LONG-TERM EFFECTS OF A BRIEF, VIDEO-BASED PARENTING EDUCATION PROGRAM ON PARENTING KNOWLEDGE, ATTITUDES, AND SELF-EFFICACY IN COLLEGE STUDENTS

By

BENJAMIN A. SIGEL

Bachelor of Arts in Psychology
Boston University
Boston, Massachusetts
2001

Master of Science in Psychology
Oklahoma State University
Stillwater, Oklahoma
2006

Submitted to the Faculty of the
Graduate College of the
Oklahoma State University
in partial fulfillment of
the requirements for
the Degree of
Doctor of Philosophy
July 2010

LONG-TERM EFFECTS OF A BRIEF, VIDEO-BASED PARENTING EDUCATION PROGRAM ON PARENTING KNOWLEDGE, ATTITUDES, AND SELF-EFFICACY IN COLLEGE STUDENTS

Dissertation Approved:

Maureen Sullivan, Ph.D.
Dissertation Adviser

Thad Leffingwell, Ph.D.

David Thomas, Ph.D.

Amanda Sheffield Morris, Ph.D.

A. Gordon Emslie, Ph.D.
Dean of the Graduate College

ACKNOWLEDGEMENTS

I would like to express my gratitude to Dr. Cynthia Hartung for her support, advice, and encouragement. I am also appreciative of my committee members, Dr. Maureen Sullivan, Dr. Thad Leffingwell, Dr. David Thomas, and Dr. Amanda Morris-Sheffield for their time and effort; as well as to my lab-mates, Monica Armendariz, Elizabeth Lefler, Carrie Little, and David Fedele. Additionally, this project would not have been possible without the dedicated undergraduate research assistants of the Disruptive Behavior Disorders lab. Finally, I would like to thank my family and particularly my wife, Kelly, for her support, love, and patience.

TABLE OF CONTENTS

LIST OF TABLES

LIST OF FIGURES

Figure Page

CHAPTER I

INTRODUCTION

Disruptive behavior disorders (DBDs) put children at risk for future problems such as poor academic achievement, substance use and abuse, social problems, and employment problems (Disney, et. al., 1999; Kandel, Johnson, Bird, & Canini, 1997; Mannuzza, Klein, Bessler, & Malloy, 1993; Weiss, Hechtman, Milroy, & Perlman, 1985; Weiss & Hechtman, 1993). DBDs consist of attention-deficit/hyperactivity disorder (ADHD), oppositional defiant disorder (ODD), and conduct disorder (CD) (American Psychiatric Association (APA), 2000). According to the *Diagnostic and Statistical Manual of Mental Disorders – Fourth Edition – Text Revision (DSM-IV-TR*, APA, 2000), ADHD is characterized by inattention and/or hyperactivity-impulsivity. ODD is defined as a pattern of negativistic, hostile, and defiant behavior (APA, 2000). CD is defined as a pattern of behavior that violates the basic rights of others or major age-appropriate societal norms or rules (APA, 2000). According to the *DSM-IV-TR*, the prevalence rates in children have been estimated at 3% to 7% for ADHD, 2% to 16% for ODD, and 1% to 10% for CD. One possible way to reduce the occurrence of DBDs is through prevention.

There are three different methods of prevention: primary, secondary, and tertiary. These prevention strategies will be discussed as they relate to DBDs. Primary prevention includes strategies and programs that are provided to an entire population to prevent the development of DBDs in children. The population could be an entire nation, state, school,

or community. Secondary prevention involves identifying, and providing services to, young children who are displaying some symptoms of DBDs (e.g., impulsive, hyperactive, inattentive, and aggressive behaviors) and are, therefore, at higher risk for developing DBDs. Tertiary prevention is also referred to as intervention or treatment and it occurs after a clinically significant DBD has developed. Tertiary prevention is aimed at decreasing symptoms and related impairments.

One method of preventing DBDs is parenting education. Parenting education can be used as primary, secondary, or tertiary prevention and has been shown to be effective for changing maladaptive parenting practices (Barkley, Guevremont, Anastopoulos, & Fletcher, 1992; Peed, Roberts, & Forehand, 1977; Spaccarelli, Cotler, & Penman, 1992; Webster-Stratton, 1984; Webster-Stratton, 1990; Webster-Stratton, 1994; Webster-Stratton, Kalpocoff, Hollinsworth, 1988; Wells & Egan, 1988) as well as improving children's behaviors (Barkley, Guevremont, Anastopoulos, & Fletcher, 1992; Bernal, Klinnert, & Schultz, 1980; Kazdin, Siegel, Bass, 1992; Peed, Roberts, & Forehand, 1977; Spaccarelli, Cotler, & Penman, 1992; Webster-Stratton, 1984; Webster-Stratton, 1990; Webster-Stratton, 1994; Webster-Stratton, Kalpocoff, Hollinsworth, 1988; Wells & Egan, 1988; Wiltz & Patterson, 1974). Many parenting education programs are expensive to implement because they are administered by a trained professional and last 6-16 weeks.

The purpose of this study is to follow-up individuals who, one year earlier, viewed *Perry's* (2004) *Positive Discipline: Without Shaking, Shouting, or Spanking.* This parenting education program is a 90-minute video that does not need to be administered by a trained professional. The video consists of three 30-minute chapters. In each chapter, developmental information and effective parenting skills for one of three age groups (i.e.,

infants, toddlers, and preschoolers) is presented. Topics include anger management skills, strategies for comforting babies, token economies, time outs, dealing with colic, post-partum depression, establishing bedtime routines, prevention of child maltreatment, and effects of shaking, shouting, and spanking.

Sigel and Hartung (2006) found that college students, who were not parents and were not expecting a child, showed improvements on several dependent variables immediately after watching the video program. Specifically, parenting knowledge, approval of nurturing parenting practices, and parenting self-efficacy was higher while approval of ineffective parenting practices was lower. Although these results are promising, these improvements may not be maintained over time. The goal of the current study is to follow-up with the participants from the Sigel and Hartung (2006) study to determine if this parenting education video might be effective as a primary prevention for DBDs. The overarching goal of this line of research is to determine if the widespread dissemination of brief parenting programs to high school and college students would prevent the frequency and severity of DBDs in the future children of these students.

CHAPTER II

REVIEW OF LITERATURE

First, the role of parenting and genetic factors in the development and maintenance of DBDs will be discussed. Second, parenting education programs and research on their effectiveness as tertiary, secondary, and primary preventions will be reviewed. Third, an example of a multilevel prevention program will be described. Finally, the Sigel and Hartung (2006) study that will be followed-up in the current study will be presented.

The Development of DBDs

Researchers theorize that children develop DBDs through an interaction between heritable factors and the environment. Children may be genetically predisposed to exhibit aggressive, impulsive, hyperactive, and inattentive behaviors. These behaviors are often indirectly reinforced by a parent's ineffective and often coercive parenting style. These parenting practices increase the likelihood that these disruptive behaviors will continue.

The heritable factors involved in the development and expression of DBDs may include brain mechanisms and genes. The brain mechanisms that have been proposed that influence the expression of DBDs include prefrontal cortex volume reductions, prefrontal hypoactivity, low autonomic arousal, and low serotonin levels. Neuroimaging studies of individuals with DBDs found sizeable prefrontal volume reductions (11-17%), as well as, less prefrontal activity (Raine, Lencz, Birhle, LaCasse, & Colletti, 2000; Woermann et

al., 2000). The prefrontal cortex is involved with planning complex cognitive behaviors, personality expression, moderating correct social behavior, and impulse control.

Furthermore, studies have also provided evidence for decreased autonomic arousal, as measured by heart rate and skin conductance, in children and adolescents diagnosed with DBDs (Raine & Jones, 1987; Raine, Venebles, & Williams, 1990). It is believed that individuals who experience less autonomic arousal would experience less stress from threatening cues and thus be less likely to avoid aggressive, novel, and/or punishing encounters.

Additionally, low serotonin levels have been associated with an increased risk for aggression. Davidson, Putnam, and Larson (2000) indicate findings have been replicated and suggest there are reductions in the serotonin metabolite 5-HIAA in individuals diagnosed with DBDs. Researchers have also found that 5-HIAA levels are predictive of future aggressive behavior in boys diagnosed with DBDs (Kruesi et al., 1992).

Research has shown that certain genes may influence the expression of DBDs. Two dopamine genes have been identified in the expression of DBDs, a dopamine transporter (DAT1) and dopamine receptor (DRD4). The DAT1 gene has been shown to be significantly associated with DBDs (Cook et. al., 1995; Gill, Daly, Heron, Hawi, & Fitzgerald, 1997; Waldman et al., 1996). The DRD4 gene has been shown to be significantly associated with novelty-seeking behavior and DBDs (Benjamin, Li, Patterson, Greenberg, Murphy, & Hamer, 1996, Ebstein et al, 1996; Faraone et al., 1999; Rowe et al., 1998).

Another gene that may influence the expression of DBDs is one that codes for tryptophan hydroxylase (TPH). Trytophan is an essential amino acid that is a necessary

precursor for the synthesis of serotonin. Researchers have found a correlation between an allele of the TPH gene and measures of aggression (Manuck et al., 1999; Nielson et al., 1994).

Parenting is one environmental influence that may be involved in children developing DBDs. According to Patterson's Coercion theory (1982), children may have parents that tend to use parenting practices that are often inconsistent but include frequent reprimands and high levels of coercive and punitive discipline which then contributes to and sustains their children's negative behaviors (McMahon & Wells, 1989; Patterson, 1982). These types of parenting practices are believed to promote disruptive behavior development due to providing reinforcement for oppositional and defiant behavior (Patterson, Reid, & Dishion, 1992; Wahler & Dumas, 1986). Furthermore, these parenting practices model aggressive, hostile, and punitive interpersonal styles (Eron, 1987; Weiss, Dodge, Bates, & Pettit, 1992).

It appears that children may develop DBDs through an interaction of nature and nurture. Children may be genetically predisposed to exhibit aggressive, impulsive, hyperactive, and inattentive behaviors due to a variety of genes and brain mechanisms. These difficult behaviors may become reinforced by a parent's ineffective and often coercive parenting style. As a result, these practices increase the likelihood that these disruptive behaviors will continue.

Parenting Education Interventions and Their Effectiveness as a Tertiary Prevention.

Research has shown parent education is an effective way to reduce DBDs. Effective parenting practices reinforce positive prosocial behaviors and not negative deviant behaviors which then reduce the child's disruptive behavior and increase the

child's positive prosocial behavior. Most parenting education interventions share the common goal of modifying and remedying destructive and dysfunctional patterns of family interaction in order to produce long lasting and constructive changes (Patterson, 1968). Most parenting education programs use empirical techniques based on behaviorism. Behavioral approaches attempt to modify patterns of antecedents and consequences in the environment so that positive, prosocial behaviors are reinforced and negative, deviant behaviors are punished or at least not reinforced (Dumas, 1989). This can be accomplished by changing parents' behaviors and interactions with their children so that desirable behaviors are reinforced and undesirable behaviors are not reinforced. The skills parents are typically taught include increased monitoring of behaviors, attending to appropriate behaviors, using discipline for maladaptive behaviors (timeout vs. spanking), providing rewards and consequences, active ignoring, giving clear instructions, using effective communication, contracting, and anticipating new conflicts or problems (McMahon & Forehand, 2003; McMahon & Wells, 1989; Miller & Prinz, 1990). Parenting education programs often use social learning techniques which were first applied by Constance Hanf at the University of Oregon Health Sciences Center to help parents learn behavioral principles (Hanf, 1968; Hanf, 1969). Social learning theory states that behavior is not only controlled by the outcomes of reinforcement and punishment but also via observational learning. Moreover, if people observe positive, desired outcomes in the observed behavior, they are more likely to model, imitate, and adopt the behavior themselves. Social learning techniques help parents learn the behavioral techniques through modeling, rehearsal, feedback, and homework assignments (Schaefer & Briesmeister, 1998).

Several of the most widely used parenting education programs are programs based on Patterson's *Living With Children* (1968), Forehand's *Helping the Noncompliant Child* (1981), Barkley's *Defiant Children* (1997), Kazdin's *Parent Management Training* (1992), Eyberg's *Parent-Child Interaction Therapy* (PCIT; 2003), Cunningham's *Community Parent Education Program* (2000), and Webster-Stratton's *The Incredible Years* (1992). These programs are available to be purchased as books from publishers or manuals from the authors. Although, all of these programs are used by mental health professionals who work with parents of children with DBDs some programs are written or have versions written for parents of children with DBDs (e.g., Webster-Stratton's *The Incredible Years* (1992) and Patterson's *Living With Children* (1976)).

Programs based on Patterson's (1968) *Living With Children* are intended for parents of children age 3-12 with difficult behaviors. The programs typically vary according to the needs of the families and involve weekly treatment sessions and telephone contacts with parents. Researchers have reported the programs typically last less than 20 hours of contact time between sessions and phone contact (Bernal, Klinnert, & Schultz, 1980; Patterson, Chamberlain, & Reid, 1982). These behavioral parent training programs focus on teaching parents basic behavioral principles for modifying child behavior, encouraging parents to monitor child behaviors, and assisting parents in developing and implementing behavior modification programs to improve targeted child behavior problems. Research has found this program to be effective in reducing DBDs (Bernal, Klinnert, & Schultz, 1980; Patterson, et al., 1982; Wiltz & Patterson, 1974). Based on this research Eyberg, Nelson, and Boggs (2008) judged parenting education

programs based on Patterson's *Living With Children* (1968) as meeting the criteria for "well-established" psychosocial interventions for childhood behavioral disorders.

Forehand's (1981) *Helping the Noncompliant Child* program typically involves 10-sessions with a mental health professional. The program is intended for parents of children age 3-8 with noncompliance and other conduct problems. Parents are taught skills which include increasing positive feedback to the child for appropriate behaviors, ignoring minor negative behaviors, giving children clear directions, and providing praise (reinforcement) or time-out (punishment) following child compliance and noncompliance, respectively. Parents learn skills through modeling, role-plays, and in vivo training in the clinic or home and progress as each skill is mastered. Research has shown this program to be effective in reducing DBDs (Peed, et al., 1977; Wells & Egan, 1988). Based on this research the Eyberg, et al. (2008) judged Forehand's (1981) *Helping the Noncompliant Child* as meeting the criteria for "probably-efficacious" psychosocial interventions for childhood behavioral disorders.

Barkley's *Defiant Children* (1997) is a 10 session program with a mental health professional. The program is intended for parents of children age 2-12 with defiance and other behavior problems. Parents are taught about understanding their child's misbehavior, motivating their child, increasing compliance, decreasing disruptive behavior, establishing proper disciplinary systems without corporal punishment, and improving school behavior. Some of the techniques taught are the use of praise, ignoring minor misbehavior, use of a token economy, use of time-out, and improving school behavior with the use of a daily school behavior report card. There has been research

conducted with the program that found the treatment to be effective in treating adolescents with ADHD symptoms (Barkley, et al., 1992).

Kazdin's *Parent Management Training* (1992) involves 16 sessions with a mental health professional. The program is intended for parents of children age 2-13 with aggressive and antisocial behavior. This program is based on Patterson's (1968) *Living With Children* and is administered to parents while their children are receiving Kazdin's (1992) *Cognitive-Behavioral Problem-Solving Skills Training*. These child sessions focus on learning and applying problem solving steps. Research has shown this program to be effective in reducing DBDs (Kazdin, Esveldt-Dawson, French & Unis, 1987a; Kazdin, Esveldt-Dawson, French & Unis, 1987b; Kazdin, et al., 1992). Furthermore, based on this research, Eyberg, et al. (2008) judged Kazdin's (1992) *Parent Management Training* in combination with Kazdin's (1992) *Cognitive-Behavioral Problem-Solving Skills Training* as meeting the criteria for "probably-efficacious" psychosocial interventions for childhood behavioral disorders.

