ABSTRACT

DO HELICOPTER PARENTS CAUSE TURBULENCE FOR THEIR OFFSPRING?
IMPLICATIONS OF PARENTAL PSYCHOLOGICAL CONTROL FOR COLLEGE
STUDENTS’ ADJUSTMENT

by Emily A. Bendikas

Significant numbers of college students experience adjustment problems during the transition to college. Research suggests that parental psychological control contributes to college student maladjustment; however, the mechanism by which this effect takes place is unclear. The present study tested the hypothesis that conflictual independence mediates the relationship between college adjustment and maternal and paternal psychological control. In addition, college student gender was expected to moderate this link. Regression analyses demonstrated that conflictual independence mediated the link between parental psychological control and college adjustment problems; however, the nature of these relationships differed by parent and college student gender. These results suggest that conflictual independence represents an important mechanism by which psychological control relates to college adjustment problems. However, conflictual independence did not significantly impact all relationships tested. Therefore, further investigation is necessary in order to fully understand the mechanisms by which psychological control impacts college adjustment problems.
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IMPLICATIONS OF PARENTAL PSYCHOLOGICAL CONTROL FOR COLLEGE
STUDENTS’ ADJUSTMENT

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Do Helicopter Parents Cause Life Turbulence For Their Offspring?
Implications of Parental Psychological Control for College Students’ Adjustment

The transition to college and emerging adulthood presents challenges that new students must learn to navigate (Arnett, 2007). Increasing numbers of students are enrolling in US universities, confident that they will graduate (Strage & Brandt, 1999); however the percentage of students actually graduating from college is declining (Mattanah, Hancock, & Brand, 2004). After entering college, students report elevated levels of emotional and psychological stress (Sax, Astin, Korn, & Mahoney, 1999), and over the past several years, college counseling centers report a significant increase in the number of students who request counseling for adjustment problems (Benton, Robertson, Tseng, Newton, & Benton, 2003; Erdur-Baker, Aberson, Barrow, & Draper, 2006; Kettmann et al., 2007; Rudd, 2004; Smith, Rosenstein, & Granaas, 2001). In addition, a number of college students engage in risky behavior (e.g., West & Graham, 2005), such as binge drinking and risky sexual activity. Adjustment problems during the first year of college negatively impact this transition. Therefore, it is important to ascertain why some students successfully navigate their way through college while others experience distress causing them to seek help from counselors and/or drop out of school.

Why do some students excel during this transition while others fail? Parenting practices represent one factor that either prepares or fails to prepare first year college students for the challenges of emerging adulthood. In particular, appropriate parent-child boundaries are crucial to healthy child development in Western cultures; in contrast, poor parent-child boundaries interfere with the child’s ability to navigate developmental stages (Kerig, 2005). When poor parent-child boundaries include the “loss of psychological distinctiveness between individuals or the confusion of their interpersonal roles” (Kerig, 2005, p. 6), it is referred to as boundary dissolution. One form of boundary dissolution that is associated with maladaptation in child development is psychological control (Barber, 1996, 2001; Barber & Olsen, 1994; Kerig, 2005). Psychologically controlling parents (euphemistically known as “helicopter parents”) intrude on and manipulate their children’s thoughts and feelings, thus hindering the development of emotional and psychological autonomy when children reach adolescence (Barber, 1996, 2001; Steinberg & Silverberg, 1986).
Why is psychological control associated with problems in the emerging adult transition? The failure to psychologically separate from parents may represent one potential culprit. Psychological separation is the presence of negative feelings such as guilt, anxiety, or rejection when separating (Mattanah, et al., 2004). Developing psychological separation is an important stage-salient task in adolescence and emerging adulthood in Western cultures (Beyers & Goossens, 2003, Blos, 1979). The “individual’s drive toward healthy personal adjustment is critically dependent on his or her ability to psychologically separate from the parents and gain a sense of identity as a separate individual” (Hoffman, 1984, p. 170). In college populations, a lack of psychological separation from parents has been connected to distress and difficulty with personal adjustment (Schwartz & Buboltz, 2004). Specifically, non-conflictual independence, one type of psychological separation, is consistently associated with successful adaptation. Non-conflictual independence is the freedom from guilt, anger, resentment, and mistrust of one’s parents. In contrast, conflictual independence is the tendency to harbor guilt, anger, resentment, etc. toward one’s parents. During the transition to college, conflictual independence tends to result in adjustment problems (Hoffman & Weiss, 1987).

In order to set the stage for the current study, the next section will describe the possible link between parental psychological control and conflictual independence. Parental psychological control and conflictual independence have been separately associated with college adjustment problems; however, previous studies have not determined whether there is a relationship between psychological control, conflictual independence, and college adjustment problems. Conflictual independence may represent one underlying reason why psychological control leads to problems with adjustment in college. In particular, conflictual independence may be understood as a young adult’s reaction to or interpretation of parental psychological control tactics. For example, a young adult may recognize that her mother is trying to control through guilt or withdrawal, and in response, the young adult may develop feelings of resentment and anger toward her mother. These feelings of resentment and anger may trigger adjustment problems when transitioning to college.

As will be shown in the literature review to follow, previous research has been inconsistent regarding potential gender differences associated with parental psychological control and college student adjustment. This study seeks to identify whether college males or females are at higher risk for adjustment problems and whether students perceive their mothers
or their fathers as more psychologically controlling. Furthermore, the interaction of parent and child gender in relation to psychological control and conflictual independence will be investigated. College counselors must be aware if gender represents a risk factor for adjustment problems.

Furthermore, whereas existing literature has shown there to be a relationship between psychological control and negative outcomes such as depression; no studies to date have investigated the hypothesis that conflictual independence may mediate this relationship. In addition, past studies have not examined the possible link between psychological control and risky sexual activity in first year college students. Therefore, the present study will examine the link between parental psychological control and risky sexual activity, and whether this link is mediated by conflictual independence. Furthermore, existing research has connected parental behavioral control to binge drinking (e.g., Amoateng, Barber, & Erickson, 2006); however, the link between parental psychological control and binge drinking requires further investigation.

Overall, the present study will examine the relationship between parental psychological control, college adjustment difficulties, specifically depression, binge drinking, and sexual risk-taking, and the underlying role of conflictual independence.

Emerging Adulthood

Emerging adulthood represents the developmental stage of transition from late adolescence to adulthood (Arnett, 2000) and encompasses the period of life that includes the transition to college. As Arnett, 2000, 2002, 2005, 2007 describes emerging adulthood is distinguished by certain characteristics, specifically, the prolonged opportunity for identity exploration, instability in work and in love, and varying levels of independence from parents (e.g., many emerging adults rely on parents for financial support). Originally, Erikson (1968) identified identity versus role confusion as the fundamental struggle during adolescence. In contrast, Arnett (1998) asserted that this struggle occurred mainly in emerging adulthood (ages 18-25) when individuals have more freedom to explore their identity.

In addition, Arnett (1998) argued that emerging adults differ fundamentally from adolescents because they are motivated to attain the skills that are characteristic of adulthood, such as “accepting responsibility for one’s self and making important decisions, along with less individualistic character qualities such as consideration for others, and the more tangible achievement of financial independence” (p. 313). Emerging adults typically establish more
independence from their families in comparison to adolescents. Frequently, this autonomy is expressed as emerging adults move into separate dwellings from their parents, which is common for many college students.

Because of these challenging stage-salient tasks, first year college students may experience stress during the transition to college (Dyson & Renk, 2006). The stress associated with this transition is likely to result in adjustment problems such as depression (Asberg, Bowers, Renk, & McKinney, 2008; Dyson & Renk, 2006; Yap, Allen, & Sheeber, 2007) and/or risky behaviors (Arnett, 2000, 2005; Harrell & Karim, 2008).

