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THE EFFECTS OF BRIEF PSYCHOEDUCATION ON ADOLESCENTS'  
DEPRESSIVE SYMPTOMS AND PERCEPTIONS OF PARENTING

By

MALLORY CASEY MCBRIDE

Master of Arts, University of Montana, Missoula, MT, 2008  
Bachelor of Science, Washington State University, Pullman, WA, 2006

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Approved by:

Perry Brown, Associate Provost for Graduate Education  
Graduate School

Paul Silverman, PhD, Chair  
Psychology Department

Cameo Borntrager, PhD  
Psychology Department

Duncan Campbell, PhD  
Psychology Department

Daniel Denis, PhD  
Psychology Department

Betsy Bach, PhD  
Communication Studies

## The Effects of Brief Psychoeducation on Adolescents' Depressive Symptoms and Perceptions of Parenting

Chairperson: Paul Silverman, PhD

Adolescent depression is a mental health disorder that occurs during the teenage years and involves chronic and persistent feelings of sadness and loss of interest in usual activities, as well as a broad range of additional physical and emotional symptoms. These maladaptive symptoms have repercussions across all areas of adolescents' functioning. One area that is affected when an adolescent is depressed is how the adolescent perceives his/her world, experiences, and situations. Research demonstrates that depressed adolescents are likely to perceive a wide variety of events and situations in overly negative ways, including their parents' parental styles and behaviors. One avenue that has been shown to be effective in helping individuals increase their awareness of their depressive symptoms and improve their perceptions is psychoeducation. The present study sought to examine the effects of brief psychoeducation on adolescents' perceptions of their depressive symptoms and their parents' parenting behaviors. Participants were divided into treatment and control groups. Both groups completed measures designed to assess depressive symptoms, their parents' parenting behaviors, their sense of empowerment, and current affect. The treatment group then participated in a psychoeducational component designed to increase knowledge and awareness of depressive symptoms and how these symptoms may affect perceptions. The control group participated in a psychoeducational component not relevant to depressive symptoms. Both groups then completed the measures for a second time. It was hypothesized that participants in the treatment group would demonstrate significant decreases in depressive symptoms, negative parental perceptions, and negative affect, and significant increases in positive parental perceptions, empowerment, and positive affect relative to participants in the control group. The findings pertaining to depressive symptoms were marginally significant and the findings concerning empowerment were significant. Findings regarding affect and parental perceptions were not significant, with the exception of the negative parental characteristic of Coercion. Results highlight the utility of cognitively-based brief psychoeducation in helping adolescents understand their depressive symptoms and increasing their sense of empowerment.

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## **Introduction**

### **Conceptualization of Adolescent Depression**

Adolescent depression is a mental health disorder that occurs during the teenage years and involves chronic and persistent feelings of sadness and loss of interest in usual activities, as well as a broad range of additional physical and emotional symptoms. At any given time, up to 15% of children and adolescents demonstrate some symptoms of depression, with 5% of children ages 9 to 17 meeting criteria for Major Depressive Disorder (Birmaher, et al., 1996; Schafer, Gould, Fisher, Trautman, Moreau, & Kleinman, 1996;). Risk factors for Major Depressive Disorder in adolescence include chronic illnesses such as diabetes or asthma, female gender, family history of depression, childhood neglect or abuse, and psychosocial or socioeconomic stressors such as low parental income or living in a less than optimal neighborhood (Angold, Costello, Erkanli, & Worthman, 1999; Warner, Weissman, Mufson, & Wickramaratne, 1999). Going into the teenage years, Major Depressive Disorder becomes more than twice as common in females as in males, possibly due to differing coping styles, societal expectations of males and females, or hormonal changes (Angold, et al., 1999). Additionally, adolescents who experience depression are likely to continue to experience depression into adulthood, leading to further difficulties in terms of employment, relationships, and many other facets of daily and long-term living (Pine, Cohen, Cohen, & Brook, 1999).

Unfortunately, many adolescents who suffer from Major Depressive Disorder often contemplate suicide. Mental health disorders that contain depressive elements are the most common diagnoses in individuals who commit suicide (Grunbaum, et al., 2001). Twenty percent of adolescents will seriously contemplate committing suicide sometime during their teenage years, and eight percent of adolescents actually attempt to commit suicide. These high rates of

suicidal ideation and attempts among adolescents have led to suicide being the third leading cause of death among individuals ten to 19 years of age (Grunbaum, et al., 2001).

Approximately two-thirds of adolescents with Major Depressive Disorder also experience symptoms of a comorbid mental health disorder. Commonly, those experiencing depressive cognitions also experience symptoms consistent with anxiety disorders, attention-deficit hyperactivity disorder, oppositional defiant disorder, or substance use disorders (Angold, Costello, & Erkanli, 1999). The presence of one or several of these comorbid disorders may complicate the diagnoses and treatment of depression in adolescents.

To be diagnosed with Major Depressive Disorder, five of the following criteria must have been present within the same two-week time period, and this array of symptoms must represent a change from the adolescent's usual pattern of functioning: 1) depressed mood most of the day, every day, for at least two weeks per the adolescent's subjective report or observations made by others. It should be noted that in adolescents, a highly irritable mood for most of the day for at least two weeks may also indicate the presence of Major Depressive Disorder. 2) Markedly diminished interest or pleasure in all or almost all activities. 3) Significant weight loss when not dieting, or significant weight gain (as indicated by a loss or gain in 5% of body weight within a one-month period). It should be noted that in adolescents, the presence of Major Depressive Disorder may be indicated by not meeting expected weight gains. 4) Insomnia or hypersomnia nearly every night. 5) Psychomotor agitation or retardation nearly every day that must be observable by others. In adolescents, psychomotor agitation may be described by others as "hyperactivity." 6) Fatigue or loss of energy. In adolescents, this may take the form of disengagement from peers, school refusal, or frequent school absences. 7) Excessive feelings of worthlessness or guilt. In adolescents, this may take the form of frequent self-deprecative

statements. 8) Diminished ability to think or concentrate, or constant indecisiveness nearly every day. In adolescents, this may take the form of behavioral difficulties or poor performance in school. 9) Recurrent thoughts of death (not simply a fear of dying) or recurrent suicidal ideation or behaviors. Diagnosis of Major Depressive Disorder in adolescents also dictates that the adolescent not meet criteria for Bipolar Disorder, that depressive symptoms cause clinically significant distress or impairment in social, occupational, or other areas of functioning (in adolescents, this includes impairments in peer interactions, school performance, and occupational performance), that symptoms are not due to the effects of a medication, illicit drug, or general medical condition, and that symptoms are not caused by bereavement due to loss of a loved one or other recent trauma or loss (American Psychiatric Association, 2000).

Treatment of depressive symptoms in adolescents often involves a combination of psychotherapy and antidepressant medication. Cognitive Behavioral Therapy (CBT) and Interpersonal Psychotherapy are two forms of psychotherapy that have been found to be especially effective when treating adolescents with depression. CBT involves challenging the adolescent's automatic, negative, and/or distorted thoughts that may be partly to blame for the adolescent's depressive symptoms, the goal being to ultimately change the adolescent's maladaptive views about themselves, the world in which they live, and their future. This, in turn, will lead to more positive patterns of thinking; these positive patterns of thinking are believed to then effect positive changes in the adolescent's behaviors and emotions (Harrington, Whittaker, & Shoebridge, 1998; Hazell, 2004; Reinecke, Ryan, & DuBoise, 1998).

Interpersonal Psychotherapy involves resolving past traumas or grief, coming to terms with interpersonal role disputes or confusion, resolving interpersonal skill deficits, and establishing effective coping mechanisms. During sessions, the therapist may educate the

adolescent about effective coping, problem solving, and social skills, and relaxation techniques may be taught. Additionally, the therapist may educate the adolescent's parents about realistic, age-appropriate expectations and how to communicate in a supportive, non-judgmental manner (Hazell, 2004).

Generally, the medication of choice for adolescents experiencing depressive symptoms is a Selective Serotonin Reuptake Inhibitor (SSRI). Many studies have found that SSRIs can be beneficial in alleviating depressive symptoms in children and adolescents when used in conjunction with psychotherapy (Harrington, Whittaker, & Shoebridge, 1998; Hazell, 2004; Whittington, et al., 2004). However, there is some evidence suggesting that the use of SSRIs may lead to suicidal ideation in children and adolescents (Fergusson, et al., 2005; Whittington, et al., 2004). Consequently, the Food and Drug Administration recommends that caution be used when using SSRIs to treat depression in children and adolescents (United States Food and Drug Administration, 2003).

### **Parenting Beliefs and Behaviors and Adolescent Depression**

Adolescents who do not feel loved, supported, and cared for at home, or have parents who are inconsistent with the care and discipline they provide, will experience feelings of sadness, irritability, and many other symptoms consistent with depression. Much research supports a strong link between maladaptive parenting beliefs and behaviors and adolescent depression. For example, Ge, Conger, Lorenz, and Simons (1994) found that parents who suffered from mood disorders were more likely to use maladaptive parental practices. This, in turn, predicted depressive cognitions in their adolescent children. The authors hypothesized that the cycle of parental mood disorders, maladaptive parental practices, and adolescent depression

contributed to an overall pattern of pathological family processes, which, in turn, lead to the continuing cycle of maladaptive symptomology and negative parental practices.

Brooks (2002) conducted a study concerning the relationship between adolescent emotional issues and behavior problems and parents' parental practices. The study found that parents who demonstrated more harmful parental practices (such as not monitoring their children's activities and whereabouts) were more likely to have teenage children who exhibited drug use, risky behaviors, and depression. Additionally, the study further found that parents who did not have a positive self-concept or a positive racial/ethnic identity were also more likely to have children who exhibited behavior problems and depression. The authors discussed the possibility that healthy parental practices, self-concepts, and racial identities serve as protective factors against risky behaviors and depression in adolescence, even in adolescents who possess a genetic or environmental predisposition toward behavioral problems and depression.

Another study conducted by Bosco, Renk, Dinger, Epstein, and Phares (2003) found that teenagers whose parents demonstrated low levels of parental control and high levels of interparental conflict were more likely to exhibit depressive symptoms as well as externalizing behavior problems. Adolescent males in this study were especially susceptible to feelings of depression when they experienced low levels of maternal control. Thus, this study demonstrated that parents who do not adequately discipline or check-in on their children and who exhibit high rates of marital conflicts are more likely to have adolescent children who experience depressive symptoms. These depressive cognitions in the adolescent children likely arise out of a threatened sense of well-being due to an environment constantly in turmoil and a lack of support and acceptance (Bosco, Renk, Dinger, Epstein, & Phares, 2003).

However, exceptionally high amounts of parental control can also lead to adolescent depression. Parents who are overly controlling, protective, or restricting are more likely to have adolescent children who are emotionally deregulated and depressed. Parents who are overly protective and restricting are also less likely to engage in appropriate amounts of nurturing behaviors with their children, leading to higher levels of adolescent depressive symptoms (Betts, Gullone, & Allen, 2009). Similar results were found in a study conducted by Garber, Robinson, and Valentiner (1997). This study found that mothers who exhibited high levels of psychological control were more likely to have adolescent children with depression. These mothers also exhibited low levels of acceptance, leading to further depressive symptoms in their children. The above studies suggest that high levels of parental control are often coupled with lower levels of parental warmth, leading to an unhealthy attachment relationship between the parents and the children, as well as leading adolescent children to feel unsafe, unsupported, and overly anxious in their environments.

Mothers who provide high levels of negative feedback are also more likely to have adolescent children who experience depression. Adolescents who are constantly exposed to negative statements and evaluations from their mothers learn to also evaluate themselves in a negative light, leading to depressive cognitions (Jacquez, Cole, & Searle, 2004). However, it is not just mothers' behaviors and practices that lead to adolescent depression; additional research supports a link between fathers' maladaptive parental styles and adolescent depressive cognitions. Heaven, Newbury, and Mak (2004) found that fathers who engaged in maladaptive parenting practices were more likely to have adolescent children with higher levels of depression and who exhibited higher levels of delinquent behavior. Fathers' use of harsh or authoritarian parental styles has also been shown to be linked to depression in adolescent children (Gallimore

& Kurdek, 1992). Additionally, fathers who are perceived as being unsupportive are also more likely to have adolescent children who experience depressive symptoms (Bean, Barber, & Crane, 2006). The above articles all discussed the complex interplay between adolescents' personality and paternal personality and parenting. It was suggested that adolescent depressive predispositions are exacerbated by paternal maladaptive parental practices.

Negative perceptions of one's children may be another avenue that contributes to adolescent depression. A study by Katainen, Raikkonen, Keskivaara, and Keltikangas-Jarvinen (1999) found that mothers who perceived their children as being difficult and were unhappy with their role as mothers were more likely to utilize hostile parenting practices, even if they themselves did not believe they were engaging in maladaptive parenting practices. These hostile parental practices, in turn, predicted the onset of depressive symptoms in their children in later childhood and early adolescence. The authors of this study also hypothesized that the adolescents' environmental risk factors and genetic predispositions toward depressive symptoms were being intensified by their parents' hostile parenting practices.

Infrequent or harmful touch between the parent and child may also lead to depressive symptoms in adolescents. Frequent, positive touch, such as hugs, strengthens the attachment bond between the parent and the child, and creates feelings of warmth and safety in the child. However, parents who do not engage in high amounts of positive touch with their children, or who touch their children in a harmful way (i.e., spanking) are more likely to have adolescent children who are depressed, psychologically maladjusted, or who engage in suicidal ideations and behaviors (Pearce, Martin, & Wood, 1995). Bender et al. (2007) also found that parental use of harsh disciplinary tactics is associated with childhood and adolescent depression. In addition, parents who use harsh discipline tend to be less warm and less engaged during parent/child

interactions, leading to further symptoms of depression in their adolescent children (Bender et al., 2007). The attachment bond between the parent and child is also expressed through parental warmth, and a lack of parental warmth has also been linked to adolescent depressive cognitions (Kim & Cain, 2008).

It is important to note, and most of the articles cited above recognize, that there are a multitude of potential factors that may influence adolescent depression. Although many of the research studies cited above made attempts to control for some confounding variables (such as SES, ethnicity, parental psychopathology, child temperament, and genetic influences), it is virtually impossible to control for every variable that may account for adolescent depressive cognitions, and, thus, it is entirely possible that there are other explanations (including explanations involving complex interactions among the variables studied in the above research) other than those given in the research articles that account for the development of the reported adolescent depressive symptoms.

### **Adolescent Depression and Skewed Perceptions**

As discussed, depression is associated with sadness and irritability, lack of interest in activities, as well as a broad array of other physical and mental difficulties. These maladaptive symptoms have repercussions across all areas of adolescents' functioning, and are linked with thoughts, beliefs, and behaviors that may be considered "abnormal." One area that is undoubtedly affected when an adolescent is depressed is how the adolescent perceives his/her world, experiences, and situations. Research demonstrates that adolescents who experience depressive cognitions are likely to perceive a wide variety of events and situations in overly negative ways. In general, adolescents who experience depressive cognitions do not view themselves in a positive light, and generally do not hold themselves in high regard. These

adolescents often have feelings of lower self-worth and may feel they are not as competent as others. As feelings of depression worsen, these feelings of lack of self-worth and competence increase (King, Naylor, Segal, & Evans, 1993).

Unfortunately, these perceptions of competence and worth often lead depressed adolescents to expect to fail in their endeavors. Subsequently, adolescents who experience depressive cognitions often exhibit maladaptive and/or delinquent behaviors. Research demonstrates that this pattern of expecting to fail and delinquency leads to further maladaptive perceptions of life events and a perpetuating cycle of depression (Overbeek et al., 2006).

The social environment may be another aspect of an adolescent's life that is perceived in an overly negative way when he or she is experiencing symptoms of depression. Adolescents who experience depression often feel less confident about interacting in social situations, and these adolescents tend to feel less liked and accepted by their peers (King, et al., 1993). Thus, adolescents with higher levels of depressive cognitions tend to perceive their peers as more rejecting, whereas adolescents who do not experience high levels of depressive cognitions do not hold these same perceptions (Kistner, Balthazor, Risi, & David, 2001).

Borelli and Prinstein (2006) found that adolescents with depressive symptoms also tend to perceive friendships in more maladaptive ways. This study found that girls with depression tended to perceive friends as more important, whereas boys with depression tended to perceive friends as being unimportant. The study also found that adolescents with depressive cognitions consistently perceived social situations in ways that "fit" with their maladaptive perceptions of friendships. Similar results were found in a study conducted by Cassidy, Ziv, Mehta, and Feeney (2003). This study examined self and social perceptions of adolescents with depression. As would be expected, adolescents with higher levels of depressive cognitions tended to perceive

themselves more negatively, whereas adolescents who did not experience high levels of depressive cognitions tended to perceive themselves more positively. Furthermore, adolescents in the study tended to perceive social situations in ways that confirmed their positive or negative perceptions of themselves.

These perceptions of social situations in adolescents with depression also carry over to family interactions and the family environment. It has been found that adolescents with depressive symptoms generally perceive their families in less favorable ways, and perceive their families as having more maladaptive patterns of functioning (Millikan, Wamboldt, & Bihun, 2002). Adolescents who experience depressive cognitions also tend to perceive less support from their families, and they often perceive their families as not something to feel pride about (Kashani, Suarez, Jones, & Reid, 1999). Depressed adolescents also tend to perceive their families as not being responsive and adaptive to their problems (Kashani, et al., 1999).

### **Adolescent Depression and Skewed Perceptions of Parenting**

Adolescents who experience depressive symptoms, in addition to experiencing maladaptive perceptions of their families in general, also tend to view their parents, as well as their parents' parental styles and behaviors, in a less positive light. A study conducted by McKinney, Donnelly, and Renk (2008) found that depression, negative perceptions of one's parents, and low self-esteem were all positive related in a sample of older adolescents. Additionally, a study conducted by Eshbaugh (2008) found that depressed adolescents tended to perceive their family environments and their relationships with their parents as being distressing. Interestingly, depressed males tended to view their fathers as more unsupportive of both themselves and their mothers, whereas depressed females tended to view their mothers as more unsupportive of themselves and their fathers. The author stated that the genders of the depressed

adolescents and the parents were clearly playing a role in the outcome of the study, and it was hypothesized that adolescents in the study were projecting their depressive feelings onto their same-gendered parent (Eshbaugh, 2008).