Eyberg's *Parent-Child Interaction Therapy* (PCIT; Brinkmeyer & Eyberg, 2003) usually involves 12 to 16 weekly sessions with a mental health professional. The program is intended for parents of children age 2–7 with disruptive behavior disorders that targets change in parent-child interaction patterns. There are two phases of PCIT. The first phase focuses on learning specific positive attention skills (emphasizing behavioral descriptions, reflections, and labeled praises) and active ignoring skills, which they use in applying differential social attention to positive and negative child behaviors during a play situation. The focus of this phase is on increasing positive interactions and parenting. The second phase focuses on learning and practicing

giving clear instructions and following through with praise or time-out during in vivo discipline situations. Therapists coach the parents as they interact with their child during the treatment sessions teaching the skills introduced. The skills are practiced at home during weekly homework assignments. Research has shown this program effective in reducing DBDs (Nixon, Sweeney,Erickson, & Touyz, 2003; Schuhmann, Foote, Eyberg, Boggs, & Algina, 1998). Based on this research Eyberg, et al. (2008) judged Eyberg's *Parent-Child Interaction Therapy* (PCIT; Brinkmeyer & Eyberg, 2003) as meeting the criteria for "probably-efficacious" psychosocial interventions for childhood behavioral disorders.

A relatively new technique for parenting education has been the use of video in sessions. Webster-Stratton's *The Incredible Years* (1992) program uses videos that contain vignettes showing parents interacting with their children in both appropriate and inappropriate ways. After the video vignettes are shown, the therapist may lead a discussion about the interactions observed and the parent's responses. This program involves teaching parents to modify maladaptive parent-child interactions by learning how to attend to positive behaviors and effectively deal with child disruptive behavior through techniques such as the use of praise, ignoring minor misbehavior, monitoring, use of a token economy, use of logical consequences, and the use of time-out. Parents learn skills through modeling, role-plays, and video tape examples. The training usually takes 12-14 two-hour sessions to complete and is conducted in a group format. The program is intended for parents of children age 2-10 who display aggression and conduct problems. Research has shown this program to effective in reducing DBDs (Spaccarelli, et al., 1992; Webster-Stratton, 1984; Webster-Stratton, 1990; Webster-Stratton, 1994;

Webster-Stratton, et al., 1994). Based on this research Eyberg, et al. (2008) judged judged Webster-Stratton's *The Incredible Years* (1992) as meeting the criteria for "well-established" psychosocial interventions for childhood behavioral disorders.

Another parent education program that uses video tapes is the Community Parent Education Program (COPE) (Cunningham, Bremner, & Secord-Gilbert, 2000). This program also involves teaching parents to modify maladaptive parent-child interactions by learning how to attend to positive behaviors and effectively deal with child disruptive behavior through techniques such as the use of praise, monitoring, ignoring minor misbehavior, use of a token economy, use of logical consequences, and the use of time-out. Parents learn skills through modeling, role-plays, and video tape examples. The program is designed for parents of children age 3-12 with DBDs. The program takes approximately eight weeks to complete but is administered in the community by individuals who were previously participants in the class. Therefore, the program is designed to be more easily dispersed than traditional parenting education programs and is, therefore, more cost effective. Cunningham, Bremner, and Boyle (1995) found that this program reduced negative behaviors in children with DBDs.

Another new approach has been self-administered video-based parenting education (i.e., Gordon, 2000). Self-administered video-based parenting education incorporates all the aspects of traditional parenting education. The video is made up of recorded vignettes containing both appropriate and inappropriate interactions between family members. The vignettes are followed by didactic instruction. There are several advantages to using self-administered videos over traditional parenting education methods. Self-administered video require no training for implementation. The video-

based method may be useful for individuals and/or cultures where stigma may impact the likelihood of seeking mental health services. However, these self-administered videos often take as long to complete as traditional parenting education. Also, the treatment cannot be tailored to a particular child or family situation. Nonetheless, research has shown that self-administered video has been effective in increasing parental satisfaction, increasing knowledge and use of skills, improving family relations, and decreasing negative behavior (Gordon, 2000; Kacir & Gordon, 1999; Lagges & Gordon, 1999;).

Parenting Education as Secondary Prevention

Children who exhibit early disruptive behaviors including inattention, hyperactivity, impulsivity, and aggression have been shown to be at greater risk for developing a future lifelong course of antisocial behavior (Aguilar, Sroufe, Egeland, & Carlson, 2000; Moffitt, Caspi, Harrington, & Milne, 2002). Moffitt et al. (2002) referred to children who show difficulties with inattention, hyperactivity, impulsivity, and aggression beginning at 1 ½ to 2 years of age as being on an "early starter pathway" (Aguilar, et. al., 2000; Shaw, Gilliom, Ingoldsby, & Nagin, 2003). According to Offord, Boyle, and Racine (1991) these early starters represent approximately 6% of the population but are responsible for almost half of adolescent crime and three-fourths of violent crimes. Other factors that have been shown to impact the development of antisocial behaviors include dysfunctional parent-child interactions, parental distress, and poverty (Aguilar et al., 2000; Hart & Risley, 1995; Offord, Adler, & Boyle, 1986; Patterson & Reid, 1994; Rutter, 1985).

In secondary prevention of DBDs, parenting education is used alone or as part of a multi-component approach which involves parenting education, social skills training,

home visits, and/or academic tutoring. The programs that have been empirically evaluated are the *Montreal Prevention Project* (Trembley, et al., 1992), *First Steps to Success* (Walker, Kavanagh, Stiller, Golly, Severson, & Feil, 1998), *Fast Track* (Conduct Problems Prevention Research Group, 1992), and *The Incredible Years* (Webster-Stratton, 1992).

The *Montreal Prevention Project* targets 7- to 9-year-old aggressive children (Trembley, et al., 1992). Parents received parenting education every 2-3 weeks for 2 years based on behavioral parenting principals with emphasis on social learning principals that have been previously discussed. The children received social skills and problem solving skills training for 2 years. In the first year, 9 sessions focused on prosocial skills (e.g. group entry, help seeking). In the second year, 10 sessions focused on developing self-control skills (e.g. following rules, managing anger-inducing situations). The treatment has been shown to be effective in reducing adolescent delinquent behavior and decreasing special education resource use (McCord, Tremblay, Vitaro, & Desmarais-Gervais, 1994; Tremblay, Pagani-Kurtz, Vitaro, Masse, & Pihl, 1995; Vitaro & Tremblay, 1994).

The *First Steps to Success* (Walker, et al., 1998) program targeted kindergarteners who were displaying antisocial behaviors. The program was composed of home and school interventions. The home intervention was a 6-week parenting program based on behavioral parenting principals with emphasis on social learning principals that have been previously discussed. Program consultants visited the family's home weekly for 45-60 minutes. The school intervention was adapted from the CLASS program for Acting-Out Children (Hops & Walker, 1988). The goal was to teach the child adaptive behavior

that would foster academic and social success. The home intervention usually took two months to implement. This intervention was effective in increasing adaptive behaviors and decreasing maladaptive and aggressive behaviors in children as rated by their teachers (Walker, et al., 1998)

The *Fast Track* (Conduct Problems Prevention Research Group, 1992) program targeted children at-risk for CD based on parent and teacher reports. In 1st grade, families received parent training, home visits with problem-solving skills training, child social skills training groups, child tutoring in reading, and peer-pairing. In 2nd grade, parent training and social skills groups occurred twice monthly. After 2nd grade, parent and child groups met monthly. Research investigating this program showed effectiveness in improving children's social, emotional, and academic skills, peer interactions and social status after treatment and in follow-ups (Conduct Problems Prevention Research Group, 1999; Conduct Problems Prevention Research Group, 2002; Conduct Problems Prevention Research Group, 2004). The treatment was also effective in reducing oppositional behavior and conduct problems (Conduct Problems Prevention Research Group, 1999; Conduct Problems Prevention Research Group, 2002; Conduct Problems Prevention Research Group, 2004). Additionally, parenting education was effective in decreasing use of physical discipline and increasing self-efficacy and use of appropriate/consistent discipline after treatment and in follow-ups (Conduct Problems Prevention Research Group, 1999; Conduct Problems Prevention Research Group, 2002).

Webster-Stratton adapted the *Incredible Years* (1992) for use as a prevention program. The program consisted of 12 weeks of parent and teacher training based on the Webster-Stratton's *Incredible Years* (1992). There was also a social skills and problem

solving component for the children. The program was designed for children age 4-7. The treatment has been shown to be effective in reducing conduct problems and increasing positive parent-child interaction (Webster-Stratton & Hammond, 1997). Additionally, parenting education was effective in decreasing use of physical discipline and increasing self-efficacy and use of appropriate/consistent discipline after treatment and in follow-ups (Webster-Stratton & Hammond, 1997).

Parenting Education as Primary Prevention

There are several methods for teaching effective parenting strategies at a primary prevention level. These methods include primary parent training (i.e., individuals whose children are not considered high risk for developing DBDs) and the use of media at a large-scale level (i.e., videos, newsletters, magazines, books, etc.). These methods have not focused specifically on preventing DBDs but rather on teaching effective parenting strategies to reduce the risk of children's mental health problems in general. The rationale for using parent training as a primary prevention is that parents will be less likely to use coercive and punitive punishment and reprimands and be more prepared if their children display difficult behaviors. It is also hoped that parents will be less likely to engage in parenting practices that contribute to, and sustain, children's maladaptive behaviors and, therefore, children will be less likely to develop DBDs.

The most popular method for primary prevention of mental health problems in children is providing parenting information through media. Media-based prevention may begin prenatally and extend into infancy and childhood. The information is often focused on understanding the developmental stages of childhood and parenting education topics such as token economies, time outs, attending to positive behavior, ignoring negative

behavior, reflection, and prevention of child maltreatment. Examples of primary prevention programs that have research support include the *First 5 Program* (Center for Community Wellness, 2001), *Parenting Newsletters* (Riley, Salisbury, Walker, & Steinberg, 1996), and *Grandir* (Laurendeau, Gagnon, Desjardins, Perreault, & Kischuk, 1991).

The *First 5 Program* (Center for Community Wellness, 2001) is used in California and involves distributing parenting kits to both prenatal and postnatal parents. The kits are available to parents through prenatal care, hospitals, home visits, and a toll-free telephone number. The kits contains a set of five videos on (1) prenatal/child health and nutrition, (2) early child development, (3) child safety, (4) quality childcare, and (5) early literacy. The kit also includes 13 related brochures, a parents' guide with links to resources available by telephone and internet and a board book for reading to toddlers. Parents who received the kit, both prenatally and postnatally, showed significant increases in parenting knowledge from pre-test to post-test and higher levels of knowledge than parents who did not receive the kits. Expectant and first-time parents were more likely to use and gain knowledge from the kits (Center for Community Wellness, 2001).

Parenting Newsletters (Riley, et al., 1996) were distributed throughout Wisconsin and other states. The newsletters included information about early pregnancy through the preschool years. The newsletters presented information on topics such as parenting techniques, developmental milestones, health and nutrition, child safety, and environmental stimulation. Riley, et al. (1996) found that mothers who received the newsletters had more nurturing attitudes towards childrearing and fewer ineffective

attitudes towards childrearing; they were also less likely to use physical punishment and more likely to provide a stimulating environment for their babies than a control group.

Another example of a media-based effort to enhance parenting is *Gradir* (previously titled *Parents Magazine,* Laurendeau, et al., 1991) that was available in Quebec, Canada. This magazine is distributed for free in local grocery stores. The magazine provided age-related information on developmental milestones, childrearing practices, and child nutrition. An evaluation of the readers of the magazine found that they had more positive attitudes towards using community resources (Laurendeau, et al., 1991).

There is very limited research evaluating the effectiveness of parent training programs with parents whose children are not high-risk for developing DBDs or with adults who are not parents but may care for children in the future. Nonetheless, the limited research shows parenting education programs to be effective with these populations. Taylor and Beauchamp (1988) provided support and parenting education to mothers by student nurses in a maternity ward. The services started during their hospital visit and lasted until 4 weeks after leaving the hospital. The student nurses visited the mothers at home. The topics discussed were child behavior management, family adjustment, parenting patterns, utilization of community resources, and child development. The mothers also received handouts on these topics. Compared to a control group these mothers had higher levels of parenting knowledge, more nurturing parenting attitudes, fewer ineffective parenting attitudes, and more positive interaction patterns with their children.

Limited research has also shown that parenting skills can be effectively taught to non-expectant high school students. Moore and Robin (1981) randomly assigned high school students to either a nine week parent education class or a wait-list control group. The parent education class consisted of lectures, films, class discussions, role-playing exercises, and examinations to teach concepts of behavioral and reflective childrearing. The authors reported that analysis of achievement tests and written and role-played analog assessment measures tertiary that the parent-training course produced significant increments in behavioral and reflective parenting skills compared to the control group. Zoline & Jason (1985) randomly assigned non-expectant high school students to either an experimental group which consisted of five, forty minute sessions of parent education (i.e., parenting techniques, developmental milestones, health and nutrition, and child safety) or to a control group which consisted of five, forty minute sessions of topics related to adult living (i.e., money management, career selection, and adult relationships). The participants who received parent education produced greater parenting knowledge and more positive expectations of parenting compared to the control group (Zoline & Jason, 1985). Additionally, previous research has shown that high school students believe they need training in certain areas of parenting. Specifically, high schoolers expressed needing to learn about planning and decision making, parenting and child care, and adolescent social development (Mensah, Schultz, & Hughes, 1983). These research findings, although limited, provide some evidence that parent training can be effective for high school students. More specifically, students believe they are need of and are motivated to learn parenting skills. However, it is not known whether skills taught before an individual becomes a parent can be maintained over time. Furthermore, it is not clear

whether the knowledge gained in a high school parenting class will impact later parenting behaviors.

A Multi-Level System of Family Intervention

The *Triple P-Positive Parenting Program* (Sanders & Markie-Dadds, 1996) is an example of a multilevel system of family intervention. The program includes primary, secondary, and tertiary prevention and can be tailored to the individual family based on their level of need. At the primary prevention level the program consists of commercial and public service announcements on positive parenting, newspaper columns based on common parenting issues, videos and newsletters about parenting, and printed advertising materials. At the secondary and tertiary levels the program is also tailored to the individual family. At the brief end of the spectrum, parents are provided with parenting tip sheets and videos. At the comprehensive end of the spectrum, information on childrearing strategies, child development, managing difficult behavior, and causes of difficult behavior are provided during 10 home visits. The program may be administered in individual family or group formats. The program may also include information for parents on couples' communication, mood management, and skills for coping with stress. The *Triple P-Positive Parenting Program* has been shown to be effective in decreasing children's disruptive and oppositional behaviors as well as improving the use of positive parenting strategies (Sanders & Christensen, 1985**;** Sanders & Dadds, 1982; Sanders & Glynn, 1981**;** Sanders & Plant, 1989).

Summary

One possible way to decrease the number of children with childhood DBDs is through widespread dissemination of parenting education in high schools, colleges,

clinics, doctor's offices, and hospitals. Parenting education has been shown to effectively reduce children's DBDs (Barkley, et al., 1992; Bernal, et al., 1980; Kazdin, et al., 1992; Spaccarelli, et al., 1992; Peed, et al., 1977; Wells & Egan, 1988; Webster-Stratton, 1984; Webster-Stratton, 1990; Webster-Stratton, 1994; Webster-Stratton, et al., 1994; Wiltz & Patterson, 1974). Additionally, follow-up studies of parents who completed parenting education programs showed positive impacts on future parenting behaviors (Conduct Problems Prevention Research Group, 1999; Conduct Problems Prevention Research Group, 2002; Webster-Stratton & Hammond, 1997). Also, children whose parents participated in the parenting programs displayed fewer negative outcomes (Conduct Problems Prevention Research Group, 1999; Conduct Problems Prevention Research Group, 2002; Conduct Problems Prevention Research Group, 2004; Lochman, 1992; McCord, et al., 1994; Pepler, et al., 1991; Pepler, et al., 1995; Tremblay, et al., 1995; Vitaro & Tremblay, 1994; Walker, et al., 1998; Webster-Stratton & Hammond, 1997; Zolna, et al., 2001). Finally, limited research has supported the use of parenting education with non-high-risk expectant mothers and high school students (Taylor & Beauchamp, 1988; Zoline & Jason, 1985). However, follow-up studies with individuals who were not immediately expecting children have not been conducted so it is not known if the initial positive findings will be maintained and will generalize to future parenting behavior. One obstacle to widespread dissemination is that most parenting education programs are lengthy, expensive, and must be administered by a trained professional.