**Adjustment Problems During the Transition to College**

According to college counseling center staff, the frequency and severity of college student psychopathology has been increasing significantly over recent decades (Benton et al., 2003; Edur-Baker et al., 2006; Kettmann et al., 2007; Rudd, 2004; Smith et al., 2001). In particular, students who seek services at college counseling centers frequently suffer from internalizing problems such as depression (Benton et al., 2003; Furr, Westefeld, McConnell, & Jenkins, 2001). For example, Benton and colleagues (2003) investigated data on the presenting problems of clients who have visited counseling centers over a period of 13 years (1988-2001). They found that the number of students presenting with depression doubled over that time period. In addition, Furr and colleagues (2001) sampled 1,455 college students from four universities and found that 53% of students experienced depressive symptoms while in college. Because of the increase in depression on college campuses, many college counseling centers have considered administering a brief screening instrument for depression to all clients at intake in order to more rapidly identify those with depression (Smith et al., 2001). Symptoms of depression are particularly concerning because they can lead to a variety of negative outcomes including suicide and academic failure (Furr et al., 2001). For example Westefeld and Furr (1987) sampled 962 college students and found that 81% admitted to experiencing depression while in college. Furthermore, 32% of those students reported that they had contemplated committing suicide, with 1% reporting that they had made a suicide attempt while in college. Depression has also been linked to problems with academic achievement. Heiligenstein and Guenther (1996) found that academic impairment was common in college students with depression. Moreover, most college students with moderate-to-severe depression reported missed classes, poor academic performance, and significant interpersonal problems in school.
In addition to the increased risk of depression, alcohol is the “most pervasively misused substance on college campuses” (Perkins 2002, p. 91), and the number of students who abuse alcohol continues to increase (e.g., Hensley, 2001; Palombi, 2007). College students suffer a number of negative consequences as a result of frequent binge drinking (West & Graham, 2005). In particular, binge drinkers are at increased risk for academic failure and dropping out of college (Hensley, 2001). For example, Wechsler, Dowdall, Maenner, Gledhill-Hoyt, and Lee (1998) surveyed a sample of 14,521 college students from 116 colleges and universities and found that 30% of students who drink alcohol admitted to missing a class due to drinking, and 23% of drinkers indicated that drinking caused them to get behind in their schoolwork. In addition, students who use or abuse alcohol are more likely to become physically ill (Engs & Aldo-Benson, 1995), be injured in accidents (Perkins, 2002), and become victims of sexual assaults (Wechsler et al., 1998). Furthermore, binge drinking has been linked to suicide (Perkins, 2002). According to a study by Presley, Meilman, and Cashin (1996), 6.1% of binge drinkers reported that they had suicidal thoughts, and 1.9% of binge drinkers disclosed that they attempted to commit suicide due to drinking or drug use. Because binge drinking is so prevalent among college students, campus administrators struggle to handle all of the alcohol-related problems (Larimer & Cronce, 2002; Palombi, 2007; Sullivan & Risler, 2002).

In addition, sexual risk-taking is regularly occurring among college students (e.g., Brown & Vanable, 2007). According to a 1997 study conducted by the Centers for Disease Control (CDC), only 29.6% of college students had used a condom during their most recent sexual intercourse (as cited in Rolison & Scherman, 2003). It is developmentally normative for emerging adults to have interest in finding romantic partners; however, “many students’ limited sexual experience makes them likely to experience sexual situations that may be unplanned, unreciprocated, or nonconsensual” (Schulenberg & Maggs, 2002, p. 63). In addition, risky sexual activity is frequently associated with the consumption of alcohol (e.g., Schulenberg & Maggs, 2002). Not only is alcohol frequently served in social contexts at college, but the social and sexual enhancement properties of alcohol can lead to increased motivation to drink (Cooper & Orcutt, 1997). Inhibitions are reduced when alcohol is consumed which can result in unsafe sexual behaviors (Schulenberg & Maggs, 2002). In a study conducted by Larimer, Lydum, Anderson, and Turner (1999), a substantial percentage of male and female college students admit to engaging in sexual activity that was unwanted or unplanned in the context of using alcohol. In
addition, Koss, Gidycz, and Wisniewski (1987) examined a national college sample and found that 74% of the perpetrators and 55% of the victims of rape had consumed alcohol before the incident. In another study, 23% of college women and 7% of college men reported experiences of unwanted sexual intercourse, and impaired judgment due to alcohol was the most frequently endorsed explanation for unwanted sexual intercourse (Flack et al., 2008).

In addition to the research showing a link between risky sexual activity and alcohol use, one intriguing study suggests that risky sexual behavior also is predicted by parental psychological control. Rodgers (1999) argues that the decision to “use consistent and effective contraception indicates psychosocial maturity” (pg. 5); however, excessive parental psychological control may negatively impact social and psychological maturation that are crucial for individuals to make responsible decisions about their behavior. Rodgers (1999) found that females who perceived their fathers as psychologically controlling were more likely to engage in risky sexual activity than those who viewed their fathers as less psychologically controlling. Because research relating risky sexual activity to psychological control is limited, further investigation is warranted.

Parental Psychological Control

Parental psychological control may represent a contributing factor to college student depression and risky behaviors, such as binge drinking and unsafe sexual activity. Psychological control refers to control that “potentially inhibits or intrudes upon psychological development through manipulation and exploitation of the parent-child bond…negative, affect-laden expressions and criticisms…and excessive personal control” (Barber, 1996, p. 3297). Research over the past few decades has differentiated various forms of parental control, such as the difference between psychological control and behavioral control, and the impact on children’s adjustment and development (e.g., Barber, 1996, 2001; Barber & Olsen, 1994). Furthermore, psychological control is “not concerned with behavioral regulation, but with control – and violation – of the child’s psychological self” (Barber, 2001, p. 16). According to Becker (1964), expressions of disappointment, withdrawal of love, isolation of the child, and use of shame and guilt characterize examples of psychological control.

Parental psychological control negatively impacts the emotional and behavioral adjustment of children and adolescents (Barber, 2001; Conger et al., 1997; Galambos, Barker, & Krahn, 2006). Research over the past few decades has concentrated on the various forms of
parental control and their impact on children’s adjustment and development (e.g., Barber, 1996, 2001; Barber & Olsen, 1994). Several studies have established the relationship between psychological control and children’s internalizing (e.g., Barber, 1992; Barber et al., 1994) as well as externalizing problems (e.g., Barber, 1996, 1999, 2001; Barber & Olsen, 1997; Conger et al., 1997). For example, Barber (1996) found that adolescent-reported symptoms of depression and anxiety were significantly related to both maternal and paternal psychological control. Parents who repeatedly attempted to control their adolescents’ psychological world ultimately diminished the adolescents’ sense of competence, according to adolescent self-reports (Conger et al., 1997). According to Hersh and Hussong (2006), alcohol abstinence in high school significantly interacted with psychological control to predict alcohol use frequency in college and alcohol-related negative consequences. High school alcohol abstainers with more restrictive parents participated in more frequent alcohol use in the first semester of college compared to those with less restrictive parents. Past studies have not examined the link between psychological control and risky sexual behavior. However, because risky sexual activity is significantly associated with alcohol use, and alcohol use is significantly related to psychological control, risky sexual activity might be expected to be related to parental psychological control.

**Confictual Independence**

Psychological control may be associated with problems in emerging adulthood because of the underlying mechanism of conflictual independence. Emerging adults with psychologically controlling parents tend to struggle more than their peers to separate and gain independence from their parents. According to Hoffman (1984), the “individual’s drive toward healthy personal adjustment is critically dependent on his or her ability to psychologically separate from the parents and gain a sense of identity as a separate individual” (p. 170). In addition, Hoffman (1984) identified four types of psychological separation. Functional independence concerns the ability to manage and direct one’s practical and personal issues without the assistance of their parents. Attitudinal independence is the ability to hold different attitudes and values from one’s parents. Emotional independence measures the freedom from excessive need for parental approval, emotional support, and closeness. Finally, conflictual independence is the freedom from anger, guilt, resentment, responsibility, anxiety, and mistrust of one’s parents. Hoffman’s term, conflictual independence, is confusing and causes one to assume that it is a negative concept associated with anger, guilt, anxiety etc. For the purposes of this study, Hoffman’s term,
conflictual independence, will be referred to as non-conflictual independence. In other words, non-conflictual independence will be equated with the freedom from anger, guilt, resentment, etc., and conflictual independence will signify conflict and mistrust within the parent-child relationship. When researchers use the PSI to assess college student psychological separation, they frequently find that non-conflictual independence, rather than functional, attitudinal, or emotional independence, is significantly related to various aspects of adjustment to college (Haemmerlie, Steen, & Benedicto, 1994; Hoffman, 1984; Hoffman & Weiss, 1987; Lapsley, Rice, & Shadid, 1989; Lopez, Campbell, & Watkins, 1988; Rice, 1992; Rice, Cole, & Lapsley, 1990).

Transitioning to a university for the first time can be a stressful experience for many college freshmen (Dyson & Renk, 2006). However, incoming students with psychologically controlling parents many experience additional stress. When these psychologically controlled students live in a less restrictive environment, they may be faced with the task of psychological separation from parents (Hersh & Hussong, 2006). As a result, these college students may react against their restrictive parents now that they live in a less restrictive environment by drinking alcohol frequently and irresponsibly. In other words, an overly restrictive parental context can result in risk-related behaviors in college. Thus, parents who are overly restrictive and controlling “may serve to promote the very alcohol-related behaviors they may be trying to contain” (Hersh & Hussong, 2006, p. 742). Furthermore, conflictual independence is associated with depression. For example, Lopez, Watkins, Manus, and Hunton-Shoup (1992) found that conflictual independence associated with both parents separately was significantly related to depression/dejection in a sample of 224 college students.

**Gender Differences**

The link between parental psychological control and college student adjustment problems may be influenced by parent and child gender (e.g., the four dyadic relationships of mother/daughter, mother/son, father/daughter, and father/son). The ways that mothers, fathers, daughters, and sons interact with one another differ (Steinberg, 2001). Therefore, the nature of each dyadic relationship may influence the link between parental psychological control and adjustment problems. In particular, mother/daughter dyads tend have more closeness and conflict than any other dyad (Steinberg, 1987). In addition, previous studies support that mutuality in the mother-daughter relationship is particularly important in daughters’
development of self-esteem and social adjustment (e.g., Goldberg, 1994). Even though research supports that the mother-daughter relationship is more argumentative than the father-daughter relationship, mothers and daughters tend to communicate more comfortably, feel more emotionally close to one another, and spend more time with one another than fathers and daughters (Nielson, 2007).