Adolescents' perceptions of their parents' parental styles is likely also influenced by depressive cognitions. A study by Jackson, Pratt, Hunsberger, and Pancer (2005) found that high school students who experienced more depressive symptoms perceived their parents as being more authoritarian, whereas adolescents who experienced fewer depressive symptoms perceived their parents as being more authoritative. These perceptions influenced the adolescents' self-esteem; adolescents who were depressed and perceived their parents as authoritarian had lower self-esteem throughout their high school careers than adolescents who experienced fewer depressive symptoms and perceived their parents as being authoritative.

Perceptions of specific parental traits also appear to be influenced by adolescent depression. Plunkett, Henry, Robinson, Behnke, and Falcon (2007) found that adolescents who experienced a depressed mood and low self-esteem were more likely to view their parents as unsupportive and highly controlling. The study further found that boys who experienced depressive cognitions were likely to perceive their parents as being highly psychologically controlling. In addition, girls who were depressed were likely to perceive their fathers as being unsupportive. Another study by Rey (1995) found that 12 to 18 year old adolescents with Major Depressive Disorder tended to perceive their mothers as being uncaring, emotionally unresponsive and unsupportive. Finally, Yahav (2007) found that adolescents who were aggressive and/or depressed were more likely to view their parents as rejecting, favoring a sibling, or overprotecting. Interestingly, siblings who were not experiencing depressive cognitions did not tend to view their parents in the same negative light.

Given the maladaptive symptoms of depression, and how these symptoms likely affect every aspect of an adolescent's functioning, it is unclear whether the research cited above reflects accurate experiences and perceptions or is a reflection of adolescents' skewed or inaccurate perceptions that are a result of depressive cognitions; unfortunately, research exploring adolescent perceptions of parenting as well as objective parental behaviors could not be found. Due to the correlational nature of much of the research on adolescent perceptions of experiences and their parents' behaviors, it is impossible to ascertain the "accuracy" of the perceptions of the adolescents. However, it may be the case that depressive cognitions lead to misperceptions of parent/child interactions, and, consequently, an awareness of the effect depression has on perceptions may be an important step in improving the parent/child relationship.

### **Developmental Trajectories of Depression and Treatment Implications**

As might be expected, adolescent depression is often preceded by childhood depression. A study conducted by Dekker et. al. (2007) followed a cohort of 4 to 18-year-olds from early childhood to adolescence (younger participants) and from adolescence to young adulthood (older participants) in order to examine developmental trajectories of depression. The study found that most participants who experienced depression continued to experience increasing depressive symptoms into adolescence and early adulthood, leading to poor outcomes during various stages of life. The study highlighted the importance of early interventions to address childhood and adolescent depression.

Another study conducted by Hammen, Brennan, Keenan-Miller, and Herr (2008) found that youth first diagnosed with depression at an early age (prior to age 15) had more chronic and persistent depressive symptoms than youth diagnosed with depression after age 15. In addition,

children and adolescents diagnosed with “early-onset” depression were more likely to experience additional symptoms of psychopathology, poor psychosocial adjustment, poor social functioning and suicidal ideation. This study also stressed the importance of addressing depressive symptoms during childhood and adolescence in order to combat “life-course-persistent” depression.

Thus, treating childhood and adolescent depressive symptoms is vital in ensuring the reduction of maladaptive symptoms and behaviors that might otherwise continue through the lifespan. As previously discussed, common treatments for childhood depression include interpersonal individual therapy and family therapy, cognitive-behavioral therapy, and SSRI medications. However, there are drawbacks to using these traditional treatment modalities in an adolescent population. Cottrell (2003) reports that family therapy may be more effective with children than adolescents because adolescents are gaining independence and establishing themselves within peer groups. Additionally, Cottrell (2003) reports that the use of family therapy when treating childhood and adolescent depression may only be effective if one or more other family members are also experiencing depressive cognitions.

David-Ferdon and Kaslow (2008) also reported that, although cognitive-behavioral therapy has been found to be efficacious in the treatment of adolescent depression, its utility is often increased when a knowledge-based or coping-based component is added. Similar statements are made in an article by Verduyn (2000). This article emphasizes the efficacy of CBT in the treatment of adolescent depression, but notes that stronger results have been found in the adult population and suggests that other treatment avenues be explored to address depressive symptoms in adolescents. Additionally, despite the effectiveness and widespread use of Fluoxetine in the treatment of adolescent depression, the utility of medication treatment regimens is generally increased when used in conjunction with some other form of treatment (Moreno,

Roche, & Greenhill, 2006). Given the above information, one avenue to be explored when treating adolescent depressive cognitions is the use of psychoeducational techniques.

### **Conceptualization of Psychoeducation**

Psychoeducation is “a process of psychological assessment and the subsequent design of remedial programs...often tied to the educator’s [or researcher’s] assumptions or beliefs regarding the nature and etiology of a child’s exceptionality” (Encyclopedia of Special Education, 1986, p. 1266). Psychoeducation is used as a treatment for many different emotional, behavioral, and mental health issues, including grief therapy, mentoring, empowerment, peer counseling, sexual aggression, relaxation training, stress reduction, anxiety disorders, attachment issues, and literacy issues (Wood, Brendtro, Fecser, & Nichols, 1999). The “psycho” part of the word “psychoeducation” refers to the broad range of psychological ideas and theories upon which the approaches, program missions, and practices of various psychoeducational programs are based. The “education” part of the word “psychoeducation” refers to the teaching and learning paradigms that largely make up the content and practices of psychoeducational programs (Wood, et al., 1999). In general, it is believed that the more knowledge a person has about his/her illness or condition, the better the person can live with his/her illness or condition.

Psychoeducational programs are based on a wide range of psychological ideas and theories, and the specific methods used within these programs depend upon which psychological theory the program is adhering to. Psychodynamic psychoeducation is based upon the theories of psychoanalytic or psychodynamic psychology. These psychoeducational programs place emphasis on inner drives and emotions, and the resolution of inner conflicts. These principles are used in ways that allow these programs to focus on solutions to problems within a dynamic context, and within both individual and group situations.

Behavioral psychoeducation is based upon the behavioral and learning theories of psychology, and focuses primarily on observable or learned characteristics. Many behavioral psychoeducational programs use principles of reinforcement in order to modify behaviors in troubled individuals. In addition, these programs focus on the interplay between cognition, affect, and actions, and these components are used in order to improve social skills and self-management in addition to modifying learned behaviors (Wood, et al., 1999).

Sociological psychoeducation is based upon the principles of social psychology and uses the peer group as the primary agent of change in modifying troubled thinking, behaving, and social performance. These programs use peer relationships, culture, and shared concerns of the peer group to correct unwanted social behaviors. A supportive, therapeutic environment is considered to be extremely important in sociological psychoeducation; the supportive environment is believed to help foster positive changes in relationships with adults and peers (Wood, et al., 1999).

Ecological psychoeducation is based on a re-education philosophy, or the idea that skills that are less than optimal can be re-taught and re-learned. These psychoeducational programs combine mental health therapy, education, and human service approaches in order to address the complex social systems and interpersonal factors that interact in the lives of troubled children and adolescents. The utilization of multiple approaches is designed to re-formulate the skills, behaviors, and social interactions of disturbed youth (Wood, et al., 1999).

Developmental psychoeducation arose from the theories of developmental psychology, and is based upon the notion that human characteristics such as behaviors, cognitions, emotions, motivations, and attitudes emerge in predictable, chronological phases. Developmental psychoeducation programs focus on fostering a foundation of identity and self-esteem, as well as

the encouragement of healthy development throughout the life-span. Constructs such as attachment, separation anxiety, and relationships may also have a focus in developmental psychoeducational programs, with parents being educated on fostering healthy attachment relationships and engaging in supportive and constructive communication with their children (Wood, et al., 1999).

Cognitive-affective psychoeducational programs focus on basic thinking and self-regulation skills that assist children and adolescents in understanding their experiences. These psychoeducational programs, which are based upon the principles of cognitive psychology, build upon research pertaining to the connections between brain activity, emotions, and behaviors, and focus on teaching thinking and coping skills in order to regulate these emotions and behaviors. In addition, irrational beliefs and cognitive distortions are directly confronted and challenged, and adaptive problem-solving skills, self-regulation skills, and stress-management skills are taught (Wood, et al., 1999).

Research demonstrates that psychoeducation techniques may be just as effective as traditional therapeutic approaches in the treatment of adolescent mental health issues and concerns. For example, a study conducted by Schechtman, Bar-El, and Hadar (1997) examined the therapeutic factors attributed to psychoeducational groups and traditional counseling groups. Participants were non-clinical 8<sup>th</sup> grade students who attended either weekly psychoeducational groups or weekly counseling groups. Participants were asked to list therapeutic factors that could be attributed to their group. The authors found that the number of therapeutic factors named by participants was not statistically different across the psychoeducational or counseling groups. The authors stated that the results indicate that both psychoeducation and counseling are equally effective when it comes to therapeutic value.

## **Psychoeducation and Psychological Symptoms**

Psychoeducation has been found to be effective in the treatment of many adolescent mental health issues. A study conducted in China tested the effects of a 16-week psychoeducation course on the mental health status of middle school students. During the course, the students, who had a mean age of 14, were educated on the psychological and emotional components of sex, personality, coping resources, academic learning, and relationships with peers and romantic partners. Symptoms relevant to personality and psychological difficulties were examined both before and after the students completed the psychoeducation course. The study found that completion of the course led to a decrease in many psychological symptoms, including obsessive-compulsive thoughts and behaviors, interpersonal sensitivity, excessive anxiety and worry, and thoughts and behaviors indicative of general psychosis (Wang, 1997). However, the article failed to note whether follow-ups were conducted to ascertain whether improvements persisted.

Additionally, a study conducted by Kellner and Bry (1999) found that an anger management training program that included a psychoeducational component was effective in decreasing symptoms of conduct disorder in adolescents. The program included psychoeducation pertaining to anger discrimination, recognizing signs of increasing anger, and pro-social responses to anger. Upon completion of the program, the adolescents in the study demonstrated improvements in incidents of physical aggression and were reported as having fewer symptoms of conduct disorder by their parents and teachers. This study also did not conduct follow-up assessments to evaluate continuing improvements. Additionally, the sample size of this study was quite small—only seven adolescents participated.

## **Psychoeducation and Depression**

Specifically with regard to adolescent depression, psychoeducation has been found to be effective in reducing depressive cognitions. A study conducted by Gaynor and Lawrence (2002) examined the effects of coupling a psychoeducational cognitive-behavioral treatment with therapy focusing on interpersonal interactions when treating adolescents experiencing depressive cognitions. The sample consisted of 13 to 18-year-old community residents who met criteria for a depressive disorder. Baseline data were collected on each participant before the treatment was administered; a post-test was administered following the treatment phase. The combination of psychoeducation and therapy was found to be effective in significantly reducing adolescent depressive symptoms. Additionally, these positive results were maintained when the adolescents' depressive cognitions were examined at a three-month follow-up. However, adolescents who were more severely depressed did not demonstrate significant improvements. Additionally, the study did not use a control group; the authors conceded that a design consisting of both a treatment group and control group may have yielded different results.

Another study conducted by Wells, Miller, Tobacyk, and Clanton (2002) examined the effectiveness of a psychoeducational program in improving adolescent self-esteem and reducing the risk that adolescents would drop out of high school. The sample consisted of eighty 14 to 16 year old adolescents from a non-clinical community population. The study found that the eight-week psychoeducational program significantly improved adolescent self-esteem and decreased drop-out rates. The study further found that these improvements in self-esteem lead to subsequent improvements in other areas of mental health, including a significant improvement in adolescent depressive cognitions. However, this study did not utilize a control group, and follow-ups were not conducted to ascertain whether positive results were maintained.

Psychoeducation may lead to improvements in adolescent depression perhaps in part because it helps adolescents to cope with their depressive cognitions. A psychoeducation program known as “Helping Adolescents Cope” focuses on establishing coping resources and reducing the use of ineffective coping strategies. An initial study evaluating the effectiveness of the program consisted of 112 participants divided into three groups. Prior to group assignment, students from three area schools were screened for symptom severity (per the Child Depression Inventory) and whether they felt they needed help establishing coping resources. The treatment group participated in the program and consisted of students who had indicated they needed help in establishing coping resources. The first control group did not participate in the program and consisted of students who had also indicated they needed help in establishing coping resources. The third control group also did not participate in the program and consisted of students who had not indicated they needed help with establishing coping resources. This psychoeducational program was found to be effective in reducing adolescent depressive symptomology and ineffective coping strategies, and it was found to improve adolescents’ coping strategies and resources. Students in the two control groups demonstrated increases in depressive symptoms, whereas adolescents in the treatment group reported an increased ability to cope with their depressive symptoms and difficult situations (Hayes & Morgan, 2005).

Other research suggests that simply increasing adolescents’ knowledge about the symptoms and potential outcomes of depression may be partly the reason why psychoeducational techniques are effective. A study conducted by Portzky and van Heeringen (2006) looked at the effect of a psychoeducational program on improving adolescents’ knowledge, attitudes, coping strategies, and feelings of hopelessness specifically concerning suicidal ideations. The study consisted of 172 non-clinical participants, with a mean age of 15.6. Participants were divided

into one of four groups: a treatment group assessed multiple times during the program, a treatment group only assessed at the end of the program, a control group assessed multiple times throughout the study, and a control group assessed only one time during the study. Although no improvements were found concerning coping and hopelessness, the program was found to be effective in improving adolescents' knowledge about suicidal thoughts and gestures.

Additionally, adolescent attitudes about suicidal persons also improved; the authors hypothesized that improving the adolescents' knowledge helped to improve their attitudes pertaining to suicidality (Portzky & van Heeringen, 2006). When discussing the results pertaining to coping and hopelessness, the authors acknowledged that adolescents in all four groups had very high initial ratings of hopelessness and poor coping styles, indicating that hopelessness and ineffective coping were ingrained in the adolescents' functioning. Additionally, the authors also acknowledged that the program was designed to address adolescent knowledge, not coping or hopelessness.

Assisting adolescents in understanding their symptoms and why they might be feeling the way they do through psychoeducational techniques often leads to a sense of empowerment, and, consequently, a subsequent decrease in maladaptive symptoms. A psychoeducational program known as "Girls Circle" is designed to increase adolescent girls' self-efficacy, perceived body image, and social connections in an effort to empower young women to be actively involved in their adolescent development and to create healthy and stable interpersonal connections.

Hossfeld (2008) reports that "Girls Circle" does indeed create a sense of empowerment in teenage girls, and is subsequently effective in reducing symptoms of psychopathology during the teenage years. However, it is important to note that, so far, only qualitative measures have been

used to evaluate the program; quantitative research using an experimental design is still underway.

A psychoeducational program known as the “Adolescent Depression Empowerment Psychosocial Treatment” (ADEPT) is also designed to establish a sense of empowerment in adolescents with the goal of reducing depressive cognitions. This program involves a combination of cognitive-behavioral therapy, interpersonal therapy, and family-systems therapy, and is designed to increase knowledge and understanding of one’s symptoms and to use this knowledge to function within the family group. McClure, Connell, Zucker, Griffith, and Kaslow (2005) report that preliminary results pertaining to the efficacy of this program have demonstrated that ADEPT is effective in increasing adolescent empowerment and reducing depressive cognitions. However, several limitations are also acknowledged: so far, the studies have consisted of small samples, and have used pre-test/post-test designs with no control groups. Additionally, the authors note that ADEPT was initially designed as an intervention for African-American youth, and, consequently, the results of the preliminary studies are likely not generalizable across ethnic groups.

### **Psychoeducation and Perceptions**

Psychoeducational techniques have also been found to be effective in improving perceptions and awareness in interpersonal communication, symptoms of psychopathology, and many other negative circumstances and situations. Brand, Lakey, and Berman (1995) examined the effects of psychoeducation on perceived social support in an adult sample of community residents. The 51 participants in this study, ages 19-69, either completed a 13-week psychoeducational intervention that emphasized social skills training and cognitive reframing and restructuring in relation to self and social perceptions, or participated in a wait-list control

group. The study found that participants who had completed the psychoeducational course demonstrated significant improvements in their perceptions of themselves and the social support provided to them by their families relative to participants in the control group. Unfortunately, this study is not entirely applicable to the present study because it consisted of an adult sample, not an adolescent sample.

A lack of awareness about mental health symptoms and the effect of these symptoms may be partly to blame for depressive cognitions in adolescents. Adolescents' knowledge of depressive symptom identification and treatment has generally been found to be low. Additionally, adolescents with low to cursory knowledge of depressive symptoms are more likely to experience depressive cognitions (Hess et. al., 2004). However, psychoeducation has been found to be effective in increasing awareness of mental health symptoms. A study conducted by Chowdhury, Caulfield, and Heyman (2003) found that children between the ages of 11 and 16 with Obsessive-Compulsive Disorder (OCD) who participated in a six-week psychoeducational group focusing on awareness and understanding of symptoms as well as establishing and increasing social support reported significant improvements in identifying and awareness of symptoms. This awareness lead to a reported increase in confidence in coping with OCD. It is important to note that this study used a very small sample size (only seven adolescents participated in the study), and only qualitative measures were used. Additionally, no improvements in OCD symptoms were reported.

Adolescents experiencing depressive symptoms often have negative perceptions of interpersonal interactions and life circumstances. Psychoeducational techniques have been found to be effective in improving perceptions in adolescents experiencing depressive symptomology. Sanford et. al. (2006) examined the effects of a family psychoeducational program with families

that included an adolescent with Major Depressive Disorder. The sample consisted of thirty-one 13 to 18 year olds who met criteria for Major Depressive Disorder. Participants were either assigned to a treatment group who participated in the program in addition to “treatment as usual,” or a control group who participated in treatment as usual. The study found that adolescents and their families who received family psychoeducation reported improved perceptions regarding family social support and their ability to function within a social group. In addition, adolescents who received family psychoeducation reported improvements in their perceptions of their relationships with their parents. A three-month follow-up was conducted in which results were reported to have persisted. It is important to note that this study did not measure improvements in depressive symptoms; however, the authors hypothesized that improving perceptions of social support and family relationships in turn likely lead to improvements in depressive symptoms.

Although the research in this area is limited, psychoeducational techniques have been found to improve children’s perceptions of their parents’ behaviors. Fristad, Goldberg-Arnold, and Gavazzi (2003) examined the effect of family psychoeducation groups on children suffering from mood disorders, including anxiety and depression. Thirty-five families with children between the ages of 8 and 11 and with a wide range of clinical histories participated in the study. Children and their families were either assigned to a treatment group and participated in six sessions of family psychoeducation in addition to family therapy or a control group who only received family therapy. The authors found that children who received family psychoeducation reported significant improvements in mood disorder symptoms, as well as improvements in family interactions and perceptions of parental support compared with children receiving only family therapy or on the wait-list.

