to be significantly different at the first step, after the addition of the first block of variables, insecure attachment and emotional abuse, but not after the addition of sexual abuse.

Table 6

*Hierarchical Regression of Predictor Variables on SIC for Females (n = 262)*

<table>
<thead>
<tr>
<th>Variables</th>
<th>SIC scores (DV)</th>
<th>Insecure Attachment</th>
<th>Emotional Abuse</th>
<th>B</th>
<th>SE B</th>
<th>β</th>
<th>ΔR²</th>
<th>95% confidence intervals</th>
</tr>
</thead>
<tbody>
<tr>
<td>Step 1:</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Insecure Attachment</td>
<td>.158*</td>
<td>1</td>
<td></td>
<td>.008*</td>
<td>.002</td>
<td>.299</td>
<td>.053</td>
<td>[.003, .012]</td>
</tr>
<tr>
<td>Emotional Abuse</td>
<td>.013</td>
<td>.709*</td>
<td>1</td>
<td>-.008*</td>
<td>.003</td>
<td>-.199*</td>
<td>.045*</td>
<td>[-.015, -.001]</td>
</tr>
<tr>
<td>Step 2:</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Sexual Abuse</td>
<td>.102</td>
<td>.302*</td>
<td>.303*</td>
<td>.006</td>
<td>.005</td>
<td>.081</td>
<td>.006*</td>
<td>[-.003, 0.15]</td>
</tr>
<tr>
<td>Intercept</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>4.969</td>
</tr>
</tbody>
</table>

*Note: B = unstandardized regression coefficient; SE B = standard error; β = standardized regression coefficient; ΔR² = change in $R^2$ *p < .05

After the addition of the third block, with the predictor variables in the equation, $R^2 = .053$ with bootstrapped 95% CI [ -.003, .015], $F(3, 258) = 3.616, p = .007$. The adjusted $R^2$ value of .039 indicates that 3.9% of the variability in female SIC scores is predicted by the amount of insecure attachment and emotional abuse, and sexual and abuse reported by participants.

After step 1, with insecure attachment and emotional abuse taken into account, $R^2 = .045, F_{inc}(2, 259) = 6.052, p = .003$. These two predictors added a significant increment to $R^2$. At step 2, with the addition of sexual abuse scores added to the equation of SIC by insecure attachment and emotional abuse, $R^2 = .050, F_{inc}(1, 258) = 4.571, p = .209$. The addition of the second step to the equation did not contribute to a significant increment in $R^2$. For females, sexual interest in children is predicted by the amount of insecure parent-child attachment and emotional abuse reported by an individual, as well as sexual abuse.
CHAPTER 5

DISCUSSION

The purpose of this study was to add to the paucity of research aimed at understanding individuals who are sexually attracted to young children and may be at a heightened risk of acting on those sexual interests. Many factors contribute to the development of sexual interest in children (SIC). The current study investigated the ability of developmental variables to predict SIC in a community sample of males and females. The use of the PROCESS macro disconfirmed the first hypothesis: emotional abuse was not a significant moderator between sexual abuse and SIC scores for neither males, nor females. Based on this finding, the interaction between sexual and emotional abuse was not included in either model. For males, 15.7% of variance in SIC scores was explained with the four-variable model and early sexual experiences accounted for the most variance in the model. In the final model parameters, early sexual experiences had confidence intervals that did not cross zero (95% CIs [.008, .088]) and represent the distinct possibility that early sexual experiences have a true effect on an increase in SIC scores for males in the population. For females, 3.9% of the variance was accounted for by the three-variable model; insecure attachment and emotional accounted for the most variance in SIC scores. Insecure attachment and emotional abuse had a confidence interval that did not cross zero (95% CI [.003, .014]) representing the possibility of a true positive relationship between these predictors and SIC scores for females.
Consistent with previous research and in support of the second hypothesis, SIC scores were predicted differently based on participant’s gender; insecure attachment was more predictive of SIC for females, and early sexual experiences were important for predicting SIC in males. These results are consistent with, and extend research on developmental variables contributing to the development of SIC. A non-normal distribution of these variables in the general population increases the possibility that the correlation coefficients have been inflated therefore the current findings should be interpreted cautiously.