Starting in adolescence, conflicts tend to develop between mothers and sons over issues of independence and discipline, whereas the influence of the father seems to remain the same (Buhrmester, Camparo, Christensen, Gonzalez, & Hinshaw, 1992). Previous studies support that males are more demanding, resistant, and aversive with their mothers than with their fathers (e.g., Steinberg & Hill, 1978). Buhrmester and colleagues (1992) suggest that males may become more disinhibited and openly express anger with mothers because mothers tend to be warmer and more expressive with their sons than fathers. Mothers also respond to their sons’ compliance with greater positive reinforcement than do fathers (e.g., Lytton, 1979). In addition, sons tend to be more affectionate with their mothers than with their fathers (Buhrmester et al., 1992).

Previous research supports that fathers on average spend less total time with their sons and daughters than mothers do (Pleck, 2010). Implications of fathers’ lower engagement time have not been well-established. Fathers’ lower engagement time “could mean that fathers’ contribution to development is smaller than mothers’, [however] it could alternatively create a context in which fathers’ behaviors have a disproportionately high impact on the child” (Pleck, 2010). In general, the father-child relationship, particularly the father-daughter relationship, is characterized by less closeness and greater power differentials (e.g., Steinberg, 1987). Therefore, the impact of paternal psychological control “is less likely to be cushioned by other positive relational experiences compared to the effect of psychological control by mothers” (Rogers et al., 2003, p. 378). In other words, females may be more likely than males to negatively react to paternal psychological control because this relationship is less likely to be characterized as close, affirming, or reciprocal (Rogers et al., 2003). A positive father-daughter relationship is critically important to female adjustment (e.g., Cummings & O’Reilly, 1997). Specifically, fathers tend to have a greater influence on the daughters’ capability to trust and relate well to males than do mothers (e.g., Flouri, 2005). In addition, strong father-daughter relationships are related to self-confidence and self-reliance in daughters.
In the father/son dyad, fathers tend to spend more time with their sons than with their daughters (e.g., Pleck, 2010). Nelson and Coyne (2009) found that fathers’ warm and responsive parenting has been linked to less emotional distress in males but not in females. Furthermore, fathers are more likely to give advice and share more information with sons than with daughters (e.g., Pleck, 2010). In addition, the father-son relationship tends to be more competitive and less affectionate than the father-daughter relationship (Nielsen, 1996). Previous research supports that fathers play a key role in the socialization of emotion in sons. For example, Zeman and Garber (1996) found that adolescents tend to perceive their fathers as less tolerant of negative displays of emotion, such as anger. Therefore, sons may be less likely to express their negative emotions with their fathers. In addition, fathers tend to react to sons’ noncompliance more harshly than mothers (Nielson, 2007).

Gender differences associated with the prevalence and effects of psychological control are mixed and require further examination. In regard to parental psychological control, most studies have found slightly higher levels of psychological control, specifically maternal psychological control, reported by males than by females (Armentrout & Burger, 1972; Barber, 1996 (Study 3); Best, Hauser, & Allen, 1997; Dornbusch, Ritter, Leiderman, Robert, Fraleigh, 1987; Schaefer, 1965; Shulman, Collins, & Dital, 1993). The studies used primarily Caucasian samples and analyzed preadolescent or adolescent-reported psychological control as the methodology. In contrast, two other studies found higher levels for females rather than males (Barber, 1996 (Study 3; Hispanic); Bronstein, 1994); however, both studies used Hispanic samples and conducted observational ratings to measure psychological control. Finally, other studies did not find any significant gender differences (Kuczynski & Kochanska, 1995; Mantzicopoulos & Oh-Hwang, 1998; Mason, Cauce, Gonzales, & Hiraga, 1996; Smetana, 1995). However, these studies varied in their methodology and samples. For example, Kuczynski and Kochanska (1995) conducted observations and used a sample of 2-year-olds. Furthermore, Mantzicopoulos and Oh-Hwang (1998) focused on a Korean sample of adolescents and used self-report data. The variation in methodology and sample composition may explain some of the mixed results; however, there is some consistency in the trend suggesting that higher levels of psychological control are perceived by males (Barber, 2001). Further research is necessary in order to verify this trend.
Even though males may be more likely to perceive their parents as psychologically controlling, there is inconclusive evidence with respect to the relationship between gender and outcomes. Some studies report insignificant gender differences (e.g., Herman, Dornbusch, Herron, & Herting, 1997); whereas other studies suggest that psychological control has a stronger link to female adjustment than to male adjustment (e.g., Conger et al., 1997). In particular, psychological control may be related to female internalizing symptoms. According to Pettit, Laird, Dodge, and Criss (2001), early adolescent females with psychologically controlling mothers reported higher levels of anxiety, depression, and delinquency in middle childhood and adolescence. Furthermore, female internalizing symptoms may result due to differences in the interactive style of females and males (Rogers et al., 2003). Research suggests that females are more likely than males to attempt to maintain harmonious relationships, to a certain extent by engaging in interactive styles that are enabling (e.g., Hendrich, Blatt, Kupermine, Zohar, & Leadbeater, 2001). In other words, females tend to reinforce the thoughts of others and try to preserve interpersonal relationships in some cases by internalizing and suppressing their own thoughts or emotions (e.g., Maccoby, 1990). Therefore, females may be more likely than males to react to parental attempts to subjugate or control their feelings and opinions by internalizing their negative responses (Rogers et al., 2003). In contrast, research suggests that for males, the goal of interaction in interpersonal relationships tends to be one of self-assertion and dominance in comparison to females (e.g., Rosenfield, Vertefuille, & McAlpine, 2000). Males may be more likely than females to react to parental psychological control with externalizing efforts, such as binge drinking and risky sexual behavior, to establish their own autonomy and opinions (Rogers et al., 2003). Furthermore, Chodorow (1978) suggested that the process of individuation may differ by gender because of the different ways in which males and females may be socialized. In general, autonomy tends to be encouraged for males, whereas females may be expected to establish a separate identity from the family while also staying connected to the family (Gilligan, 1982). Females may define themselves in relation to other people; therefore, “females identity development may occur within an intimate relational context” (Bomar & Sabatelli, 1996, p. 435). Therefore, females may be more likely to struggle to gain independence from parents (e.g., conflictual independence) than males. Given these propositions, the present study seeks to shed light on gender differences associated with reactions to perceived psychological control and conflictual independence.
Findings concerning differences in psychological control due to parent gender also are contradictory. Some studies have found that mothers are more likely to psychologically control their children than are fathers (Armentrout & Burger, 1972; Boyes & Allen, 1993; Dobkin, Tremblay, & Sacchitelle, 1997; Forehand & Nousianinen, 1993; Litovsky & Dusek, 1985; Schaefer, 1965). However, a few studies have found psychological control ratings (self-report measures used with preschool children) to be higher for fathers than for mothers (see Barber, 2001 for review). Other research studies have found no gender differences in youths’ perceptions of maternal versus paternal psychological control (Rogers et al., 2003). Therefore, additional investigation is needed to determine whether perceived psychological control levels vary by parent gender.

**Specific Aims of the Present Study**

Depression, binge drinking, and risky sexual activity represent significant adjustment problems experienced by college freshmen (Arnett, 2000, 2005; Asberg et al., 2008; Dyson & Renk, 2006; Engs & Aldo-Benson, 1995; Furr et al., 2001; Hensley, 2001; Licciardone, 2003; O’Hare & Sherrer, 2006; Perkins, 2002; Wechsler et al., 2000; West & Graham, 2005). The current study aims to investigate the relationship between perceptions of parental psychological control and current adjustment problems in first-year college students and to determine whether conflictual independence acts as a mediator in this relationship. In addition, this study will investigate whether these relationships are moderated by parent and child gender.

**Hypotheses**

1. College students will perceive their mothers as being more psychologically controlling than their fathers.
2. Male college students will report higher levels of parental psychological control than female college students.
3. Female college students will report higher levels of depression, and males will report higher levels of risk behaviors, specifically binge drinking and risky sexual activity.
4. Conflictual independence will mediate the relationship between parental psychological control and college students’ adjustment, as indicated by levels of depression, binge drinking, and risky sexual activity. In addition, gender may moderate these relationships; therefore, moderated mediation analyses will be conducted.
Method

Participants

The current study used data from a sample of 358 freshman college students (235 females, 123 males) who participated in the Transition to University Study at a mid-sized, Midwest university. The sample was composed of students who were 88.9% Caucasian, 2.4% Asian/Asian American, 1.6% Latino/Hispanic, and 7.1% who preferred not to say. The mean age of the participants was 18.48. A majority of the sample came from intact families (81.6%) and 17.0% reported that their parents were either divorced or separated.