## **Present Study**

Due to the primarily correlational nature of much of the above research pertaining to the perceptions of depressed adolescents and the association of maladaptive parenting behaviors with adolescent depressive symptoms, it was unclear whether maladaptive parental behaviors are indeed associated with adolescent depression, or whether adolescents who were experiencing depressive symptoms were simply perceiving their parents as behaving negatively. Thus, it was postulated that a brief psychoeducational treatment would potentially affect these perceptions. Although adolescents' depressive symptoms and negative feelings and beliefs about their parents' parenting behaviors likely partly stem from the early attachment relationships that develop early in a child's life, it is important to ascertain alternate treatment modalities other than attachment-focused interventions that might be useful in the treatment of adolescent depressive symptoms and unhealthy parent/child relationships. The availability of a variety of effective treatments would allow interventions to be more closely tailored to fit individual strengths and challenges. It is possible that a cognitively-based intervention such as psychoeducation may be effective in improving adolescents' understanding of their negative feelings about themselves and their parents, consequently leading to diminished symptoms. This, in turn, would perhaps lead to improvements in the parent/child relationship and the attachment bond.

The purpose of the present study was to ascertain the potential immediate effects of a brief, cognitively-based psychoeducation program on older adolescents' perceptions of their parents' parenting beliefs and practices, their own depressive symptoms, their sense of empowerment, and current affective state. Empowerment and affect were included as dependent variables because it is important to ascertain if brief psychoeducation influences positive

feelings, courage, and a sense of control in addition to knowledge and understanding, as these components may be important for motivation to initiate and participate in treatment.

Adolescents between the ages of 18 and 19 were divided into two groups—a treatment group and a control group. Both groups completed a measure of their own depressive symptoms and a measure assessing their beliefs about their parents' parental style. Participants also completed a measure assessing empowerment, or the extent to which each participant felt hopeful, effective, and “in control” of his/her life, and a measure of affect, or the extent to which each participant was experiencing positive versus negative emotions in the present moment. After completion of these measures, adolescents in the treatment group engaged in a brief psychoeducational program relevant to depressive symptoms and perceptions, whereas adolescents in the control group engaged in a brief psychoeducational program targeting optimism and pessimism in an employment setting. Adolescents in both groups then again completed the measures pertaining to depressive symptoms, parental practices, empowerment, and affect.

It was hypothesized that, prior to the implementation of the psychoeducational component, adolescents in both groups would not demonstrate significant differences concerning depression or their views of their parents' parental styles. However, it was hypothesized that, after the implementation of the psychoeducational component, adolescents in the treatment group would report significantly fewer symptoms of depression and significantly fewer negative views pertaining to their parents' parental style than adolescents in the control group. It was further hypothesized that adolescents in the treatment group would report a significant increase in their sense of empowerment and positive affect, and a significant decrease in negative affect relative to the control group.

## **Method**

### **Participants**

Participants were 103 adolescents between the ages of 18 and 19 from the Missoula, Montana area. A power analysis conducted using GPower 3.1 (Faul, Erdfelder, Lang, & Buchner, 2007) indicated a need for a sample of approximately 80 participants per group, for a total sample of approximately 160 participants. The power analysis was conducted based on an expected effect size of approximately .2. This value was selected based on prior research on psychoeducational programs indicating Cohen's *d* effect sizes of between .15 and .7. Due to the extremely brief nature of the present study's psychoeducational intervention, it was expected that the present study's effect size would fall at the low end of what has been found in previous studies of psychoeducation programs. Unfortunately, due to the limited resources available and the number of participants who failed to attend their scheduled appointments, the sample consisted of only 103 participants.

Participants were recruited from the Psychology 100 classes at the University of Montana. A sign-up sheet was posted on the Psychology 100 "Research Sign-Up" table with a notice stating that only individuals between the ages of 18 and 19 were eligible for the study. The notice also stated that participants would receive six Psychology 100 research credits for their participation. Individuals signed up for time slots that fit with their schedules.

Ultimately, it was decided not to collect additional data later during that semester or the following semester. In the Psychology 100 classes, lectures pertaining to depression and other mental health concerns are discussed toward the end of the semester, and these class discussions may have served as psychoeducation in of themselves, thus having the potential to serve as a confound in the present study. Data for the study were collected during Spring semester;

additional data were not collected at the beginning of the following semester (Fall) because of the possibility that depressive symptoms and perceptions would be different simply based on the semester in which the data were collected.

The mean age of participants was 18.5, and the study consisted of 76 females and 27 males. Most participants reported their race as “Caucasian” (N=94). In addition, most participants reported their parents as “Married” (N=57). Although many participants failed to report their parents’ income (Missing=34), most participants who reported their parents’ income indicated that their parents earned over \$71,000 per year (N=28). Additionally, most participants reported that they still lived with their parents (N=53), and the majority of participants indicated that they spoke with their parents at least once per week (N=92). Most participants also reported that they had never received mental health treatment or a mental health diagnosis (N=76).

## **Measures**

For the present study, participants completed a total of five paper-and-pencil measures. The first measure was a short Background Questionnaire, which consisted of questions pertaining to the participants’ age, sex, race/ethnicity, number of siblings, marital status of parents, socio-economic status of parents, whether the participant was currently living with his/her parents, how frequently the participant had contact with his/her parents, prior mental health treatment, and past or current mental health disorder diagnoses.

To assess adolescents’ perceptions of their parents, participants completed the Parents as Social Context Questionnaire, which is a 25-item adolescent report that assesses the adolescent’s parents on six dimensions of parenting: 1) Warmth, defined as an expression of love, affection, caring, and enjoyment, characterized by appreciation and emotional availability, 2) Rejection, defined as active dislike, aversion, and hostility, characterized by an attitude that is harsh, over-

reactive, irritable, critical, and disapproving, 3) Structure, defined as a provision of information about pathways to reach desired outcomes, characterized by clear expectations and firm maturity demands, 4) Chaos, defined as interfering or obscuring the pathways from means to ends, characterized by inconsistency or unpredictability, 5) Autonomy Support, defined as allowing freedom of expression and action and encouraging the child to attend to, accept, and value preferences and opinions, and 6) Coercion, defined as an autocratic style that is restrictive, overcontrolling, and intrusive. Although there is little information on the psychometric properties of the measure, internal consistency reliabilities for the specific dimensions have been found to be satisfactory, ranging from .64-.70, and internal consistency reliabilities for the items themselves have been shown to be good, ranging from .78-.88 (Skinner, Johnson & Synder, 2005).

The Beck Depression Inventory was used to assess depressive symptoms. The BDI is a 21-question, multiple choice, self-report inventory, designed for individuals between the ages of 17 and 80. The BDI is composed of items relating to depressive symptoms such as hopelessness and irritability, cognitions such as guilt or feelings of being punished, as well as physical symptoms such as fatigue, weight loss, and lack of interest in sexual activity. The BDI has been shown to have good psychometric properties (Silverberg, Marczak, & Gondoli, 1996) and the internal consistency reliabilities have been shown to range from .73-.92 for non-psychiatric populations (Beck, Steer, & Garbin, 1988). It should be noted that Question #9 on the BDI asks about suicidal ideation. All BDIs were examined by a trained graduate student research assistant immediately following completion to ascertain if any participant had endorsed suicidal thoughts. There were no participants who endorsed concerning levels of suicidal ideation.

To assess each participant's sense of empowerment, participants completed the Empowerment Scale, a 31-item self-report measure that assesses self-esteem,

power/powerlessness, autonomy, control over the future, and righteous anger. Each item is scored on a Likert-type scale; participants indicated whether they “Strongly Disagree,” “Disagree,” “Neither agree nor disagree,” “Agree,” or “Strongly Agree,” with each item. During scoring, each item response was assigned a numerical value (Strongly Disagree = -2, Agree = -1, Neither agree nor disagree = 0, Agree = 1, and Strongly Agree = 2). Item scores were then summed and participants were given an overall “empowerment” score; higher scores indicated a higher sense of empowerment. The Empowerment Scale has been shown to have good psychometric properties, with an internal consistency reliability of .86 (Rogers, Chamberlin, Ellison, & Crean, 1997).

To assess positive and negative affect in each participant, the Positive Affect/Negative Affect Scale (PANAS) was used. The PANAS is a 20-item self-report measure that assesses participants’ current emotional experience. Participants were given a list of emotionally-oriented words and were asked to rate the extent to which they were currently experiencing each emotion on a Likert-type scale (1=Very slightly or not at all, 2=A little, 3=Moderately, 4=Quite a bit, or 5=Extremely). Ten items on the PANAS assess positive affect (attentive, interested, alert, excited, enthusiastic, inspired, proud, determined, strong, and active) and ten items assess negative affect (distressed, upset, hostile, irritable, scared, afraid, ashamed, guilty, nervous, and jittery). The PANAS has been shown to have good psychometric properties, with internal consistency reliabilities ranging from .87 (negative affect) to .90 (positive affect) (Watson, Clark, & Tellegen, 1988).

## **Procedure**

The present study was conducted in two psychology labs in the Skaggs Building at the University of Montana. Each participant signed up for a two-hour block of time, and there were

approximately ten to twenty subjects participating in the study during the same two-hour time block. Subjects participating during the same two-hour time block were in the same group (i.e., the treatment or control group), and there were six two-hour time blocks (three treatment groups and three control groups). The participants in the first, third, and fifth time blocks were in the treatment group, and the participants in the second, fourth, and sixth time blocks were in the control group. It should be noted that time of day, day of the week, and location were held constant across all six groups.

Upon arrival at the research lab at the Skaggs Building, the participants were greeted by a trained graduate research assistant. Each participant was informed that he/she could withdraw from the study at any time without penalty. Prior to the start of the study, participants were asked if they had any questions, and they were allowed to have their questions answered. Participants who agreed to continue were given a consent form to sign. It should be noted that the participants and the graduate research assistants were blind to whether they were participating in the treatment or control group. After the signed consent forms had been collected by the research assistant, participants completed the Demographics Questionnaire, the Beck Depression Inventory, the Adolescent Version of the Parents as Social Context Questionnaire, the Empowerment Scale and the Positive Affect/Negative Affect Scale. It should be noted that although the directions for the BDI ask participants to consider the past two weeks when completing the questionnaire, the participants were asked to complete the BDI to reflect their current feelings and symptoms.

After the participants completed the questionnaires, the psychoeducational component of the study was administered. Subjects in the treatment group engaged in a brief psychoeducational program relevant to depressive symptoms and perceptions, whereas subjects in the control group

engaged in a brief psychoeducational program not relevant to depressive symptoms and perceptions. The psychoeducational component administered to the treatment group was partly based on a psychoeducational component of a cognitive therapy manual for treating children and adolescents (Friedberg, McClure, & Garcia, 2009). A technique described in this manual involves educating children and adolescents about cognitive distortions that are commonly experienced by individuals who are depressed. The descriptions of the cognitive distortions that were used in the present study were taken from this manual.

Participants in the treatment group watched a video of the primary researcher. In the video, the researcher described symptoms of depression and stated that these symptoms may lead to cognitive distortions, or exaggerated and irrational thoughts. The symptoms of depression discussed by the primary researcher in the video included: depressed mood most of the day every day for the past two weeks, described as “down, sad, or irritable;” diminished interest in pleasurable activities, described as “not enjoying fun things as much as before;” weight loss or gain; insomnia or hypersomnia, described as “having trouble falling asleep or staying asleep at night, or sleeping too much or feeling really tired during the day;” psychomotor agitation or retardation, described as “feeling hyper or agitated or slow and sluggish;” loss of energy, described as “not hanging out with friends as much or not going to school as much;” feelings of guilt or worthlessness, partly described as “putting oneself down;” diminished ability to think or concentrate, described as “trouble making decisions, getting in trouble at school, trouble concentrating in school, or getting bad grades;” thoughts of death or suicide, described as “thinking about dying or wishing to be dead.”

In the video shown to the treatment group, the primary researcher also discussed several cognitive distortions taken from a cognitive therapy manual by Friedberg, McClure, and Garcia

(2009) that might be experienced by individuals who are depressed. The cognitive distortions discussed in the video were 1) seeing things from only one side and ignoring all other sides, 2) using your feelings as the main guide for your actions and thoughts, 3) falsely believing something awful will happen to you, 4) falsely believing all the bad things that happen to you or other people are all your fault, 5) using a label for yourself such as “I’m bad,” or labeling others, 6) stubbornly insisting that your ideas about how you, other people, and the world should act are the only ones that are right, 7) convincing yourself that strengths, successes, and good experiences do not count, 8) incorrectly believing you know exactly what is going through someone else’s mind without checking it out or asking him or her, 9) believing something despite there being little to back up the ideas, 10) seeing things in only two ways, 11) when you look at yourself, other people, or what happens to you, you shrink the positive or supersize the negative, and 12) jumping to big conclusions by using small bits of information. The script for the treatment group’s video is presented below.

#### Script for Treatment Group’s Video:

Hello, my name is Mallory McBride and I am the primary researcher of this study. Thank you for participating. In this video, I’m going to talk about some symptoms that are commonly experienced when a person is depressed. I am also going to talk about ways in which people with depression might perceive situations and events in ways that are inaccurate or distorted. Please listen carefully because, after you watch the video, you will complete a packet that uses the information from the video. Don’t worry, it’s not a test. All of the information that I give you in this video will also be in the packet. Okay, let’s get started.

Depression is a mental health condition that is experienced by many people of all ages. People who are depressed commonly experience the following symptoms: They experience a depressed mood most of the day every day for at least two weeks. This might involve feeling down, sad, or irritable without really knowing why. People with depression also may experience a diminished interest in pleasurable activities, meaning that they don’t enjoy fun things as much as they did before. People with depression might gain a lot of weight or lose a lot of weight, and they might have insomnia or hypersomnia, meaning that they have trouble falling asleep or staying asleep at night, or they sleep too much or feel really tired during the day. People with depression might also experience psychomotor agitation, meaning that they feel really hyper or agitated during the day, or they might experience psychomotor retardation, meaning that they feel really slow or

sluggish during the day. They might also experience a loss of energy, which may involve not hanging out with friends as much or not going to school as much. People with depression also commonly have feelings of guilt or worthlessness. This may involve putting themselves down, feeling that they aren't good at anything, or feeling responsible for things that aren't their fault. Depression also leads to a diminished ability to think or concentrate, so people with depression might have trouble making decisions, they might get in trouble at school, they might have trouble concentrating in school, or they might get bad grades. Finally, people with depression sometimes have thoughts of death or suicide, meaning that they might think about dying or wish they were dead.

Now I'm going to talk about ways in which people with depression might perceive situations and events in ways that are inaccurate or distorted. These are called cognitive distortions, and people who are depressed commonly experience them. One cognitive distortion experienced by people who are depressed is seeing things from only one side and ignoring all other sides to a situation. For example, they might think that a bad grade is only the result of their own stupidity, and they may ignore facts such as the test being hard or the teacher being unfair. People who are depressed also use feelings as the main guide for their actions and thoughts. For example, they might decide not to do something because they are feeling sad and tired. Depression also leads people to falsely believe something awful will happen with very little to back up these ideas, and they may also believe that all the bad things that happen to them or other people are all their fault. People with depression might also use a label for themselves such as "I'm bad," or they may label others. People with depression might also stubbornly insist that their ideas about how they, other people, and the world should act are the only ones that are right. For example, they might think that their friends and family should just leave them alone and stay out of their lives. They may also convince themselves that strengths, successes, and good experiences do not count. People with depression may also incorrectly believe that they know exactly what is going through someone else's mind without checking it out or asking the person, and they may believe something despite there being little to back up their ideas. For example, they might assume that a friend is mad at them when the friend really isn't mad. People with depression may also see things in only two ways, while ignoring all other possibilities, and when they look at themselves, other people, or what happens to them, they might shrink the positive or supersize the negative. Finally, people with depression might jump to big conclusions by using small bits of information. For example, they might think their boyfriend or girlfriend is breaking up them because they didn't call them for three hours. Well, that's all the information that I have for you. Thank you for listening and thank you for your participation.

After watching the video, the participants completed a workbook using the information presented in the video. The workbook completed by the treatment group contained 12 hypothetical scenarios based upon the scenarios in the Adolescent Cognitive Style Questionnaire (Hankin & Abramson, 2002), a questionnaire that consists of 12 hypothetical negative event scenarios relevant to adolescents. The scenarios constructed for the psychoeducational

component of the present study consisted of adolescents appraising situations and events. Participants then identified whether the adolescent in the scenario was depressed or not depressed. If the adolescent in the scenario was identified as “depressed,” then the participant was asked to list two symptoms of depression that were noticeably present in the scenario, as well as two cognitive distortions exhibited by the adolescent in the scenario. If the adolescent in the scenario was identified as “not depressed,” then the participant was asked to list two reasons why the adolescent in the scenario was not depressed.

Below is the format for each question in the treatment group’s workbook:

Scenario

Is the individual in the scenario depressed?

If so, please list two symptoms of depression that you noticed in this scenario. If not, please list two reasons why you don’t think this person is depressed.

1. \_\_\_\_\_
2. \_\_\_\_\_

Did the individual in the scenario make any cognitive distortions?

If so, please list two cognitive distortions that you noticed in the scenario.

1. \_\_\_\_\_
2. \_\_\_\_\_

A list of depressive symptoms as well as descriptions of the symptoms was presented at the beginning of the workbook. In addition, the list of cognitive distortions was also presented at the beginning of the workbook. After completion of the workbook, the graduate research assistant discussed the workbook scenarios with the participants. The research assistant gave the correct answers to the scenarios, and the participants were allowed to ask questions and discuss their answers. The scenarios presented in the treatment group’s workbook were as follows:

1. Jeff takes a history test and gets an “F.” He believes the reason for his grade is that he is stupid and worthless. Jeff also has not been attending school as much, and, when he does go to school, he has a lot of trouble paying attention.

Answers: Depressed. Symptoms Present: Loss of energy, diminished ability to concentrate, feelings of worthlessness. Cognitive Distortions: Seeing things from one side while ignoring others, labeling yourself, shrinking the positive and supersizing the negative, jumping to big conclusions.

2. Sarah wants a boyfriend, but she doesn't have one. Sarah believes she doesn't have a boyfriend because she just hasn't met anyone she wants to go out with. Sarah has lots of friends whom she hangs out with all the time and she belongs to a lot of school clubs, so she thinks she will meet someone to date really soon.