Differences were expected between men and women on the various predictor variables and the outcome variable, SIC. The extant literature on sexual interest in children implicates a much larger proportion of males professing both interest in and sexual behavior toward children in clinical, incarcerated, and community samples. The current study focused on whether or not gender differences in SIC could be confirmed through regression analyses based on a priori hypotheses. In their original study, Wurtele et al. (2014) found significantly higher instances of anxious and avoidant attachment styles in both males and females, sexual abuse in females, and early sexual experiences in males, providing clues as to which variables to include in the male versus female regression models.

**Insecure Attachment**

Canadian researcher William Marshall (1993) was one of the first to apply attachment theory to help explain sexual offending. He proposed that child molesters experience negative early attachments to their caregivers, resulting in emotional loneliness, fear of rejection, and social isolation. Since that time, research has found that
incarcerated child molesters and rapists commonly report insecure attachment, with rapists reporting more avoidant attachment, and child molesters reporting more insecure anxious/ambivalent attachment (Maniglio, 2012; Simons et al., 2008). A novel blend of insecure parent-child attachment variables was included in the current study. This was accomplished by combining the scores from the anxious and avoidant subscales within the CEBQ (Simons et al., 2008). This combination created a continuous variable indicative of insecure attachment with the hope of capturing how attachment style varies in degree rather than dichotomous type (i.e., anxious or avoidant). The combination of these two constructs more fully captures the range of insecure attachment relevant to the dynamic interactions between parents and children. This variable may help quantify parent-child attachment styles that could be characterized as preoccupied, high-anxiety, fearful-avoidant, high-avoidant, and dismissing-avoidant (Fraley, 2010). Results from Malatras and Isreal (2013) suggest that family stability may play an important role in self-regulatory behavior and in turn, self-control in adulthood. It is possible that growing up in a chaotic family environment with insecure attachments results in a diminished capacity for self-control and age-appropriate emotional regulation (Gannon, Rose, & Ward, 2008) found among adults who seek out children for sexual purposes. Current findings suggest that sexual interest in children may stem from insecure attachment processes; therefore, the importance of intervening with youth who can be identified as insecurely attached is paramount to affecting more positive developmental outcomes.

**Sexual and Emotional Abuse Experiences**

Moderate to large negative effects on mental health outcomes are found among individuals reporting emotional abuse, on par with psychopathology stemming from
witnessing domestic violence or experiencing extra-familial sexual abuse (Teicher, Samson, Polcari, & McGreenery, 2006). Furthermore, the effects of emotional abuse are not easily overcome (Polcari, Rabi, Bolger, & Teicher, 2013). The current study revealed that insecure and emotional abuse experiences may be more applicable to predicting SIC in females, especially when considering that the bootstrapped CIs did not cross zero for either predictor in the female model (95% CIs [.003, .012] and [-.15, -.001], respectively). This finding is consistent with a voluminous literature documenting detrimental effects of CSA on females. A history of adverse childhood experience appears to have different, gendered trajectories for future problematic internalizing, externalizing, and emotional behavior (Gore-Felton et al., 2002). The current findings support the need to develop research aimed at uncovering how emotional and sexual abuse experiences may work differently to predict SIC scores in males and females.