Procedure

Both the methods and protocol for the present study were approved by the Departmental Review Board of the Miami University Psychology Department. Freshman participants were recruited using the Psychology Subject Pool and flyers that were placed in freshman dormitories. Once participants read and signed a consent form stating their role in the study, they completed a series of questionnaires asking about experiences with their family as well as experiences in other relationships in October 2007. Researchers explained the steps taken to protect the participants’ confidentiality. In addition, data were gathered through an online survey, and participants were tested in groups of approximately 5 to 20. In order to control for order effects, across-subjects counter-balancing procedure was used. Across-subjects counter-balancing was achieved by randomly introducing one of three versions of the online survey to participants. Specifically, one version called for participants to begin the survey by completing items asking about their relationship with their mothers, a second version invited participants to first start by
answering questions about their relationship with their fathers, and a third version asked participants to begin completing measures about their relationship with their close friend or romantic partner. Once the survey was completed, participants were debriefed about the study’s purpose. Overall, participants completed the study in less than two hours and received two credit hours for their participation. For those participants who responded to the recruitment flyers, they were compensated monetarily with a ten dollar gift card. In addition, participants were informed that they may discontinue their participation in the study at any time or refuse to answer any question without penalty.

Measures

**Parental psychological control.** The Psychological Control Subscale of The Parent-Child Boundaries Scale - III – Psychological Control Scale (PBS-III; Kerig, 2006) is a 5-item self-report scale that assesses participants’ perceptions of their experience of parental psychological control with each of their parents. Items ask participants to rate whether they perceive their parents as trying to control their thoughts and feelings through the use of shame or guilt, isolation, withdrawal of love, and expressions of disappointment. For example, “My mother gives me the ‘cold shoulder’ if I don’t see things her way.” represents one of these items. One item (“My mother makes me feel guilty if I don’t do what she wants me to do”) was removed because it overlapped with a few questions on the conflictual independence scale of the Psychological Separation Inventory. Items are rated on a scale ranging from 1 (never) to 5 (almost always), and scores for this subscale range from 5-25. For this sample, the internal consistency of this scale was good (Cronbach’s Alpha = .86 and .85 for maternal psychological control and paternal psychological control, respectively).

**Conflictual independence.** The Psychological Separation Inventory – Conflictual Independence Scale (PSI; Hoffman, 1984) is a 25-item scale of the PSI that measures the participants’ perception of the degree of freedom from guilt, anxiety, mistrust, and resentment of mother and father separately. Items are rated on a Likert scale ranging from 1(not at all true of me) to 5 (very true of me). For the purposes of this study, the scale was shortened to 13 items that were most relevant for current college students. Items, such as “When I don’t write my mother/father often enough I feel guilty”, do not pertain to life of college students today. For this sample, internal consistency ranges from .87 (conflictual independence associated with father) to .88 (conflictual independence associated with mother). Test-retest reliabilities range
for females between .85 (conflictual independence associated with father) and .96 (conflictual independence associated with mother) (Hoffman, 1984). For males, test-retest reliability is .94 for conflictual independence associated with father and with mother (Hoffman, 1984). Correlations between conflictual independence and adjustment problems in past studies demonstrated validity (Hoffman & Weiss, 1987).

**Depressive symptomatology.** The Center for Epidemiological Studies – Depression Measure (CES-D; Radloff, 1977) is a 20-item self-report instrument that asks participants about the frequency of depressive symptoms within the past week. This scale measure depressive affect, somatic symptoms, positive affect, and perceptions of interpersonal rejection. Items are rated on a 4-point Likert scale: 0 (*Rarely or None of the Time (Less than 1 day)*), 1 (*Some or Little of the Time (1-2 days)*), 2 (*Occasionally or a Moderate Amount of Time (3-4 days)*), 3 (*Most of All of the Time (5-7 days)*). Item scores are summed and range from 0-60. In addition, the internal consistency reliability was good in this sample (Cronbach’s Alpha = .89). Previous research has found that the CES-D demonstrates moderate test-retest reliability across a range of subsamples (Roberts, 1980), and it discriminates between clinical subsamples of depressed and anxious patients compared to controls (Boyd & Weissman, 1982; Craig & Van Natta, 1979).

**Risky sex.** Items from The Sexual History Questionnaire (SHQ; Cupitt, 1998) and questions from Capaldi, Stoolmiller, Clark, and Owen’s (2002) Sex Survey were combined to measure the frequency of sexual risk taking tendencies. Five of the items were rated on a 5-point Likert scale (0, 1-2, 3-4, 5-7, 8 or more) and measured the frequency of risky sexual acts within the last school year. The sixth question was also rated on a 5-point Likert scale; however, the response options ranged from 0 (Never or Almost Never) to 4 (Always/Almost Always). Questions incorporated language representative of the college sample. For example, one of the items asked, “Since the school year began, how many times have you had a “hook up” with someone you didn’t know very well?” The SHQ has high reliability (Cupitt, 1998); however, psychometric testing on the Sex Survey has not yet been reported. For this sample, internal consistency was good (Cronbach’s Alpha = .85).

**Binge drinking.** The Seven-Day Retrospective Diary (RD; O’Hare, 1991) asks respondents to indicate the number of drinks they have consumed on average each day of the week. Within one week, five or more drinks in one sitting for males and four or more drinks in one sitting for females defines binge drinking. This measure has good validity and reliability
with a range of populations such as college students (O’Hare, 1991). In addition, the data gathered from the Seven-Day Retrospective Diary can be scored in a few different ways. For the purposes of this study, the number of days a week that participants engage in binge drinking (5 or more drinks for males and 4 or more drinks for females) was recorded in order to determine the frequency of binge drinking. Scores range from 0-7.

Results

Descriptive Statistics

Table 1 displays descriptive statistics for each variable, separated by gender, that were measured in the present study. The results are based on 358 participants who were used in the final analysis. Nine participants were removed from the study because they reported sophomore, junior, or senior standing. To account for missing values in the data set, the average scores were calculated (separate for males and females) for each scale to replace the missing values. Only 2.29% of the data was missing. In addition, both skewness and kurtosis were present in the data. Specifically, the data was positively skewed; therefore, logarithm transformation was used (note: transformations were not conducted for the binge drinking or sexual risk-taking measures because the skewness and kurtosis statistics were within normal range). After running this transformation, the data set resembled a normal distribution and the skewness and kurtosis statistics were within normal range.

Table 2 presents the intercorrelations among the variables. As expected, parental psychological control was significantly correlated with conflictual independence for females and males. In addition, maternal psychological control was significantly correlated with all dependent measures except for binge drinking in females and depression and sexual risk-taking in males. Paternal psychological control was significantly correlated with all dependent measures for females and sexual risk-taking and binge drinking in males. A 0.05 level of significance was used in all analyses. The statistical analyses associated with each hypothesis will be addressed separately.

Hypotheses

Hypothesis 1: Male and female college students will perceive their mothers as being more psychologically controlling than their fathers.

Paired t-tests were conducted to determine whether college students perceived their mothers as being more psychologically controlling than their fathers. Analyses indicated that
there were significant mean differences between paternal psychological control reports and maternal psychological control reports, \( t(357) = 4.61, p < .001 \). Both males’ and females’ reports indicated higher mean differences for maternal psychological control in comparison to paternal psychological control (see Table 1). This mean difference was significant for males, \( t(122) = 2.20, p < .05 \), and for females, \( t(234) = 4.08, p < .001 \). Therefore, the hypothesis was supported by the data.

**Hypothesis 2: Male college students will report higher levels of parental psychological control than female college students.**

When mean differences in males’ and females’ report of maternal and paternal psychological control (see Table 1) were compared, t-tests revealed no significant mean differences between males and females in their reports of maternal psychological control, \( t(356) = -0.108, p > .05 \), or their reports of paternal psychological control, \( t(356) = -0.875, p > .05 \). Therefore, the data did not support the hypothesis.

**Hypothesis 3: Female college students will report higher levels of depression, and males will report higher levels of risk behaviors, specifically binge drinking and risky sexual activity.**

A multivariate analyses of variance (MANOVA) was conducted to assess the relationships between college student gender and adjustment problems, with gender as the independent variable, and depression, binge drinking, and sexual risk-taking as the dependent measures. Follow-up univariate tests were conducted in the cases when MANOVA results indicated statistical significance. Results revealed a main effect of college student gender on adjustment problems, Wilks’ \( \Lambda = 3.596, p < .05 \). Follow-up ANOVA analyses demonstrated mean differences between males and females on the reports of binge drinking and sexual-risk taking (see Table 3). Males’ mean score for binge drinking was significantly higher than females’ mean score, and males’ mean score for sexual risk-taking was higher than females’ mean score, as indicated in Table 3. Males’ and females’ mean difference scores for depression was not significant.