Answers: Not depressed. Symptoms Not Present: No depressed mood, no loss of interest, no loss of energy, no feelings of worthlessness. Cognitive Distortions: None.

3. Bobby's girlfriend breaks up with him even though he doesn't want to break up. Bobby has gained a lot of weight recently, and he believes his girlfriend thinks he is ugly and hates him. The truth is, Bobby's girlfriend is tired of Bobby acting so grumpy and irritable all the time, not going out with her as much as he used to, and always putting himself down.

Answers: Depressed. Symptoms Present: Weight gain, feelings of worthlessness, depressed mood, loss of interest, loss of energy. Cognitive Distortions: Seeing things from one side, labeling yourself, incorrectly believing you know what is going through someone else's mind, believing something despite little evidence.

4. Amy applies for several colleges but doesn't get in to any of them. Even though the reason she didn't get in is because of the bad economy, Amy believes that she didn't get in to college because she is worthless. Amy also thinks it is better she didn't get in to any colleges because it took her a really long time to make the decision to apply to college, and has been feeling so tired lately that she isn't sure she wants to go to college anyway.

Answers: Depressed. Symptoms Present: Feelings of worthlessness, loss of energy, insomnia, diminished ability to think or concentrate. Cognitive Distortions: Using feelings as a main guide for actions, falsely believing that bad things are your fault, convincing yourself that strengths do not count.

5. Rick tries out for the basketball team but doesn't make it. He knows he is a good player, and he stays in shape by eating healthy meals and getting plenty of sleep at night, but he also knows that a lot of really good players tried out for the team. Rick decides to train really hard and try out for the team next year.

Answers: Not depressed. Symptoms not Present: No weight loss or gain, no trouble sleeping, no loss of energy, no diminished pleasure in activities. Cognitive Distortions: None.

6. Mary wants to go to Billy's birthday party, but she is not invited. Mary thinks that nobody likes her, and she believes that bad things always happen to her and not other

people. The truth is, Billy likes Mary but, lately, Mary has been really hyper and acting up in class. Mary has also been really irritable. Billy hopes she starts acting like herself again so they can be friends.

Answers: Depressed. Symptoms Present: Psychomotor agitation, depressed mood (irritability), feelings of worthlessness, diminished ability to concentrate. Cognitive Distortions: Falsely believing that bad things are your fault, incorrectly believing you know what is going through someone else's mind, believing something bad despite little evidence, shrinking the positive and supersizing the negative, jumping to big conclusions.

7. Ronald works at a restaurant. One day at work, Ronald drops a wine glass on the floor and it breaks. Ronald's boss yells at him for breaking the glass. Ronald knows that he should have been more careful with the glass, but he also knows he is a good worker. He apologizes to his boss and says he will be more careful in the future.

Answers: Not depressed. Symptoms not Present: No feelings of guilt or worthlessness, no diminished interest in activities, no depressed mood. Cognitive Distortions: None.

8. Tina brings home a report card that has mostly Ds. She shows the report card to her parents. She thinks that her parents are really mad at her and she believes her parents think she can't do anything right. The truth is, Tina's parents are not mad at her, but are concerned because she has had trouble concentrating in school and seems tired and sluggish. They want to help her, but Tina won't talk to them about what is wrong.

Answers: Depressed. Symptoms Present: Diminished ability to concentrate, loss of energy, insomnia, feelings of worthlessness. Cognitive Distortions: Believing something bad despite little evidence, labeling yourself, incorrectly believing you know what is going through someone else's mind, jumping to big conclusions.

9. John's parents are worried about him because he has seemed sad and doesn't hang out with his friends as much as he used to. They sit John down to discuss this with him, but John believes they are ganging up on him and he yells at them to leave him alone. John thinks his parents are mad at him and don't understand what he's going through. The truth is, John's parents just want to help him, and they wish he would talk to them about what is wrong.

Answers: Depressed. Symptoms Present: Depressed mood, diminished interest in activities, loss of energy, feelings of worthlessness. Cognitive Distortions: Seeing things from one side, using feelings as main guide for actions, insisting that your beliefs about yourself and others are right, incorrectly believing you know what is going through someone else's mind.

10. Jessica is in the cafeteria at school when another girl makes fun of the shirt she is wearing. Jessica knows that this girl often says mean things, but her feelings are hurt a little. Jessica has a lot of friends, and they tell her that her shirt is cute. Jessica decides to not let what the other girl said bother her.

Answers: Not depressed. Symptoms not Present: No feelings of worthlessness, no diminished interest, no loss of energy. Cognitive Distortions: None.

11. Seth has been on the school's honor roll for the past three years, but, this year, he didn't make it. He thinks he didn't make it because he is dumb. Seth feels that he will never be good at anything and it might be better off if he were dead. The truth is, Seth didn't make the honor roll because he has missed a lot of school lately and hasn't been able to pay attention in class.

Answers: Depressed. Symptoms Present: Depressed mood, thoughts of death, loss of energy, diminished ability to concentrate. Cognitive Distortions: Falsely believing that bad things are your fault, convincing yourself that strengths do not count, believing something despite little evidence, shrinking the positive and supersizing the negative.

12. Jen wants to go to the homecoming dance with Steve, but he doesn't ask her to go with him. Jen thinks Steve didn't ask her to the dance because she is fat and ugly. The truth is, Jen has actually lost a lot of weight recently. Steve had planned on asking Jen to the dance, but Jen hadn't been in school that much lately, and he hadn't seen her at the mall in awhile. When Steve had seen Jen at school, she always seemed distracted and agitated, so he decided not to ask her to the dance.

Answers: Depressed. Symptoms Present: Weight loss, diminished interest in activities, loss of energy, psychomotor agitation, diminished ability to concentrate. Cognitive Distortions: Seeing things from one side, labeling yourself, incorrectly believing you know what is going through someone else's mind, jumping to conclusions.

Participants in the control group also watched a video of the primary researcher. In the video, the researcher described pessimism and optimism and characteristics of pessimistic and optimistic individuals. Pessimism and Optimism were chosen as the concepts that were presented in the control group's video for several reasons. The first is that optimism and pessimism have been found to be related to depressive cognitions in adolescents (Hammond & Romney, 1995; Shek, 1993). This is important in that the adolescents in the control group completed a measure pertaining to their depressive symptoms, and, thus, it might have seemed confusing or strange to the participants if the concepts presented in the video appeared to be completely unrelated to depression. However, the way in which pessimism and optimism were defined in the above studies is much different than how each concept was described in the present study. For example,

in the research cited above, the definitions of “pessimism” included components pertaining to a lack of self-esteem, a lack of control over one’s future or actions, complete hopelessness, and worthlessness. Given that depression includes many of these components, it makes sense that the participants in the research cited above would demonstrate similar levels of depression and pessimism. The present study did not include such severe descriptions of these concepts.

Pessimism and Optimism were also chosen because research also demonstrates that these constructs may not be strongly related to depression. Extremera, Duran, and Rey (2007) found that optimism and pessimism are not strongly related to adolescent psychological adjustment, stress, or life satisfaction. The authors stated that optimism and pessimism appear to be independent constructs, unrelated to adolescents’ levels of psychological well-being. Given the mixed research about the relationship between adolescent depression and optimism/pessimism, as well as the less depression-oriented definitions that were presented in the present study, it is not believed that the inclusion of these constructs was highly problematic.

In the video shown to the control group, pessimism was described as “a lack of hope or confidence in the future” (Oxford University Press, 2005). Optimism was described as “hopefulness and confidence about the future or success of something” (Oxford University Press, 2005). The characteristics discussed in the video describing pessimistic individuals were cynical, discouraged, foreboding, dejected, gloomy, and negative. The characteristics discussed in the video describing optimistic individuals were assured, confident, encouraged, hopeful, upbeat, and positive. The script for the control group’s video is presented below.

Script for Control Group’s Video:

Hello, my name is Mallory McBride and I am the primary researcher of this study. Thank you for participating. In this video, I’m going to talk about optimism and pessimism and how being optimistic or pessimistic may affect a person’s attitudes and behaviors when it comes to employment. I am also going to talk about characteristics of optimistic and pessimistic people.

Please listen carefully because after you watch the video, you will complete a packet that uses the information from the video. Don't worry, it's not a test. All of the information that I give you in this video will also be in the packet. Okay, let's get started.

I'm sure all of you have heard the terms "optimism" and "pessimism," and most of you probably already know what they mean, but I'd like to give you the definitions of "optimism" and "pessimism" from the Oxford English Dictionary. Optimism is defined as hopefulness and confidence about the future or success of something. Pessimism is defined as a lack of hope or confidence in the future. As you might expect, people who are optimistic do better at their jobs, and they are more likely to be praised by their bosses and apply for promotions. Optimistic people generally like their jobs, and they may feel that working hard will bring them success in life. In contrast, pessimistic people do not do as well at their jobs, and they may feel that their jobs are a "dead end" or not worthwhile. Pessimistic people may feel that what they are doing isn't important, and, therefore, they don't need to work very hard.

Now I'm going to talk about some characteristics of optimistic and pessimistic people. In general, optimistic people are self-assured (meaning that they feel secure in their knowledge, skills, and abilities), confident about their knowledge, skills and abilities, encouraged about future possibilities and opportunities, hopeful about future events, upbeat, and positive. In general, pessimistic people are cynical (meaning that they don't trust others' motives), discouraged about future possibilities, foreboding (meaning that they feel that the future will not bring good things), dejected (meaning that they do not feel hopeful about future events), gloomy, and negative. Well, that's all the information that I have for you. Thank you for listening and thank you for your participation.

After watching the video, the participants in the control group then completed a workbook using the information presented in the video. The workbook completed by the control group contained 12 hypothetical scenarios based upon the statements in the Organizational Orientation: Upward Mobile Orientation Measure (McCroskey, Richmond, Johnson, & Smith, 2004), an 18-item self-report measure that evaluates the ways in which people approach work in organizations. In the "control" psychoeducational component of the present study, participants identified whether the individual in the scenario was optimistic or pessimistic, and then discussed their reasons for identifying the individual this way.

Below is the format for each question in the control group's workbook:

Is the individual in the scenario optimistic or pessimistic?

If you believe the person is optimistic, please list two characteristics of optimism that you noticed in this scenario. If you believe the person is pessimistic, please list two characteristics of pessimism that you noticed in this scenario.

1. \_\_\_\_\_
2. \_\_\_\_\_

A description of pessimism and optimism and characteristics of pessimistic and optimistic individuals were presented at the beginning of the workbook. As with the treatment group, after completion of the workbook, the trained graduate research assistant discussed the workbook scenarios with the participants. The research assistant gave the correct answers to the scenarios, and the participants were allowed to ask questions and discuss their answers. The scenarios presented in the control group's workbook were as follows:

1. George works at a grocery store. Although he doesn't always like his job, he generally tries his best to do what his employer wants him to do because he believes he will be more successful later in life if he tries hard at his job now.

Answers: Optimistic. Characteristics: Any characteristics of optimism.

2. Laura works at a video store. One day, her boss offers her a management position, which means she would get paid a lot more money. Laura has made friends with other people who work at the store. Laura decides not to accept the management position because she feels that her friends probably won't like her anymore and she might not do a good job.

Answers: Pessimistic. Characteristics: Any characteristics of pessimism.

3. Rob wants to be a veterinarian. He knows that if he works hard, he will be able to get into a good college, get into veterinary school, get a job as a veterinarian, and do well at his job.

Answers: Optimistic. Characteristics: Any characteristics of optimism.

4. Cory works in a coffee shop. Although there is an opening at the coffee shop for a higher-paying position, Cory doesn't apply because he doesn't want to work harder than he has

to. He tells himself, “It isn’t worth it to work harder because it will never get me all the way to the top.”

Answers: Pessimistic. Characteristics: Any characteristics of pessimism.

5. Betty doesn’t like her part-time job. She tells herself that she doesn’t like her job because she wasn’t trained very well and doesn’t know how to do the work. Betty feels that it isn’t worth it to learn how to do the job well because she is just going to quit soon anyway.

Answers: Pessimistic. Characteristics: Any characteristics of pessimism.

6. Marcus works really hard at his part-time job. He likes learning new things about the job and has gotten really good at doing the work. Marcus’ boss always tells him that he does excellent work, and Marcus knows that he is going to keep getting better.

Answers: Optimistic. Characteristics: Any characteristics of optimism.

7. Peter works at his mom’s store. He doesn’t work very hard because he feels his job is a “dead end” and the work he does doesn’t really count for anything. His mom asks Peter to work harder, but Peter tells her that his job doesn’t count for anything so he doesn’t feel he should put in a lot of effort.

Answers: Pessimistic. Characteristics: Any characteristics of pessimism.

8. Jim works for his dad’s business. Everyone at his job always tells him that he is a good worker, and Jim knows that all of his hard work will pay off one day. Jim’s dad is proud of him for working so hard, and he is happy that Jim has such a good outlook on life.

Answers: Optimistic. Characteristics: Any characteristics of optimism.

9. Lily really liked her job when she first started, but she doesn’t really like her job as much anymore. She doesn’t feel that she really accomplishes anything while at work, and she goes home not feeling good about the work she did that day. She decides that, instead of trying to find another job, she will just stop working hard and wait for something better to fall in her lap.

Answers: Pessimistic. Characteristics: Any characteristics of pessimism.

10. Denise works in an ice-cream store. Although she doesn’t plan to work there forever, she knows she is good at the job, and she knows that she can only get better. Denise decides to apply for a manager position because she knows she is good at the job.

Answers: Optimistic. Characteristics: Any characteristics of optimism.

11. Andy works at a fast-food restaurant. He doesn't feel that he is doing anything that important, so he doesn't work very hard. He tells himself that he doesn't need to work hard because his job is never going to be successful or important.

Answers: Pessimistic. Characteristics: Any characteristics of pessimism.

12. Ellen is in a band with her friends. She believes she is a creative person, and knows that her band is good. She knows that if they work hard, they could become famous.

Answers: Optimistic. Characteristics: Any characteristics of optimism.

After the psychoeducational component of the study, participants again completed the Empowerment Scale, the Positive Affect/Negative Affect Scale, the Beck Depression Inventory (again to reflect their current symptoms and not those experienced in the past two weeks) and the Parents as Social Context Questionnaire, Adolescent Version. After the participants completed the measures for the second time, they were given a debriefing sheet and a list of mental health resources available in the community. The debriefing sheet explained that some groups of participants watched a video about depressive symptoms, whereas other groups watched a video about pessimistic and optimistic attitudes in an employment setting. The debriefing sheet also stated that individuals who watched the video about optimism and pessimism may not have gained the same understanding of their symptoms as the individuals who watched the video about depression. The debriefing sheet further stated that participants in the control group could watch the video about depression if they wished. However, none of the participants in the control group requested to watch the video about depression. Participants were awarded six credits of Psychology 100 research participation.

## **Results**

Data were analyzed using the Statistical Package for the Social Sciences, Version 17.0. The independent variables are the psychoeducational component and time. The independent variables each have two levels; the levels for the psychoeducational component are treatment

group and control group, and the levels for time are Time 1 and Time 2. The dependent variables are depressive symptoms, parenting behaviors, empowerment, and affect. The hypotheses were examined using 12 repeated measures ANOVAs, and simple main effects were also assessed. The dependent variables analyzed in each model were Beck Depression Inventory score (depressive symptoms), Positive Parenting as assessed by the Parents as Social Context Questionnaire (created by combining scores on the Warmth, Structure, and Autonomy Support dimensions), Negative Parenting as assessed by the Parents as Social Context Questionnaire (created by combining scores on the Rejection, Chaos, and Coercion dimensions), Parental Warmth as assessed by the Parents as Social Context Questionnaire, Parental Rejection as assessed by the Parents as Social Context Questionnaire, Parental Structure as assessed by the Parents as Social Context Questionnaire, Parental Chaos as assessed by the Parents as Social Context Questionnaire, Parental Autonomy Support as assessed by the Parents as Social Context Questionnaire, Parental Coercion as assessed by the Parents as Social Context Questionnaire, Empowerment Scale score, Positive Affect as assessed by the Positive Affect/Negative Affect Scale, and Negative Affect as assessed by the Positive Affect/Negative Affect Scale.

All relationships between dependent variables at Time 1 and Time 2 were as expected. Depression score was negatively related to Positive Parenting (Time 1:  $r = -.374$ ,  $p = .000$ ; Time 2:  $r = -.418$ ,  $p = .000$ ) and positively correlated with Negative Parenting (Time 1:  $r = .393$ ,  $p = .000$ ; Time 2:  $r = .361$ ,  $p = .000$ ). This indicates that as depressive symptoms increase, positive perceptions of one's parent decrease and negative perceptions of one's parent increase. The relationship between Positive Parenting and Negative Parenting was also as expected (Time 1:  $r = -.711$ ,  $p = .000$ ; Time 2:  $r = -.689$ ,  $p = .000$ ), indicating that as positive views of parental behaviors increase, negative views of parental behaviors decrease. Depression score was also negatively

related to empowerment (Time 1:  $r=-.467$ ,  $p=.000$ ; Time 2:  $r=-.536$ ,  $p=.000$ ) and positive affect (Time 1:  $r=-.244$ ,  $p=.013$ ; Time 2:  $r=-.287$ ,  $p=.003$ ), and positively related to negative affect (Time 1:  $r=.597$ ,  $p=.000$ ; Time 2:  $r=.494$ ,  $p=.000$ ). This indicates that as participants' feelings of empowerment increased, depressive symptoms decreased. Additionally, as depressive symptoms increased, positive affect decreased and negative affect increased. Empowerment was also found to be negatively related to Negative Parenting (Time 1:  $r=-.185$ ,  $p=.062$ ; Time 2:  $r=-.218$ ,  $p=.028$ ) and positively related to Positive Parenting (Time 1:  $r=.195$ ,  $p=.049$ ; Time 2:  $r=.245$ ,  $p=.013$ ). Empowerment and affect were also related in the expected direction—as empowerment increased, positive affect tended to increase as well (Time 1:  $r=.169$ ,  $p=.087$ ; Time 2:  $r=.245$ ,  $p=.013$ ), and negative affect tended to decrease (Time 1:  $r=-.368$ ,  $p=.000$ ; Time 2:  $r=-.390$ ,  $p=.000$ ).

