THE IMPACT OF INDIRECT AGGRESSION ON COLLEGE STUDENT

ADJUSTMENT

Except where reference is made to the work of others, the work described in this dissertation is my own and done in collaboration with my advisory committee. The dissertation does not include propriety or classified information.

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THE IMPACT OF INDIRECT AGGRESSION ON COLLEGE STUDENT ADJUSTMENT

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THE IMPACT OF INDIRECT AGGRESSION ON COLLEGE STUDENT ADJUSTMENT

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John Lawrence Klem, son of Dr. Robert E. and Jane Klem, was born on April 8th, 1970, in Troy, New York. He graduated from the College of Charleston with his Bachelors of Science degree in Psychology in 1992. He obtained his Master of Science in Psychology in 1994 from Georgia College and State University. After his master's degree, John worked as a family and adolescent counselor in settings throughout the United States. In 2004, he enrolled in the Counselor Education and Supervision doctoral program at Auburn University. He is married to Tonya Klem and has two children, Conrad and Isaiah.

THE IMPACT OF INDIRECT AGGRESSION ON COLLEGE STUDENT ADJUSTMENT

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The purpose of the study was to investigate the impact of indirect aggression on college student adjustment. Specifically, this study examined the relationship between perpetration by indirect aggression and victimization by indirect aggression on three domains of college adjustment. The three domains were overall college adjustment, social adjustment to college, and personal-emotional adjustment to college. In addition to this analysis, gender differences in the use of indirect aggression and victimization by indirect aggression were evaluated. 135 undergraduate college students participated in the study, of which 114 were females and 21 were male. Participants completed four assessments, the Student Adaptation to College Questionnaire, the Indirect Aggression Scale—Aggressor Version, the Indirect Aggression Scale—Target Version, and a demographic measure. Bivariate correlations and regression analysis were used to

evaluate the relationship between indirect aggression and college adjustment. A multivariate analysis of variance (MANOVA) was used to examine gender differences in the use of aggression.

Results indicated that perpetration of indirect aggression is unrelated to overall college adjustment, social adjustment, and personal-emotional adjustment to college. Victimization by indirect aggression was found to significantly relate to personal-emotional adjustment to college but not overall college adjustment to college or social adjustment to college. On the “Use of malicious humor’ subscale, males reported significantly greater use of this subtype of indirect aggression and victimization by this subtype of indirect aggression. No other gender differences were found.

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I. INTRODUCTION

The research into human aggression is extensive and complex (see Geen & Donnerstein, 1998). Since the early 1900s, researchers have developed comprehensive models to explain human aggression (see Dodge, Coie, & Lynam, 2006). The reasons driving these efforts are obvious as human aggression is costly and damaging to both the individual and society as a whole (Werner & Crick, 1999), with some estimates on the costs to be over 300 billion dollars per year (World Health Organization, 2004). Unfortunately, the research into aggression has been primarily focused on the more overt types of aggression, such as physical (hitting or pushing) aggression (Fry & Gabriel, 1994; Underwood, Galen, & Paquette, 2001) or verbal (threatening to harm) aggression (Owen, Shute, & Slee, 2000). While these forms of aggression are extremely damaging and are important to investigate, researchers have largely ignored the other less obvious forms of aggression (Werner & Crick, 1999).

Over the last two decades researchers have began to investigate and operationalize less obvious forms of aggression (Griffin & Gross, 2004; Owens, Slee, & Shute, 2000; Salmivalli & Kaukiainen, 2004). Some of the more prominent types that have been identified include relational aggression (Crick & Grotpeter, 1995), social aggression (Cairns, Cairns, Neckerman, Ferguson, & Gariépy, 1989) and indirect aggression (Lagerspetz, Björkqvist, & Peltonen, 1988). While researchers continue to

debate the differences between each of these forms of aggression (Björkqvist, 2001; Underwood & Galen, 2001), there is support for the assumption that these differing forms of aggression can be categorized under the original term “indirect aggression” (Archer & Coyne, 2005). Some of the commonalities across these less obvious forms of aggression include, first, individuals have intent to harm another individual (Crick & Grotpeter, 1995; Galen & Underwood, 1997). Second, these forms of aggression have been found to be more indicative of aggression in females as compared to males (Archer, 2004; Archer & Coyne, 2005; Crick & Grotpeter, 1995; Lagerspetz, Björkqvist, & Peltonen, 1988). Finally, these methods of aggression use manipulation of the social milieu to cause damage (Archer & Coyne, 2005). Some examples include, spreading rumors or gossiping about the individual, excluding someone from a peer group or avoiding contact/ withdrawing friendship from an individual (Crick & Grotpeter, 1995; Galen & Underwood, 1997).