**Hypothesis 4: Conflictual independence will mediate the relationship between parental psychological control and college students’ adjustment, as indicated by levels of depression, binge drinking, and risky sexual activity.** In addition, gender may moderate these relationships; therefore, moderated mediation analyses will be conducted.
In order to test these hypotheses, multiple steps were taken: the relationships among the independent variables, the dependent variables, and the mediator were analyzed; simple mediation models were examined; the proposed moderator variable was integrated into the models; and the moderated mediation hypotheses were empirically tested. In contrast to the multistep method proposed by Baron and Kenny (1986), MacKinnon, Lockwood, Hoffman, West, and Sheets (2002) assert that the direct effect from the independent variable to the dependent variable does not need to be significant in order for mediation to be present. Moreover, Kenny, Kashy, and Bolger (1998) published a restructured account of Baron and Kenny (1986) stating that the relationship between the independent variable and the dependent variable is no longer necessary when demonstrating mediation. Therefore, in order to conduct a test of mediation, two significant correlations must first be present: 1) there must be a significant correlation between the independent variable and the mediator \( (a) \), and 2) there must be a significant correlation between the mediator and the dependent variable \( (b) \) (See Figure 1). If both of these correlations are statistically significant, the mediational model will be tested.

In order to demonstrate mediation, hierarchical regressions are run. The first regresses the dependent variable (adjustment problem) on the mediator (conflictual independence). The second regression adds the independent variable (psychological control) to the model. Mediation is demonstrated if the effect of the independent variable is no longer significant when the mediator is present. The strength and form of the mediation effects were hypothesized to differ between males and females; in other words, child gender was considered to be a moderator. A number of sources refer to this effect as moderated mediation (e.g., Baron & Kenny, 1986); however, there is debate about how to assess the presence, strength, and significance of this effect. For the purposes of this study, moderated mediation effects were calculated according to methods proposed by MacKinnon (2008) (see Figure 2), which he refers to as “moderation and mediation with stacked groups” (p. 283). The mediated effect between psychological control and college adjustment problems is expected to differ for males versus females. Therefore, regression analyses were performed separately by college student gender. Once mediation was established in both groups (males and females), a test of the equality of the mediated effect for each level of the moderator was run \( (H_0: a_{11}b_{11} - a_{12}b_{12} = 0) \) (Figure 3). In other words, the effects were analyzed to determine whether the mediational paths were different across gender. Equations for the two groups are outlined in Figure 2. For this test, the standard error is “the
pooled standard error of the mediated effect from each group” (MacKinnon, 2008, p. 285) (Figure 3). The most commonly used standard error is the formula derived by Sobel (1982). The following regression analyses will be divided by college adjustment problem type.

Results for depression. The regression analyses revealed that, for females, the direct effect of maternal psychological control on depression was significant, $\beta = .730$, $t = 5.610$, $p < .001$. In addition, maternal psychological control was significantly related to conflictual independence with mothers, $\beta = .714$, $t = 14.244$, $p < .001$, and conflictual independence with mothers was significantly related to depression in females, $\beta = .725$, $t = 5.982$, $p < .001$. In the presence of the mediator (conflictual independence with mothers), maternal psychological control remained significant and continued to account for the variance in female depression in the mother-daughter relationship, $\beta = .383$, $t = 2.203$, $p < .05$ (see Table 4). Therefore, the Sobel test was conducted to test for partial mediation. Analyses revealed that the Sobel test was statistically significant, $z = 5.525$, $p < .001$; therefore, conflictual independence partially mediated the effect between maternal psychological control and depression in the mother-daughter relationship.

In contrast, for males, there was no direct effect of maternal psychological control on depression, $\beta = .299$, $t = 1.472$, $p = .144$. Maternal psychological control was significantly related to conflictual independence with mothers, $\beta = .674$, $t = 7.994$, $p < .001$, and conflictual independence with mothers was significantly related to depression in college males, $\beta = .509$, $t = 2.949$, $p < .01$. When conflictual independence and maternal psychological control were present in the model, maternal psychological control did not account for a significant amount of variance in male depression, $\beta = -.062$, $t = -.254$, $p = .800$; however, conflictual independence remained significant, $\beta = .540$, $t = 2.537$, $p < .05$. Therefore, conflictual independence mediated this mother-son relationship (see Table 4).

Turning next to father-child relationships, the results showed a direct effect of paternal psychological control on depression in females, $\beta = .655$, $t = 4.864$, $p < .001$. Furthermore, paternal psychological control predicted conflictual independence with fathers, $\beta = .732$, $t = 13.608$, $p < .001$, and conflictual independence with fathers predicted females’ depression, $\beta = .348$, $t = 6.181$, $p < .001$. When conflictual independence was added to the model that included paternal psychological control and depression in females, paternal psychological control no
longer accounted for the variance in depression in the father-daughter relationship, $\beta = .181$, $t = 1.046$, $p = .297$ (see Table 5), demonstrating full mediation.

For boys, however, paternal psychological control did not have a direct effect on male depression, $\beta = .142$, $t = .715$, $p = .476$. Paternal psychological control was significantly related to conflictual independence with fathers, $\beta = .660$, $t = 9.025$, $p < .001$. In addition, conflictual independence with fathers was significantly related to depression in college males, $\beta = .537$, $t = 2.925$, $p < .01$. Consistent with full mediation, paternal psychological control no longer accounted for variance in depression when conflictual independence was added to the model, $\beta = -.347$, $t = -1.410$, $p = .161$ (see Table 5). When a test of the equality of the mediated effect for females versus males was run, analyses supported the presence of moderated mediation, $t = 7.186$, $p < .001$. Therefore, the indirect effect of paternal psychological control on depression differed between males and females. Moreover, this relationship was stronger for the father-daughter relationship than for the father-son relationship.

**Results for binge drinking.** Regression analyses indicated that maternal psychological control was not directly related to binge drinking in college females, $\beta = .692$, $t = 1.195$, $p = .233$. As stated previously, maternal psychological control was significantly related to conflictual independence in the mother-daughter relationship. In addition, conflictual independence with mothers was significantly related to binge drinking in females, $\beta = 1.574$, $t = 2.908$, $p < .01$. Mediation analysis revealed that conflictual independence accounted for variance in binge drinking over and above variance explained by maternal psychological control, $\beta = -.800$, $t = -1.032$, $p = .303$ (see Table 6). Therefore, mediation was demonstrated.

In contrast, maternal psychological control was not directly related to binge drinking in college males, $\beta = 1.583$, $t = 1.981$, $p = .050$. Maternal psychological control was significantly related to conflictual independence in the mother-son relationship, as discussed earlier. However, conflictual independence with mothers was not significantly related to binge drinking in males, $\beta = 1.003$, $t = 1.441$, $p = .152$ (see Table 6). Therefore, mediation was not tested.

Turning next to father-child relationships, results showed that paternal psychological control demonstrated a direct relationship with females’ binge drinking, $\beta = 1.343$, $t = 2.253$, $p < .05$. Furthermore, paternal psychological control was significantly related to conflictual independence with fathers; however, conflictual independence with fathers was not significantly
relate to binge drinking in females, $\beta = .835$, $t = 1.543$, $p = .124$ (see Table 7). Because both of the necessary relationships were not significant, a test of mediation was not conducted.

Paternal psychological control was directly related to males’ binge drinking, $\beta = 2.451$, $t = 3.257$, $p < .01$. In addition, paternal psychological control was significantly related to conflictual independence with fathers, as stated previously; however, conflictual independence with fathers was not significantly related to binge drinking in males, $\beta = 1.162$, $t = 1.568$, $p = .119$ (see Table 7). Therefore, mediation analyses were not necessary.

**Results for sexual risk-taking.** Regression analyses showed a direct relationship between maternal psychological control and females’ sexual risk-taking behavior, $\beta = 7.332$, $t = 3.558$, $p < .001$. Furthermore, maternal psychological control was significantly related to conflictual independence with mothers, and conflictual independence with mothers was significantly related to sexual risk-taking, $\beta = 10.658$, $t = 5.659$, $p < .001$. Therefore, mediation analyses were run and revealed that when conflictual independence with mothers was present in the model, maternal psychological control no longer accounted for the variance in sexual risk-taking in females, $\beta = -.521$, $t = -.193$, $p = .847$ (see Table 8). These results indicate that mediation was present.

For college males, maternal psychological control was not directly related to sexual risk-taking in the mother-son relationship, $\beta = 6.819$, $t = 1.936$, $p = .055$. Even though maternal psychological control was significantly related to conflictual independence with mothers, there was no significant relationship between conflictual independence with mothers and sexual risk-taking, $\beta = 4.190$, $t = 1.365$, $p = .175$ (see Table 8). Therefore, analyses testing mediation were not conducted.

Paternal psychological control was directly related to sexual risk-taking in females, $\beta = 5.254$, $t = 2.426$, $p < .05$. As stated previously, paternal psychological control was significantly related to conflictual independence with fathers. In addition, conflictual independence with fathers was significantly related to sexual risk-taking in females, $\beta = 6.480$, $t = 3.349$, $p < .01$. Mediation analyses revealed that when conflictual independence with fathers was included in the model, paternal psychological control no longer accounted for the variance in sexual risk-taking in college females, $\beta = .908$, $t = .318$, $p = .751$. The mediation analysis is shown in Table 9.