To answer some of these questions, 127 non-expectant individuals (65 male and 62 female) participated in a previous study by Sigel and Hartung (2006). The participants completed questionnaires to assess pre-prevention levels of parenting knowledge,

approval of nurturing parenting practices, approval of ineffective parenting practices, and self-efficacy towards parenting. Next, the participants completed the parenting education program by watching the video. Finally, the participants completed the questionnaires again to measure post-prevention levels. After the intervention, non-expectant men and women had higher levels of parenting knowledge, approval of nurturing parenting practices, and self-efficacy towards parenting as well as lower levels of approval of ineffective parenting practices (Sigel & Hartung, 2006). After watching the video, men and women displayed equal levels of parenting knowledge, self-efficacy, and approval of both nurturing and ineffective parenting practices (Sigel & Hartung, 2006).

The Current Study

The purpose of the current study was to add to the evidence on the effectiveness of parenting education with non-expectant individuals. This study evaluated the extended effectiveness of *Perry's* (2004) *Positive Discipline: Without Shaking, Shouting, or Spanking* which is a parent education video. The complete intervention was approximately an hour and a half long and split into three sections containing information about parenting children aged birth to one year, one to two years, and three to five years. Additionally, sex differences in the effects of the parent education program were explored.

It was hypothesized that the differences in parenting knowledge, approval of ineffective parenting practices, approval of nurturing parenting practices, and self-efficacy that were found by Sigel and Hartung (2006) were maintained one year after the initial intervention. In addition, men and women were expected to maintain equal levels

of parenting knowledge, approval of nurturing parenting practices, approval of ineffective parenting practices, and self-efficacy.

If this brief parenting education program is effective in the long term for non-expectant college students, this will add to the evidence supporting primary parenting education for individuals who are not immediately expecting children. Primary parenting education could be an effective way to reduce childhood disorders and child maltreatment. Additionally, positive findings for the current study would provide evidence that primary prevention does not have to be long, costly, or administered by a professional. If this parenting education program shows long-term effectiveness, this would justify the implementation of brief parenting education in high schools to determine if knowledge will be gained and maintained. If the program were effective over time with high school students there would be strong evidence to add parenting education to high school curriculums.

If this brief parenting education program is not effective in the long term for non-expectant college students, this could mean that primary parenting education for individuals who are not currently expecting children may not be effective. Alternatively, this could mean that the intervention was too brief to be maintained over time.

CHAPTER III

METHODOLOGY

Participants

Participants in the experimental group were 45 (21 male and 24 female) undergraduates who agreed to be contacted for and completed a one-year follow-up after participating in the Sigel and Hartung (2006) study. The Sigel and Hartung (2006) study had a sample of 127 (65 male and 62 female) undergraduates, thus the retention rate was 35% (32% of males and 39% of females). At the time of follow-up, these participants ranged in age from 18 to 26 with a mean age of 21 (M = 21.04, SD = 1.61). The mean level of education completed was 14 (13 to 16, M = 14.36, SD = 1.31) years with a high school GPA of 3.54 (SD = .44) and college GPA of 3.19 (SD = .48). Their mean mothers' level of education completed was 14 (11 to 17, M = 14.36, SD = 2.13) years while their mean fathers' level of education was 15 (12 to 17, M = 14.93, SD = 1.99) years. The mode of participants' reported income was below $9,600 a year. The mode of parents' income was above $60,000 a year. Eighty-four percent of the sample identified themselves as Caucasian, 4% as African-American, 2% as Hispanic, 2% as Asian, 2% as American-Indian, 2% as biracial, and 2% as other. Forty-four percent of participants self-reported that they were currently single, 36% were in a committed relationship, 11% were dating, and 9% were married (see Tables 1 and 2). Previously, these participants answered questions about parenting knowledge, parenting self-efficacy, endorsement of

adaptive parenting strategies, and endorsement of maladaptive parenting strategies. The participants then watched a parenting education video (i.e., Perry's (2004) *Positive Discipline: Without Shaking, Shouting, or Spanking*) and completed the measures again. These undergraduate men and women, who were not parents and were not expecting a child at the time of the first study, were initially recruited from a large public university through the psychology undergraduate participant pool. At the time of the follow-up study, no follow-up participants were pregnant, had a significant other who was pregnant, or had a child since their initial participation.

Participants in the control group were 42 (16 male and 26 female) undergraduates who completed the same measures as the experimental group without watching the parenting education video approximately one year prior to follow-up. At follow-up, the participants again completed the measures. The initial control group had a sample of 152 (67 male and 85 female) undergraduates, thus the retention rate was 28% (24% of males and 31% of females) for the control group at follow-up. At the time of follow-up, participants ranged in age from 19 to 29 with a mean age of 21 (M = 20.76, SD = 2.44). The mean level of education completed was 14 (13 to 16, M = 14.33, SD = 1.28) years with a high school GPA 3.56 (SD = .57) and college GPA of 3.33 (SD = .49). Their mothers' and fathers' mean level of education completed was both 15 (12 to 17, M = 14.62, SD = 1.87; 3 to 17, M = 14.55, SD = 2.74, respectively) years. The mode of participants' reported income was below $9,600 a year. The mode of parents' income was above $60,000 a year. Eighty-eight percent of the sample identified themselves as Caucasian, 5% as African-American, 5% as American-Indian, and 2% as biracial. Forty-eight percent of participants self-reported that they were single, 26% were in a committed

relationship, 14% were married, and 7% were dating (see Tables 1 and 2). These undergraduate men and women, who were not parents and were not expecting a child at the time of originally completing the measures, were recruited from a large public university through the psychology undergraduate participant pool. At the time of the follow-up study, no follow-up participants were pregnant, had a significant other who was pregnant, or had a child since their initial participation.

Measures

Means and standard deviations, as well as, test-retest reliability and/or internal consistency were established for the following measures in a pilot study conducted by Sigel and Hartung (2006). Prior to conducting the initial study, Sigel and Hartung collected pilot data from 42 (12 male and 30 female) undergraduates (ages 18 to 29; M = 21.83, SD = 2.17). The participants in the pilot study were also recruited through the undergraduate participant pool. The measures were administered twice; the second time was one-week after the first. The mean level of education completed was 14 years (M = 14.45, SD = 1.37). Sixty-nine percent of the participants identified as Caucasian, 21% as Asian American, 2% as American Indian, 2% as African American, 2% as Hispanic, and 2% as biracial. Fifty-seven percent of participants reported being unmarried and 36% reported being married or in a committed relationship.

Demographics Questionnaire (Appendix A). The Demographics Questionnaire was designed specifically for this study. The questionnaire included items regarding the participant's age, race/ethnicity, parenting status, annual salary, marital status, education level, relationship status, parents' education, education status, high school, and college GPA.

Positive Parenting Knowledge Test (PPKT; Appendix B). The PPKT contains 46 multiple-choice questions. The number of correct answers was calculated for each participant. The possible score range was from 0 to 46 with higher scores indicating more parenting knowledge. This measure was designed to measure parenting-skills demonstrated in Perry's (2004) *Positive Discipline: Without Shaking, Shouting, or Spanking* as well as other general parenting skills. In the pilot study, the mean score was 29.74 with a standard deviation of 5.29. Test-retest reliability for the PPKT was good (r = .80).

Parenting Behavior Checklist (PBC; Fox, 1994; Appendix C). The PBC contains 50 questions rated on a four-point Likert-scale as occurring "almost never/never," "sometimes," "frequently," or "almost always/always." The test was designed to measure approval of nurturing and ineffective parenting practices. The measure contains 20 questions regarding approval of nurturing and 30 questions regarding approval of ineffective parenting practices. Higher scores are indicative of support for, or endorsement of, a particular parenting practice. Two-dimensional summary scores were calculated including one for endorsement of nurturing, adaptive, or effective parenting practices and one for endorsement of maladaptive ineffective or maladaptive parenting practices. The possible scores ranged from 20 to 80 for the approval of nurturing and from 30 to 120 for ineffective parenting practices. This questionnaire was originally designed for parents. It was adapted, with permission from the authors (R. Fox, personal communication, July 20, 2005), for use with individuals who are not parents. This required changing the language from present tense to future tense since the participants did not have children. In the pilot study, the mean score for the nurturing parenting

subscale was 67.69 with a standard deviation of 6.31. The mean score for the ineffective parenting subscale was 41.51 with a standard deviation of 7.61.Test-retest reliability for the nurturing parenting (r = .85) and ineffective parenting (r = .85) subscales were adequate. Internal consistency for the nurturing parenting (α = .84) and ineffective parenting (α = .89) subscales were good.

Parenting Sense of Competency Scale (PSOC; Gibaud-Wallston & Wandersman, 1978; Appendix D). The PSOC contains seven items rated on a six-point Likert-scale from "strongly disagree" to "strongly agree." The PSOC was designed to measure parenting self-efficacy. The possible score range was from 7 to 42 with higher scores indicating higher self-efficacy. This scale was also designed for use with parents and was adapted to measure parenting self-efficacy in non-parents by changing the language from the present tense to the future tense. This scale is available in the public domain so permission to revise was not necessary. In the pilot study, the mean score was 26 with a standard deviation of 5.03. Test-retest reliability for the PSOC was adequate (r = .70) and internal consistency was good (α = .84).

Positive Discipline: Without Shaking, Shouting, or Spanking (Perry, 2004). As mentioned previously, the video consists of three, 30-minute chapters. In each chapter, developmental information and effective parenting skills for one of three age groups (i.e., infants, toddlers, and preschoolers) are presented. Topics include anger management, baby comforting, token economies, time outs, colic, post-partum depression, bedtime routines, and prevention of child maltreatment. Although this video was designed to be self-administered by parents, Sigel and Hartung (2006) had research assistants remain in

the room while participants watched the video in an effort to increase attention to the program.

Procedures

Sigel and Hartung (2006) participants and a control group of participants, who agreed to be contacted about a follow-up were sent an e-mail or contacted by phone. The follow-up study was completed online. Participants were informed that this follow-up will measure the effectiveness of self-administered parenting education and its long-term effects on parenting knowledge and attitudes. Participants completed the consent form online (see Appendix E). Next, they completed a demographics questionnaire (see Appendix A) with items about age, race/ethnicity, parenting status, annual salary, marital/relationship status, education, child care experience, and high school and college GPA. Next, participants completed the PPKT, PBC, and PSOC. Finally, they were presented with an online debriefing page (see Appendix F). To help eliminate participants who did not adequately complete the follow-up measures, the time participants started the study and the time they finished the study was recorded. Participants completed the follow-up study in approximately 18 minutes (M = 18.26, SD = 5.37). If the participants completed the study in less than nine minutes (two standard deviations from the mean), their data were not included. This resulted in one participant in the experimental group and two participants in the control group not being included.

CHAPTER IV

FINDINGS

First, demographic variables were summarized and analyzed to determine if the experimental and control group participants differed on demographic variables. Second, analyses were conducted to determine whether or not participants who completed the follow-up differed from those who did not complete the follow-up on initial levels on dependent variables. Third, analyses were conducted in order to determine the effectiveness of the intervention. More specifically, it was hypothesized, that compared to the control group, the experimental group would display higher levels of parenting knowledge, approval of nurturing parenting practices, and self-efficacy as well as lower levels of approval of ineffective parenting practices at one year after the initial intervention. Moreover, it was hypothesized, at follow-up, men and women in the experimental group would display equal levels of parenting knowledge, self-efficacy, and approval of both nurturing and ineffective parenting practices. Fourth, analyses were conducted in order to determine if the initial changes found by Sigel and Hartung (2006) were maintained one year after the initial intervention. It was hypothesized that the levels on the dependent variables would not be significantly different from post-test to one-year follow-up.

Preliminary Analyses

In order to determine if experimental and control groups differed on demographic variables, *t*-test and chi-square analyses were run. This was conducted to ensure that there

were no confounds due to sample differences. Independent samples two-tailed *t*-tests were conducted to identify if there were significant differences on age, education level completed, mothers' highest level of education completed, fathers' highest level of education completed, income, high school GPA, and college GPA between experimental and control participants. A total of six *t*-tests were conducted at an alpha level of .05. Results of the *t*-tests are displayed in Table 1. There were no significant differences between experimental and control participants on these demographic variables. Thus, the two groups were similar, and without potential confounds. Therefore, covariates involving these demographics were not used in subsequent analyses.

Chi-square analyses were conducted to identify if there were significant differences among retention rates, gender, ethnicity, relationship status, income, and parents' income between experimental and control participants. A total of six chi-square analyses were conducted at an alpha level of .05. Results of the chi-square analyses are displayed in Table 2. There were no significant differences between experimental and control participants on these demographic variables. Thus, the two groups were similar, and without potential confounds.

Independent samples two-tailed *t*-tests were conducted on pre-test levels of knowledge, approval of nurturing parenting practices, approval of ineffective parenting practices, and self-efficacy in order to determine if participants who completed the follow-up differed from those who did not complete the follow-up on initial levels on dependent variables. A total of four independent-samples *t*-tests were conducted at an alpha level of .05. Results of the *t*-tests are displayed in Table 3. Results indicated that completers displayed higher levels of approval of nurturing parenting practices at pre-test

compared to those who did not complete the follow-up, t (278) = 3.16, p = .002. There were no significant differences between completers and non-completers on initial levels of parenting knowledge, approval of ineffective parenting practices, or self-efficacy.

Effectiveness of Intervention

Means and standard deviations for all dependent variables are shown in Table 4 and Figures 1-4. It was hypothesized, that compared to the control group, the experimental group would display differences in parenting knowledge, approval of nurturing parenting practices, approval of ineffective parenting practices, and self-efficacy at one year after the initial intervention. In order to help determine if the intervention was effective, a series of four, 2 (gender :men vs. women) x 2 (group :experimental vs. control) x 2 (time: pre-test vs. follow-up) mixed design repeated measures ANOVAs, were conducted on knowledge, approval of nurturing parenting practices, approval of ineffective parenting practices, and self-efficacy as dependent variables. Four ANOVAS were conducted at an alpha level of .05. Results of the ANOVAs are displayed in Table 5.

The main effect analyses indicated that there was a main effect for gender on approval of nurturing parenting practices and approval of ineffective parenting practices, $F(1) = 10.03$, p = .002 and $F(1) = 5.67$, p = .020, respectively. There was not a significant main effect of gender on parenting knowledge or self-efficacy. These main effect analyses indicated that overall men had different levels of approval of nurturing parenting practices and levels of approval of ineffective parenting practices than women. Approval of nurturing practices was higher in women while approval of ineffective parenting practices was higher in men. Additionally, the main effect analyses indicated that there

was a significant main effect for group on parenting knowledge, $F(1) = 4.57$, $p = .036$. There was not a significant main effect for group on approval of nurturing parenting practices, approval of ineffective parenting practices, or self-efficacy. These main effect analyses indicated that experimental group participants differed in levels of parenting practices compared to control group participants. Parenting knowledge was higher in the experimental group than the control group. Finally, main effect analyses indicated that there was a significant main effect for time on parenting knowledge, approval of ineffective parenting practices, and self-efficacy, $F(1) = 39.86$, $p = .001$, $F(1) = 18.25$, $p = .001$, and $F(1) = 4.22$, $p = .043$, respectively. There was not a significant main effect for time on approval of nurturing parenting practices. These main effect analyses indicated that there was a significant difference in the levels of parenting knowledge, approval of ineffective parenting practices, and self-efficacy across time. Parenting knowledge and self-efficacy were higher while approval of ineffective parenting practices was lower at follow-up than at pre-test.

There was not a significant interaction between gender and group or gender and time on the dependent variables. This indicated scores did not differ across gender and group or across gender and time. However, as hypothesized, there was a significant interaction between group and time on parenting knowledge, approval of ineffective parenting practices, and self-efficacy, $F(1) = 11.39$, $p = .001$, $F(1) = 10.54$, $p = .002$, and $F(1) = 7.29$, $p = .008$, respectively. These interaction analyses indicated that parenting knowledge, approval of ineffective parenting practices, and self-efficacy significantly differed across group and time. There was not a significant interaction between time and

group for approval of nurturing parenting practices. Finally, there was not a significant interaction between gender, group, and time on the dependent variables.