**Sexualized Childhood**

Salu (2011) proposes that the roots of our behavioral and emotional patterns stem from both our genetics and our learning processes; these factors combine to form the foundation of our sexual preferences in adulthood. Classical conditioning has been implicated in the development of sexuality. Unconditioned stimuli such as fear and love have the same root physiological response in individuals, increasing the possibility of cross-wiring sexual arousal cues. Exposure to early sexual experiences, such as masturbation or exposure to explicit media, may serve as a platform for behaviors related to sexuality to become conditioned during adolescence and potentially problematic, especially if the developmental context is atypical.
This study provides evidence that a sexualized childhood, especially for boys, may contribute to the development of SIC in adulthood. The early sexual experiences variable was a summation of early masturbation (before the age of 11) and frequent exposure to explicit media before the age of 10. One risk factor of problematic sexual behaviors in youth has been highlighted by literature concerning juvenile sexual offenders. One study attempted to determine what risk variables separate youth who continued problematic sexual behaviors from those who desisted after adult reprimand. Curwen, Jenkins, and Worling (2014) found: “the use of force, threat, or violence during sexual behaviors; having demonstrated a pattern of sexual behaviors; having engaged in multiple types of sexual behaviors; currently having age inappropriate sexual thoughts or fantasies… and having ever resided in a family with poor sexual boundaries” (pp. 474-475) identified youth who did not desist problematic sexual behavior after adult reprimand. The authors do not postulate at what point these risk factors intersect with contextual variables, but the types of risk factors implicated in continued sexualized behaviors may stem from family, media, and mental health factors. Though not explicitly examined in the current study, poorer outcomes have been associated with early age of intercourse in tandem with attachment and ACE variables (Boislard-Pepin & Poulin, 2011; Jordahl & Lohman, 2009) suggesting the need to examine whether sexualized childhoods beget early sexual intercourse and poorer outcomes generally, and specifically, in relation to SIC.

Limitations of the Current Study

The data collected for this regression model met some of the assumptions necessary to conduct a multiple regression analysis: the total number of cases were
sufficient to run a regression model and multicollinearity was reduced by combining highly correlated variables. Normality of the individuals and outliers within the data set were accounted for by the robust nature of the bootstrapping technique performed (Field, 2013). After the precautions were taken, the residuals of the dependent variable were still abnormal and outliers were left in the model. The proportion of females sampled expressing SIC was small, and therefore less variability in SIC scores may have accounted for the small amount of variance predicted by the independent variables. Bootstrapping is an appropriate technique when the homogeneity of variance between each group analyzed falls within a ratio of 4:1; when analyzed, this did not hold true for the SIC scores nor early sexual experience scores for males and females (the variance ratio between groups was far smaller than required). Though the regression was performed with bootstrapping, a robust regression technique, it may not account for this assumption violation. The results of the current regression models put forth should be interpreted in concert with all of these considerations.

The current study had several methodological limitations. The target population were recruited online and comprised a convenience sample, limiting the external validity of the results. Though online research is cost-effective and provides participants anonymity not afforded by structured interviews or in-person surveys, there are elements in their environment when taking the survey that cannot be controlled by the researcher and may have contributed to error variance. The online platform does not provide the opportunity to confirm the demographic information provided by participants. Additionally, the title of the study, Sexual Experiences and Behaviors, may have repelled some and attracted other participants; individuals who took the surveys may have been
more willing to divulge this sensitive information than others. Thus, interpretation of the findings from the current study may not be generalizable to the larger population. However, important trends are highlighted which should be explored more fully with larger data sets in future studies.

Sexual interest in children was defined by a participant’s continuous score from 0-25 with scores of 0-5 to mean “no SIC” and a score of 6+ to mean “some degree of SIC.” The items comprising the sexual interest in children scale measure the attitudes (i.e., hypothetical likelihood, agreement) of participants related to SIC. Future measures of sexual interest in children should include behavioral scales to clearly distinguish between participants’ attitudes surrounding SIC and their behaviors related to SIC; this distinction may give rise to better models aimed at differentiating between adults endorsing SIC from individuals who have acted on their interest.

**Implications for Future Research**

As this and other studies have shown, sexual interest in children is found among a small minority of non-clinical, non-incarcerated adults. Though these individuals make up a small minority (2% to 5%) of the general population, the potential for harm to others underscores the need to continue exploration into the occurrence of SIC. Results from this study highlight the need for more research focused on attachment, adverse childhood experiences, and early sexual experiences in males and females at the level of the individual, within families, and in the community to modify the trajectory of SIC for those at risk. Neither model in the current study accounted for a substantial portion of variance in SIC scores, therefore the addition of other variables associated with SIC to regression models, such as genetic, social, and cognitive factors (Hayashino, Wurtele,
Klebe, 1995; Houtepen et al., 2016; Santtila et al., 2015), may increase predictive ability in addition to the variables presented here.

