

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

By

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## 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, Birchle, 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). Tryptophan 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 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 1<sup>st</sup> 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 2<sup>nd</sup> grade, parent training and social skills groups occurred twice monthly. After 2<sup>nd</sup> 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 ( $\alpha = .84$ ) and ineffective parenting ( $\alpha = .89$ ) 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 ( $\alpha = .84$ ).

*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.

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## 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  American Indian
- African-American  Biracial
- Hispanic/Latino  Other
- Asian/Asian-American
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  Parenting videos

I already have children  Parenting cd-roms

Parenting classes   Other

Parenting books

## 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
- give the child a firm spanking
  - bite the child back to teach a lesson
  - give a firm but brief explanation (ex. "No biting")
  - tell the child not to do it again
- 18) Biting usually stops around age
- 1-2 years
  - 2-3 years
  - 3-4 years
  - 4-5 years
- 19) One reason why a toddler may bite is that
- he/she is angry
  - he/she is teething
  - he/she is confused about the difference between kissing and biting
  - all of the above
- 20) At 12 months of age (1 year), toddlers
- begin to understand and follow simple rules consistently
  - begin to understand but not follow simple rules consistently
  - do not understand but follow simple rules consistently
  - do not understand and do not follow simple rules
- 21) At 24 months of age (2 years), toddlers
- begin to understand and follow simple rules consistently
  - begin to understand but not follow simple rules consistently
  - do not understand but follow simple rules consistently
  - do not understand and do not follow simple rules
- 22) Which statement would be most effective in teaching a child rules?
- Only adults can walk in the street.
  - Don't ever do that again.
  - Always walk on the sidewalk.
  - Never walk in the street.
- 23) How often should a parent offer food to a toddler?
- Approximately 3-4 times per day (every 4-6 hours)
  - Approximately 5-6 times per day (every 2-3 hours)
  - Immediately when the child asks for food
  - 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?
- What do you want to eat?
  - Do you want carrots?
  - Do you want carrots or grapes?
  - All of the above are equally effective
- 25) If a toddler starts playing with his/her food at the table, a parent should
- send the toddler to bed without dinner
  - force the toddler to finish the food on the plate
  - take the food away and give the toddler a treat
  - take the food away and provide the toddler with another activity
- 26) Toddlers prefer foods with what type of texture?
- Smooth
  - Rough
  - Hard
  - Light
- 27) One way to possibly prevent obesity in later life is to
- Feed a toddler approximately 3-4 times per day (every 4-6 hours)
  - Feed a toddler approximately 5-6 times per day (every 2-3 hours)
  - Let a toddler follow his/her own hunger signals
  - Withhold food
- 28) An effective strategy for increasing cooperation at bedtime would be
- Changing the bedtime routine every evening
  - Using the same bedtime routine every evening
  - Playing actively with the child after reading quietly together
  - None of the above
- 29) If a child leaves his/her room after the bedtime routine has been completed, a parent should
- yell at the child and let him/her stay up a little longer
  - let the child stay up a little longer and then gently lead the child back to bed
  - talk to the child about why he/she doesn't want to go to bed
  - 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
- Encourage the child to argue with you
  - Increase the likelihood that the child will comply
  - Decrease the likelihood that the child will comply
  - 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
- turn off the TV
  - turn off the TV and discuss the situation at length with the child
  - let the child watch one more show since he/she asked politely
  - 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
- increase the length of the time out
  - not engage in a positive activity with the child after the timeout
  - give up on time out because it does not work for the child
  - stop using time out temporarily and focus on increasing positive family relations
- 33) Preschoolers may become defiant or oppositional because
- they enjoy making their parents angry
  - they are asserting their new found independence
  - their parents did not discipline them enough when they were toddlers
  - their parents are not using effective discipline strategies