To further clarify the interaction analyses, simple effect analyses were conducted to investigate the simple effects of time (pre-test vs. follow-up) at levels of group (experimental vs. control) for parenting knowledge, approval of ineffective parenting practices, and self-efficacy. Approval of nurturing parenting practices was not included in these analyses because there was not a significant interaction between time and group on this variable. As hypothesized, the experimental group analyses indicated that parenting knowledge, self-efficacy, and approval of ineffective parenting practices were significantly different at follow-up than at pre-test, $F(1) = 6.04$, $p = .000$, $F(1) = 3.37$, $p = .002$, and $F(1) = -5.36$, $p = .001$, respectively. In the experimental group, parenting knowledge and self-efficacy were higher while approval of ineffective parenting practices was lower at follow-up than at pre-test. The control group analyses indicated that parenting knowledge was significantly different at follow-up than at pre-test, $F(1) = 2.28$, $p = .008$. In the control group, parenting knowledge was higher at follow-up than at pre-test. Levels of approval of ineffective parenting practices and self-efficacy between pre-test and follow-up did not significantly differ.

Further analyses were conducted to determine if scores on dependent measures for the experimental group at follow-up were significantly different from scores for control group at follow-up. Planned comparisons were conducted on (experimental group vs. control group) at follow-up levels of parenting knowledge, approval of ineffective parenting practices, and self-efficacy. These analyses indicated that follow-up scores for the experimental group were significantly different than scores for the control group on

parenting knowledge and self-efficacy, $F(1) = 2.77$, $p = .007$ and $F(1) = 2.32$, $p = .023$. Follow-up scores for the experimental group were higher than follow-up scores for the control group on parenting knowledge and self-efficacy. Additionally, the scores for the experimental group were significantly different than scores for the control group on approval of ineffective parenting practices, $F(1) = -2.65$, $p = .010$. Follow-up scores for the experimental group were lower than follow-up scores for the control group on approval of ineffective parenting practices.

It was hypothesized, at follow-up, men and women in the experimental group would display equal levels of parenting knowledge, self-efficacy, and approval of both nurturing and ineffective parenting practices. To test this hypothesis, planned comparisons were conducted to investigate gender (men vs. women) at pre-test and at follow-up levels of parenting knowledge, approval of nurturing parenting practices, approval of ineffective parenting practices, and self-efficacy. Pre-test analyses indicated that men had significantly different levels of parenting knowledge, levels of approval of nurturing parenting practices, and levels of approval of ineffective parenting practices than women, $F(1) = -2.16$, $p = .034$, $F(1) = -3.05$, $p = .003$, and $F(1) = 2.38$, $p = .019$, respectively. At pre-test, men had lower levels of parenting knowledge, lower levels of approval of nurturing parenting practices, and higher levels of approval of ineffective parenting practices than women. Levels of self-efficacy did not differ by gender at pre-test. Follow-up analyses indicated that men had significantly different levels of approval of nurturing parenting practices than women, $F(1) = -2.59$, $p = .011$. At follow-up, men had lower levels of approval of nurturing parenting practices than women. Levels of

parenting knowledge, approval of ineffective parenting practices, and self-efficacy did not differ by gender at follow-up, supporting the hypotheses.

Maintenance of Gains in the Experimental Group from Pre-test to Post-test to Follow-up

To test whether or not the initial changes found by Sigel and Hartung (2006) were maintained one year after the initial intervention, a series of three, one-way (time: pre-test vs. post-test vs. follow-up) repeated measures ANOVAs were conducted for the experimental group with knowledge, approval of ineffective parenting practices, and self-efficacy, as dependent variables. Scores on the approval of nurturing parenting practices were not included in these analyses because there was not a significant difference in approval of ineffective parenting practices from pre-test to follow-up. Pre-test vs. post-test scores were included in the analyses because not all of the participants in the Sigel and Hartung (2006) study completed the follow-up. These analyses helped determine if the initial changes found by Sigel and Hartung (2006) were found in this sample of participants. A total of three ANOVAs were conducted at an alpha level of .05. The ANOVA results are displayed in Table 6. These ANOVAs indicated significant differences across time for pre-test, post-test, and follow-up scores on knowledge, approval of ineffective parenting practices, and self-efficacy, $F(2) = 149.78$, $p = .001$, $F(2) = 21.65$, $p = .001$, and $F(1) = 10.21$, $p = .001$, respectively. Planned comparisons indicated that experimental group displayed significant differences in self-efficacy and approval of ineffective parenting practices from pre-test to post-test, $F(1) = 4.78$, $p = .001$ and $F(1) = -6.07$, $p = .001$, respectively. For the experimental group, post-test scores on self-efficacy were higher and scores on approval of ineffective parenting practices were lower than at pre-test. Comparisons between post-test and follow-up scores indicated that

scores on self-efficacy and approval of ineffective parenting practices did not significantly differ. These comparisons suggest that most of the gains made at post-test were maintained at follow-up. Comparisons also indicated that experimental group participants displayed significant difference in parenting knowledge from pre-test to post-test, $F(1) = 17.68$, $p = .001$. For the experimental group, post-test scores on parenting knowledge were higher than at pre-test. However, follow-up scores differed significantly from post-test scores on parenting knowledge, $F(1) = -10.68$, $p = .001$. This suggests that although there were significant differences at follow-up when compared to pre-test scores, some of the initial change at post-test was not maintained.

CHAPTER V

CONCLUSION

One method of preventing DBDs is parenting education. Parenting education can be used as primary, secondary, or tertiary prevention and has been shown to be effective for changing maladaptive parenting practices (Barkley, Guevremont, Anastopoulos, & Fletcher, 1992; Peed, Roberts, & Forehand, 1977; Spaccarelli, Cotler, & Penman, 1992; Webster-Stratton, 1984; Webster-Stratton, 1990; Webster-Stratton, 1994; Webster-Stratton, Kalpocoff, Hollinsworth, 1988; Wells & Egan, 1988) as well as improving children's behaviors (Barkley, Guevremont, Anastopoulos, & Fletcher, 1992; Bernal, Klinnert, & Schultz, 1980; Kazdin, Siegel, Bass, 1992; Peed, Roberts, & Forehand, 1977; Spaccarelli, Cotler, & Penman, 1992; Webster-Stratton, 1984; Webster-Stratton, 1990; Webster-Stratton, 1994; Webster-Stratton, Kalpocoff, Hollinsworth, 1988; Wells & Egan, 1988; Wiltz & Patterson, 1974). However, the majority of parent education programs are delivered as secondary or tertiary prevention. There is limited research evaluating the effectiveness of parent training programs as primary prevention and even less with parents whose children are not high-risk for developing DBDs or with adults who are not currently parents. However, the very limited research conducted with these non-high-risk or with non-expectant parents has been promising (Taylor & Beauchamp, 1988; Zoline & Jason, 1985). Additionally, most parent education programs are time consuming and costly to implement.

The purpose of this project was to evaluate the effectiveness of a brief parent education intervention, delivered as a primary prevention, with non-high-risk and non-expectant parents. Additionally, the project was designed to investigate whether or not gender would affect changes in parenting knowledge, attitudes, and self-efficacy. The ultimate goal of this line of research is to provide evidence for the efficacy of adding parent education to school curricula and programs provided at hospitals, clinics, colleges, and doctor's offices. Specifically, the goal is to make parenting education more easily accessible to both expectant and non-expectant individuals. It is anticipated that making brief parenting education programs available would be an effective primary prevention for disruptive behavior disorders.

To evaluate whether the parent education intervention was effective for non-expectant individuals, experimental participants completed measures of parenting knowledge, approval of nurturing parenting practices, approval of ineffective parenting practices, and self-efficacy prior to, immediately after, and at one-year follow-up after viewing the parent education program. A control group of participants completed measures of parenting knowledge, approval of nurturing parenting practices, approval of ineffective parenting practices, and self-efficacy. These participants did not view the parent education program and then completed the measures again after a one-year interval.

It was hypothesized, that compared to the control group, the experimental group would display higher levels of parenting knowledge, approval of nurturing parenting practices, and self-efficacy as well as lower levels of approval of ineffective parenting practices at one year after the initial intervention. Moreover, it was hypothesized, at

follow-up, men and women in the experimental group would display equal levels of parenting knowledge, self-efficacy, and approval of both nurturing and ineffective parenting practices. Finally, it was hypothesized that the levels on the dependent variables would not be significantly different from post-test to one-year follow-up, and thus initial gains were maintained.

The analyses, as hypothesized, indicated that this brief parent education intervention was effective in non-expectant men and women for positively impacting parenting knowledge, approval of ineffective parenting practices, and self-efficacy towards parenting. Participants who did not receive the intervention did not display significant changes in self-efficacy or approval of ineffective parenting practices, but did display significant changes in parenting knowledge. The positive impact in parenting knowledge for those who did not receive the intervention was unexpected, but may be due to the passing of time. The participants in the study were from the psychology undergraduate subject pool. Many of the participants could have taken additional psychology prior to the follow-up which could have positively impacted their knowledge of parenting skills. However, at follow-up, the level of parenting knowledge in those who received the intervention was greater than those who did not. This indicated that although there were changes in parenting knowledge over time for those who did not receive the intervention, the changes for those who did receive the intervention appeared to be greater.

Levels of acceptance of nurturing parenting practices were not positively influenced at one-year follow-up after viewing the video. However, this may be due to approval of nurturing parenting practices being quite high even at pre-test. Thus, college

students were able to recognize positive parenting techniques prior to watching the parenting video. Their levels of parenting knowledge and self-efficacy were not high at pre-test and their levels of approval of ineffective parenting practice were fairly high at pre-test. Additionally, participants who completed the study compared to those who did not displayed higher initial levels of approval of nurturing parenting practices. The participants who completed the follow-up may have been more motivated to be better parents and thus able to recognize positive parenting techniques and therefore more likely to endorse these items. However, pre-test levels of parenting knowledge, approval of ineffective parenting practices, and self-efficacy did not differ between completers and non-completers.

To evaluate differential effects of the intervention for men and women, pre-test levels of knowledge, parenting practices, and self-efficacy between men and women and between were compared. Women had higher levels of baseline parenting knowledge, more approval of nurturing parenting practices, and less approval of ineffective parenting practices. There were no differences between baseline levels of self-efficacy between genders. These findings suggest that men are more in need of parent education than women. Men endorsed more approval of ineffective parenting practices which in combination with less knowledge and approval of nurturing parenting practices could be a risk factor for disruptive behavior disorders.

However, after the intervention, at one-year follow-up, men and women did not differ on levels of parenting knowledge, approval of ineffective parenting practices, and self-efficacy. Given that men displayed less parenting knowledge and more approval of ineffective parenting practices before the program and that there were no differences

between men and women on these measures one-year after the program, this shows that men improved to a level that was consistent with that of women. Men were more in need of parent education and benefited more from the intervention. Following the intervention, men were as well prepared to become parents as the women in terms of knowledge, approval of ineffective parenting practices, and self-efficacy towards parenting. At follow-up, women continued to display higher levels of approval of nurturing parenting practices than men.

Another goal of this study was to determine if the initial improvements after the intervention in parenting knowledge, self-efficacy, and approval of ineffective parenting practices were maintained one year later. Analyses indicated that initial improvements in self-efficacy and approval of ineffective practices were maintained one year after the intervention. Although, improvements occurred in parenting knowledge, not all of the initial gains were maintained. The non-maintenance of initial gains in parenting knowledge may be due to the study measure of parenting knowledge (i.e., PPKT). This measure was specific to the intervention. The questions were created from information contained in the videos. The participants may have had more difficulty remembering specific details about the video and thus the initial gains were not maintained. Whereas, the study measures of self-efficacy and approval of ineffective parenting practices (i.e., PSOC & PBC) were more global measures of constructs, not specific to the videos. Therefore, it is understandable that initial gains were maintained for self-efficacy and approval of ineffective parenting practices and not parenting knowledge.

Overall, these findings support the efficacy of adding parent education to college and, possibly even, high school curricula. Stated differently, it appears that non-expectant

college students can learn from parenting education. Thus, adults do not need to have parenting on the immediate horizon to benefit from the program. In addition, it appears that men benefited as much as, or more than, women from the intervention. If men feel prepared, knowledgeable, and have adequate self-efficacy towards raising children they may be more involved in parenting their children and there may be more equal sharing of parenting responsibilities between mothers and fathers. Research has found that equally shared parenting, or coparenting, may result in better mental health outcomes for children including less disruptive behavior (Belsky, Woodworth, & Crnic, 1996; McHale & Rasmussen, 1998; Schoppe, Mangelsdorf, & Frosch, 2001).

There are several limitations to the present study. First of all, the sample size was relatively small and thus generalizability is limited. Additionally, although the study includes a control group, participants were not randomly assigned. The participants did not differ significantly on demographic variables, however, confounds may still exist. Moreover, the control group did not receive an alternate parent education video or intervention. Therefore, the control group only eliminates the possibility of a confound related to time. Finally, although the results of this study found significant increases in knowledge and self-efficacy as well as decreases in approval of ineffective parenting practices, initially and at follow-up, these changes may not translate into changes in parenting practices in the future.

In summary, this brief parent education intervention was effective for increasing parenting knowledge and self-efficacy towards parenting while decreasing approval of ineffective parenting practices. These changes were evident for non-expectant men and women immediately after the intervention and at follow-up. These findings support the

efficacy of adding parent education to college and, possibly even high school curricula. Stated differently, it appears that non-expectant college students can learn from parenting education. Thus, adults do not need to have parenting on their immediate horizon to benefit from the program.

The results of this study are important in several different ways. First, it appears that even a very brief parent education program may be effective in providing individuals a base of parenting knowledge and self-efficacy while decreasing approval of ineffective parenting practices that could guard against future disruptive behavior disorders. The research adds to the empirical literature supporting widespread dissemination of parent education as a primary prevention. The majority of parent education videos do not have research support. Parents or future parents do not know the quality or effectiveness of the videos that are available. In addition, it appears that men benefited as much as, or more, from the intervention. If men feel prepared, knowledgeable, and have adequate self-efficacy towards raising children they may be more involved in parenting their children and there may be more equal sharing of parenting responsibilities between the mothers and fathers.

Future research should focus on whether the changes initially displayed and at follow-up will translate into more positive parenting practices and less instances of maltreatment and disruptive behavior disorders. Additionally, future research should examine whether men who are exposed to parenting education are more involved in the parenting responsibilities of their children.

REFERENCES

Aguilar, B., Sroufe, L. A., Egeland, B., & Carlson, E. (2000). Distinguishing the life-course-persistent and adolescent-limited antisocial behavior types: From birth to 16 years. *Development and Psychopathology, 12,* 109–132.

American Psychiatric Association (2000). *Diagnostic and Statistical Manual of Mental Disorders (4th ed.) Text Revision*. Washington: Author.

Barkley, R. A. (1997). *Defiant children: A clinician's manual for assessment and parent education*. Guilford Press: New York.

Barkley, R. A., Guevremont, A. D., Anastopoulos, A. D., & Fletcher, K. E. (1992). A comparison of three family programs for treating family conflicts in adolescents with Attention-Deficit Hyperactivity Disorder. *Journal of Consulting and Clinical Psychology*, 60, 450-462.

Belsky, J., Woodworth, S., & Crnic, K. (1996). Trouble in the second year: Three questions about family interaction. *Child Development, 67,* 556-578.

Benjamin, J., Li., L., Patterson, C., Greenberg, B. D., Murphy, D., & Hamer, D. (1996). Population and family association between D4 dopamine receptor gene and measures of novelty seeking. *Nature Genetic, 12,* 81-84.

Bernal, M. E., Klinnert, M. D., & Schultz, L. A. (1980). Outcome evaluation of behavioral parent education and client centered parent counseling for children with conduct problems. *Journal of Applied Behavior Analysis*, 13, 677-691.

Brestan, E. V., & Eyberg, S. M., (1998). Effective psychosocial treatments of conduct-disordered children and adolescents: 29 years, 82 studies, and 5,272 kids. *Journal of Clinical Child Psychology, Vol. 27(2),* 180-189.

Brinkmeyer, M. Y., & Eyberg, S. M. (2003). Parent-child interaction therapy for oppositional children. In A. E. Kazdin & J. R. Weisz (Eds.), Evidenced-based psychotherapies for children and adolescents (pp. 204–223). New York: Guilford.

Center for Community Wellness (2001). *Final Results for the Kit for New Parents Evaluation.* Retrieved May 2006 from http://www.ccfc.ca.gov/PDF/Kit/Final%20Results.Kit.NOV.1.04.sph.web.pdf

Conduct Problems Prevention Research Group (1992). A developmental and clinical model for the prevention of conduct disorders: The FAST Track Program. *Development and Psychopathology, 4,* 509-527.