Research has demonstrated that there are some very disturbing links between engaging in or being the victim of indirect, relational, or social aggression and social/psychological issues and developmental problems (Boone, Sangster, & Mathieson, 2006; Crick & Bigbee, 1998; Crick & Grotpeter, 1995; Crick, Ostrov, Burr, Cullerton-Sen, Jansen-Yeh, & Ralston, 2006; Leadbeater, Prinstein, Boergers, & Vernberg, 2001). This has included an increased level of peer rejection (Crick & Bigbee, 1998; Crick & Grotpeter, 1995; Crick et al., 2006), increases in depressive characteristics (Crick & Bigbee, 1998; Crick & Grotpeter, 1995; Leadbeater et al., 2006), higher levels of loneliness (Crick & Grotpeter, 1995; Prinstein et al. 2001), lower levels of perceived self-worth (Crick & Grotpeter, 1995; Prinstein et al., 2001), and finally an increased risk for

depression and anxiety (Craig, 1998). These results suggest that relational aggression has numerous detrimental impacts and there is a need for continued investigation.

While the research into indirect, relational, and social aggression is growing, the majority of this research has focused on primary grades, from pre-school through high school. However, there is a paucity of research on the effects of indirect aggression and engagement in indirect aggression among college aged and older adults (Storch, Bagner, Geffken, & Baumeister, 2004; Werner & Crick, 1999). This is of specific concern for the preliminary research suggests this behavior occurs and can have damaging effects in the aforementioned population. In an early study of indirect aggression among college students using the term relational aggression, Werner and Crick (1999) found that the use of relational aggression to be connected with traits of both antisocial and borderline personality disorders, decreased levels of prosocial behavior and increased levels of bulimic symptoms and alcohol use in women. In another study of relational aggression conducted with college students, Loudin, Loukis, and Robinson (2003) found relational aggression to be correlated with anxiety concerning negative evaluation, decreased ability to take the perspective of others, and low levels of intrapersonal empathy. Recent studies on relational aggression among college students have shown relational aggression to be related to peer rejection and alcohol use among women (Storch, Werner, & Storch, 2003) and “uniquely predicted social anxiety, loneliness, depression, and alcohol and drug problems” (Storch, Bagner, Geffken, & Baumeister, 2004). These studies provide insight into the consequences of relational aggression among college students. The research indicates that relational aggression causes serious social and emotional problems for college students; however, more research is needed in this area.

This research supports the hypotheses that indirect aggression potentially can negatively effect college students' psychological and social adjustment. Specific consequences, such as loneliness, isolation, and depression, all have the potential to influence or effect a student's successful adjustment or integration into college life (Gerdes & Mallinckrodt, 1994). Research into college adjustment has identified four specific factors that contribute to an individual's ability to adjust to the college environment (Gerdes & Mallinckrodt, 1994; Martin, et al. 1999). The areas include academic adjustment, institutional commitment, social adjustment and personal-emotional adjustment (Gerdes & Mallinckrodt, 1994). Academic adjustment refers to an individual's motivation, behavior, and contentment with the academic environment of the institution. Institutional commitment refers to an individual's connection with their institution or a strong dedication to complete a college degree. Social adjustment refers to becoming "integrated into the social life of college, forming a social network, and managing new social freedoms" (p. 281). Finally personal-emotional adjustment refers to various psychological issues, such as symptoms of depression and anxiety, which a student may experience throughout college (Gerdes & Mallinckrodt, 1994). Since indirect aggression can potentially have a negative impact on an individual's social and emotional well being, it may also contribute to a student's ability to adjust to college life.