For college males, paternal psychological control was directly related to sexual risk-taking, $\beta = 12.255$, $t = 3.743$, $p < .001$. In addition, paternal psychological control was
significantly related to conflictual independence with fathers, as demonstrated earlier; however, conflictual independence with fathers was not significantly related to sexual risk-taking in college males, $\beta = 4.361, t = 1.333, p = .185$ (see Table 9). Therefore, mediation analyses were not conducted.

**Discussion**

During the transition to college, significant numbers of college students report adjustment problems (e.g., Benton, 2003). Research supports the hypothesis that parental psychological control leads to college adjustment problems; however, the mechanism by which this effect takes place is unclear. Specifically, the possible mediating role of conflictual independence has not yet been investigated. Therefore, the purpose of this study was to examine this relationship as well as the added effect of parent and college student gender. In particular, it was hypothesized that conflictual independence would mediate the relationships between parental psychological control and college student adjustment, as indicated by self-reports of depression, binge drinking, and sexual risk-taking. In addition, mothers were predicted to use psychological control tactics more often than fathers, and college males were expected to experience higher levels of psychological control than college females. Furthermore, college females were predicted to report higher levels of depression and males were predicted to report higher levels of binge drinking and sexual risk-taking during the transition to college. Results indicated that some of the hypotheses were supported; however, a number of unexpected relationships emerged.

Analyses revealed that college students reported their mothers to be more psychologically controlling than their fathers. These findings are in line with most studies focused on parental psychological control (see Barber, 2001 for review). Based on the preliminary results of the present study, one interpretation of this finding may be that mothers have more contact with their college-aged children than fathers (Pleck, 2010). In particular, the mother/daughter dyad, more so than any other dyad, is characterized by closeness, frequent communication, and conflict (Nielson, 2007). Therefore, young adults who are away at college may experience more psychologically controlling tactics by their mothers because they may be more likely to interact with mothers than with fathers. Further investigation is necessary in order to determine the implications of higher levels of maternal psychological control.

In the present study, no significant differences emerged between males’ and females’ reports of maternal and paternal psychological control. These results counter several studies that
found significant gender differences (e.g., Barber, 1996); however, previous studies focused on different populations than the present study. For example, Schaefer’s (1965) well-known study focused on adolescent self-reports (ages 12-14) and found that males were more likely to report psychological control than females. In contrast, the present study focused on self-report questionnaires completed by college students (ages 18-19). However, the differences in results may be due to cohort effects. Therefore, gender differences may emerge when psychological control is reported by younger individuals rather than by college students.

As expected, significant differences emerged between male and female reports of college adjustment problems, with males reporting higher mean levels of binge drinking and sexual risk-taking than females. These results are in line with current research indicating that males are more likely to engage in binge drinking and risk sexual activity (e.g., Harrell & Karim, 2008; Perkins, 2002). In addition, no significant gender differences surfaced for self-reports of depression levels, which is counter to existing research. For example, Pettit and colleagues (2001) found that preadolescent females with psychologically controlling mothers were more likely to experience internalizing problems than males. The present study suggests that college males and females do not differ in depression levels; however, this finding may be due to the modest sample size. In addition, females outnumbered males and the sample was primarily Caucasian and upper class. Greater diversity of participants may yield depression scores that are higher for females than for males.

**Mother-Daughter Relationship**

As expected, for the mother-daughter relationship, the effect of maternal psychological control on daughters’ adjustment problems (depression, binge drinking, and sexual risk-taking) was significant. In addition, conflictual independence mediated all of these effects, with the exception of depression. Conflictual independence partially mediated the relationship between maternal psychological control and depression in college females. These findings suggest that maternal psychological control and conflictual independence are associated with a host of adjustment problems. Maternal psychological control may particularly impact daughters’ difficulty adjusting to college because the mother/daughter dyad is characterized by the greatest degree of closeness and conflict (Nielson, 2007). In addition, psychologically controlled daughters who have not successfully separated from their mothers may engage in binge drinking and sexual risk-taking in order to act out their frustration felt toward their mothers. Another
possibility is that these daughters are trying to escape from the control their mothers are still trying to exert over them and establish independence. It may be more difficult for mothers to know whether their daughters are engaging in risky activities if they are living away from home; therefore, daughters may be more likely to engage in such activities.

**Father-Daughter Relationship**

In comparison to maternal psychological control, daughters are similarly impacted by paternal psychological control. Once again, paternal psychological control was significantly related to depression, binge drinking, and sexual risk-taking. Confictual independence mediated each of these effects except binge drinking. In support of previous research, fathers have a unique influence on daughters (Rowa, Kerig, & Geller, 2001), and the father-daughter relationship tends to have less closeness and greater power differentials than the mother-daughter relationship (Rogers et al., 2003). Therefore, females tend to be more negatively affected by paternal psychological control than males. The same was true in this particular sample. Analyses revealed that daughters (in comparison to sons) were more likely to experience depression when psychologically controlled by fathers during the transition to college. These findings also support previous research stating that paternal psychological control was associated with sexual risk-taking in females only (Rogers, 1999). One possible explanation for these results is suggested by Flouri (2005). Flouri (2005) stated that fathers tend to have a strong influence on daughters’ capability to trust and relate well to the males in her life. Therefore, daughters may engage in sexual risk-taking with males because of their negative relationship with their fathers. Perhaps these daughters are looking for male acceptance and closeness since they are being psychologically controlled by fathers. Similar to the explanation given for the relationship between maternal psychological control and risk-taking activities, perhaps daughters engage in risky behaviors, such as binge drinking, because they are desperately trying to exert their independence. In addition, they may believe that their fathers are less likely to learn of their drinking habits when living away from home.

**Mother-Son Relationship**

Maternal psychological control was only associated with one type of adjustment problem in males, depression. Furthermore, this effect was mediated by conflictual independence. The link between maternal psychological control and children’s depression is well established in the literature (e.g., Barber, 1996). However, this effect has not been connected to conflictual
independence. The feelings of resentment and mistrust of mothers, represented by conflictual independence, may partially explain why maternal psychological control is related to depression in sons. Perhaps maternal psychological control is not associated with binge drinking or sexual risk-taking in males because mothers in comparison to fathers tend to be warmer and more affectionate with males (Buhrmester et al., 1992). In addition, fathers tend to have a greater impact on male socialization than mothers (Zeman & Garber, 1996); therefore, males may be more likely to experience a variety of adjustment problems in relation to paternal psychological control.

**Father-Son Relationship**

In comparison to the mother-son relationship, paternal psychological control in the father-son relationship was related to all of the adjustment problems measured in the present study. Moreover, only the effect involving depression was mediated by conflictual independence. These results are in line with previous research which supports the key role fathers play in the socialization of emotion in sons. In general, sons tend to perceive their fathers as less tolerant (than their mothers) of negative displays of emotion, such as anger (Zeman & Garber, 1996). Because psychologically controlling fathers tend to be nonresponsive to their sons’ emotional and psychological needs (Maccoby & Martin, 1983), sons may feel as though they cannot express their emotions around their fathers. In contrast, sons are more likely to express their emotions with their mothers (e.g., Buhrmester et al., 1992). This difference between maternal and paternal reactions to sons’ negative emotions may partially explain why sons experience a wide variety of adjustment problems associated with paternal psychological control in comparison to maternal psychological control. In addition, Pleck (2010) hypothesized that fathers’ lower engagement time with their children may create an environment where fathers’ interactions with their children have a disproportionately high influence on them. Perhaps paternal psychological control influences males’ adjustment more so than maternal psychological control because fathers tend to spend less time with their children. Therefore, negative interactions with fathers may be more harmful to child adjustment than negative interactions with mothers.

**Psychological Control: Females in Comparison to Males**

Based on these preliminary results, females tend to experience depression, binge drinking, and sexual risk-taking when psychologically controlled by mothers or fathers. In
comparison, males experience all of these adjustment problems only in relation to paternal psychological control. Maternal psychological control in the mother-son relationship is only linked to sons’ depression. Therefore, it seems as though females are significantly impacted by both maternal and paternal psychological control, whereas, males seem to experience more adjustment problems in relation to paternal psychological control only. These patterns may be associated with socialization practices with males versus females. In general, females are socialized to define themselves within a relational context (Bomar & Sabatelli, 1996). They are expected to stay connected to the family while also establishing a separate identity (Gilligan, 1982). These findings may support this female conflict of needing to relate to the family while also trying to establish independence.

In addition, conflictual independence mediates all effects in females except for the relationship between paternal psychological control and binge drinking in the father-daughter relationship. In comparison, conflictual independence only mediates the effects of maternal and paternal psychological control on depression in males. It is unclear why this pattern emerged. Perhaps females are more likely to endorse conflictual independence because they tend to have a more difficult time establishing independence than males (Gilligan, 1982). In addition, depression may be associated with conflictual independence in all dyadic relationships because the feelings of resentment, represented by conflictual independence, may be internalized. Internalization of feelings is characteristic of depression.