Conduct Problems Prevention Research Group (1999). Initial impact of the Fast Track prevention trial for conduct problems: I. The high-risk sample. *Journal of Consulting and Clinical Psychology, 67,* 631–647.

Conduct Problems Prevention Research Group (2002). Evaluation of the first 3 years of the Fast Track prevention trial with children at high risk for adolescent conduct problems. *Journal of Abnormal Child Psychology, 30(1),* 19-35.

Conduct Problems Prevention Research Group (2004). The Effects of the Fast Track Program on Serious Problem Outcomes at the End of Elementary School. *Journal of Clinical Child and Adolescent Psychology, 33(4),* 650-661.

Cook, E. H., Stein, M.A., Krasowski, M. D., Cox N.J., Olkon, D. M., Kieffer, J. E., Leventhal, B. L. (1995). Association of attention-deficit disorder and the dopamine transporter gene. *American Journal of Human Genetics, 56,* 993-998.

Cunningham, C.E., Bremner, R.B., & Boyle, M. (1995). Large group community-based parenting programs for families of preschoolers at risk for disruptive behavior disorders: Utilization, cost effectiveness, and outcome. *Journal of Child Psychology and Psychiatry, 36,* 1141–1159.

Cunningham, C.E., Bremner, R.B. & Secord-Gilbert, M. (2000). *COPE: The Community Parent Education Program: A school based family systems oriented workshop for parents of children with disruptive behavior disorders (Leader's Manual).* Hamilton: COPE Works.

Davidson, R. J., Putnam, K. M., & Larson, C. L. (2000). Dysfunction in the neural circuitry of emotion regulation: A possible prelude to violence. *Science, 289,* 591-594.

Davidson, R. J., Putnam, K. M., & Larson, C. L. (2000). Dysfunction in the neural circuitry of emotion regulation: A possible prelude to violence. *Science, 289,* 591-594.

Disney, E. R., Elkins, I. J., McGue, M., et al. (1999). Effects of ADHD, conduct disorder, and gender on substance use and abuse in adolescence. *American Journal Psychiatry, 156,* 1515-1521.

Dumas, J. D. (1989). Treating antisocial behavior in children: Child and family approaches. *Clinical Psychology Review, 9,* 197-222.

Ebstein, R. P., Novick, O., Umansky, R., Priel, B., Osher, Y., Blaine, D., Bennett, E., Nemanov, L., Katz, M., & Belmaker, R. (1996). Dopamine D4 receptor (D4DR) exon III polymorphism associated with the human personality trait of novelty seeking. *Nature Genetics, 12,* 78-80.

Eron, L. D., (1987). The development of aggressive behavior from the perspective of a developing behaviorism. *American Psychologist, 42,* 435-442.

Eyberg, S. M., Nelson, M. M., & Boggs, S. R. (2008). Evidence-based psychosocial treatments for children and adolescents with disruptive behavior. *Journal of Clinical Child & Adolescent Psychology, 37(1),* 215–237.

Faraone, S V., Biederman, J., Weiffenbach, B., Chu, M. P., Weaver, A., Spencer, T. J., Wilens, T. E., Frazier, J., Cleves, M., & Sakai, J. (1999). Dopamine D-sub-4 gene 7-repeat allele and attention deficit hyperactivity disorder. *American Journal of Psychiatry, 156,* 768-770.

Foley, et. al. (2004). Childhood Adversity, Monoamine Oxidase A Genotype, and Risk for Conduct Disorder. *Archives of General Psychiatry, 61,* 738-744.

Forehand, R. L., & McMahon, R. J. (1981). *Helping the noncompliant child: A clinician's guide to parent education*. Guilford Press: New York.

Gill, M., Daly, G., Heron, S., Hawi, Z., & Fitzgerald, M. (1997). Confirmation of association between attention deficit hyperactivity disorder and dopamine transporter polymorphism. *Molecular Psychiatry, 2,* 311-313.

Goldstein, A.P., Sprafkin, R.P., Gershaw, J.J., & Klein, P. (1980). Skillstreaming the Adolescent. Champaign, IL: Research Press.

Gordon, D. A. (2000). Parent training via CD-ROM: Using technology to disseminate effective prevention practices. *Journal of Primary Prevention, 21(2),* 227-251.

Hanf, C. (1968, April). *Modifying problem behaviors in mother-child interaction: Standardized laboratory situations*. Paper presented at the meeting of the Association of Behavior Therapies, Olympia, WA.

Hanf, C. (1969, April). *A two-stage program for modifying maternal controlling during the mother-child interaction*. Paper presented at the meeting of the Western Psychological Association, Vancouver, British Columbia, Canada.

Hart, B. M., & Risley, T. R. (1995). Meaningful differences in the everyday experience of young American children. Sydney; Paul. H. Brooks.

Hops, H., Walker, H. M., Hernandez, D., Nagoshi, J. T., Omura, R. T., Skindrud, K., & Taylor, J. (1978). CLASS: A standardized in-class program for acting-out children. II. Field test evaluations. *Journal of Educational Psychology, 70,* 636-644.

Institute of Medicine (1994). Reducing risks for mental disorders: Frontiers for preventive intervention research. Washington, DC: National Academy Press.

Kacir, C., & Gordon, D.A. (1999). Parenting Adolescents Wisely: The Effectiveness of an Interactive Videodisk Parent Training Programme in Appalachia. *Child and Family Behaviour Therapy, 21* (4), 1-22.

Kandel, D. B., Johnson, J. G., Bird, H. R., & Canino, G. (1997). Psychiatric disorders associated with substance use among children and adolescents: Findings from the Methods for the Epidemiology of Child and Adolescent Mental Disorders (MECA) Study. *Journal of Abnormal Child Psychology, 25*(2), 121-132.

Kazdin, A. E., Esveldt-Dawson, K., French, N. H., & Unis, A. S. (1987a). Effects of parent management training and problem-solving skills training combined in the treatment of antisocial child behavior. *Journal of the American Academy of Child & Adolescent Psychiatry*, *26*(3), 416.

Kazdin, A. E., Esveldt-Dawson, K., French, N. H., & Unis, A. S. (1987b). Problem-solving skills training and relationship therapy in the treatment of antisocial child behavior. *Journal of Consulting & Clinical Psychology*, *55*(1), 76

Kazdin, A. E., Siegel, T. C., & Bass, D. (1992). Cognitive problem solving skills training and parent management training in the treatment of antisocial behavior in children. *Journal of Consulting and Clinical Psychology, 60,* 733-747.

Kruesi, M. J., Hibbs, E. D., Zahn, T. P., Keysor, C. S., Hamburger, S. D., Bartko, J. J., & Rapoport, J. L. (1992). 2-year prospective follow-up study of children and adolescents with disruptive behavior disorders: Prediction by cerebrospinal fluid 5-hydroxyindoleacetic acid, homovanillic acid, and autonomic measures. *Archives of General Psychiatry, 49(6),* 429-435.

Lagges, A., & Gordon, D. A. (1999). Use of an interactive laserdisc parent training program with teenage parents. *Child and Family Behavior Therapy, 21,* 19-37.

Laurendeau, M. C., Gagnon, G., Desjardins, N., Perreault, R., & Kischuk, N. (1991). Evaluation of an early, mass media parental support intervention. *Journal of Primary Prevention*, 11, 207–225.

Lochman, J. E. (1992). Cognitive-behavioral intervention with aggressive boys: three year follow-up and preventative effects. *Journal of Consulting and Clinical Psychology, 60,* 426-432.

Mannuzza, S., Klein, R. G., Bessler, A., & Malloy, P. (1993). Adult outcome of hyperactive boys: Educational achievement, occupational rank, and psychiatric status. *Archives of General Psychiatry, 50*(7), 565-576.

Manuck, S. B., Flory, J. D., Ferrell, R. E., Dent, K. M., Mann., J. J., & Muldoon, M. F. (1999). Aggression and anger-related traits associated with a polymorphism of the tryptophan hydroxylase gene. *Biological Psychiatry, 45,* 603-614.

McCord, J., Tremblay, R., Vitaro, F., & Desmarais-Gervais, L. (1994). Boys' disruptive behaviour, school adjustment, and delinquency: The Montreal Prevention Experiment. *International Journal of Behavioral Development, 17,* 739–752.

McHale, J. P., & Rasmussen, J. L. (1998). Coparental and family group-level dynamics during infancy: Early family precursors of child and family functioning during preschool. *Development and Psychopathology, 10,* 39-59.

McMahon, R. J., & Forehand, R. L. (2003). *Helping the noncompliant child: Family-based treatment for oppositional behavior (2nd ed.)*: Guilford Press.

McMahon, R. J., & Wells, K. C. (1989). Conduct disorders. In E. J. Mash, & R. A. Barkley (Eds.), *Treatment of childhood disorders* (pp. 73-132). New York: Guilford Press.

Mensah, K. L., Schultz, J. B., & Hughes, R. P. (1983). Parent education needs of selective students. *Family Relations: Journal of Applied Family & Child Studies, 32*(2), 181-189.

Miller, G. E., & Prinz, R. J. (1990). Enhancement of social learning family interventions for childhood conduct disorder. *Psychological Bulletin, 108,* 291-307.

Moffitt, T. E., Caspi, A., Harrington, H., & Milne, B. J. (2002). Males on the life-course-persistent and adolescence-limited antisocial pathways: Follow-up at age 26 years. *Development and Psychopathology, 14,* 179–207.

Moore, P., & Robin, A. (1981). An approach to parent training for high school students. *American Journal of Family Therapy*, *9*(4), 61-69.

Nielsen, D. A., Goldman, D., Virkunnen, M., Tokola, R., Rawlings, R., & Linnoila, M. (1994). Suicidality and 5-hydroxyindoleactic acid concentration associated with a tryptophan hydroxylase polymorphism. *Archives of General Psychiatry, 51,* 34-38.

Nixon, R. D., Sweeney, L., Erickson, D. B., & Touyz, S. W. (2003). Parent-child interaction therapy: A comparison of standard and abbreviated treatments for oppositional defiant preschoolers. *Journal of Consulting and Clinical Psychology, 71*, 251–260.

Offord, D.R., Alder, R.J. and Boyle, M.H. (1986). Prevalence and socio-demographic correlates of Conduct Disorder. *American Journal of Social Psychiatry 6*, pp. 272–278.

Offord, D. R., Boyle, M. H., & Racine, Y. A. (1991). The epidemiology of antisocial behavior in childhood and adolescence. In D. J. Pepler & K. H. Rubin (Eds.), *The development and treatment of childhood aggression* (pp. 31–54). Hillsdale, NJ: Erlbaum.

Patterson, G. R. (1976*). Living with children: New methods for parents and teachers*. Champaign, IL: Research Press.

Patterson, G. R. (1982). *Coercive family process*. Eugene, OR: Castalia.

Patterson, G. R., Chamberlain, P., & Reid, J. B. (1982). A comparative evaluation of a parent-training program. Behavior Therapy, 13, 638–650.

Patterson, G. R., & Gullion, M. E. (1968). *Living with children: New methods for parents and teachers*. Champaign, IL: Research Press.

Patterson, G. R., & Reid, J. B. (1984). Social interactional processes within the family: The study of the moment-by-moment family transactions in which human social development is imbedded. *Journal of Applied Developmental Psychology, 5(3),* 237– 262.

Patterson, G. R., Reid, J. B., & Dishion, T. J. (1992). Antisocial boys. Eugene, OR: Castalia.

Peed, S., Roberts, M., & Forehand, R. (1977). Evaluation of the effectiveness of a standardized parent education program in altering the interaction of mothers and their noncompliant children. *Behavior Modification*, *1*, 323-350.

Pepler, D.J., King, G., Craig, W., Byrd, B., & Bream, L. (1995). The development and evaluation of a multisystem social skills group training programs for aggressive children. *Child & Youth Care Forum, 24*, 297-313.

Pepler, D.J., King, G., & Gyrd, W. (1991). A socially cognitive based social skills training program for aggressive children. In D.J. Pepler & K. Rubin (Eds.). The development and treatment of childhood aggression (pp. 361-379). Hillsdale, NJ: Lawrence Erlbaum Associates.

Perry, J. (Writer), & Perry, J. (Producer/Director). (2004). *Positive Discipline: Without Shaking, Shouting, or Spanking.* [Education Videotape]. Boulder: Injoy Videos.

Raine, A. & Jones, F. (1987). Attention, autonomic arousal, and personality in behaviorally disordered children. *Journal of Abnormal Child Psychology, 15,* 583-599.

Raine, A., Lencz, T., Bihrle, S., LaCasse, L., & Colletti, P. (2000). Reduced prefrontal gray matter volume and reduced autonomic activity in antisocial personality disorder, *Archives of General Psychiatry, 57,* 119–127.

Raine, A., Venebles, P. H., & Williams, M. (1990). Relationships between central and autonomic measures of arousal at age 15 years and criminality at age 24 years. *Archives of General Psychiatry, 47,* 405-410.

Riley, D., Salisbury, M. J., Walker, S. K., & Steinberg, J. (1996, November). *Parenting the first year: Wisconsin statewide impact report*. Madison, WI: University of Wisconsin-Extension and School of Human Ecology, University of Wisconsin.

Rowe, D. C., Stever, C., Giedinghagen, L. N., Gard, J. M., Cleveland, H. H., Terris, S. T., Hohr, J. H., Sherman, S. L., & Waldman, I. D. (1998). Dopamine DRD4 receptor polymorphism and attention deficit hyperactivity disorder. *Molecular Psychiatry,3,* 419-426.

Rutter, M. (1985). Resilience in the face of adversity: Protective factors and resistance to psychiatric disorder. *British Journal of Psychiatry, 147,* 598–611.

Sanders, M. R., & Christensen, A. (1985). A comparison of the effects of child management and planned activities training in five parenting environments. *Journal of Abnormal Child Psychology, 13,* 101–117.

Sanders, M. R., & Glynn, T. (1981). Training parents in behavioral self-management: An analysis of generalization and maintenance. *Journal of Applied Behavior Analysis, 14,* 223-237.

Sanders, M. R., & Markie-Dadds, C. (1992). Toward a technology of prevention of disruptive behaviour disorder: The role of behavioural family intervention. *Behaviour Change, 9,* 186–200.

Sanders, M. R., & Markie-Dadds, C. (1996). Triple P: A multi-level family intervention program for children with disruptive behaviour disorders. In P. Cotton & H. Jackson (Eds.). *Early intervention and prevention in mental health* (pp. 59-85). Melbourne, VIC: Australian Psychological Society.

Sanders, M. R., & Plant, K. (1989). Programming for generalization to high- and low-risk parenting situations in families with oppositional developmentally disabled preschoolers. *Behavior Modification, 13,* 283–305.

Schaefer, C. E., & Briesmeister, J. M. (Eds.). (1989). *Handbook of parent training: Parents as co-therapists for children's behavior problems.* New York: John Wiley & Sons.

Schoppe, S., Mangelsdorf, S., & Frosch, C. (2001). Coparenting, family process, and family structure: Implications for preschoolers' externalizing behavior problems. *Journal of Family Psychology, 15*(3), 526-545.

Schuhmann, E. M., Foote, R. C., Eyberg, S. M., Boggs, S. R., & Algina, J. (1998). Efficacy of parent-child interaction therapy: Interim report of a randomized trial with short-term maintenance. *Journal of Clinical Child Psychology, 27,* 34–45.

Shaw, D. S., Gilliom, M., Ingoldsby, E. M., & Nagin, D. (2003). Trajectories leading to school age conduct problems. *Developmental Psychology, 39,* 189–200.

Sigel, B.A., & Hartung, C. M. (2006). An evaluation of a brief parenting education program for increasing parenting knowledge and self-efficacy while increasing approval of nurturing parenting practices and decreasing approval of ineffective practices. Unpublished Manuscript.

Spaccarelli**,** S., Cotler, S., Penman, D. (1992). Problem-solving skills training as a supplement to behavioral parent education. *Cognitive Therapy and Research, Vol. 16(1),* 1-17.

Taylor, D. K., & Beauchamp, C. (1998). Hospital-based universal prevention strategy in child abuse: A multi-level needs assessment. *Child Abuse & Neglect, 12,* 342-354.