- 34) Which of the following is a good question for a preschooler?
- Do you want to get dressed?
  - Do you want to wear your blue shirt?
  - What do you want to wear? You can wear anything you want except your red shirt.
  - Do you want to wear your blue shirt or your red shirt?
- 35) An example of a good directive for a preschooler would be
- Put on your socks, shoes, and coat
  - Put on your coat
  - Would you like to put on your coat?
  - None of the above
- 36) Preschoolers need approximately how many hours of sleep in a night?
- 8-10
  - 10-12
  - 12-14
  - 14-16
- 37) One reason a preschooler might act aggressively is that
- he/she has limited self control
  - he/she is getting used to being away from home
  - he/she is hungry or tired
  - all of the above
- 38) How long should a timeout last?
- It depends on what the child did
  - Approximately one minute for every year old the child is
  - Approximately 5 minutes
  - Approximately 15 minutes
- 39) Using physical punishment like spanking with a hand or belt
- rarely causes harmful physical and emotional side effects
  - may cause harmful side effects if the parent is angry or frustrated
  - usually does not teach a child that hitting solves problems
  - 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
- is always an effective way to discipline a child
  - may stop the unwanted behavior for a short time
  - is a more effective way to discipline than time out
  - is a more effective way to discipline than grounding
- 41) Shouting, threatening, lecturing, or using put downs
- is a more effective way to discipline than spanking
  - is likely to damage a child's self-esteem
  - often helps children learn to speak respectfully to adults
  - often stops the unwanted behavior for a long time
- 42) If you verbally praise a child frequently following good behavior
- The child will become spoiled
  - The praise will seem insincere when the child achieves a major accomplishment
  - The likelihood that the good behavior will occur again will increase
  - 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?
- Thanks for putting your gum in the garbage and not under the table like you usually do.
  - I'm glad you are making your bed, but why can't you do it every morning?
  - Thank you for sitting and waiting quietly for me while I was on the phone.
  - 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
- You can watch TV after you clean up your room.
  - You can watch TV if you promise to clean up your room when the show is over.
  - You can watch TV if you don't tell your brother.
  - None of the above.
- 45) Which of the following is an example of ineffective use of reward?
- You can play ball if you feed your dog.
  - You can play ball if you promise to feed your dog when you get back.
  - Since you cleaned your room, you can play ball.
  - None of the above
- 46) Ignoring a child who is misbehaving
- should never be done
  - can be an effective technique for managing a child's behavior
  - should be discontinued if a child further escalates his/her behavior
  - teaches a child that he/she is alone in the world

Positive Parenting Knowledge Test Answer Key

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

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Institutional Review Board for Human Subject Research

Dr. Sue Jacobs, Chair

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## TABLES



Table 1.

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

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

\* =  $p < .05$

Table 2.

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

Demographic	Experimental		Control		Chi-square	p
	n	%	n	%		
Recidivism	45	35	42	28	1.84	.175
Gender						
Male	21	47	16	38	.65	.419
Female	24	53	26	62		
Ethnicity					3.25	.777
Caucasian	38	84	37	88		
African-American	2	4	2	5		
Hispanic	1	2	0	0		
Asian	1	2	0	0		
American-Indian	1	2	2	5		
Biracial	1	2	1	2		
Other	1	2	0	0		
Relationship Status					2.65	.619
Married	4	9	6	14		
Divorced	0	0	1	0		
Separated	0	0	0	0		
Single	20	44	20	48		
Widowed	0	0	0	0		
Dating	5	11	3	7		
In a committed relationship	16	36	11	26		
Income					9.92	.271
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		
\$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					14.32	.158
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		
\$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	<i>n</i>	<i>M</i>	<i>SD</i>	<i>t</i>	<i>p</i>
Knowledge	Completers	87	28.65	4.23	.34	.736
	Non-completers	192	28.46	4.63		
Nurturing Practices	Completers	87	68.49	6.35	3.16*	.002
	Non-completers	192	65.55	7.56		
Ineffective Practices	Completers	87	41.30	8.32	-.83	.408
	Non-completers	192	42.25	9.12		
Self-Efficacy	Completers	87	26.95	5.83	-1.28	.203
	Non-completers	192	27.91	5.80		

\* =  $p < .05$

Table 4.

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

Experimental			
	Men ( <i>SD</i> ); <i>n</i> = 21	Women ( <i>SD</i> ); <i>n</i> = 24	Total ( <i>SD</i> ); <i>n</i> = 45
<b>Knowledge</b>			
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)
<b>Nurturing Practices</b>			
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)
<b>Ineffective Practices</b>			
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)
<b>Self-efficacy</b>			
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 ( <i>SD</i> ); <i>n</i> = 16	Women ( <i>SD</i> ); <i>n</i> = 26	Total ( <i>SD</i> ); <i>n</i> = 42
<b>Knowledge</b>			
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)
<b>Nurturing Practices</b>			
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)
<b>Ineffective Practices</b>			
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)
<b>Self-efficacy</b>			
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	$\eta^2$	p	F	df	$\eta^2$	p	F	df	$\eta^2$	p
Knowledge	3.69	1	.04	.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	$\eta^2$	p	F	df	$\eta^2$	p	F	df	$\eta^2$	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	$\eta^2$	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 ( <i>n</i> = 45)	Change from Pre-test to Post-test to Follow-up			
	<i>F</i>	<i>df</i>	$\eta^2$	<i>p</i>
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.