When repeated measures ANOVA's were conducted to evaluate the differences between the treatment group and control group at Time 1 and Time 2, it was found that the difference between the treatment group's (Group 1) and control group's (Group 2) Beck Depression Inventory scores at Time 1 was not significant ( $t= .506$ ;  $p=.614$ ) (Group 1: Mean=7.15, SD=5.26; Group 2: Mean=6.57, SD=6.29). There was a main effect for Time ( $p=.000$ ), and both groups demonstrated a significant decrease in BDI scores at Time 2 (Group 1:  $t=4.57$ ,  $p=.000$ ; Group 2:  $t=2.37$ ,  $p=.022$ ). The difference between the treatment group's and control group's BDI scores at Time 2 was not significant ( $t=-.158$ ;  $p=.875$ ) (Group 1: Mean=5.74, SD=5.14; Group 2: Mean=5.92, SD=6.26). There was not a significant main effect for Group ( $p=.858$ ), and the Time\*Group interaction was marginally significant ( $p=.073$ ). It's possible that, had the study had a sample size that was congruent with the power analysis, this interaction would have been statistically significant. Nonetheless, the findings indicate that both groups were reporting a

significant decrease in depressive symptoms from Time 1 to Time 2; however, the treatment group reported a slightly larger decrease in depressive symptoms than the control group. This finding marginally supports the hypothesis that the treatment group would demonstrate a greater decrease in depression scores at Time 2 than the control group. The results pertaining to depression are summarized in Table 1, and the relationship between the treatment group and control group is highlighted in Graph 1.

Table 1 About Here

Graph 1 About Here

Analysis of the Parents as Social Context Questionnaire scores revealed that the difference between the treatment group's and control group's Positive Parenting scores at Time 1 was not significant ( $t=.467$ ;  $p=.642$ ) (Group 1: Mean=82.28, SD=10.12; Group 2: Mean=81.24, SD=12.31). There was a main effect for Time ( $p=.000$ ), and both groups demonstrated a significant increase in Positive Parenting scores at Time 2 (Group 1:  $t=-2.08$ ,  $p=.042$ ; Group 2:  $t=3.14$ ,  $p=.003$ ). The difference between the treatment group's and control group's Positive Parenting scores at Time 2 was not significant ( $t=.176$ ;  $p=.861$ ) (Group 1: Mean=83.19, SD=10.46; Group 2: Mean=82.80, SD=12.05). There was not a significant main effect for Group ( $p=.746$ ), and the Time\*Group interaction was not significant ( $p=.327$ ). However, a graph of each group's Positive Parenting scores from Time 1 to Time 2 revealed that the two lines were converging toward one another (Graph 2). Thus, it is possible that a larger sample size would have yielded a statistically significant interaction. The findings indicate that both groups were reporting a significant increase in Positive Parenting from Time 1 to Time 2; this reported increase in Positive Parenting was approximately equal across groups. This finding is contrary to the expectation that the treatment group would demonstrate a significant increase in Positive

Parenting at Time 2 relative to the control group. The results pertaining to Positive Parenting are summarized in Table 2, and the relationship between the treatment group and control group is highlighted in Graph 2.

Table 2 About Here

Graph 2 About Here

The findings regarding Negative Parenting as assessed by the Parents as Social Context Questionnaire did not support the hypotheses. The difference between the treatment group's and control group's Negative Parenting scores at Time 1 was not significant ( $t=.138$ ;  $p=.890$ ) (Group 1: Mean=35.26, SD=11.21; Group 2: Mean=34.96, SD=11.02). There were no significant main effects for Time ( $p=.197$ ) or Group ( $p=.939$ ), and neither group demonstrated a significant decrease in Negative Parenting scores at Time 2 (Group 1:  $t=1.05$ ,  $p=.299$ ; Group 2:  $t=.788$ ,  $p=.435$ ). The difference between the treatment group's and control group's Negative Parenting scores at Time 2 was not significant ( $t=.015$ ;  $p=.988$ ) (Group 1: Mean=34.57, SD=11.98; Group 2: Mean=34.53, SD=11.58), and the Time\*Group interaction was not significant ( $p=.757$ ). However, a graph of each group's Negative Parenting scores from Time 1 to Time 2 revealed that the two lines were converging toward one another, and were almost touching at Time 2 (Graph 3). Thus, it is possible that a larger sample size would have produced a statistically significant interaction. The findings indicate that neither group was reporting a significant decrease in Negative Parenting from Time 1 to Time 2. This finding is contrary to the expectation that the treatment group would demonstrate a significant decrease in Negative Parenting at Time 2 relative to the control group. Findings pertaining to Negative Parenting are summarized in Table 3, and the relationship between the treatment group and control group is highlighted in Graph 3.

Table 3 About Here

Graph 3 About Here

Each dimension of the Parents as Social Context Questionnaire was also analyzed as a dependent variable. The difference between the treatment group's and control group's Parental Warmth scores at Time 1 was not significant ( $t=.340$ ;  $p=.734$ ) (Group 1: Mean=28.58, SD=3.23; Group 2: Mean=28.35, SD=3.83). There was a significant main effect for Time ( $p=.018$ ). However, the treatment group did not demonstrate a significant increase in Parental Warmth at Time 2, but the control group did demonstrate a significant increase in Parental Warmth at Time 2 (Group 1:  $t=-1.07$ ,  $p=.291$ ; Group 2:  $t=-.071$ ,  $p=.025$ ). The difference between the treatment group's and control group's Parental Warmth scores at Time 2 was not significant ( $t=-.090$ ;  $p=.928$ ) (Group 1: Mean=28.83, SD=3.40; Group 2: Mean=28.90, SD=4.17). There was not a significant main effect for Group ( $p=.904$ ). Although the Time\*Group interaction was not significant ( $p=.359$ ), a graph of the Parental Warmth variable indicated an interaction (Graph 4). Thus, it is possible that statistical significance would have been found with a larger sample size. The findings indicate that only the control group was reporting a significant increase in Parental Warmth from Time 1 to Time 2. This finding is contrary to the expectation that the treatment group would report significantly more Positive Parenting characteristics at Time 2 relative to the control group. The results pertaining to Parental Warmth are summarized in Table 4, and the relationship between the treatment group and control group is highlighted in Graph 4.

Table 4 About Here

Graph 4 About Here

The difference between the treatment group's and control group's Parental Rejection scores as assessed by the Parents as Social Context Questionnaire at Time 1 was not significant

( $t=.573$ ;  $p=.568$ ) (Group 1: Mean=10.19, SD=3.95; Group 2: Mean=9.76, SD=3.67). There were no significant main effects for Time ( $p=.716$ ) or Group ( $p=.558$ ), and neither group demonstrated a significant decrease in Parental Rejection at Time 2 (Group 1:  $t=.239$ ,  $p=.812$ ; Group 2:  $t=.282$ ,  $p=.779$ ). The difference between the treatment group's and control group's Parental Rejection scores at Time 2 was not significant ( $t=.575$ ;  $p=.566$ ) (Group 1: Mean=10.13, SD=3.99; Group 2: Mean=9.69, SD=3.68), and the Time\*Group interaction was not significant ( $p=.989$ ), with no interaction or potential interaction indicated in the graph of the variable (Graph 5). The findings indicate that neither group was reporting a significant decrease in Parental Rejection from Time 1 to Time 2. This finding is contrary to the hypothesis that the treatment group would demonstrate a significant decrease in Negative Parenting characteristics at Time 2 relative to the control group. Results concerning Parental Rejection are summarized in Table 5, and the relationship between the treatment group and control group is highlighted in Graph 5.

Table 5 About Here

Graph 5 About Here

The difference between the treatment group's and control group's Parental Structure scores as assessed by the Parents as Social Context Questionnaire at Time 1 was not significant ( $t=.620$ ;  $p=.537$ ) (Group 1: Mean=26.57, SD=4.24; Group 2: Mean=26.00, SD=4.97). There was a marginally significant main effect for Time ( $p=.061$ ). However, the treatment group did not demonstrate a significant increase in Parental Structure at Time 2, but the control group did demonstrate a significant increase in Parental Structure at Time 2 (Group 1:  $t=-.401$ ,  $p=.690$ ;  $t=-1.97$ ,  $p=.035$ ). The difference between the treatment group's and control group's Parental Structure scores at Time 2 was not significant ( $t=.081$ ;  $p=.936$ ) (Group 1: Mean=26.64, SD=4.31; Group 2: Mean=26.57, SD=4.48). There was not a significant main effect for Group

( $p=.717$ ), and the Time\*Group interaction was not significant ( $p=.149$ ). However, a graph of each group's Parental Structure scores from Time 1 to Time 2 revealed that the two lines were converging toward one another (Graph 6). Thus, it is possible that a larger sample size would have yielded a statistically significant interaction. The findings indicate that only the control group was reporting a significant increase in Parental Structure from Time 1 to Time 2. This finding is contrary to the expectation that the treatment group would report significantly more Positive Parenting characteristics at Time 2 relative to the control group. Findings pertaining to Parental Structure are summarized in Table 6, and the relationship between the treatment group and control group is highlighted in Graph 6.

Table 6 About Here

Graph 6 About Here

The difference between the treatment group's and control group's Parental Chaos scores as assessed by the Parents as Social Context Questionnaire at Time 1 was not significant ( $t=-.646$ ;  $p=.520$ ) (Group 1: Mean=11.81, SD=3.91; Group 2: Mean=12.33, SD=4.15). There were no significant main effects for Time ( $p=.510$ ) or Group ( $p=.582$ ), and neither the treatment group nor control group demonstrated a significant change in Parental Chaos at Time 2 (Group 1:  $t=-.678$ ,  $p=.501$ ; Group 2:  $t=-.253$ ,  $p=.802$ ). The difference between the treatment group's and control group's Parental Chaos scores at Time 2 was not significant ( $t=-.426$ ;  $p=.671$ ) (Group 1: Mean=12.04, SD=4.15; Group 2: Mean=12.41, SD=4.64), and the Time\*Group interaction was not significant ( $p=.757$ ). The graph of each group's Parental Chaos scores did not indicate an interaction (Graph 7). The findings indicate that neither group was reporting a significant decrease in Parental Chaos from Time 1 to Time 2. This finding is contrary to the hypothesis that the treatment group would demonstrate a significant decrease in Negative Parenting

characteristics at Time 2 relative to the control group. The results regarding Parental Chaos are summarized in Table 7, and the relationship between the treatment group and control group is highlighted in Graph 7.

Table 7 About Here

Graph 7 About Here

The difference between the treatment group's and control group's Parental Autonomy Support scores as assessed by the Parents as Social Context Questionnaire at Time 1 was not significant ( $t=.246$ ;  $p=.806$ ) (Group 1: Mean=27.11, SD=4.17; Group 2: Mean=26.90, SD=4.65). There was a significant main effect for Time ( $p=.016$ ). However, the treatment group did not demonstrate a significant increase in Parental Autonomy Support at Time 2, but the control group did demonstrate a significant increase in Parental Autonomy Support at Time 2 (Group 1:  $t=-1.33$ ,  $p=.191$ ; Group 2:  $t=-2.03$ ,  $p=.048$ ). The difference between the treatment group's and control group's Parental Autonomy Support scores at Time 2 was not significant ( $t=-.143$ ;  $p=.887$ ) (Group 1: Mean=27.42, SD=4.08; Group 2: Mean=27.53, SD=4.08). There was not a significant main effect for Group ( $p=.952$ ). Although the Time\*Group interaction was not significant ( $p=.389$ ), a graph of the Parental Autonomy Support variable for each group from Time 1 to Time 2 indicated an interaction (Graph 8). It is possible that a statistically significant interaction would have been found with a larger sample size. The findings indicate that only the control group was reporting a significant increase in Parental Autonomy Support from Time 1 to Time 2. This finding is contrary to the expectation that the treatment group would report significantly more Positive Parenting characteristics at Time 2 relative to the control group. The findings relating to Autonomy Support are summarized in Table 8, and the relationship between the treatment group and control group is highlighted in Graph 8.

Table 8 About Here

Graph 8 About Here

Finally, the difference between the treatment group's and control group's Parental Coercion scores as assessed by the Parents as Social Context Questionnaire at Time 1 was not significant ( $t=.396$ ;  $p=.693$ ) (Group 1: Mean=13.26, SD=4.85; Group 2: Mean=12.88, SD=4.99). There was a significant main effect for Time ( $p=.003$ ). The treatment group demonstrated a significant decrease in Parental Coercion at Time 2 and the control group demonstrated a marginally significant decrease in Parental Coercion at Time 2 (Group 1:  $t=2.52$ ,  $p=.015$ ; Group 2:  $t=1.82$ ;  $p=.075$ ). The difference between the treatment group's and control group's Parental Coercion scores at Time 2 was not significant ( $t=.009$ ;  $p=.993$ ) (Group 1: Mean=12.40, SD=4.91; Group 2: Mean=12.39, SD=5.06). There was not a significant main effect for Group ( $p=.837$ ), and the Time\*Group interaction was not significant ( $p=.395$ ). However, a graph of Parental Coercion from Time 1 to Time 2 indicates an interaction (Graph 9), and it is possible that statistical significance would have been found had the study had a larger sample size. The findings indicate that both groups were reporting a decrease in Parental Coercion from Time 1 to Time 2. However, the treatment group reported a larger decrease in Parental Coercion than the control group. This finding supports the hypothesis that the treatment group would demonstrate a greater decrease in Negative Parenting characteristics at Time 2 than the control group. The results pertaining to Parental Coercion are summarized in Table 9, and the relationship between the treatment group and control group is highlighted in Graph 9.

Table 9 About Here

Graph 9 About Here

The findings concerning Empowerment did support the study's hypotheses. The difference between the treatment group's and control group's Empowerment Scale scores at Time 1 was not significant ( $t=.414$ ;  $p=.679$ ) (Group 1: Mean=75.74, SD=6.33; Group 2: Mean=74.96, SD=12.17). There was a significant main effect for Time ( $p=.023$ ). The treatment group demonstrated a significant increase in Empowerment at Time 2, but the control group did not demonstrate significant increase in Empowerment at Time 2 (Group 1:  $t=-2.41$ ,  $p=.019$ ; Group 2:  $t=-1.06$ ,  $p=.294$ ). The difference between the treatment group's and control group's Empowerment scores at Time 2 was not significant ( $t=.604$ ;  $p=.548$ ) (Group 1: Mean=76.83, SD=7.72; Group 2: Mean=75.61, SD=12.47). There was not a significant main effect for Group ( $p=.603$ ), and the Time\*Group interaction was not significant ( $p=.562$ ), although a graph of Empowerment from Time 1 to Time 2 indicates a potential interaction (Graph 10). It is possible that a larger sample size would have lead to a statistically significant interaction. The findings indicate that both groups were reporting an increase in Empowerment from Time 1 to Time 2; however, the treatment group reported a larger increase in Empowerment than the control group. This finding supports the hypothesis that the treatment group would demonstrate a greater increase in Empowerment at Time 2 than the control group. Table 10 summarizes the results pertaining to Empowerment, and the relationship between the treatment group and control group is highlighted in Graph 10.

Table 10 About Here

Graph 10 About Here

There was a somewhat unusual finding concerning Positive Affect as assessed by the Positive Affect/Negative Affect Scale. The difference between the treatment group's and control group's Positive Affect scores at Time 1 was not significant ( $t=-.464$ ;  $p=.644$ ) (Group 1:

Mean=29.22, SD=7.03; Group 2: Mean=29.96, SD=9.04). There was a significant main effect for Time ( $p=.005$ ). However, the direction of the effect was contrary to expectation. The treatment group demonstrated a significant decrease in Positive Affect at Time 2, but the control group did not demonstrate significant change in Positive Affect at Time 2 (Group 1:  $t=2.55$ ,  $p=.014$ ; Group 2:  $t=1.45$ ,  $p=.154$ ). The difference between the treatment group's and control group's Positive Affect scores at Time 2 was not significant ( $t=-.882$ ;  $p=.380$ ) (Group 1: Mean=27.54, SD=8.47; Group 2: Mean=29.20, SD=10.67). There was not a significant main effect for Group ( $p=.479$ ), and the Time\*Group interaction was not significant ( $p=.278$ ). However, a graph of the Positive Affect variable indicates that the lines are converging toward one another (Graph 11), and it is possible that a larger sample size would have revealed a significant interaction effect. The findings indicate that both groups were reporting a decrease in Positive Affect from Time 1 to Time 2; however, the treatment group reported a larger decrease in Positive Affect than the control group. This is somewhat of a curious finding, and is contrary to the expectation that the treatment group would demonstrate an increase in Positive Affect at Time 2. The results pertaining to Positive Affect are summarized in Table 11, and the relationship between the treatment group and control group is highlighted in Graph 11.

Table 11 About Here

Graph 11 About Here

The direction of the findings concerning Negative Affect as assessed by the Positive Affect/Negative Affect Scale was as expected. The difference between the treatment group's and control group's Negative Affect scores at Time 1 was not significant ( $t=-.771$ ;  $p=.443$ ) (Group 1: Mean=13.72, SD=3.47; Group 2: Mean=14.35, SD=4.71). There was a significant main effect for Time ( $p=.000$ ), and both groups demonstrated a significant decrease in Negative Affect at

Time 2 (Group 1:  $t=3.85$ ,  $p=.000$ ; Group 2:  $t=5.46$ ,  $p=.000$ ). The difference between the treatment group's and control group's Negative Affect scores at Time 2 was not significant ( $t=-.283$ ;  $p=.778$ ) (Group 1: Mean=12.67, SD=2.62; Group 2: Mean=12.84, SD=3.45). There was not a significant main effect for Group ( $p=.564$ ). Although the Time\*Group interaction was not significant ( $p=.247$ ), the graph of Negative Affect from Time 1 to Time 2 indicates an interaction (Graph 12), and, thus, it is possible that statistical significance would have been found with a larger sample. The findings indicate that both groups were reporting a decrease in Negative Affect from Time 1 to Time 2; this reported decrease in Negative Affect was approximately equal across groups. This finding is contrary to the expectation that the treatment group would demonstrate a significant decrease in Negative Affect at Time 2 relative to the control group. Table 12 summarized the results regarding Negative Affect, and the relationship between the treatment group and control group is highlighted in Graph 12.

Table 12 About Here

Graph 12 About Here

### **Discussion**

This study sought to examine the effects of brief psychoeducation on older adolescents' depressive symptoms and their perceptions of their parents' parental behaviors and attitudes. Prior to the psychoeducational component, each participant completed the Beck Depression Inventory to assess depressive symptoms, the Adolescent Version of the Parents as Social Context Questionnaire to assess parental behaviors, the Empowerment Scale to assess their feelings about self-esteem, a sense of power, autonomy, and control over the future, and the Positive Affect/Negative Affect Scale to assess in-the-moment feelings and emotions. The treatment group engaged in a brief psychoeducational program designed to educate them on the

effects of depression, the symptoms of depression, and how depression may affect perceptions. The control group engaged in a “placebo” psychoeducational program pertaining to pessimism and optimism in an employment setting. After the psychoeducational component of the study, the participants again completed the BDI, the PSCQ, the Empowerment Scale, and the PANAS.