Tremblay, R. E., Pagani-Kurtz, L., Vitaro, F., Mâsse, L. C., & Pihl, R. O. (1995). A bimodal preventive intervention for disruptive kindergarten boys: Its impact through mid-adolescence. *Journal of Consulting and Clinical Psychology, 63(4),* 560-568.

Tremblay, R. E., Vitaro, F., Bertrand, L., LeBlanc, M., Beauchesne, H., Boileau, H., David, L. (1992). Parent and child training to prevent early onset of delinquency: The montreal longitudinal-experimental study. In J. McCord & R. E. Tremblay (Eds.), Preventing antisocial behavior: Interventions from birth through adolescence (pp. 117-138). New York: Guilford.

Vitaro, F., & Tremblay, R. (1994). Impact of a prevention program on aggressive children's friendships and social adjustment. *Journal of Abnormal Child Psychology, 22,* 457–475.

Wahler, R. G., & Dumas, J. E. (1986). Maintenance factors in coercive mother-child interactions: The compliance and predictability hypothesis. *Journal of Applied Behavior Analysis, 19,* 13-22.

Waldman, I. D., Rowe, D. C., Abramowitz, A., Kozel, S., Mohr, J., Sherman, S. L., Cleveland, H. H., Sanders, M. L., & Stever, C. (1996). Association of the dopamine transporter gene (DAT1) and attention deficit hyperactivity disorder in children. *American Journal of Human Genetics, 59,* A25.

Walker, H. M., Kavanagh, K., Stiller, B., Golly, A., Severson, H. H., & Feil, E. G. (1998). First Step to Success: An early intervention approach for preventing school antisocial behavior. *Journal of Emotional and Behavioral Disorders, 6,* 66–80.

Webster-Stratton**,** C., (1984). Randomized trial of two parent-training programs for families with conduct-disordered children. *Journal of Consulting and Clinical Psychology, 52(4),* 666-678.

Webster-Stratton**,** C., (1990). Enhancing the effectiveness of self-administered videotape parent education for families with conduct-problem children. *Journal of Abnormal Child Psychology, 18(5),* 479-492.

Webster-Stratton, C. (1992). *The Incredible Years: A Trouble-Shooting Guide for Parents of Children Ages 3–8 Years*. Toronto, Canada: Umbrella Press.

Webster-Stratton**,** C., (1994). Advancing videotape parent education: A comparison study. *Journal of Consulting and Clinical Psychology, 62(3),* 583-593.

Webster-Stratton, C. & Hammond, M. (1997). Treating children with early-onset conduct problems: A comparison of child and parent training interventions. *Journal of Consulting and Clinical Psychology, 65,* 93-109.

Webster-Stratton**,** C., Kolpacoff, M., & Hollinsworth, T., (1988). Self-administered videotape therapy for families with conduct-problem children: Comparison with two cost-effective treatments and a control group. *Journal of Consulting and Clinical Psychology, 56(4),* 558-566.

Weiss, B., Dodge, K. A., Pettit, G. S., & Bates, J. E. (1992). Some consequences of early harsh discipline: Child aggress and maladaptive social information processing style. *Child Development, 63,* 1321-1325.

Weiss, G., Hechtman, L., Milroy, T., & Perlman, T. (1985). Psychiatric status of hyperactives as adults: A controlled prospective 15-year follow-up of 63 hyperactive children. *Journal of the American Academy of Child Psychiatry, 24*(2), 211-220.

Weiss, G., & Hechtman, L. T. (1993). *Hyperactive children grown up: ADHD in children, adolescents, and adults (2nd ed.)*: Guilford Press.

Wells, K. C., & Egan, J. (1988). Social learning and systems family therapy for childhood oppositional disorder: Comparative treatment outcome. *Comprehensive Psychiatry, 29*(2), 138-146.

Wiltz**,** N. A., & Patterson, G. R., (1974). An evaluation of parent education procedures designed to alter inappropriate aggressive behavior of boys. *Behavior Therapy, 5(2),* 215-221.

Woermann, F. G., van Elst, L. T., Koepp, M. J., Free, S. L., Thompson, P. J., Trimble, M. R., & Duncan, J. S. (2000). Reduction of frontal neocortical grey matter associated with affective aggression in patients with temporal lobe epilepsy: an objective voxel by voxel analysis of automatically segmented MRI. *Journal of Neurology, Neurosurgery, and Psychiatry, 68,* 162-169.

Zoline, S. S., & Jason, L. A. (1985). Preventive parent education for high school students. *Journal of Clinical Child Psychology, 14*(2), 119-123.

Zolna, J., Kimmich, M., & Hawkinson, L. (2001). *Final report: Evaluation of First Step to Success replication.* Submitted to the Oregon Commission on Children and Families, Salem, OR.

APPENDICES

Appendix A.

DEMOGRAPHIC QUESTIONNAIRE

Please answer the following questions. All responses will be kept confidential.

1. Your sex (check one): ☐ Men ☐ Women

2. Your age: _____

3. Your ethnicity: (Please check all that apply)

☐ Caucasian
☐ African-American
☐ Hispanic/Latino
☐ Asian/Asian-American
☐ American Indian _____
☐ Biracial _____
☐ Other _____

4. Your highest level of education completed (check one):

☐ 1 ☐ 2 ☐ 3 ☐ 4 ☐ 5 ☐ 6 ☐ 7 ☐ 8 (Grade school)
☐ 9 ☐ 10 ☐ 11 ☐ 12 (High school)
☐ 13 ☐ 14 ☐ 15 ☐ 16 (College)
☐ 17 and over (Graduate School)

5. Your total household income per month (check one):

☐ Less than $800 ☐ $800-$1,000 ☐ $1001-$1,500 ☐ $1,501-$2,000
☐ $2,001-$2,500 ☐ $2,501-$3,000 ☐ $3,001-$3,500 ☐ $3,501-$4,000
☐ $4,001-$4,500 ☐ $4,501-$5,000 ☐ $5,001 and above

6. Your parent's household income per month (check one):

☐ Less than $800 ☐ $800-$1,000 ☐ $1001-$1,500 ☐ $1,501-$2,000
☐ $2,001-$2,500 ☐ $2,501-$3,000 ☐ $3,001-$3,500 ☐ $3,501-$4,000
☐ $4,001-$4,500 ☐ $4,501-$5,000 ☐ $5,001 and above

7. Current Relationship Status (check one):

☐ Married ☐ Divorced ☐ Separated ☐ Single ☐ Widowed ☐ Dating
☐ In a committed relationship

8. Do you have children (check one)? ☐ Yes ☐ No

9. If yes, please provide the following information:

Child's age ☐ Sex: ☐ Men ☐ Women

Child's age ☐ Sex: ☐ Men ☐ Women

Child's age ☐ Sex: ☐ Men ☐ Women

10. Are you currently expecting a child (check one)? ☐ Yes ☐ No

11. If you are currently expecting a child, please enter your expected due date. ☐

12. If you are expecting a child, please describe your relationship with your expectant child's mother/father (check one).

☐ Married ☐ Divorced ☐ Separated ☐ Single

☐ Widowed ☐ Dating ☐ In a committed relationship

13. If you are not currently expecting a child, are you thinking about having children (check one)?

☐ Yes ☐ No

14. What type of child care experience have you had (check all that apply)?

☐ Babysitting

☐ I already have children

☐ Parenting classes ☐

☐ Parenting books ☐

☐ Parenting videos ☐

☐ Parenting cd-roms ☐

☐ Other ☐

Appendix B.

POSITIVE PARENTING KNOWLEDGE TEST

Please choose the correct answer.

1) When a baby is crying it most often means that the baby
   a) is hungry or uncomfortable
   b) is spoiled and wants attention
   c) is sick and needs to go to the doctor
   d) all of the above

2) When going outside, babies should wear
   a) several more layers of clothing than adults plus a blanket
   b) several more layers of clothing than adults
   c) the same or one more layer of clothing than adults
   d) one less layer of clothing than adults

3) When a baby is playing with something unsafe a parent should
   a) Take the object away and give the baby a firm spanking
   b) Take the object away and give the baby an explanation
   c) Take the object away and give the baby a lecture
   d) Get the baby's attention, say "no", and replace the unsafe object with an appropriate one

4) If a parent responds quickly when a baby is crying the baby will
   a) likely become spoiled
   b) learn to cry more often if this is the only time the parent attends to the child
   c) learn to cry more often if the parent also attends to the baby when he/she is not crying
   d) always learn to cry more often

5) Shaking a baby lightly can cause
   a) the baby to stop crying
   b) brain damage
   c) death
   d) all of the above

6) A baby's personality or temperament
   a) Is inborn and typically does not change much
   b) Can be changed with love and affection
   c) Can be changed if the baby is neglected
   d) Is usually the same as the mother's

7) Which of the following are ways to connect with a baby
   a) develop routines
   b) read to a baby
   c) use physical touch
   d) all of the above

8) Babies may misbehave because
   a) they are curious at this age
   b) they enjoy making their parents angry
   c) their parents are giving them too much freedom to explore
   d) their parents are not using effective discipline strategies

9) It is important for a parent to know and use appropriate anger management techniques because
   a) An angry parent might get carried away and hurt a child
   b) An angry parent might scare a child
   c) An angry parent might use ineffective discipline techniques
   d) all of the above

10) Colic usually lasts for no more than
   a) 1-3 months
   b) 3-4 months
   c) 5-12 months
   d) 1-2 years

11) A parent should _____ let a baby have a pacifier during the first few weeks of breast feeding.
   a) always
   b) never
   c) sometimes
   d) only after a baby has been fed

12) Postpartum depression can occur at any time within _____ after the birth of a baby.
   a) 3 months
   b) 6 months
   c) 1 year
   d) 2 years

13) How long do symptoms of depression have to be present for in order for a mother to have postpartum depression?
   a) 1 week
   b) 2 weeks
   c) 1 month
   d) 2 months

14) How long should a mother breast feed a baby?
   a) For two months
   b) For four months
   c) Until the baby starts eating solid food
   d) The longer the better

15) The most effective way to prevent a toddler from being in a dangerous situation is to
   a) set clear rules and boundaries
   b) supervise the toddler closely
   c) childproof the house
   d) all of the above

16) When a toddler is in danger a parent should remove the child from the situation and
   a) give the child a firm spanking
   b) give the child a firm but brief explanation (ex. that's not safe)
   c) give the child a detailed explanation
   d) send the child to his/her room without any explanation

17) If a toddler bites another child, a parent should
   a) give the child a firm spanking
   b) bite the child back to teach a lesson
   c) give a firm but brief explanation (ex. “No biting”)
   d) tell the child not to do it again

18) Biting usually stops around age
   a) 1-2 years
   b) 2-3 years
   c) 3-4 years
   d) 4-5 years

19) One reason why a toddler may bite is that
   a) he/she is angry
   b) he/she is teething
   c) he/she is confused about the difference between kissing and biting
   d) all of the above

20) At 12 months of age (1 year), toddlers
   a) begin to understand and follow simple rules consistently
   b) begin to understand but not follow simple rules consistently
   c) do not understand but follow simple rules consistently
   d) do not understand and do not follow simple rules

21) At 24 months of age (2 years), toddlers
   a) begin to understand and follow simple rules consistently
   b) begin to understand but not follow simple rules consistently
   c) do not understand but follow simple rules consistently
   d) do not understand and do not follow simple rules

22) Which statement would be most effective in teaching a child rules?
   a) Only adults can walk in the street.
   b) Don’t ever do that again.
   c) Always walk on the sidewalk.
   d) Never walk in the street.

23) How often should a parent offer food to a toddler?
   a) Approximately 3-4 times per day (every 4-6 hours)
   b) Approximately 5-6 times per day (every 2-3 hours)
   c) Immediately when the child asks for food
   d) 15 minutes after the child asks for food if he/she is still hungry

24) Which of the following is the most effective question for a toddler at snack time?
   a) What do you want to eat?
   b) Do you want carrots?
   c) Do you want carrots or grapes?
   d) All of the above are equally effective

25) If a toddler starts playing with his/her food at the table, a parent should
   a) send the toddler to bed without dinner
   b) force the toddler to finish the food on the plate
   c) take the food away and give the toddler a treat
   d) take the food away and provide the toddler with another activity

26) Toddlers prefer foods with what type of texture?
   a) Smooth
   b) Rough
   c) Hard
   d) Light

27) One way to possibly prevent obesity in later life is to
   a) Feed a toddler approximately 3-4 times per day (every 4-6 hours)
   b) Feed a toddler approximately 5-6 times per day (every 2-3 hours)
   c) Let a toddler follow his/her own hunger signals
   d) Withhold food

28) An effective strategy for increasing cooperation at bedtime would be
   a) Changing the bedtime routine every evening
   b) Using the same bedtime routine every evening
   c) Playing actively with the child after reading quietly together
   d) None of the above

29) If a child leaves his/her room after the bedtime routine has been completed, a parent should
   a) yell at the child and let him/her stay up a little longer
   b) let the child stay up a little longer and then gently lead the child back to bed
   c) talk to the child about why he/she doesn’t want to go to bed
   d) gently lead the child back to bed

30) Giving a child a brief warning before changing activities (ex. in 5 minutes it will be time to put your pajamas on) will
   a) Encourage the child to argue with you
   b) Increase the likelihood that the child will comply
   c) Decrease the likelihood that the child will comply
   d) Take the control away from the parent

31) A parent tells a child that it will be time to turn off the TV when the current show is over. After the show is over, the child politely asks the parent to let him/her watch one more show. The parent should
   a) turn off the TV
   b) turn off the TV and discuss the situation at length with the child
   c) let the child watch one more show since he/she asked politely
   d) let the child watch one more show if he/she promises to turn off the TV after that show

32) If time out does not seem to be working for a preschooler a parent should
   a) increase the length of the time out
   b) not engage in a positive activity with the child after the timeout
   c) give up on time out because it does not work for the child
   d) stop using time out temporarily and focus on increasing positive family relations

33) Preschoolers may become defiant or oppositional because
   a) they enjoy making their parents angry
   b) they are asserting their new found independence
   c) their parents did not discipline them enough when they were toddlers
   d) their parents are not using effective discipline strategies

34) Which of the following is a good question for a preschooler?
   a) Do you want to get dressed?
   b) Do you want to wear your blue shirt?
   c) What do you want to wear? You can wear anything you want except your red shirt.
   d) Do you want to wear your blue shirt or your red shirt?

35) An example of a good directive for a preschooler would be
   a) Put on your socks, shoes, and coat
   b) Put on your coat
   c) Would you like to put on your coat?
   d) None of the above

36) Preschoolers need approximately how many hours of sleep in a night?
   a) 8-10
   b) 10-12
   c) 12-14
   d) 14-16

37) One reason a preschooler might act aggressively is that
   a) he/she has limited self control
   b) he/she is getting used to being away from home
   c) he/she is hungry or tired
   d) all of the above

38) How long should a timeout last?
   a) It depends on what the child did
   b) Approximately one minute for every year old the child is
   c) Approximately 5 minutes
   d) Approximately 15 minutes

39) Using physical punishment like spanking with a hand or belt
   a) rarely causes harmful physical and emotional side effects
   b) may cause harmful side effects if the parent is angry or frustrated
   c) usually does not teach a child that hitting solves problems
   d) often helps children learn not to hit, kick, or bite because it is hurtful

40) Using physical punishment like spanking with a hand or belt
   a) is always an effective way to discipline a child
   b) may stop the unwanted behavior for a short time
   c) is a more effective way to discipline than time out
   d) is a more effective way to discipline than grounding

41) Shouting, threatening, lecturing, or using put downs
   a) is a more effective way to discipline than spanking
   b) is likely to damage a child's self-esteem
   c) often helps children learn to speak respectfully to adults
   d) often stops the unwanted behavior for a long time

42) If you verbally praise a child frequently following good behavior
   a) The child will become spoiled
   b) The praise will seem insincere when the child achieves a major accomplishment
   c) The likelihood that the good behavior will occur again will increase
   d) The likelihood that the good behavior will occur again will decrease

43) Which of the following is the best example of effective use of praise?
   a) Thanks for putting your gum in the garbage and not under the table like you usually do.
   b) I'm glad you are making your bed, but why can't you do it every morning?
   c) Thank you for sitting and waiting quietly for me while I was on the phone.
   d) You came to the table when I asked but you should have washed your hands first.