Adjustment to college is an extremely important issue in relation to student attrition (Enoch & Roland, 2006). Student attrition has significant costs to both the institution and the individual (Martin, Swartz-Kulstad, & Madson, 1999). Research indicates between 30 and 40 percent of the students enrolling in college will leave without completing their degree (ACT, 2000). Furthermore, over 20 percent of the

individuals who leave college will do so during the first year of enrollment (Mallinckrodt & Sedlacek, 1987). Individuals who fail to complete college will experience a more than 23% percent reduction in their median salary compared to comparable age college graduates over the course of there lifetime (Tinto, 1993). In regards to the institution, many of the smaller, less prestigious college and universities are facing continual financial issues and are now realizing retention is a key to their long-term survival (Tinto, 1993). Based on this startling information, it is imperative that professionals in higher education explore the causes behind college attrition.

Attaining a complete understanding of the variables inhibiting college adjustment has multiple implications (Mattanah, Hancock, Brand, 2004). First, if indirect aggression is found to impact college adjustment, colleges can implement comprehensive educational programs during the orientation process to educate students about the negative psychological impacts of indirect aggression. Second, college counselors will have a greater understanding of one of the causes that may underlie a student's social and emotional problems and therefore will be better prepare to treat the presenting issues. Finally, mental health counselors will have an increased understanding of the ways that indirect aggression affects young adults and the implications for their psychological and social well-being.

Purpose

Despite the limited number of studies investigating indirect aggression for college students, there is enough evidence to hypothesize that engaging in this behavior or being a victim can potentially have a significant impact on college students (Loudin, et al.,

2003; Storch, et al., 2003; Storch, et al., 2004; Werner & Crick, 1999). One area that is unexplored in the research is the connection between indirect aggression and college student adjustment. This purpose of this study was to examine the relationship between indirect aggression and two domains of student adjustment to college, i.e. social adjustment and personal-emotional adjustment. In addition, the study considered whether there are differences in these domains of college adjustment and whether one was a victim, perpetrator or both of indirect aggression. The results were discussed in relation to current research on indirect aggression, the impact on college adjustment, and possible interventions for college counselors and administrators.

Significance of Study

Research into indirect aggression has primarily focused on preschool, elementary, and high school students, with only a limited amount of research on the impact of indirect aggression on college students. This lack of research points to the need for additional investigation because studies the few with college students have found correlations with many of the same social psychological consequences experienced by individuals in younger cohorts (Werner & Crick, 1999). Furthermore, college is a difficult time as many students struggle with leaving home and entering an unfamiliar environment (Gerdes & Mallinckrodt, 1994). The current research indicates that social and personal-emotional adjustments are two of the four key variables to successful adjustment to college. Gaining an understanding of the factors that influence a student's social and emotional adjustment would have multiple benefits to college counselors and administrators (Paul & Brier, 2001). This study explored the impact of indirect aggression on college student

adjustment in the social and personal-emotional realms. In addition, this study enhanced the current research on indirect aggression among college students. Finally, the information gained from this study offered some insight into the methods through which college counselors and administrators can develop programs to increase student retention.

Research Questions

1. Does being a perpetrator of indirect aggression relate with overall college adjustment?
2. Does victimization by indirect aggression relate with overall college adjustment?
3. Does being a perpetrator of indirect aggression relate with two sub scales of college adjustment (social adjustment and personal-emotional adjustment)?
4. Does victimization by indirect aggression relate with two sub scales of college adjustment (social adjustment and personal-emotional adjustment)?
5. Are there gender differences in the use of indirect aggression among college students?
6. Are there gender differences in victimization by indirect aggression among college students?

Definition of Terms

Academic Adjustment: Academic adjustment refers to an individual's motivation, behavior, and contentment with the academic environment of the institution (Gerdes & Mallinckrodt, 1994).

Aggression: Behavior that is intentional and is regarded as negative by the targeted individual(s). Furthermore, there is an attempt to hurt or destroy an individual(s) psychologically and/or physically (Galen & Underwood, 1997).

College Adjustment: For the purposes of this study, college adjustment will be measured through use of the Student Adaptation to College Questionnaire (SACQ; Baker & Siryk, 1989). This scale measures four distinct constructs related to college adjustment; academic adjustment, social adjustment, personal-emotional adjustment, and intuitional adjustment.