Prior to statistical analysis, participants’ responses to the workbooks were examined in order to evaluate comprehension. In other words, an attempt was made to determine whether the participants understood the material that was presented in the video and workbook. Responses to the workbook scenarios were highly accurate and appeared devoid of confusion. Additionally, all graduate research assistants reported that participants seemed to adequately understand the material as evidenced by the questions asked and the speed and ease of completion. Thus, it is not believed that a misunderstanding of the material presented in the video and workbook contributed to the results of the study.

It should be noted that, due to the imbalance of female participants to male participants, the results of the study should be interpreted with caution. As prior research demonstrates, most individuals diagnosed with depression are female (Angold, et al., 1999), and, consequently, the disparity between the number of female and male participants may have influenced the findings of the study. However, in the present study, the ratio of males and females was approximately equal across groups (Group 1: 15 males and 39 females; Group 2: 12 males and 37 females), and males and females did not demonstrate significantly different depression scores at Time 1 or Time 2 (Males Time 1: Mean=7.07, SD=5.14; Females Time 1: Mean=6.80, SD=5.98; Males Time 2: 6.22, SD=5.10; Females Time 2: 5.68, SD=5.88). Nonetheless, due to this disproportion of female and male participants, the findings of the study may not be applicable to males.

It was hypothesized that the treatment group would demonstrate a significantly larger decrease in depression scores at Time 2 relative to the control group, and this hypothesis was marginally supported. Both the treatment group and control group demonstrated a significant decrease in depression scores. However, the treatment group demonstrated a larger decrease in depression scores compared to the control group. That is, t-tests conducted to evaluate simple effects revealed that the treatment group had a larger decrease in depression scores at Time 2 than the control group. Additionally, an interaction effect was demonstrated in the graph of both groups' scores at Time 1 and Time 2, although this interaction effect was only marginally statistically significant. Hence, watching the video pertaining to depression and cognitive distortions and completing the workbook appears to have influenced the treatment group's response at Time 2. This may indicate that adolescents in the treatment group gained a better understanding of depressive symptoms as well as a sense of control over their symptoms. This finding is consistent with prior research that suggests that psychoeducation may be effective in decreasing depressive cognitions in adolescents (Gaynor & Lawrence, 2002; Hayes & Morgan, 2005; Wells, Miller, Tobacyk, & Clanton, 2002). However, very few studies examining the effects of psychoeducation on depressive cognitions have utilized a control group, and, thus, it may be unreasonable to compare the present study's findings to findings from previous research.

It is important to discuss the finding that both the treatment group and control group demonstrated a decrease in depressive symptoms at Time 2. It may be that the psychoeducational component did indeed influence the responses of the treatment group, but it is possible that participants in the control group believed they were supposed to report a decrease in depressive symptoms at Time 2. Thus, the control group may have been acting within a context of expectation—reporting a change simply because they felt they were supposed to. The placebo

effect may also be to blame for the reported decrease in the control group's depression scores. It may be that simply watching a video, completing a workbook, and interacting with the research assistant lead the participants in the control group to feel less depressed and to believe that they had gained a better understanding of their depressive symptoms. Additionally, the control group watched a video and completed a workbook pertaining to optimism and pessimism, and, as previously discussed, these concepts may be related to depression. It is possible that the content of the control group's video and workbook influenced their perceptions of their depressive symptoms. It should be noted that it is entirely possible that the reported decrease in depression scores in the treatment group may also be due to expectation or the placebo effect, and could potentially not be solely the result of the material presented in the video and workbook. However, it is also possible that the treatment group was influenced by the material presented in the video and the workbook and subsequently did gain a better understanding of depression, leading to a decrease in depression scores.

It was also hypothesized that individuals in the treatment group would report a significant increase in their parents' positive parental behaviors and attitudes and a significant decrease in their parents' negative parental behaviors and attitudes. However, this hypothesis was largely unsupported in the present study. Both groups reported a significant increase in the Positive Parenting Dimension, but this increase in positive parenting was approximately equal across groups. This finding could again be due to participants believing that they were supposed to report an increase in positive parental behaviors and attitudes. Thus, both groups may have reported an increase because they believed they were supposed to do so. It is also possible that participants in both groups were influenced by the material presented in the workbook. Some scenarios in both groups' workbooks consisted of an adolescent interacting with his/her parent. It

is possible that simply analyzing the scenarios concerning parent/child relationships influenced participants' views of their parents, leading to an increase in Positive Parenting across both groups.

Additionally, neither group reported a significant decrease in the Negative Parenting dimension. It is somewhat unclear why participants reported a significant increase in Positive Parenting but did not report a decrease in Negative Parenting. One possibility is that participants felt uncomfortable analyzing their parents in a negative manner, and subsequently did not report negative parental characteristics at Time 1 or Time 2. The characteristics of the sample should also be considered. Most participants reported still living with their parents or speaking to their parents at least once per week. This suggests that many participants had positive relationships with their parents, and, thus, it is possible that most participants did not believe their parents engaged in negative parental practices. It should also be noted that the present study's intervention was designed to target *perceptions* of parenting. It is possible that, despite the presence of depressive symptoms, many participants in the study perceived their parents' behaviors correctly, and, thus, an intervention focusing on perceptions of parenting would not lead to a reported change in either positive or negative parenting behaviors.

When each parenting dimension as assessed by the Parents as Social Context Questionnaire was examined, the results were also largely contrary to expectation. Interestingly, only the control group reported a significant increase in the Positive Parenting characteristics of Warmth, Structure, and Autonomy Support. That is, t-tests conducted to evaluate simple effects revealed that the control group had a larger increase in parental warmth, parental structure, and parental autonomy support scores at Time 2 than the treatment group. This finding could again be due to the control group believing they were supposed to report an increase in positive

parenting characteristics. It is also possible that the information pertaining to optimism in the control group's video as well as the scenarios about optimism and parent/child interactions in the control group's workbook influenced the responses of the control group at Time 2, whereas the treatment group was not as highly influenced by the material presented in their video and workbook. Thus, it may be that the control group focused on optimistic characteristics, and this focus led to a reported increase in the control group's views of their parent's positive parenting techniques, whereas the treatment group may have been focusing more on depressive cognitions, leading to a decrease in depression scores at Time 2 but not a change in reported parenting characteristics.

Additionally, neither group demonstrated a significant decrease in Rejection or Chaos. This may be due to participants not reporting negative parental characteristics, and consequently, Rejection and Chaos being low at Time 1 and Time 2. However, with regard to Coercion, although both groups reported a significant decrease at Time 2, the treatment group reported a larger decrease in Coercion relative to the control group. That is, t-tests conducted to evaluate simple effects revealed that the treatment group reported a larger decrease in parental coercion scores at Time 2 than the control group. Additionally, an interaction effect was demonstrated in the graph of both groups' scores at Time 1 and Time 2, although this interaction effect was not statistically significant. Although this finding may be due to the placebo effect or participants believing their scores should be lower at Time 2, it is more likely that this finding is due to the information presented in the video and workbook. Coercion is defined as an autocratic style that is restrictive, over-controlling, and intrusive (Skinner, Johnson & Synder, 2005). The control group may have reported a decrease in Coercion at Time 2 due to the scenarios in the workbook involving parent/child interactions. Analyzing these scenarios may have led to the perception

that, rather than being restrictive or intrusive, parents were instead primarily attempting to be supportive and protective. This finding appears to be even more salient in the treatment group. The scenarios in the treatment group's workbook directly pertained to cognitive distortions; the negative parental characteristics of Rejection and Chaos pertain primarily to emotional states (i.e., *feeling* disliked or criticized, or *feeling* that one's parent is hostile or unpredictable), whereas the negative parental characteristic of Coercion may be more directly related to cognitions (i.e., *believing* that the parent's *intentions* are to be restrictive, over-controlling, or intrusive). Thus, the treatment group's analysis of the workbook scenarios may have led to a change in cognitive perceptions—viewing parents as restrictive or controlling at Time 1 changed to viewing parents as supportive, loving, and protecting at Time 2. This indicates that parent/child communication regarding the parent's intentions may be useful in altering a child's negative perceptions of his/her parent.

It was further hypothesized that adolescents in the treatment group would report a significant increase in feelings of empowerment at Time 2 relative to the control group, and this hypothesis was supported. Although both groups reported an increase in empowerment at Time 2, the treatment group reported a significant increase in empowerment, whereas the control group did not demonstrate a significant increase in empowerment. Thus, t-tests conducted to evaluate simple effects revealed that the treatment group demonstrated a significant increase in empowerment scores at Time 2, whereas the control group did not demonstrate a significant increase in empowerment scores. Additionally, an interaction effect was demonstrated in the graph of both groups' scores at Time 1 and Time 2, although this interaction effect was not statistically significant. However, the mechanism of change is somewhat unclear. It is possible that sitting with other participants and interacting with the research assistant led to feelings of

unity and strength, thus influencing empowerment at Time 2. However, if this were the case, it would be expected that participants in the control group would also report significant increases in empowerment. Thus, it appears that the information presented in the video and workbook directly influenced feelings of empowerment in the treatment group. This indicates that participants in the treatment group perhaps gained knowledge and a sense of control concerning their depressive cognitions and parental relationships. Participants may have lacked understanding about their emotions and symptoms, perhaps leading to feelings of frustration and hopelessness, and it may be that providing information about depression and the effects of depression on relationships and cognitions lead to increased understanding, increased hope, and subsequent increased empowerment. Consequently, it appears that psychoeducational techniques may be effective in increasing empowerment in adolescents, and thus may be beneficial as a treatment modality.

Finally, it was hypothesized that the treatment group would demonstrate a significant increase in Positive Affect and a significant decrease in Negative Affect at Time 2 relative to the control group; however, this hypothesis was not supported. Both groups reported a decrease in Negative Affect at Time 2, and this decrease was approximately equal across groups. This finding may be due to participants believing that they were supposed to demonstrate a decrease in Negative Affect. However, interacting with peers and the research assistant may have also lead to decreases in negative feelings, thus explaining the decrease in Negative Affect.

Interestingly, both groups also reported a decrease in Positive Affect at Time 2. However, t-tests conducted to evaluate simple effects revealed that the treatment group reported a larger decrease in Positive Affect relative to the control group. This is somewhat contradictory to the finding that feelings of empowerment were increased in the treatment group. However, this

finding may be best explained by methodology. As demonstrated, the treatment group did gain an increased sense of empowerment relative to the control group, and this may be a direct result of the treatment intervention (i.e., information presented in the video and the workbook).

However, the time required to complete the study was approximately two hours, and, thus, participants may have become frustrated with the length of the study. Additionally, all participants had to complete each measure twice: both prior to and after the psychoeducational component. The length of time required to complete the study as well as the repetition of the measures may have lead to decreases in Positive Affect in both the treatment group and control group. The treatment group may have demonstrated a larger decrease in Positive Affect because it took slightly longer for the treatment group to complete the study than the control group.

However, some research suggests that children and adolescents may be able to learn and respond to educational material despite experiencing frustration (Baker, D’Mello, Rodrigo, & Graesser, 2010). Additional research suggests that frustration and boredom are often experienced in both school-related and non-school-related activities, but experiencing frustration or boredom is not necessarily related to a lack of learning motivation or ability (Larson & Richards, 1991). Thus, despite the participants’ apparent frustrations, the psychoeducational component did appear to positively influence depressive cognitions as well as feelings of empowerment in the treatment group.

### **Limitations**

The present study had several limitations that warrant discussion. One potential limitation is the extremely brief nature of the psychoeducational component of the study, and statistically insignificant findings concerning affect and parental characteristics may be the result of the brief duration of the treatment. Perhaps one short psychoeducational activity about the effects and

symptoms of depression is simply not enough to influence an immediate change in perceptions, and it is possible that a longer psychoeducational intervention may have lead to more of the study's hypotheses being supported.

In addition, no follow-ups were conducted to ascertain whether decreased depressive cognitions and increased feelings of empowerment were maintained over a period of time. It may be that brief psychoeducation influences perceptions directly following the intervention, but the initial effects may not be sustained over time. Perhaps if participants had been questioned about their symptoms and perceptions at one or several time points (i.e., two weeks later, one month later, six months later, etc.) following the completion of the measures and the psychoeducational component, the effects of the intervention would have been found to be either lessened or strengthened by the passage of time.

It is also important to note that no measures were administered and no analyses were conducted to ascertain if the participants truly learned the material presented in the video and the workbook. The psychoeducation program used in the present study was cognitively based, but it is somewhat unclear whether the participants' cognitions were altered, or whether they simply felt better after engaging in the intervention. Thus, feelings, beliefs, and symptoms were evaluated following the psychoeducational component, but cognitions were not. However, as previously discussed, a review of the participants' answers on the workbook responses suggests that they did indeed comprehend the material in the video and workbook, and the graduate research assistants reported that all participants appeared appropriately interested and engaged.

It should also be noted that several different graduate research assistants were responsible for the data collection sessions. Thus, it is likely that not all groups were conducted in the same manner and followed the same format due to individual differences among the research

assistants. Additionally, the individual personalities of the research assistants and their desire to adequately oversee the data collection sessions may have lead them to misperceive the participants as adequately interested and engaged in the study.

The disproportionate ratio of females to males is another important limitation. Females outnumbered males 76 to 27, and this undoubtedly influenced the findings of the study. Males and females differ in several domains, including hormone levels, maturity, and social expectations, and responses on the questionnaires were no doubt influenced by these characteristics. Thus, it is possible that the findings of the study would have been different had there not been such a large discrepancy between female and male participants. Additionally, as a result of this imbalance, the results of the study may not be applicable to male adolescents.

The sample size of the study may also partially be to blame for the lack of statistically significant findings concerning affect and parental characteristics, as well as the statistically insignificant findings for differences between the two groups for depression and empowerment at Time 2. Although marginally significant findings were obtained for depression and significant findings were obtained for empowerment, the differences between the treatment group and control group at Time 2 were not significant, and largely statistically insignificant findings were obtained for affect and parenting perceptions. These findings may be due to a lack of statistical power as a result of the study's sample size. A power analysis had indicated the need for a sample of 160 participants, but due to participation and resource constraints, only 103 participants completed the study. A sample of 160 participants may have yielded more significant findings. Additionally, the graphs of Depression, Positive Parenting, Negative Parenting, Parental Warmth, Parental Structure, Parental Autonomy Support, Parental Coercion, Empowerment, Positive Affect, and Negative Affect from Time 1 to Time 2 indicated

interactions or potential interactions. It is likely that, although interactions were present, the study simply did not have adequate power to detect statistical significance.

As previously discussed, additional data were not collected toward the end of the semester or at the beginning of the following semester due to the potential for confounding variables. A discussion of depression and other mental health concerns is held in the Psychology 100 classes toward the end of the semester, and collecting data during the same time period as these discussions were being held in class would have led to uncertainty regarding the source of the participants' increased knowledge of depressive symptoms. Additional data were not collected at the beginning of the following semester, Fall semester, because it is possible that depressive cognitions and perceptions of parents may have been influenced simply based on the semester. During Fall semester, most 18 and 19 year old students in the Psychology 100 classes have just begun college, and, as a result, depressive symptoms may be naturally higher as students adjust to college life. Thus, additional data were not collected due to these concerns.

Additionally, due to the availability of participants and the resources needed for an extensive screening process, the study did not focus specifically on a depressed population of adolescents. Scores on the Beck Depression Inventory reflect the severity of an individual's depression. A score from 1 to 13 suggests minimal depression, 14 to 19 suggests mild depression, 20 to 28 suggests moderate depression, and 29 to 63 suggests severe depression. In the present study, 91 participants reported "minimal" depressive symptoms, 8 participants reported "mild" symptoms, 4 participants reported "moderate" symptoms, and no participants reported severe depression. Thus, there was not equal representation of mildly, moderately, and severely depressed adolescents in the study. Results may have been different had the study utilized adolescents who had been previously diagnosed with depression.

Finally, a sample consisting solely of university students may also have influenced the results of the study. Individuals who attend college generally come from higher-income families and more desirable environments (Huang, Guo, Kim, & Sherraden, 2010; Lindholm, 2006). As previously discussed, depression in adolescence is associated with low parental income or living in a less than optimal neighborhood (Angold, Costello, Erkanli, & Worthman, 1999; Warner, Weissman, Mufson, & Wickramaratne, 1999). Thus, it is possible that the lack of participants exhibiting moderate or high levels of depression may be the result of the use of a university sample.

### **Directions for Future Research**

The effect of psychoeducation on adolescent perceptions is an important area of research, and one that should continue to be studied. Future research may benefit from focusing on lengthier psychoeducational programs and the potential effects on adolescent perceptions and depressive cognitions. However, although the brevity of the psychoeducational component was addressed as a potential limitation, the short duration of the intervention is not necessarily a drawback. Treatment and education for mental health concerns are often expensive and time-consuming endeavors, and thus, an effective abbreviated intervention that targets mental health concerns has the potential to be highly beneficial. Future research should also focus on brief psychoeducational components and their potential utility in decreasing depressive symptoms and increasing positive perceptions and empowerment.

Additionally, future research may benefit from utilizing follow-up measures to ascertain if the effects of psychoeducational techniques are maintained or altered over a period of time. It may be that the effects of psychoeducation are lessened over time due to participants potentially forgetting the material, experiencing diminishing feelings of empowerment, or any other

experience or event that occurs during the passage of time. It is also possible that the effects of psychoeducation may be strengthened over time. Participants may spend time considering the material presented in psychoeducational interventions and experience strengthened feelings of empowerment as a result. It is also possible that effects of psychoeducation remain fairly stable over time. Future research should attempt to clarify the effects of the passage of time.

It may also benefit future studies to utilize larger sample sizes. Statistical analyses in the present study revealed interaction effects among several of the key dependent variables. However, these interactions were not statistically significant, and it is possible that a lack of statistical power was partially responsible for these findings. A larger sample size may have yielded statistically significant interactions, and it is important for future research to determine if these interactions do indeed exist.

Balanced groups (e.g., equal numbers of females and males) may also be beneficial in subsequent research, and it may also be useful to focus solely on males or solely on females to ascertain the effects of psychoeducation on one gender versus the other. Future research may also benefit from conducting screening for depression. It may be useful to specifically target adolescents who are at-risk for developing Major Depressive Disorder or adolescents who have been diagnosed with Major Depressive Disorder.