44) Which of the following is an example of effective use of reward
   a) You can watch TV after you clean up your room.
   b) You can watch TV if you promise to clean up your room when the show is over.
   c) You can watch TV if you don't tell your brother.
   d) None of the above.

45) Which of the following is an example of ineffective use of reward?
   a) You can play ball if you feed your dog.
   b) You can play ball if you promise to feed your dog when you get back.
   c) Since you cleaned your room, you can play ball.
   d) None of the above

46) Ignoring a child who is misbehaving
   a) should never be done
   b) can be an effective technique for managing a child's behavior
   c) should be discontinued if a child further escalates his/her behavior
   d) teaches a child that he/she is alone in the world

Positive Parenting Knowledge Test Answer Key

1) A
2) C
3) D
4) B
5) D
6) A
7) D
8) A
9) D
10) B
11) B
12) C
13) B
14) D
15) D
16) B
17) C
18) C
19) D
20) D
21) B
22) C
23) B
24) C
25) D
26) A
27) C
28) B
29) D
30) B
31) A
32) D
33) B
34) D
35) B
36) B
37) D
38) B
39) B
40) B
41) B
42) C
43) C
44) A
45) B
46) B

Appendix C.

REVISED VERSION OF FOX'S PARENTING BEHAVIOR CHECKLIST

We are interested in how individuals will raise children. Regardless, of whether you have never had children, expecting to have children, are in the middle of having your family, or have finished with childbearing, you will have beliefs about how you will raise children. This questionnaire is designed to help us understand those beliefs.

For each statement, choose an answer that applies to how you will raise your child. Choose only one answer to each statement. Do not skip any item.

1. I will read to my child at bedtime.

1	2	3	4
almost never/never	sometimes	frequently	almost always/always

2. I will spank my child at least once a week.

1	2	3	4
almost never/never	sometimes	frequently	almost always/always

3. My child and I will play together on the floor.

1	2	3	4
almost never/never	sometimes	frequently	almost always/always

4. If my child hits, kicks, bites, or scratches someone, I will spank him/her.

1	2	3	4
almost never/never	sometimes	frequently	almost always/always

5. I will get books for my child (from the library or store) at least once a month.

1	2	3	4
almost never/never	sometimes	frequently	almost always/always

6. When my child doesn't do what I tell her/him to do, I will spank her/him.

1	2	3	4
almost never/never	sometimes	frequently	almost always/always

7. If my child hit me in anger, I will hit or spank my child.

1	2	3	4
almost never/never	sometimes	frequently	almost always/always

8. If my child is overactive, I will yell at her/him.

1	2	3	4
almost never/never	sometimes	frequently	almost always/always

9. If my child is overactive, I will involve her/him in quiet activities.

1	2	3	4
almost never/never	sometimes	frequently	almost always/always

10. I will take my child to the park, playground, movies, library, and ballgames.

1	2	3	4
almost never/never	sometimes	frequently	almost always/always

11. I will yell at my child for whining.

1	2	3	4
almost never/never	sometimes	frequently	almost always/always

12. If my child cries after being put to bed, I will spank him/her.

1	2	3	4
almost never/never	sometimes	frequently	almost always/always

13. If my child cries after being put to bed, I will yell at him/her.

1	2	3	4
almost never/never	sometimes	frequently	almost always/always

14. I will play make-believe with my child.

1	2	3	4
almost never/never	sometimes	frequently	almost always/always

15. To toilet train my child, I will make him/her sit on the toilet for over 15 minutes.

1	2	3	4
almost never/never	sometimes	frequently	almost always/always

16. I will spank my child for refusing to eat.

1	2	3	4
almost never/never	sometimes	frequently	almost always/always

17. I will get so angry with my child I will spank him/her on the bottom.

1	2	3	4
almost never/never	sometimes	frequently	almost always/always

18. I will let my boy play with dolls or my girl play with trucks.

1	2	3	4
almost never/never	sometimes	frequently	almost always/always

19. I will spank my child in public for bad behavior.

1	2	3	4
almost never/never	sometimes	frequently	almost always/always

20. I will yell at my child for being too noisy at home.

1	2	3	4
almost never/never	sometimes	frequently	almost always/always

21. I will scold my child for soiling in his/her pants.

1	2	3	4
almost never/never	sometimes	frequently	almost always/always

22. I will threaten to tell my spouse/partner about my child's bad behavior.

1	2	3	4
almost never/never	sometimes	frequently	almost always/always

23. I will threaten to punish my child but then I won't.

1	2	3	4
almost never/never	sometimes	frequently	almost always/always

24. I will tell my child that he/she is bad.

1	2	3	4
almost never/never	sometimes	frequently	almost always/always

25. I will plan surprises for my child (birthday parties, gifts).

1	2	3	4
almost never/never	sometimes	frequently	almost always/always

26. I will scold my child for playing with his/her private parts.

1	2	3	4
almost never/never	sometimes	frequently	almost always/always

27. I will tell my child to behave so that my spouse/partner won't get angry.

1	2	3	4
almost never/never	sometimes	frequently	almost always/always

28. I will yell at my child for spilling food.

1	2	3	4
almost never/never	sometimes	frequently	almost always/always

29. I will find it useful to talk to other parents about raising children.

1	2	3	4
almost never/never	sometimes	frequently	almost always/always

30. I will punish my child for wetting the bed.

1	2	3	4
almost never/never	sometimes	frequently	almost always/always

31. I will spend at least one hour a day playing with or reading to my child.

1	2	3	4
almost never/never	sometimes	frequently	almost always/always

32. I will make my child stay at the table until all of his/her food is gone.

1	2	3	4
almost never/never	sometimes	frequently	almost always/always

33. I will spank my child for wetting his/her pants.

1	2	3	4
almost never/never	sometimes	frequently	almost always/always

34. I will read to my child at least once a week.

1	2	3	4
almost never/never	sometimes	frequently	almost always/always

35. I will slap my child for being sassy or backtalking.

1	2	3	4
almost never/never	sometimes	frequently	almost always/always

36. I will tell my child he/she should be ashamed of him/herself for soiled pants (bowel movement).

1	2	3	4
almost never/never	sometimes	frequently	almost always/always

37. When my child has a temper tantrum, I will spank him/her.

1	2	3	4
almost never/never	sometimes	frequently	almost always/always

38. I will hit my child with an object (such as a spoon or belt) when he/she behaves very badly.

1	2	3	4
almost never/never	sometimes	frequently	almost always/always

39. I will allow messy play (finger painting, play dough).

1	2	3	4
almost never/never	sometimes	frequently	almost always/always

40. I will take walks with my child at least once a week.

1	2	3	4
almost never/never	sometimes	frequently	almost always/always

41. I will talk to or hold my child when he/she is scared.

1	2	3	4
almost never/never	sometimes	frequently	almost always/always

42. When I need help or advice about my child, I will read books or magazines about parenting.

1	2	3	4
almost never/never	sometimes	frequently	almost always/always

43. When I need help or advice about my child, I will talk to my friends.

1	2	3	4
almost never/never	sometimes	frequently	almost always/always

44. I will arrange activities for my child to play such as coloring, painting, or toy play.

1	2	3	4
almost never/never	sometimes	frequently	almost always/always

45. I will tell my child God doesn't like children who lie.

1	2	3	4
almost never/never	sometimes	frequently	almost always/always

46. I will praise my child for learning new things.

1	2	3	4
almost never/never	sometimes	frequently	almost always/always

47. I will send my child to bed as a punishment.

1	2	3	4
almost never/never	sometimes	frequently	almost always/always

48. My child will have a regular bedtime routine (such as wash up, put on pajamas, read a story, say prayers).

1	2	3	4
almost never/never	sometimes	frequently	almost always/always

49. I will encourage my child to spend time with my spouse/partner or other relatives.

1	2	3	4
almost never/never	sometimes	frequently	almost always/always

50. I will tell my child that his/her bad behavior will make God sad.

1	2	3	4
almost never/never	sometimes	frequently	almost always/always

Appendix D.

REVISED VERSION OF GIBAUD-WALLSTON AND WANDERSMAN'S PARENTING SENSE OF COMPETENCY SCALE

We are interested in individual's beliefs about their readiness to raise children. Regardless, of whether you have never had children, expecting to have children, are in the middle of having your family, or have finished with childbearing, you will have beliefs about your readiness to raise children. This questionnaire is designed to help us understand those beliefs.

For each statement, choose an answer that applies to how much you agree with each statement. Choose only one answer to each statement. Do not skip any item.

1) The problems of taking care of a child will be easy to solve once I know how my actions affect my child.

1 2 3 4 5 6
STRONGLY DISAGREE STRONGLY AGREE

2) I will make a good model for a new mother/father/parent to follow in order to learn to be a good parent.

1 2 3 4 5 6
STRONGLY DISAGREE STRONGLY AGREE

3) Being a parent will be manageable, any problems will be easily solved.

1 2 3 4 5 6
STRONGLY DISAGREE STRONGLY AGREE

4) I will meet my own personal expectations for expertise in caring for my child.

1 2 3 4 5 6
STRONGLY DISAGREE STRONGLY AGREE

5) If anyone will be able to find the answer to what is troubling my child I will be the one.

1 2 3 4 5 6
STRONGLY DISAGREE STRONGLY AGREE

6) I feel thoroughly familiar with the role of being a mother/father/parent.

1 2 3 4 5 6
STRONGLY DISAGREE STRONGLY AGREE

7) I honestly believe that I have all the skills necessary to be a good mother/father/parent to my child.

1 2 3 4 5 6
STRONGLY DISAGREE STRONGLY AGREE

Appendix E.

CONSENT FORM
Study of Parenting Knowledge, Beliefs, and Attitudes in College Students; Follow-up
Benjamin Sigel, Principal Investigator
Maureen Sullivan, Ph.D., Faculty Supervisor

Project Purpose. This study is designed to help us to better understand parenting practices and effective tools for teaching parenting skills.

Participation. If you decide that you would like to participate in our study, you will complete some questionnaires. The questionnaires will include questions about you and various aspects of parenting. Your participation is completely voluntary and you may withdraw from the study at any time. You must be 18 years old to participate in this study.

Benefits. Participating in this research study will allow us to better understand effective teaching tools of parenting skills. To thank you for your participation every 25 individuals who complete the study will be entered into a raffle for $100.

Risks. If you agree to participate in this study, there may be a slight risk of discomfort with some of the questions. For instance, some questions discuss spanking, slapping, and/or yelling at a child. Additionally, for instance, some questions will ask you to report your race/ethnicity and family income. If you choose not to answer these questions you may still take part in the study. Finally, there is also the inconvenience of the time involved (approximately 2o minutes).

Data Security. Data will be collected from an online administration. The data will be sent to a password protected database. The database will store data along with your id number from the original study. The data will be saved for five years. The records of this study will be kept private. Any written results will discuss group findings and will not include information that will identify you. Research records will be stored securely and only researchers and individuals responsible for research oversight will have access to the records.

Please feel free to ask questions at any time by contacting Benjamin Sigel, Principal Investigator, at 405-744-2960 or Dr. Maureen Sullivan, Associate Professor of Psychology and Faculty Supervisor, at 405-744-6028. If you have any concerns or questions about your rights as a research participant, please contact (confidentially, if you wish) Dr. Sue Jacobs, IRB Chair, Oklahoma State University, 219 Cordell North, Stillwater, OK 74078. Phone: 405-744-5700. IRB email address: irb@okstate.edu

I HAVE HAD THE OPPORTUNITY TO READ THIS CONSENT FORM AND I AM PREPARED TO PARTICIPATE IN THIS PROJECT.

CLICK ON YES OR NO TO CONTINUE

Appendix F.

Thank you for your participation. This study is designed to help us to better understand parenting practices and effective tools for teaching parenting skills. Your cooperation is sincerely appreciated.

This experimental study is unlikely to cause distress greater than that experienced through daily life, but if necessary, please do not hesitate to contact the Psychological Services Center at 744-5975 for an appointment.

For additional information or questions regarding this study contact:

Benjamin Sigel, M.S.
Oklahoma State University
Psychology Department
215 North Murray Hall
Stillwater, OK 74078

Email: benjamin.a.sigel@okstate.edu
Phone: 744-2960

Dr. Maureen Sullivan
Oklahoma State University
Psychology Department
215 North Murray Hall
Stillwater, OK 74078

Email: maureen.sullivan@okstate.edu
Phone: (405)744-6028

Institutional Review Board for Human Subject Research

Dr. Sue Jacobs, Chair

E-mail: irb@okstate.edu
Phone: (405)744-6040

TABLES

Table 1.

Means, Standard Deviations, and t-test Results for Demographic Variables

Demographic	Sample	*n*	*M*	*SD*	*t*	*p*
Age	Experimental Control	45 42	21.04 20.76	1.61 2.44	.64	.523
Education Level	Experimental Control	45 42	14.36 14.33	1.31 1.28	.09	.932
High School GPA	Experimental Control	45 42	3.54 3.56	.44 .57	-.19	.853
College GPA	Experimental Control	45 42	3.19 3.33	.48 .49	1.33	.186
Mother's Educational Level	Experimental Control	45 42	14.36 14.62	2.13 1.87	-.59	.557
Father's Educational Level	Experimental Control	45 42	14.93 14.55	1.99 2.74	.75	.453

* = $p < .05$

Table 2.

Frequencies, Percentages, and Chi-square Results for Demographic Variables

	Experimental		*Control*			
Demographic	*n*	*%*	*n*	*%*	*Chi-square*	*p*
Recidivism	45	35	42	28	1.84	.175
Gender						
Male	21	47	16	38	.65	.419
Female	24	53	26	62		
Ethnicity						
Caucasian	38	84	37	88		
African-American	2	4	2	5		
Hispanic	1	2	0	0	3.25	.777
Asian	1	2	0	0		
American-Indian	1	2	2	5		
Biracial	1	2	1	2		
Other	1	2	0	0		
Relationship Status						
Married	4	9	6	14		
Divorced	0	0	1	0		
Separated	0	0	0	0	2.65	.619
Single	20	44	20	48		
Widowed	0	0	0	0		
Dating	5	11	3	7		
In a committed relationship	16	36	11	26		
Income						
Less than $800	31	70	26	62		
$800-$1,000	5	11	8	19		
$1001-$1,500	3	7	1	2		
$1,501-$2,000	1	2	4	10		
$2,001-$2,500	1	2	2	5	9.92	.271
$2,501-$3,000	1	2	0	0		
$3,001-$3,500	1	2	0	0		
$3,501-$4,000	0	0	0	0		
$4,001-$4,500	0	0	0	0		
$4,501-$5,000	1	2	0	0		
$5,001 and above	0	0	1	2		
Parent's Income						
Less than $800	0	0	2	5		
$800-$1,000	1	2	0	0		
$1001-$1,500	1	2	1	2		
$1,501-$2,000	2	4	0	0		
$2,001-$2,500	3	7	2	5	14.32	.158
$2,501-$3,000	8	19	0	0		
$3,001-$3,500	5	11	5	12		
$3,501-$4,000	4	9	3	7		
$4,001-$4,500	3	7	5	12		
$4,501-$5,000	2	4	3	7		
$5,001 and above	16	36	20	48		

* = $p < .05$

Table 3.

Means, Standard Deviations, and T-test Results for Groups on Pre-test Dependent Variables

Pre-test Dependent Variable	Group	*n*	*M*	*SD*	*t*	*p*
Knowledge	Completers Non-completers	87 192	28.65 28.46	4.23 4.63	.34	.736
Nurturing Practices	Completers Non-completers	87 192	68.49 65.55	6.35 7.56	3.16*	.002
Ineffective Practices	Completers Non-completers	87 192	41.30 42.25	8.32 9.12	-.83	.408
Self-Efficacy	Completers Non-completers	87 192	26.95 27.91	5.83 5.80	-1.28	.203

* = $p < .05$

Table 4.