**Limitations**

Various limitations of the present study should be considered. First, the use of self-report methods for all measures may have resulted in responses that were socially desirable. In addition, the present study focused only on three types of college student adjustment problems: depression, binge drinking, and sexual risk-taking. Clearly, there are a number of serious adjustment problems that were not included, such as anxiety, eating disorders, and drug use. Research supports that psychological control can lead to anxiety in children; however, many other adjustment problems may result from parental psychological control.

Another limitation of the present study was the cross-sectional design. The data only captured student perception of the variables at one point in time. It would be interesting to investigate the longitudinal effects of psychological control on college students. In particular,
there may be differences between levels of psychological control when students are living at home versus when living on campus.

In addition, the composition of the sample represents a limitation of the study. Overall, the sample was fairly homogenous in nature. All students that were sampled attended the same mid-sized Midwestern university. Over 88% of participants were Caucasian; therefore, less than 12% of the sample represented minority students. In addition, there were more females in the sample than males, which may partially explain why more effects of parental psychological control were found in females.

Furthermore, only one variable, conflictual independence, was analyzed as a mediator in the analyses. Some of the results revealed that conflictual independence did not mediate the relationship between certain variables; however, a direct relationship between the variables did exist. This suggests that another variable may mediate those relationships. The present study did not allow for the inclusion of other potential mediating variables. Therefore, future research should consider investigating the role that other mechanisms may play in the relationship between psychological control and college adjustment problems (e.g., emotion regulation).

Conclusions

Previous research supports the negative effect of parental psychological control on offspring (e.g., Barber, 1996). The present study is consistent with these findings and the results help to further inform the literature on psychological control. Psychological control is detrimental to college student adjustment and is significantly related to depression, binge drinking, and sexual risk-taking during the transition to college. This implies that the harmful effects of psychological control vary greatly and may differ from student to student. Furthermore, both maternal and paternal psychological control impact adjustment for males and females; however, the effects of parental psychological control, both maternal and paternal, are more numerous for females than for males. Even though mothers may be more likely to use psychologically controlling tactics, as shown in this study, the effects of paternal psychological control can be just as damaging to offspring. In addition, results suggest that conflictual independence is involved in many of the relationships between parental psychological control and adjustment problems, especially in females. Therefore, interventions targeting feelings of resentment and mistrust of one’s parents, which can be represented by conflictual independence, should be considered for college students experiencing psychological control. It is important to
recognize that some significant relationships were not indirectly related through conflictual independence. This suggests that further investigation is needed to uncover the other mechanism(s) that may mediate these important relationships.
References


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Table 1.

Means, Standard Deviations, and Ranges for Study Measures

<table>
<thead>
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<th>Measure</th>
<th>Females (n = 235)</th>
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<tr>
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<td>47.00</td>
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<td>0.33</td>
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<td>5.56</td>
<td>5.09</td>
<td>.00</td>
<td>24.00</td>
<td>7.40</td>
<td>5.81</td>
<td>.00</td>
<td>24.00</td>
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<td>1.42</td>
<td>1.40</td>
<td>.00</td>
<td>7.00</td>
<td>1.77</td>
<td>1.32</td>
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Note. Min. = Minimum. Max. = Maximum. CESDM = depression measure

Raw data displayed.
Table 2.

Correlations

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<th>Variable</th>
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<th>3</th>
<th>4</th>
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<th>6</th>
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<td>1. Psychological Control (Mother)ₐ</td>
<td>-----</td>
<td>.442***</td>
<td>.678***</td>
<td>.371***</td>
<td>.346***</td>
<td>.224***</td>
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<td>2. Psychological Control (Father)ₐ</td>
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<td>.661***</td>
<td>.304***</td>
<td>.155*</td>
<td>.144*</td>
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<td>3. Conflictual Independence (Mother)ₐ</td>
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<td>.246**</td>
<td>-----</td>
<td>.571***</td>
<td>.366***</td>
<td>.344***</td>
<td>.185**</td>
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<td>4. Non-Conflictual Independence (Father)ₐ</td>
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<td>.256**</td>
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<td>.222**</td>
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<td>6. Sex Risk Taking</td>
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<td>.555***</td>
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<td>.015</td>
<td>.599***</td>
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</table>

*Note. Correlations for females are above the diagonal; correlations for males are in italics below the diagonal. CESDM = depression measure.

ₐLogarithm method used to normalize data.

*p < .05. ** p < .01. *** p < .001.
Table 3.

*Means and Standard Deviations on the College Adjustment Problems Measures*

<table>
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<tr>
<th>Measure</th>
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<th></th>
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<tr>
<td></td>
<td>M</td>
<td>SD</td>
<td>M</td>
<td>SD</td>
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<td>5.08</td>
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<td>5.81</td>
<td>9.83**</td>
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<td>1.42</td>
<td>1.40</td>
<td>1.77</td>
<td>1.32</td>
<td>5.43*</td>
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</tbody>
</table>

*Note.* Raw data displayed for all measures. CESDM = depression measure.

*p < .05. **p < .01. ***p < .001.*
Table 4.

Summary of Regression Analysis Predicting Depression from Maternal Psychological Control and Conflictual Independence

<table>
<thead>
<tr>
<th>Criterion/Predictor</th>
<th>Females</th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
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<th></th>
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<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td>B</td>
<td>SE-B</td>
<td>β</td>
<td>R² Change</td>
<td>B</td>
<td>SE-B</td>
<td>β</td>
<td>R² Change</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>CESDM:</td>
<td></td>
<td></td>
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<td></td>
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<tr>
<td>Psych Control (M)</td>
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<td>.119***</td>
<td></td>
<td>.299</td>
<td>.203</td>
<td>.132</td>
<td>.017</td>
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<td>C.I.:</td>
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<td></td>
<td></td>
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<td></td>
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</tr>
<tr>
<td>Psych Control (M)</td>
<td>.714</td>
<td>.050</td>
<td>.678***</td>
<td>.459***</td>
<td>.674</td>
<td>.084</td>
<td>.583***</td>
<td>.340***</td>
<td></td>
<td></td>
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<td></td>
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<tr>
<td>C.I.</td>
<td>.725</td>
<td>.121</td>
<td>.366***</td>
<td>.134***</td>
<td>.509</td>
<td>.173</td>
<td>.258**</td>
<td>.067**</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>CESDM:</td>
<td></td>
<td></td>
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<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>C.I.</td>
<td>.482</td>
<td>.163</td>
<td>.243**</td>
<td></td>
<td>.540</td>
<td>.213</td>
<td>.274*</td>
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</tr>
<tr>
<td>Psych Control (M)</td>
<td>.383</td>
<td>.174</td>
<td>.181*</td>
<td>.018*</td>
<td>-.062</td>
<td>.245</td>
<td>-.027</td>
<td>.000</td>
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</tr>
</tbody>
</table>

Note. CESDM = depression. Psych Control (M) = maternal psychological control. C.I. = conflictual independence. B = unstandardized coefficient; β = standardized coefficient.

*p < .05. ** p < .01. *** p < .001
Table 5.

*Summary of Regression Analysis Predicting Depression from Paternal Psychological Control and Conflictual Independence*

<table>
<thead>
<tr>
<th>Criterion/Predictor</th>
<th>Females</th>
<th></th>
<th>Males</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>$B$</td>
<td>SE- $B$</td>
<td>$\beta$</td>
<td>$R^2$ Change</td>
</tr>
<tr>
<td>CESDM:</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Psych Control (F)</td>
<td>.655</td>
<td>.135</td>
<td>.304***</td>
<td>.093***</td>
</tr>
<tr>
<td>C.I.:</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Psych Control (F)</td>
<td>.732</td>
<td>.054</td>
<td>.661***</td>
<td>.437***</td>
</tr>
<tr>
<td>CESDM:</td>
<td></td>
<td></td>
<td></td>
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</tr>
<tr>
<td>C.I.</td>
<td>.760</td>
<td>.118</td>
<td>.389***</td>
<td>.151***</td>
</tr>
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<td>CESDM:</td>
<td></td>
<td></td>
<td></td>
<td></td>
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<tr>
<td>C.I.</td>
<td>.651</td>
<td>.157</td>
<td>.333***</td>
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<tr>
<td>Psych Control (F)</td>
<td>.181</td>
<td>.173</td>
<td>.084</td>
<td>.004</td>
</tr>
</tbody>
</table>

*Note.* CESDM = depression. Psych Control (F) = paternal psychological control. C.I. = conflictual independence. $B = \text{unstandardized coefficient; } \beta = \text{standardized coefficient.}$

*p < .05. ** $p < .01$. *** $p < .001$. 

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Table 6.