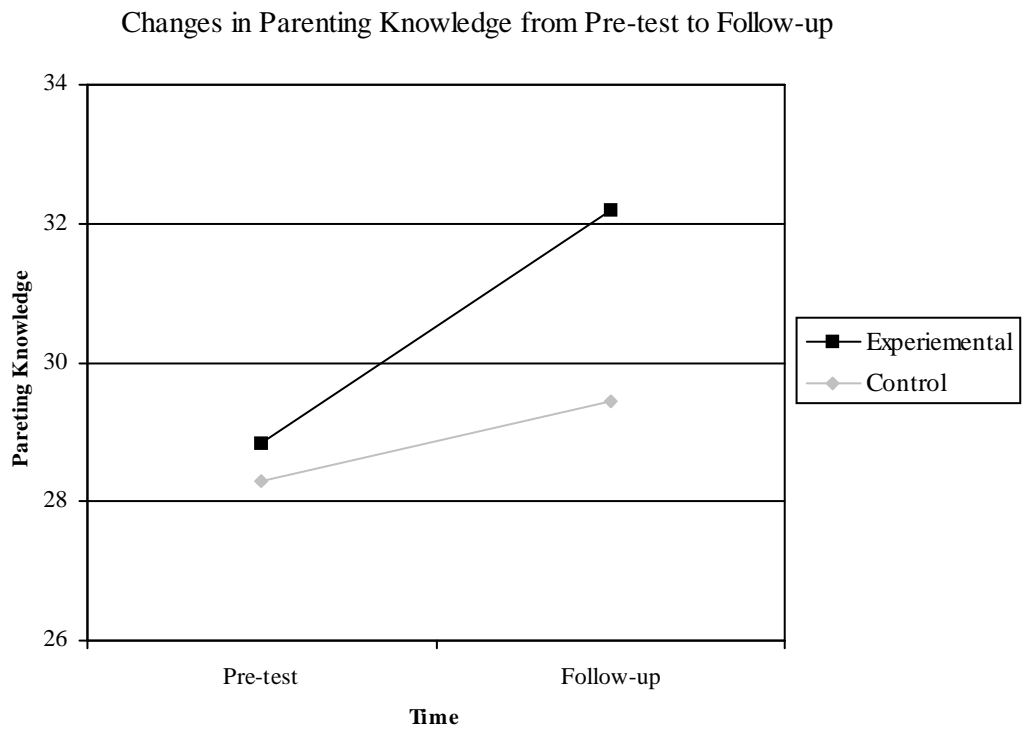




Figure 2.

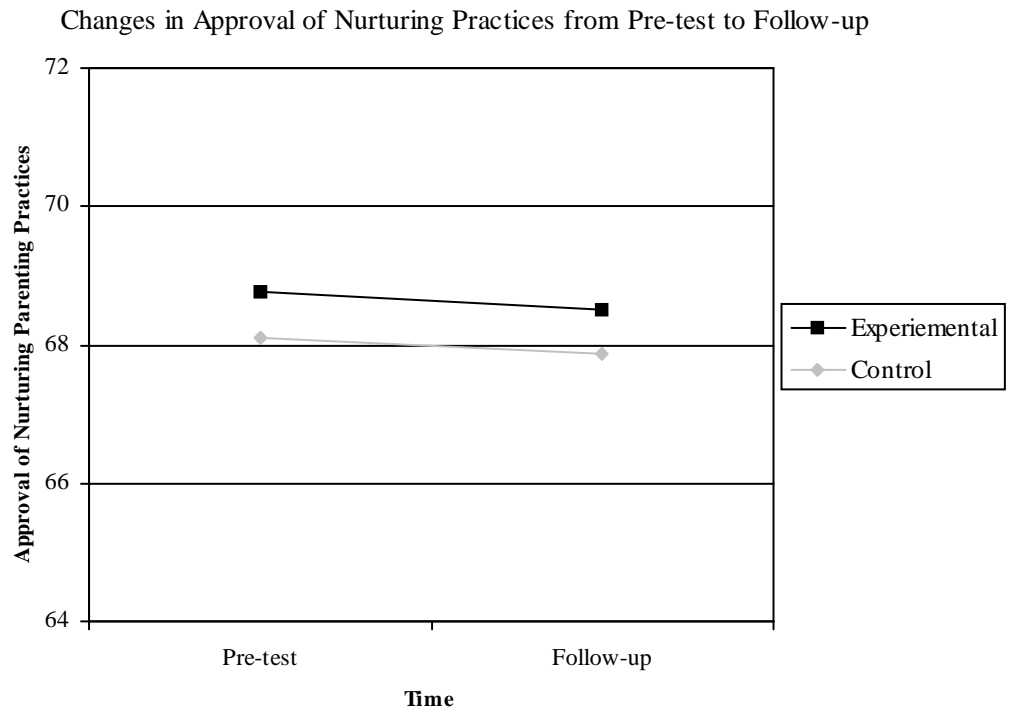


Figure 3.