The continued use of control groups will also be an important component of future research. Many prior studies did not utilize a control or comparison group, and, consequently, the true effects of the intervention were difficult to ascertain. The use of a control group in the present study perhaps lead to more accurate conclusions concerning the effects of the psychoeducational intervention, and it is imperative that future studies examining the effects of psychoeducation use control or comparison groups. However, it is possible that the present

study's use of a control condition involving optimism and pessimism may have influenced the scores of the control group at Time 2. Subsequent research in this area may benefit from using a control condition that is completely unrelated to negative affect or depressive cognitions.

It may also be helpful for future studies to include "manipulation checks" to determine whether participants truly learned the material presented during psychoeducational interventions. Psychoeducation programs are primarily cognitively based, and it will be important for future studies to determine if participants' cognitions are truly being affected. A questionnaire pertaining to the information presented in the psychoeducational intervention as well as additional questions regarding reading comprehension and general understanding may be a helpful tool in future studies.

As previously noted, it is difficult to determine whether participants were accurately reporting their parents' parenting behaviors, consequently leading to a lack of significant findings with regard to parenting practices. It may be beneficial for future research to attempt to distinguish between "accurate" and "distorted" perceptions of parenting, perhaps through the use of adolescent report measures as well as more objective parental rating systems. Additionally, in the present study, only two scenarios pertaining to parents were included in the psychoeducational workbooks. It is possible that this limited focus on parenting perceptions may have been insufficient with regard to altering perceptions. A possible direction for future studies might be to either focus solely on parenting perceptions or completely remove the parenting component. It may also be useful for future research to conduct research with adolescents who are not yet in college and are still residing with their parents. Additionally, psychoeducational techniques that target parents' perceptions may lead to improvements in parenting beliefs and practices as well as improvements in parent/child relationships.

## Conclusion

This study sought to examine the effects of brief psychoeducation on older adolescents' depressive symptoms, their perceptions of their parents' parental behaviors and attitudes, feelings of empowerment, and affect. It was hypothesized that, following the psychoeducational component of the study, the treatment group would demonstrate a significantly larger decrease in depression scores relative to the control group. In addition, it was hypothesized that individuals in the treatment group would report a significantly larger increase in their parents' positive parental behaviors and attitudes and a significantly larger decrease in their parents' negative parental behaviors and attitudes relative to the control group. It was further hypothesized that the treatment group would report increases in feelings of empowerment and positive affect, as well as decreases in negative affect.

The treatment group demonstrated a marginally significant decrease in depressive symptoms relative to the control group as well as a significantly larger increase in empowerment. However, the findings concerning perceptions of parental behaviors and attitudes and positive/negative affect were largely statistically insignificant. However, the individual parenting dimension of Coercion significantly decreased in the treatment group relative to the control group at Time 2. The conceptualization of Coercion directly relates to the cognitive *belief* that one's parent is restricting, over-controlling, or intrusive, and, thus, this finding may be due to the cognitively-oriented material presented in the treatment group's psychoeducational intervention. It should be noted that the sample consisted of 76 female participants and 27 male participants, and, consequently, the findings may have been influenced by this discrepancy of female to male participants. Due to this imbalance, generalizing the results to adolescent males should be handled with discretion.

Although the interaction effects were not statistically significant, graphs of several of the dependent variables at Time 1 and Time 2 (most notably depression, empowerment, and parental coercion) indicated an interaction. Thus, it is believed that the psychoeducational treatment does indeed possess some clinical utility. The results suggest that participants in the treatment group gained some understanding of their depressive cognitions and parental relationships. Participants may have lacked understanding about their emotions and symptoms, perhaps leading to feelings of frustration and hopelessness, and it may be that providing information pertaining to depression and the effects of depression on relationships and cognitions lead to increased understanding, increased hope, and subsequent increased empowerment. Consequently, it appears that psychoeducational techniques may be effective in increasing empowerment in adolescents, and thus may be beneficial as a treatment modality.

The findings of the study indicate that psychoeducational programs that focus on cognitive conceptualizations of depressive symptoms and empowerment may be useful in helping adolescents to understand and conceptualize their depressive symptoms, gain a sense control over their symptoms, and empower them to actively engage in treatment. Additionally, psychoeducational programs that focus specifically on parent/child communication and intentions may also be useful in improving an adolescent's perceptions of his/her parent as well as the parent/child relationship. The relationship between adolescents and their parents is extremely important in adolescents' development, but this relationship, unfortunately, is often strained. Cognitively-based brief psychoeducation may help adolescents to understand their parents' intentions as well as their perceptions about their parents' behaviors, and this, in turn, may help improve parent/child relationships. It is also important to help adolescents understand their depressive symptoms, and a better understanding of depression may help adolescents better

cope with their symptoms. Brief psychoeducational treatments that educate adolescents on their symptoms and perceptions may help adolescents to understand and take control of their depressive symptoms and empower them to actively engage in treatment.

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Appendix  
Selected Measures/Questionnaires

**Background Questionnaire**

1. How old are you? \_\_\_\_\_
2. What is your gender? \_\_\_\_\_
3. What is your race/ethnicity? (Please check. More than one item can be checked if you consider yourself to be multi-racial.)  

<input type="checkbox"/> Caucasian	<input type="checkbox"/> Asian American
<input type="checkbox"/> African American	<input type="checkbox"/> Native American
<input type="checkbox"/> Hispanic	<input type="checkbox"/> Other (please specify): _____
4. How many siblings do you have?  
(Please indicate full-siblings, half-siblings, and step-siblings.) \_\_\_\_\_
5. What is your parents' marital status? (Please check all that apply.)  

<input type="checkbox"/> Married	<input type="checkbox"/> Divorced
<input type="checkbox"/> Separated	<input type="checkbox"/> Mother or father is widowed
<input type="checkbox"/> Mother is/has been remarried	<input type="checkbox"/> Father is/has been remarried
6. What is the annual income of your parents or the parent you have primarily lived with? (Please check one. You may leave this blank if you don't know.)  

<input type="checkbox"/> \$0—\$10,000	<input type="checkbox"/> \$41,000—\$50,000
<input type="checkbox"/> \$11,000—\$20,000	<input type="checkbox"/> \$51,000—\$60,000
<input type="checkbox"/> \$21,000—\$30,000	<input type="checkbox"/> \$61,000—\$70,000
<input type="checkbox"/> \$31,000—\$40,000	<input type="checkbox"/> Over \$80,000
7. Do you still live with one or both of your parents? (Please circle one.)      YES    NO
8. How much do you talk to your parents (on the phone or in person)? (Please check one.)  

<input type="checkbox"/> More than once per day	<input type="checkbox"/> Once per week
<input type="checkbox"/> Once per day	<input type="checkbox"/> Once every 2—3 weeks
<input type="checkbox"/> Every 2—3 days	<input type="checkbox"/> Once per month
	<input type="checkbox"/> Less than once per month
9. Have you ever received treatment, therapy, or medications for mental health issues? (Please circle one. You may choose not to answer.)      YES    NO
10. Have you ever been given a mental health diagnosis (such as anxiety or depression)? (Please circle one. You may choose not to answer.)      YES    NO  
  
If YES, please specify (you may choose not to answer): \_\_\_\_\_

## Parents as Social Context Questionnaire

Please read the following statements regarding how you might feel about and respond to your parents. Indicate whether the statement is (1) Not at all true, (2) Not very true, (3) Sort of true, or (4) Very true.

	Not at all true	Not very true	Sort of true	Very true
My parents let me know they love me.	1	2	3	4
My parents enjoy being with me.	1	2	3	4
My parents are always glad to see me.	1	2	3	4
My parents think I'm special.	1	2	3	4
My parents can tell how I'm feeling without asking.	1	2	3	4
My parents are happy with me just the way I am.	1	2	3	4
My parents understand me very well.	1	2	3	4
My parents are glad I am their child.	1	2	3	4
Sometimes I wonder if my parents like me.	1	2	3	4
My parents think I'm always in the way.	1	2	3	4
My parents make me feel like I'm not wanted.	1	2	3	4
Nothing I do is good enough for my parents.	1	2	3	4
When I am upset, my parents don't care.	1	2	3	4
My parents don't say much about the good things I do, but they are always talking about the bad.	1	2	3	4
My parents do not really love me.	1	2	3	4
My parents pick on me for every little thing.	1	2	3	4
When I want to do something, my parents show me how.	1	2	3	4
When I want to understand how something works, my parents explain it to me.	1	2	3	4
If I ever have a problem, my parents help me figure out what to do about it.	1	2	3	4
My parents explain the reasons for our family rules.	1	2	3	4
My parents expect me to follow our family rules.	1	2	3	4
My parents show me how to do things for myself.	1	2	3	4
My parents keep their promises.	1	2	3	4
When my parents tell me they'll do something, I know they will do it.	1	2	3	4
When my parents make a promise, I don't know if they'll keep it.	1	2	3	4
When my parents say they will do something, sometimes they don't really do it.	1	2	3	4
My parents keep changing the rules on me.	1	2	3	4
My parents get mad at me with no warning.	1	2	3	4
When I do something wrong, I never know how	1	2	3	4

	<b>Not at all true</b>	<b>Not very true</b>	<b>Sort of true</b>	<b>Very true</b>
my parents will react.				
My parents punish me for no reason.	1	2	3	4
A lot of times, I don't know where my parents are.	1	2	3	4
I never know what my parents will do next.	1	2	3	4
My parents trust me.	1	2	3	4
My parents accept me for myself.	1	2	3	4
My parents let me do the things I think are important.	1	2	3	4
My parents try to understand my point of view.	1	2	3	4
When my parents ask me to do something, they explain why.	1	2	3	4
My parents encourage me to be true to myself.	1	2	3	
My parents expect me to say what I think.	1	2	3	
My parents want to know what I think about how we should do things.	1	2	3	
My parents are always telling me what to do.	1	2	3	4
My parents boss me.	1	2	3	4
My parents think there is only one right way to do things—their way.	1	2	3	4
My parents say “no” to everything.	1	2	3	4
The only reason my parents give me is “because I said so.”	1	2	3	4
I'm not allowed to disagree with my parents.	1	2	3	4
My parents try to control everything I do.	1	2	3	4
My parents think they know best about everything.	1	2	3	4

### Empowerment Scale

Please respond to each statement on a scale of 1 to 5.

- 1 = Strongly Disagree with the statement
- 2 = Disagree with the statement
- 3 = Neither agree nor disagree with the statement
- 4 = Agree with the statement
- 5 = Strongly Agree with the statement

1. I generally accomplish what I set out to do. ....1 2 3 4 5
2. I have positive attitude about myself. ....1 2 3 4 5
3. When I make plans, I am almost certain to make them work.....1 2 3 4 5
4. I am usually confident about the decisions I make. ....1 2 3 4 5
5. I am often able to overcome barriers. ....1 2 3 4 5
6. I feel I am a person of worth. ....1 2 3 4 5
7. I see myself as a capable person. ....1 2 3 4 5
8. I am able to do things as well as most other people.....1 2 3 4 5
9. I feel I have a number of good qualities. ....1 2 3 4 5
10. I feel powerless most of the time. ....1 2 3 4 5
11. Making waves never gets you anywhere. ....1 2 3 4 5
12. If I am unsure about something, I usually go along with the group. ....1 2 3 4 5
13. Most of the misfortunes in my life were due to bad luck. ....1 2 3 4 5
14. Usually, I feel alone. ....1 2 3 4 5
15. People have the right to make their own decisions, even if they are bad ones. ....1 2 3 4 5
16. People should try to live their lives the way they want to. ....1 2 3 4 5
17. Very often a problem can be solved by taking action.....1 2 3 4 5
18. People are limited only by what they think is possible.....1 2 3 4 5
19. I can pretty much determine what will happen in my life. ....1 2 3 4 5

## The PANAS

This scale consists of a number of words that describe different feelings and emotions. Read each item and then mark the appropriate answer in the space next to the word. **Indicate to what extent you feel this way right now, that is, at the present moment.**

Use the following scale to record your answers:

1 = Very slightly or not at all

2 = A little

3 = Moderately

4 = Quite a bit

5 = Extremely

\_\_\_ Interested

\_\_\_ Distressed

\_\_\_ Excited

\_\_\_ Upset

\_\_\_ Strong

\_\_\_ Guilty

\_\_\_ Scared

\_\_\_ Hostile

\_\_\_ Enthusiastic

\_\_\_ Proud

\_\_\_ Irritable

\_\_\_ Alert

\_\_\_ Ashamed

\_\_\_ Inspired

\_\_\_ Nervous

\_\_\_ Determined

\_\_\_ Attentive

\_\_\_ Jittery

\_\_\_ Active

\_\_\_ Afraid

### **Thank You for Participating!**

Thank you for participating in this project. This study was designed to examine the effects of psychoeducation on perceptions of symptoms of depression and parents' parenting behaviors. Several groups of students have completed or will complete this study. Some groups watched or will watch a video about symptoms of depression and how these symptoms may affect perceptions of situations and events. Some groups watched or will watch a video about how being pessimistic versus optimistic may affect perceptions in an employment setting.

I hope this study will help people understand their feelings about themselves and their parents because a better understanding of depression may help individuals cope with their symptoms. However, the people who watched a video about pessimism and optimism may not have gained the same understanding of their symptoms as the people who watched a video about symptoms of depression. If you are one of the people who watched the pessimism/optimism video and you would like to watch the video about symptoms of depression, please contact Mallory McBride, the primary researcher of the study, at [mallory.mcbride@umontana.edu](mailto:mallory.mcbride@umontana.edu).

Because the data for this study are still being collected, I would appreciate it if you did not share the details of this project with friends or relatives who may also be participating in the study. Thank you again for your participation. This project would not have been possible without your involvement.

I am aware that some of the questions that you were asked in this study were of a highly personal nature and it would not be surprising if any of them disturbed you or raised new questions. I will give you a list of organizations in the community that offer services that might interest you. If you have any questions, please feel free to contact Mallory McBride, the primary researcher of the study, at [mallory.mcbride@umontana.edu](mailto:mallory.mcbride@umontana.edu). Thank you!

Tables

Table 1

*Repeated Measures ANOVA: Depression*

Effect	F	Sig.	Partial Eta Squared	Cohen's d
Time	24.471	.000**	.195	.179
Group	.032	.858	.000	.035
Time x Group	3.280	.073	.031	.032

\*p<.05 \*\*p<.01

Table 2

*Repeated Measures ANOVA: Positive Parenting*

Effect	F	Sig.	Partial Eta Squared	Cohen's d
Time	14.038	.000**	.123	.109
Group	.105	.746	.001	.064
Time x Group	.969	.327	.010	.035

\*p<.05 \*\*p<.01

Table 3

*Repeated Measures ANOVA: Negative Parenting*

Effect	F	Sig.	Partial Eta Squared	Cohen's d
Time	1.686	.197	.017	.049
Group	.006	.939	.000	.015
Time x Group	.096	.757	.001	.003

\*p<.05 \*\*p<.01

Table 4

*Repeated Measures ANOVA: Parental Warmth*

Effect	F	Sig.	Partial Eta Squared	Cohen's d
Time	5.767	.018*	.055	.109
Group	.850	.359	.000	.022
Time x Group	.015	.904	.008	.018

\*p<.05 \*\*p<.01

Table 5

*Repeated Measures ANOVA: Parental Rejection*

Effect	F	Sig.	Partial Eta Squared	Cohen's d
Time	.133	.716	.001	.017
Group	.345	.558	.003	.114
Time x Group	.000	.989	.000	.115
*p<.05 **p<.01				

Table 6

*Repeated Measures ANOVA: Parental Structure*

Effect	F	Sig.	Partial Eta Squared	Cohen's d
Time	3.603	.061	.035	.071
Group	.132	.717	.001	.071
Time x Group	2.118	.149	.021	.016
*p<.05 **p<.01				

Table 7

*Repeated Measures ANOVA: Parental Chaos*

Effect	F	Sig.	Partial Eta Squared	Cohen's d
Time	.437	.510	.004	.037
Group	.305	.582	.003	.106
Time x Group	.097	.757	.001	.084
*p<.05 **p<.01				

Table 8

*Repeated Measures ANOVA: Parental Autonomy Support*

Effect	F	Sig.	Partial Eta Squared	Cohen's d
Time	5.969	.016*	.056	.111
Group	.004	.952	.000	.012
Time x Group	.748	.389	.007	.027
*p<.05 **p<.01				

Table 9

*Repeated Measures ANOVA: Parental Coercion*

Effect	F	Sig.	Partial Eta Squared	Cohen's d
Time	9.419	.003**	.086	.136
Group	.043	.837	.000	.039
Time x Group	.731	.395	.007	.002

\*p<.05 \*\*p<.01

Table 10

*Repeated Measures ANOVA: Empowerment*

Effect	F	Sig.	Partial Eta Squared	Cohen's d
Time	5.344	.023*	.050	.090
Group	.272	.603	.003	.103
Time x Group	.339	.562	.003	.121

\*p<.05 \*\*p<.01

Table 11

*Repeated Measures ANOVA: Positive Affect*

Effect	F	Sig.	Partial Eta Squared	Cohen's d
Time	8.189	.005**	.075	.139
Group	.504	.479	.005	.136
Time x Group	1.190	.278	.012	.173

\*p<.05 \*\*p<.01

Table 12

*Repeated Measures ANOVA: Negative Affect*

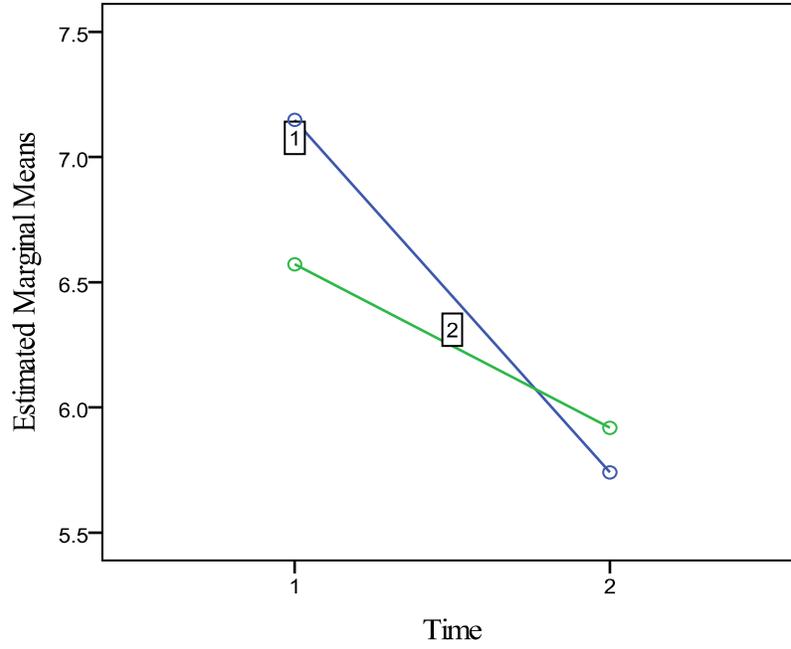
Effect	F	Sig.	Partial Eta Squared	Cohen's d
Time	43.234	.000**	.300	.359
Group	.335	.564	.003	.112
Time x Group	1.358	.247	.013	.056