Indirect Aggression: Noxious behavior in which the target person is attacked not physically or directly through verbal intimation but in a circuitous way, through social manipulation (Kaukiainen et al., 1999). For the purpose of this paper, indirect aggression will be used as a general term to describe aggression that meets the definition of indirect, social, or relational aggression. Indirect aggression will be measured using two different versions of the Indirect Aggression Scales (IAS; Forrest, Eatough, & Shevlin, 2005). The IAS-Aggressor (IAS-A) version measures the amount of indirect aggression engaged in by an individual. The IAS-Target (IAS-T) version measures the amount of victimization by indirect aggression experienced by an individual.

Instructional Attachment: Refers to an individual connection with their institution or a strong dedication to complete a college degree (Gerdes & Mallinckrodt, 1994).

Overt Aggression: Behavior that harms others through physical aggression, verbal threats or instrumental intimidation (Crick & Grotpeter, 1995).

Personal-Emotional Adjustment: Refers to the various psychological issues, such as depression and anxiety, that a student may experience upon and matriculating through college (Gerdes & Mallinckrodt, 1994).

Physical Aggression: Harming another through physical means such as hitting or pushing (Crick & Grotpeter, 1995).

Relational Aggression: Behavior that harms others through purposeful manipulation and damage of their peer relationships (Crick & Grotpeter, 1995).

Social Adjustment: According to Gerdes and Mallinckrodt (1994) social adjustment refers to being "integrated into the social life of college, forming a social network, and managing new social freedoms" (p. 281).

Social Aggression: Behavior which is directed toward damaging another's self-esteem, social status, or both, and may take such direct forms as verbal rejection, negative facial expressions or body movements, or more indirect forms such as slanderous rumors or social exclusion (Galen & Underwood, 1997).

Verbal Aggression: Harming another through verbal means such as threatening (Crick & Grotpeter, 1995).

Summary

In the past two decades researchers have begun to identify and define multiple forms of aggression. This study built upon the current research into indirect aggression. Indirect aggression has been defined as "noxious behavior in which the target person is attacked not physically or directly through verbal intimation but in a circuitous way, through social manipulation" (Kaukiainen, et al., 1999). Multiple studies have shown the

negative impacts of indirect aggression but some limitations apply. One specific limitation is the focus on children and adolescents with little research on college age students. The purpose of this study was to examine the impact of indirect aggression on college student adjustment, specifically in the domains of social and personal-emotional adjustment.

II. REVIEW OF LITERATURE

Introduction

Gaining a more complete picture of human aggression has been a topic of considerable interest for most of the twentieth century (Tremblay, 2000). Since 1967 there have been 2989 studies of aggression in childhood alone (Underwood, Galen, & Papuette, 2001). Two prominent reasons for this large amount of research on aggression are its profound negative affects on the development of the individual and the fact that it is one of the best predictors of future behavioral problems (Crick, Casas, & Mosher, 1997). It is hoped that by gaining a greater understanding of aggression, future generations of educators will be better prepared to implement programs that both prevent aggression and treat the victims of aggression (Underwood, 2003).

Unfortunately, there have been limitations to the research examining aggression; most of the past research has focused on the more obvious forms of aggression, such as physical and verbal aggression (Archer & Coyne, 2005; Björkqvist, Österman, Kaukiainen, 1992; Leaderbeater, Boone, Sangster, & Mathieson, 2006). Furthermore, because of the focus on the physical and verbal forms of aggression, researchers have more often studied aggression in males, as overt (physical and verbal) aggression is far more indicative of aggression in males (Frodi, Macaulay, & Thome, 1977; Sumrall, Ray, & Tidwell, 2000). In fact, some of the researchers in the 1960s and 1970s either excluded

females from their research studies (Olwens, 1978) or claimed that female aggression is so rare that it was not worth studying (Buss, 1961).

Recently, researchers have begun to realize that aggression in females may manifest in a more covert or indirect manner (Crick & Grotpeter, 1995; Galen & Underwood, 1997; Lagerspetz, Björkqvist, Peltonen, 1988). In one of the first investigations of indirect aggression, Lagerspetz, Björkqvist, and Peltonen (1988) speculated that girls are more likely to be discouraged in society to commit direct acts of aggression and may instead to choose to use more indirect forms of aggression, such as gossiping and social exclusion. With these more indirect forms of aggression, the aggressor gains two benefits over the more direct forms of aggression. First, the aggressor remains unidentified thereby decreasing the risk of counterattack and secondly, by remaining anonymous, the aggressor does not risk disapproval from others.