Changes in Approval of Ineffective Practices from Pre-test to Follow-up

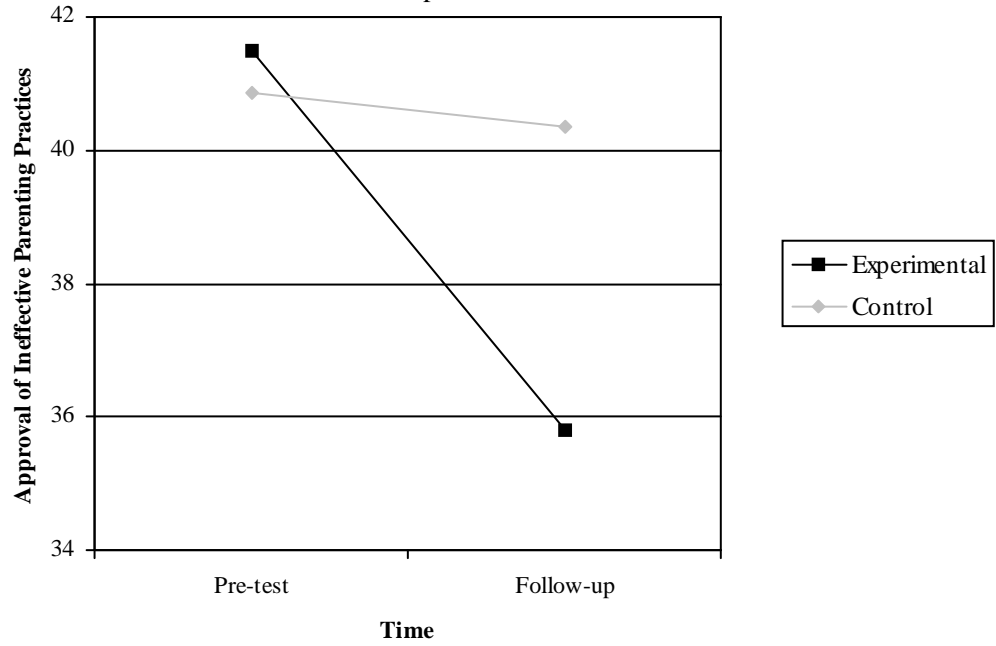
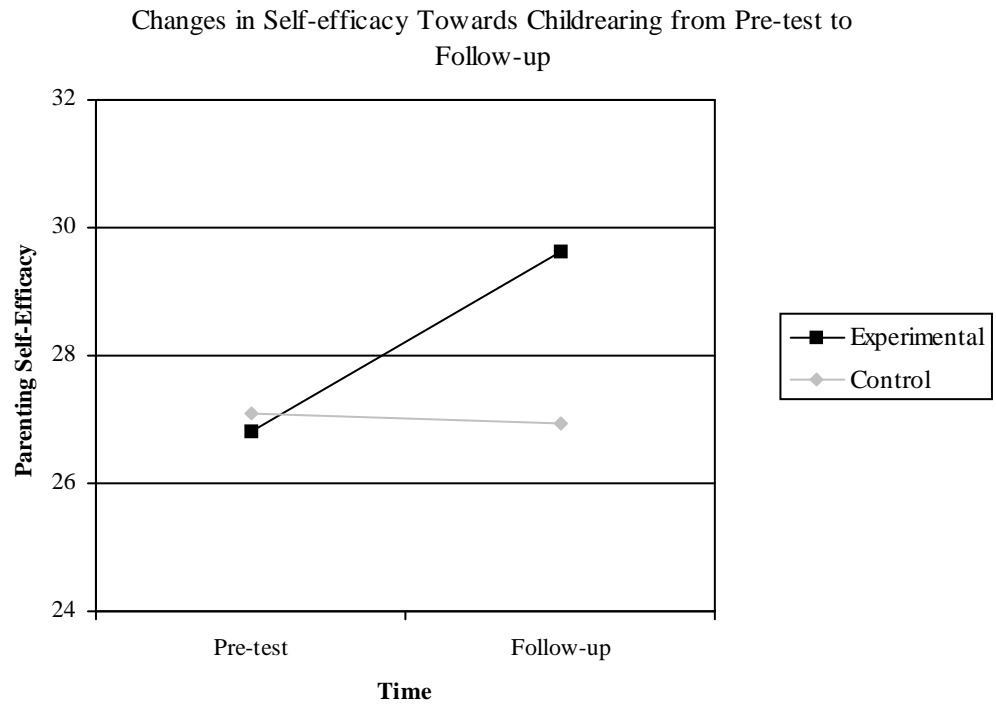


Figure 4.



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.