Future longitudinal studies should focus on the life courses of children with exposure to adverse family environments. Especially for boys, research regarding the use of explicit media in these environments is imperative to make more firm connections between sexualized childhoods and later SIC. Pornography use is higher among adolescent boys than girls (Grossi et al., 2016; Smith, 2013). Before the advent of the internet, youth access to explicit media was more limited. Now with free sources of online pornography, the likelihood of adolescents accessing and viewing pornography is greater than in the past; this fact must be conveyed to family and organizational structures to curb problematic pornography use. Sexual education is taught in a variety of spheres (e.g., family, religious, educational) and online sexual information and sexually explicit material (SEM) can be absent from these conversations. Adolescents looking online for sexual health information can stumble across sexual explicit material. Smith (2013) suggests sexual education channels “providing young people with the skills and the means to avoid SEM on the Internet, [and]… also provide them with resources for understanding and critically evaluating sexual information, including SEM” (p. 73). The detrimental effects of ACEs found in this study calls for more prevention efforts targeted at parents. Research efforts must be designed to identify appropriate means of educating parents about the individual and environmental risks their children may encounter and provide them with empirically validated techniques to reduce risk of ACEs.

Outcomes following adverse childhood experiences have been shown to vary by gender (Gore-Felton et al., 2002), specifically in the realm of CSA where sharp gender
differences exist between who is perpetrating sexual offenses versus who is the victim (Das & Otis, 2015). Research on early childhood sexual experiences suggests that mild contact in childhood sets up different trajectories for boys and girls. These gendered patterns of risk related to mild sexual contact in childhood are shown to potentially channel women into re-victimization and men into eroticization (Das & Otis, 2015). The current study provides evidence to support differential pathways for SIC for males and females, necessitating future research focus on the developmental experiences unique to each gender in areas associated with SIC. Current findings also support the existence of SIC among women. Efforts toward identification and treatment of male sex offenders continue to occupy the bulk of CSA research, notwithstanding population-based studies implicating 2-4% of women report SIC. The high-end of female-perpetrated CSA is estimated at nearly twenty percent (McLeod, 2015), but societal views have created a culture where women are not suspected, nor even believed capable of sexual abuse. More research efforts on gender differences in SIC is needed; particularly to tease out the directionality of child sexual abuse on later problematic outcomes, to include sexual interest in children.
REFERENCES


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34, 289–300.


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APPENDIX A

University of Colorado
Colorado Springs
Institutional Review Board (IRB) for the Protection of Human Subjects

Date: 1/25/2016

IRB Review

IRB PROTOCOL NO.: 16-113
Protocol Title: Predictors of Sexual Interest in Children
Principal Investigator: Leah Parker
Faculty Advisor if Applicable: Sandy Wurtele
Application: New Application
Type of Review: Exempt
Risk Level: No more than Minimal Risk
Renewal Review Level (If changed from original approval) if Applicable: N/A
No Change
This Protocol involves a Vulnerable Population: N/A
No Vulnerable Population
Expires: *
*Note, if exempt: If there are no major changes in the research, protocol does not require review on a continuing basis by
the IRB. In addition, the protocol may expire more than one review category not listed.
Externally funded: No
OSP #: Sponsor:

Thank you for submitting your Request for IRB Review. The protocol identified above has been reviewed according to
the policies of this institution and the provisions of applicable federal regulations. The review category is noted above,
along with the expiration date, if applicable.

Once human participant research has been approved, it is the Principal Investigator's (PI) responsibility to report any
changes in research activity related to the project:
• The PI must provide the IRB with all protocol and consent form amendments and revisions.
• The IRB must approve these changes prior to implementation.
• All advertisements recruiting study subjects must also receive prior approval by the IRB.
• The PI must promptly inform the IRB of all unanticipated serious adverse (within 24 hours). All unanticipated adverse events
must be reported to the IRB within 1 week (see 45CFR46.103(b)(5)). Failure to comply with these federally mandated
responsibilities may result in suspension or termination of the project.
• Renew study with the IRB prior to expiration.
• Notify the IRB when the study is complete.

If you have any questions, please contact Research Compliance Specialist in the Office of Sponsored Programs at
719-255-3903 or info@uccs.edu

Thank you for your concern about human subject protection issues, and good luck with your research.

Sincerely yours,

Zek Cypress Valkyrie

Zek Cypress Valkyrie, PhD
IRB Reviewer

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