Summary of Regression Analysis Predicting Binge Drinking from Maternal Psychological Control and Conflictual Independence

<table>
<thead>
<tr>
<th>Criterion/Predictor</th>
<th>Females</th>
<th>Males</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>$B$</td>
<td>SE-$B$</td>
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<tr>
<td>Binge Drinking:</td>
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<tr>
<td>Psych Control (M)</td>
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<td>.579</td>
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<tr>
<td>C.I.:</td>
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<td></td>
</tr>
<tr>
<td>Psych Control (M)</td>
<td>.714</td>
<td>.050</td>
</tr>
<tr>
<td>Binge Drinking:</td>
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<td></td>
</tr>
<tr>
<td>C.I.</td>
<td>1.574</td>
<td>.541</td>
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<tr>
<td>C.I.</td>
<td>2.089</td>
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<td>.776</td>
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</table>

Note. Psych Control (M) = maternal psychological control. C.I. = conflictual independence. $B =$ unstandardized coefficient; $\beta =$ standardized coefficient.

*p < .05. **p < .01. ***p < .001.
Table 7.

Summary of Regression Analysis Predicting Binge Drinking from Paternal Psychological Control and Conflictual Independence

<table>
<thead>
<tr>
<th>Criterion/Predictor</th>
<th>Females</th>
<th>Males</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>$B$</td>
<td>SE-B</td>
</tr>
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<td>Binge Drinking:</td>
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<tr>
<td>Psych Control (F)</td>
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<td>.596</td>
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<tr>
<td>C.I.:</td>
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<tr>
<td>Psych Control (F)</td>
<td>.732</td>
<td>.054</td>
</tr>
<tr>
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<tr>
<td>C.I.</td>
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<td>.060</td>
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<td>Psych Control (F)</td>
<td>1.299</td>
<td>.796</td>
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</table>

Note. Psych Control (F) = paternal psychological control. C.I. = conflictual independence. $B =$ unstandardized coefficient; $\beta =$ standardized coefficient.

*p < .05. ** $p < .01$. *** $p < .001$. 
Table 8.

Summary of Regression Analysis Predicting Sexual Risk-Taking from Maternal Psychological Control and Conflictual Independence

<table>
<thead>
<tr>
<th>Criterion/Predictor</th>
<th>Females</th>
<th></th>
<th></th>
<th></th>
<th>Males</th>
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</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>$B$</td>
<td>SE-$B$</td>
<td>$\beta$</td>
<td>$R^2$ Change</td>
<td>$B$</td>
<td>SE-$B$</td>
<td>$\beta$</td>
<td>$R^2$ Change</td>
</tr>
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<td>Sexual Risk-Taking:</td>
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<td></td>
<td></td>
<td></td>
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</tr>
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<td>Psych Control (M)</td>
<td>7.332</td>
<td>2.060</td>
<td>.224***</td>
<td>.050***</td>
<td>6.819</td>
<td>3.523</td>
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</tr>
<tr>
<td>Psych Control (M)</td>
<td>.714</td>
<td>.050</td>
<td>.678***</td>
<td>.459***</td>
<td>.674</td>
<td>.084</td>
<td>.583***</td>
<td>.340***</td>
</tr>
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<td>Sexual Risk-Taking:</td>
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<td></td>
<td></td>
</tr>
<tr>
<td>C.I.</td>
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<td>2.060</td>
<td>.224***</td>
<td>.050***</td>
<td>4.190</td>
<td>3.069</td>
<td>.122</td>
<td>.015</td>
</tr>
<tr>
<td>Sexual Risk-Taking:</td>
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<td></td>
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<td></td>
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<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>C.I.</td>
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<td>2.705</td>
<td>-.016</td>
<td></td>
<td>1.139</td>
<td>3.763</td>
<td>.033</td>
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<tr>
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<td>.068***</td>
<td>6.051</td>
<td>4.353</td>
<td>.152</td>
<td>.015</td>
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</table>

Note. Psych Control (M) = maternal psychological control. C.I. = conflictual independence. $B =$ unstandardized coefficient; $\beta =$ standardized coefficient.

*p < .05. **p < .01. ***p < .001.
Table 9.

**Summary of Regression Analysis Predicting Sexual Risk-Taking from Paternal Psychological Control and Conflictual Independence**

| Criterion/Predictor | Females | | | | | | Males | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | \( B \) | \( \text{SE-B} \) | \( \beta \) | \( R^2 \) Change | \( B \) | \( \text{SE-B} \) | \( \beta \) | \( R^2 \) Change |
| Sexual Risk-Taking: | | | | | | | | | | | | | |
| Psych Control (F) | 5.254 | 2.166 | .155* | .024* | 12.255 | 3.274 | .319*** | .102*** |
| C.I.: | | | | | | | | | | | | | |
| Psych Control (F) | .732 | .054 | .661*** | .437*** | .660 | .073 | .630*** | .396*** |
| Sexual Risk-Taking: | | | | | | | | | | | | | |
| C.I. | 6.480 | 1.935 | .212** | .045** | 4.361 | 3.272 | .199 | .014 |
| Sexual Risk-Taking: | | | | | | | | | | | | | |
| C.I. | 5.938 | 2.582 | .194* | | -4.972 | 4.012 | -.135 | |
| Psych Control (F) | .908 | 2.860 | .027 | .000 | 15.537 | 4.205 | .404*** | .098*** |

*Note.* Psych Control (F) = paternal psychological control. C.I. = conflictual independence. \( B = \) unstandardized coefficient; \( \beta = \) standardized coefficient.

*p < .05. **p < .01. ***p < .001.
Figure 1. Model of Mediation and Moderation with Stacked Groups. X = independent variable; M = mediator variable; Y = dependent variable. $a_{11}$, $b_{11}$, $c'_{11}$ = pathways in group 1; $a_{12}$, $b_{12}$, $c'_{12}$ = pathways in group 2. Adapted from MacKinnon, D.P. (2008). *Introduction to statistical mediation analysis*. New York, NY: Taylor & Francis Group.
Group 1: Female

\[ Y_1 = i_{11} + c_{11}X + e_{11} \]  \hspace{1cm} (2.1)
\[ Y_1 = i_{21} + c'_{11}X + b_{11}M + e_{21} \]  \hspace{1cm} (2.2)
\[ M_1 = i_{31} + a_{11}X + e_{31} \]  \hspace{1cm} (2.3)

Group 2: Male

\[ Y_2 = i_{12} + c_{12}X + e_{12} \]  \hspace{1cm} (2.4)
\[ Y_2 = i_{22} + c'_{12}X + b_{12}M + e_{22} \]  \hspace{1cm} (2.5)
\[ M_2 = i_{32} + a_{12}X + e_{32} \]  \hspace{1cm} (2.6)

Figure 2. Equations for Mediation and Moderation with Stacked Groups. X = independent variable; M = mediator variable; Y = dependent variable. \( a_{11}, b_{11}, c'_{11} = \) pathways in group 1; \( a_{12}, b_{12}, c'_{12} = \) pathways in group 2. Adapted from MacKinnon, D.P. (2008). *Introduction to statistical mediation analysis*. New York, NY: Taylor & Francis Group.
(\text{std} (a_{11}b_{11})) = \sqrt{b_{11} \left( \text{std}(a_{11}) \right)^2 + a_{11} \left( \text{std} (b_{11}) \right)^2} \quad (1)

(\text{std} (a_{12}b_{12})) = \sqrt{b_{12} \left( \text{std}(a_{12}) \right)^2 + a_{12} \left( \text{std} (b_{12}) \right)^2} \quad (2)

(\text{std} (a_{11}b_{11} - a_{12}b_{12})) = \sqrt{\left( \text{std}(a_{11}b_{11}) \right)^2 + \left( \text{std} (a_{12}b_{12}) \right)^2} \quad (3)

\begin{align*}
t & = \frac{a_{11}b_{11} - a_{12}b_{12}}{(\text{std} (a_{11}b_{11} - a_{12}b_{12}))} \\
& \quad \quad (4)
\end{align*}

\text{Figure 3. Test of the Equality of the Mediated Effect. std = standard deviation; } a_{11} = \text{standard error of mean 1, group 1; } b_{11} = \text{standard error of mean 1, group 2; } a_{12} = \text{standard error of mean 2, group 1; } b_{12} = \text{standard error of mean 2, group 2; } t = \text{test statistic.}
Figure 4. Relationships Between Variables Within the Mother-Daughter Dyad.

Note. Betas were used to display relationships between variables. Psych Control = Parental Psychological Control.

*p < .05, **p < .01, ***p < .001.
Figure 5. Relationships Between Variables Within the Mother-Son Dyad.

Note. Betas were used to display relationships between variables. Psych Control = Parental Psychological Control.

*p < .05. ** p < .01. *** p < .001.
**Figure 6.** Relationships Between Variables Within the Father-Daughter Dyad.

*Note.* Betas were used to display relationships between variables. Psych Control = Parental Psychological Control.

\*p < .05. \**p < .01. \***p < .001.
Figure 7. Relationships Between Variables Within the Father-Son Dyad.

Note. Betas were used to display relationships between variables. Psych Control = Parental Psychological Control.

*p < .05. ** p < .01. *** p < .001.