\*p<.05 \*\*p<.01

## Graphs

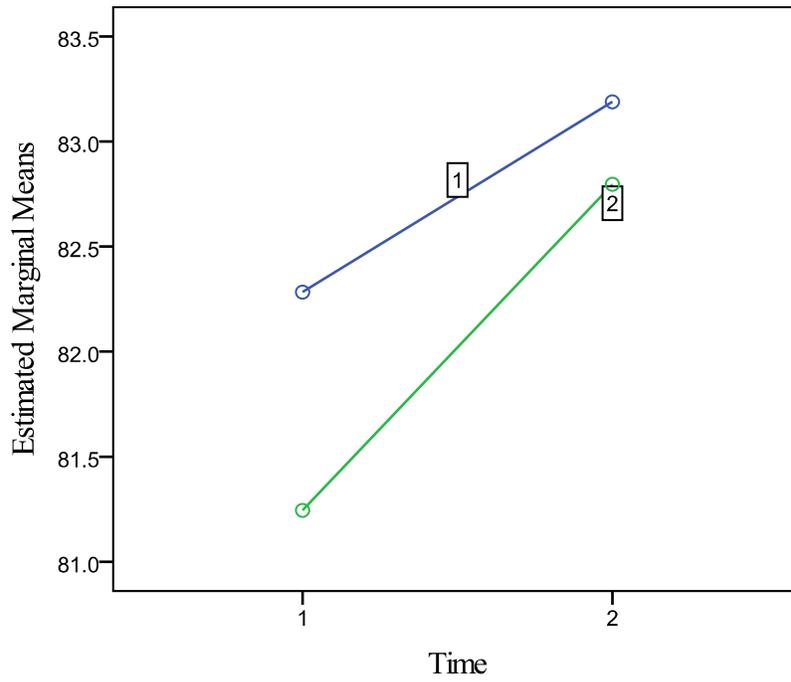
Graph 1

*Depression*



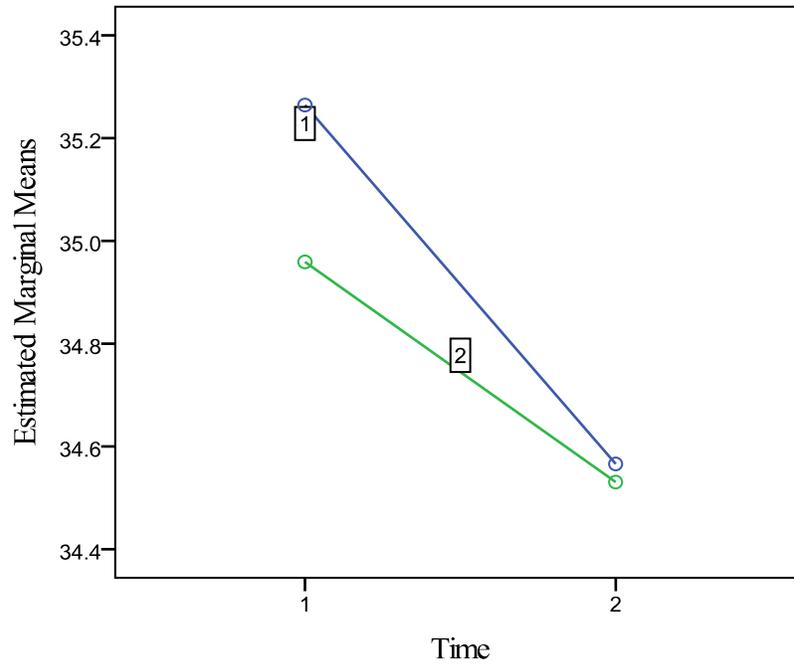
Graph 2

*Positive Parenting*



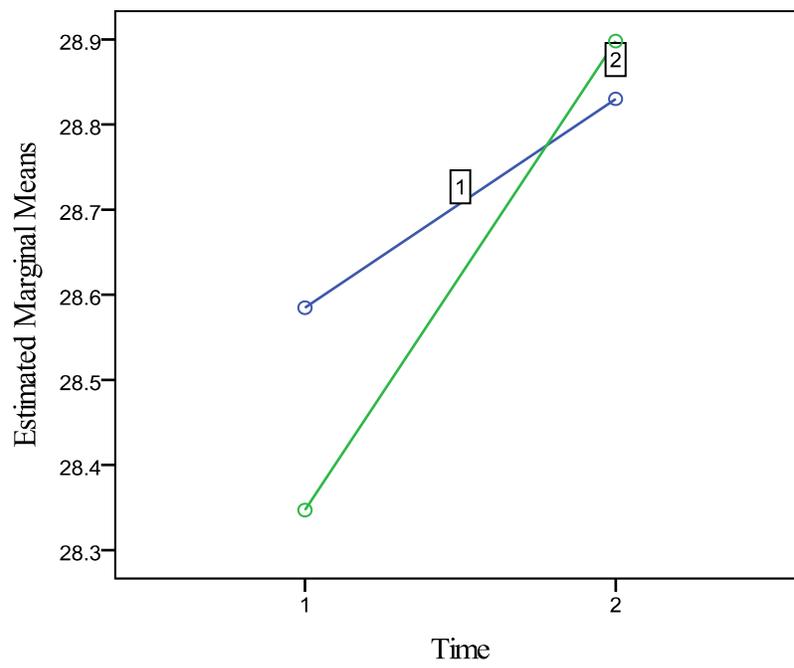
Graph 3

*Negative Parenting*



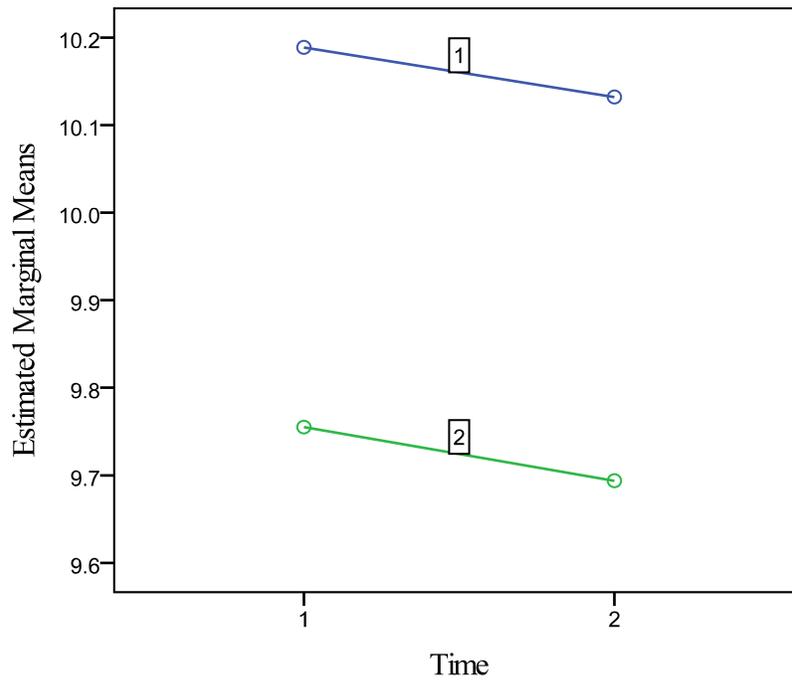
Graph 4

*Parental Warmth*



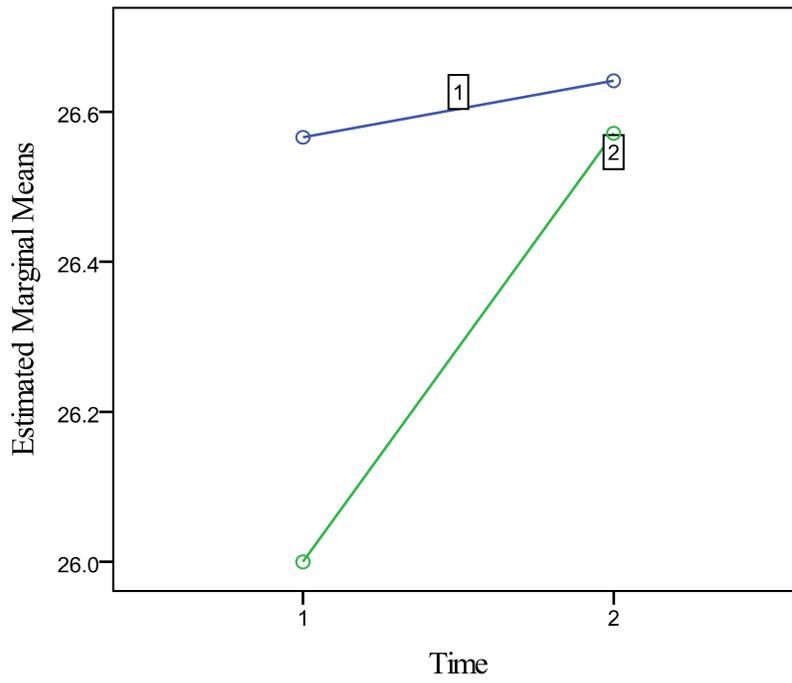
Graph 5

*Parental Rejection*



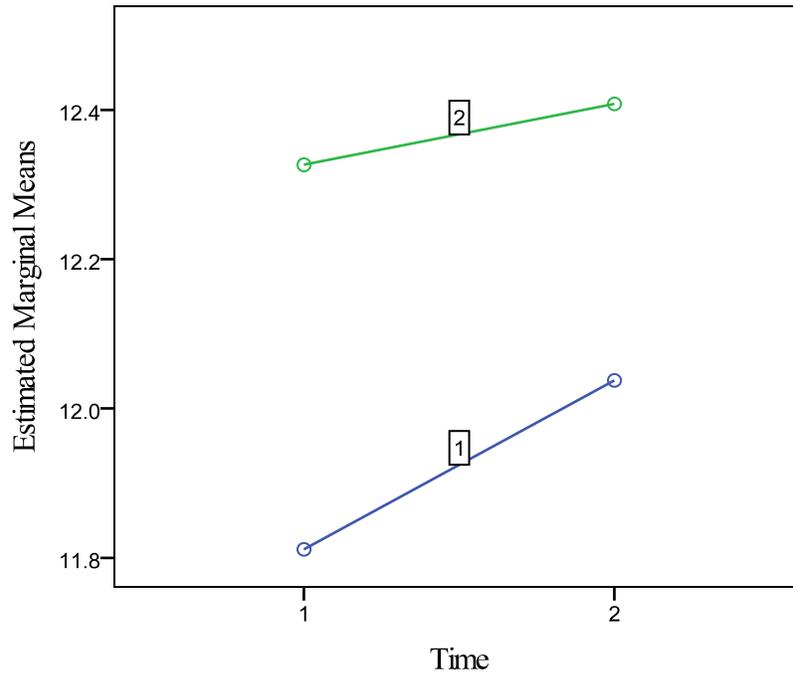
Graph 6

*Parental Structure*



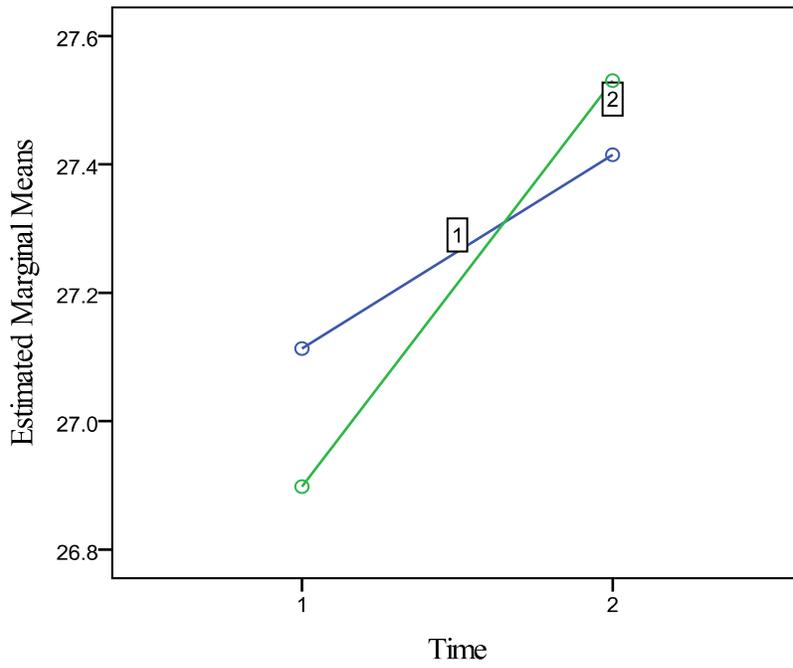
Graph 7

*Parental Chaos*



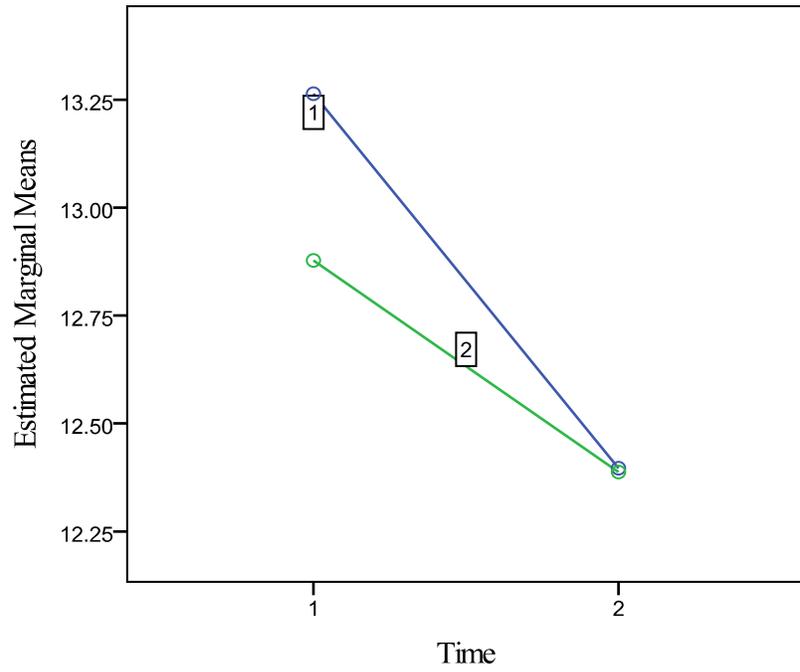
Graph 8

*Parental Autonomy Support*



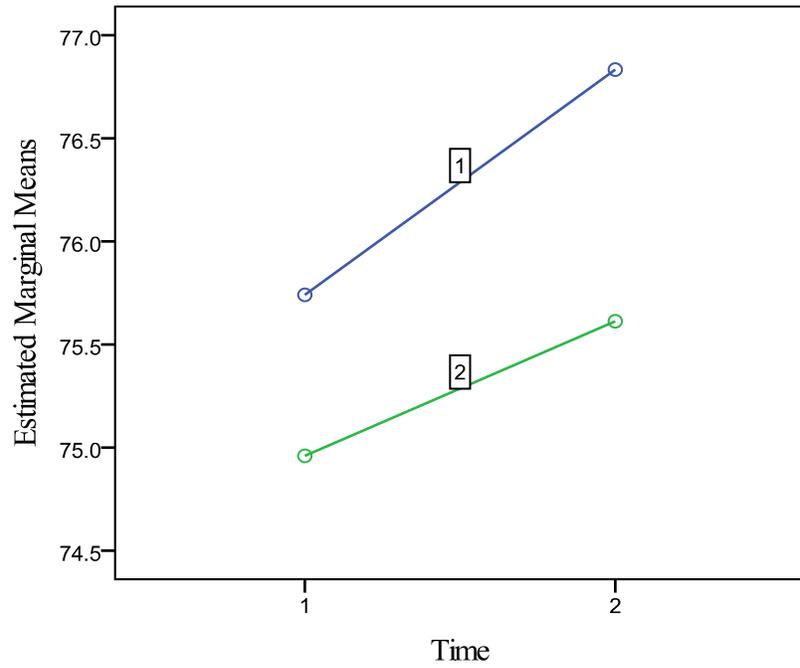
Graph 9

*Parental Coercion*



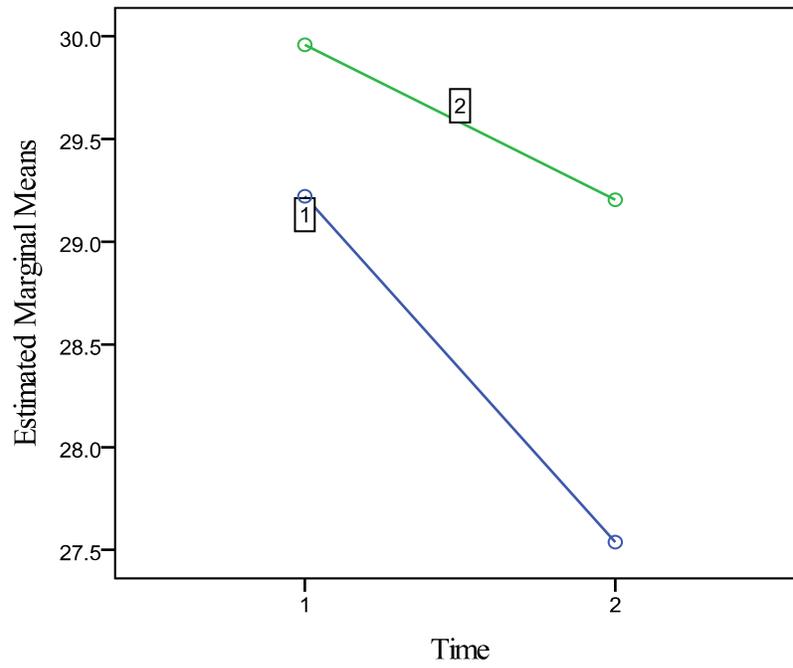
Graph 10

*Empowerment*



Graph 11

*Positive Affect*



Graph 12

*Negative Affect*