Pre-, Post-, and Follow-up Levels of Parenting Knowledge, Parenting Practices, and Self-efficacy

Experimental			
	Men (*SD*); *n = 21*	Women (*SD*); *n = 24*	Total (*SD); n = 45*
Knowledge			
Pre-test	27.81 (4.92)	30.04 (3.59)	29.00 (4.36)
Post-test	38.35 (3.67)	38.38 (3.39)	38.36 (3.48)
Follow-up	32.00 (5.57)	32.39 (3.14)	32.20 (4.42)
Nurturing Practices			
Pre-test	66.81 (6.58)	70.67 (6.07)	68.87 (6.54)
Post-test	68.15 (6.88)	72.67 (6.74)	70.61 (7.10)
Follow-up	66.23 (9.21)	70.57 (7.32)	68.50 (8.47)
Ineffective Practices			
Pre-test	43.14 (10.19)	40.46 (7.96)	41.71 (9.06)
Post-test	35.60 (4.28)	34.25 (5.56)	34.86 (5.01)
Follow-up	37.19 (10.40)	34.52 (5.93)	35.80 (8.37)
Self-efficacy			
Pre-test	26.33 (6.18)	27.25 (5.01)	26.82 (5.54)
Post-test	30.40 (7.07)	30.21 (5.36)	30.30 (6.12)
Follow-up	28.43 (4.83)	30.67 (5.36)	29.62 (5.19)

Control			
	Men (*SD*); *n = 16*	Women (*SD*); *n = 26*	Total (*SD); n = 42*
Knowledge			
Pre-test	27.19 (4.87)	28.96 (3.49)	28.29 (4.11)
Post-test			
Follow-up	27.75 (5.64)	30.46 (4.09)	29.43 (4.86)
Nurturing Practices			
Pre-test	65.38 (6.92)	69.77 (5.19)	68.10 (6.21)
Post-test			
Follow-up	64.82 (9.03)	69.77 (7.17)	67.88 (8.19)
Ineffective Practices			
Pre-test	44.44 (8.19)	38.56 (6.27)	40.86 (6.72)
Post-test			
Follow-up	42.50 (9.35)	39.04 (6.04)	40.36 (7.55)
Self-efficacy			
Pre-test	27.00 (5.45)	27.15 (6.72)	27.10 (6.20)
Post-test			
Follow-up	25.75 (6.05)	27.65 (5.38)	26.93 (5.65)

Table 5.

2 Gender (Men vs. Women) x 2 Group (Experimental vs. Control) x Time (Pre-test vs. Follow-up) Mixed Design Repeated Measures ANOVAs for Changes in Knowledge, Parenting Practices, and Self-efficacy from Pre-test to Follow-up.

Dependent Variable (n = 87)	Main Effects of Gender				Main Effects of Group				Main Effects of Time			
	F	*df*	η^2	*p*	*F*	*df*	η^2	*p*	*F*	*df*	η^2	*p*
Knowledge	3.69	1	.04	0.58	4.57*	1	.05	.036	39.86*	1	.33	.001
Nurturing Practices	10.03*	1	.11	.002	.65	1	.01	.421	.14	1	.00	.713
Ineffective Practices	5.67*	1	.07	.020	2.40	1	.03	.125	18.25*	1	.18	.001
Self-efficacy	1.43	1	.02	.235	1.38	1	.02	.243	4.22*	1	.05	.043

* = $p < .05$

Dependent Variable (n = 87)	Gender x Group				Gender x Time				Group x Time			
	F	*df*	η^2	*p*	*F*	*df*	η^2	*p*	*F*	*df*	η^2	*p*
Knowledge	.35	1	.00	.554	.21	1	.00	.647	11.39*	1	.12	.001
Nurturing Practices	.05	1	.00	.818	.14	1	.00	.713	.00	1	.00	.998
Ineffective Practices	.29	1	.00	.594	.88	1	.01	.351	10.54*	1	.11	.002
Self-efficacy	.06	1	.00	.802	1.75	1	.02	.189	7.29*	1	.09	.008

* = $p < .05$

Dependent Variable (n = 87)	Gender x Group x Time			
	F	*df*	η^2	*p*
Knowledge	3.22	1	.04	.076
Nurturing Practices	.00	1	.00	.998
Ineffective Practices	.36	1	.00	.553
Self-efficacy	.03	1	.00	.854

Table 6.

Repeated Measures ANOVAs for Changes in Knowledge, Parenting Practices, and Self-efficacy from Pre-test to Post-test to Follow-up in the Experimental Group.

Dependant Variable (n = 45)	Change from Pre-test to Post-test to Follow-up			
	F	*df*	η^2	*p*
Knowledge	149.78*	2	.78	.001
Ineffective Practices	21.65*	2	.34	.001
Self-efficacy	10.21*	2	.19	.001

* = $p < .05$

FIGURES

Figure 1.

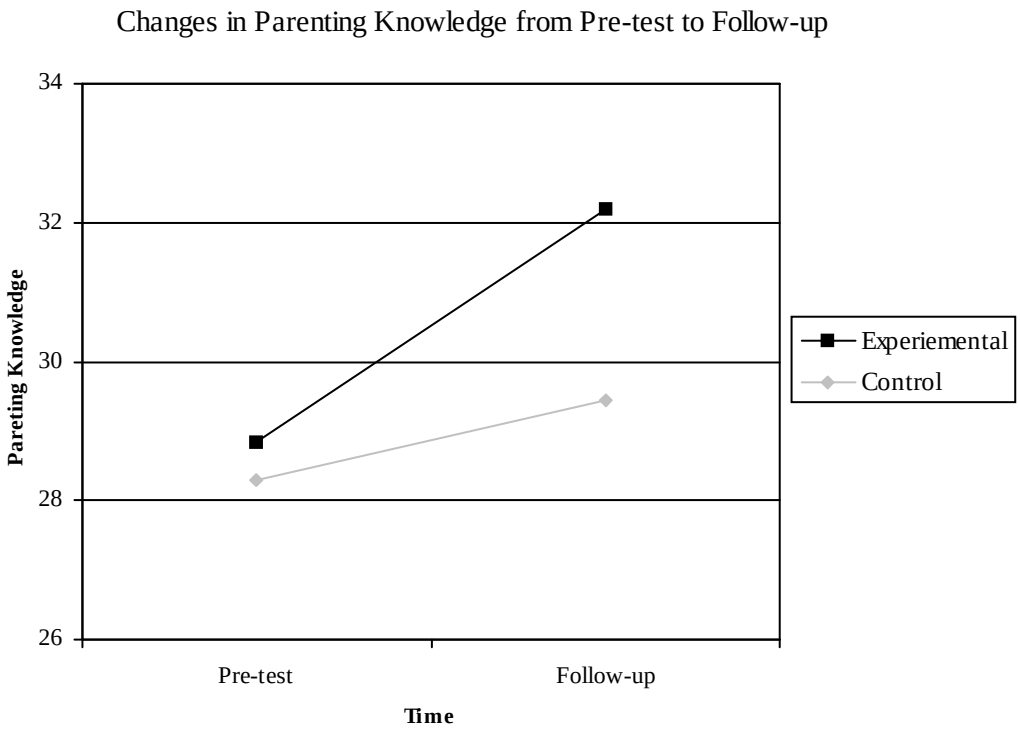

Changes in Parenting Knowledge from Pre-test to Follow-up
34
32
30
28
26
Pareting Knowledge
Pre-test
Follow-up
Time
Experiemental
Control

Figure 2.

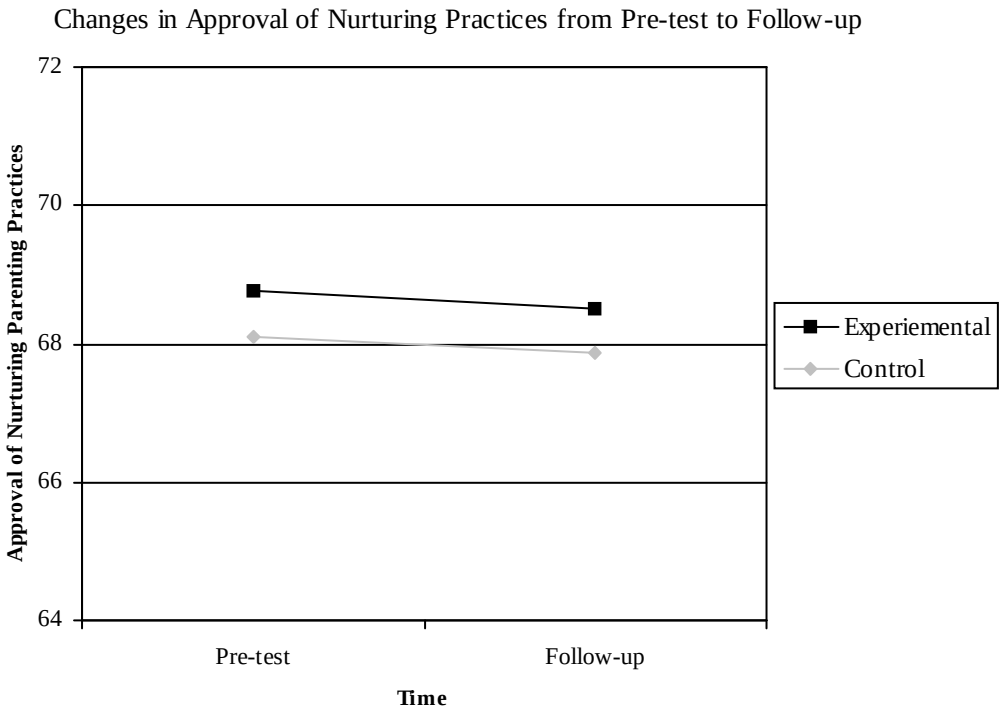

Changes in Approval of Nurturing Practices from Pre-test to Follow-up
72
70
68
66
64
Approval of Nurturing Parenting Practices
Pre-test
Follow-up
Time
Experiemental
Control

Figure 3.

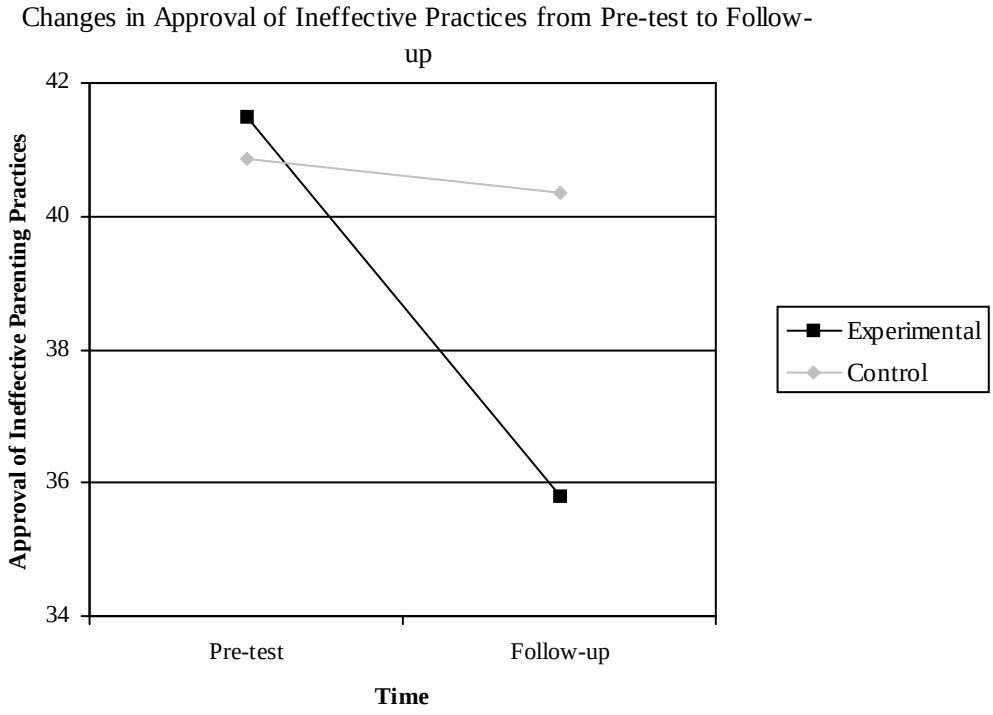
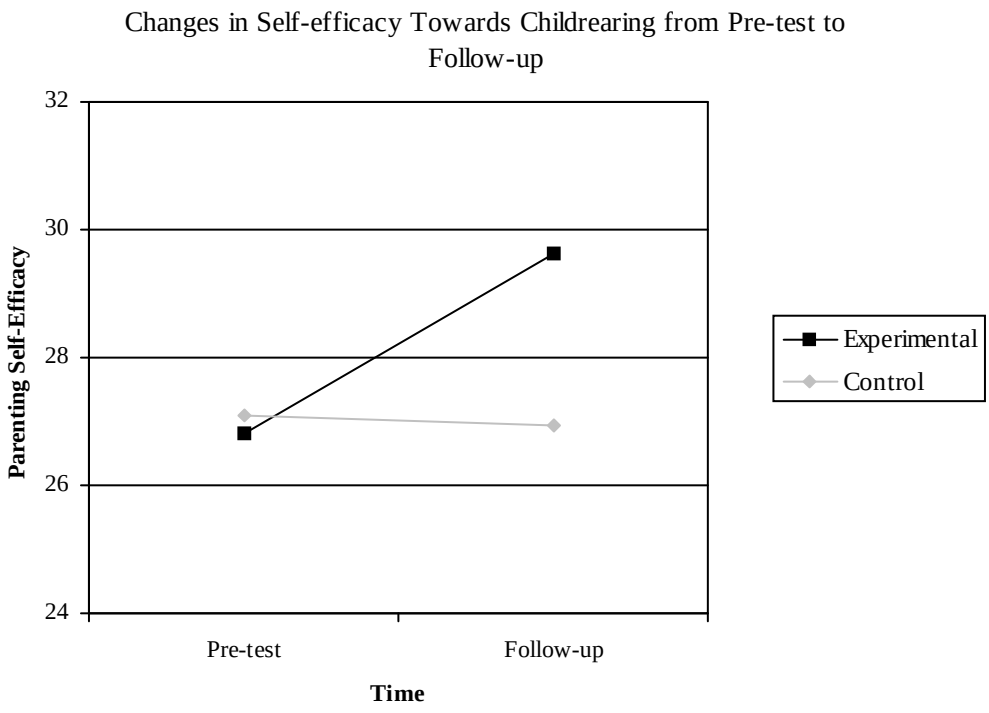

Changes in Approval of Ineffective Practices from Pre-test to Follow-up
Approval of Ineffective Parenting Practices
42
40
38
36
34
Pre-test
Follow-up
Time
Experimental
Control

Figure 4.


Changes in Self-efficacy Towards Childrearing from Pre-test to Follow-up
32
30
28
26
24
Parenting Self-Efficacy
Pre-test
Follow-up
Time
Experimental
Control

VITA

Benjamin Aaron Sigel

Candidate for the Degree of

Doctor of Philosophy

Thesis: LONG-TERM EFFECTS OF A BRIEF, VIDEO-BASED PARENTING EDUCATION PROGRAM ON PARENTING KNOWLEDGE, ATTITUDES, AND SELF-EFFICACY IN COLLEGE STUDENTS

Major Field: Clinical Psychology

Biographical:

Personal Data:

Born in Worcester, Massachusetts on January 1, 1979 to John Sigel and Kathleen Sigel.

Education:

Completed requirements for the Doctor of Philosophy of degree with a major in Clinical Psychology at Oklahoma State University, Stillwater, Oklahoma, in July 2010.

Completed requirements for the Master of Science degree with a major in Clinical Psychology at Oklahoma State University, Stillwater, Oklahoma, in July 2006.

Completed requirements for the Bachelor of Arts degree with a major in Psychology at Boston University, Boston, Massachusetts, in May 2001.

Name: Benjamin A. Sigel Date of Degree: July 2010

Institution: Oklahoma State University Location: Stillwater, Oklahoma

Title of Study: LONG-TERM EFFECTS OF A BRIEF, VIDEO-BASED PARENTING EDUCATION PROGRAM ON PARENTING KNOWLEDGE, ATTITUDES, AND SELF-EFFICACY IN COLLEGE STUDENTS

Pages in Study: 85 Candidate for the Degree of Doctor of Philosophy

Major Field: Clinical Psychology

Scope and Method of Study: The focus of this project was to evaluate the effectiveness of a brief parent education program, as a teaching and preventative tool for non-expectant individuals. The study was designed to test whether or not this parent education program would be effective long-term in positively impacting parenting knowledge, approval of ineffective parenting practices, approval of nurturing parenting practices, and self-efficacy.

Findings and Conclusions: This brief parent education intervention was effective long term in positively impacting parenting knowledge, approval of ineffective parenting practices, and self-efficacy towards parenting. These changes were evident for both non-expectant men and women.

ADVISER'S APPROVAL: Maureen Sullivan, Ph.D.