From this initial study numerous research teams have undertaken a focused examination of indirect aggression (Archer & Coyne, 2005). These investigations are finding a wide number of behaviors to be indicative of indirect aggression. Research is also realizing that indirect aggression correlates with many of the same negative impacts caused by physical and verbal aggression. Some of the more severe effects linked to indirection aggression include depression, loneliness, social anxiety, and social avoidance (Crick & Grotpeter, 1995).

Indirect Aggression

The first step towards understanding indirect aggression is to define aggression. Aggression has generally been defined as “having an intent to harm” (Archer & Coyne,

2005; Harré & Lamb, 1983; Kaukiainen, et al., 2001). While there is still an ongoing debate about whether this definition fully explains the scope of aggression, most of the current definitions share the common features of ”intent” and the behavior is “perceived as harmful” (Underwood et al., 2001, p. 249). The next dilemma has been to categorize and to define the differing types of aggression. While some forms of behavior, such as hitting, clearly fit within this definition of aggression (Archer & Coyne), other more indirect forms of aggression took far longer to be thoroughly examined in the literature.

Currently, researchers have conceptualized three prominent types of indirect aggression. The first was simply labeled indirect aggression (Lagerspetz, et al., 1988), and was originally conceptualized “as kind of social manipulation: the aggressor manipulates others in order to attack the victims, or, by other means, makes use of the social structure in order to harm the target person, without being personally involved in the attack” (Björkqvist, Österman, & Kaukiainen, 1992, p. 52). Some of the specific behavioral characteristics of indirect aggression, include “gossiping, suggesting shunning of the other, spreading vicious rumors as revenge, breaking contact with the person in question, and becoming friends with someone else as revenge” (Björkqvist, Lagerspetz & Kaukiainen, 1992, p. 125). From this initial conceptualization, indirect aggression has been studied across developmental stages of the lifespan and has been used in a number of cross-cultural studies. Furthermore, the majority of the research into indirect aggression has taken place outside of the United States, with most of the original research being completed on Finnish children and adolescents. Most, recently, researchers have also refined the definition of indirect aggression to “noxious behavior in which the target

person is attacked not physically or directly through verbal intimation, but in a circuitous way, through social manipulation" (Kaukiainen et al., 1999).

The second type identified by researchers is called relational aggression (Crick & Grotpeter, 1995). Relational aggression is defined as "behavior that harms others through purposeful manipulation and damage of their peer relationships" (Crick & Grotpeter, p. 711). Some of the initial behaviors that were identified as part of relational aggression among children included "when mad gets even by keeping person from being in their group of friends", "tells friends they will stop liking them unless friends do as they say", "when mad at a person, ignores them or stops talking to them", and "tries to keep certain people from being in their group during activity or play time" (Crick & Grotpeter, p. 713). Relational aggression has been extensively researched in a wide variety of settings, populations, and with a number of dependent variables. Some examples include observational studies in the preschool, peer reports in elementary and high school, and self and peer reports among adults. Other studies have examined the social psychological consequences linked to both the perpetrator and the victim of relational aggression. In contrast to indirect aggression, a majority of the studies on relational aggression have taken place on subjects within the United States.

The final type of indirect aggression is social aggression. Social aggression was first identified as a separate from of aggression in Cairns, Cairns, Neckerman, Ferguson, and Gariépy's (1989) longitudinal study of aggression in 4th through 7th grade students. The definition of social aggression was later expanded by Galen and Underwood (1997) as "behavior which is directed toward damaging another's self-esteem, social status, or both, and may take such direct forms as verbal rejection, negative facial expressions or

body movements, or more indirect forms such as slanderous rumors or social exclusion" (Galen & Underwood, 1997). Of the three terms, social aggression has been used in the fewest number of research studies, however the description offered by Underwood (2003) in her book, *Social Aggression Among Girls* is considered by some researchers to provide a comprehensive clarification of behaviors encompassing indirect aggression (Archer & Coyne, 2005).

From the above descriptions, it is evident that there is a significant overlap between the three constructs, as all three focus on behavior that has the intent to harm another person through manipulation or social exclusion. Unfortunately, a debate has been generated on which term best describes the behavior (Archer & Coyne, 2005; Björkqvist, 2001, Underwood, 2003; Underwood, et al., 2001), with most of this debate centered on which term most completely encompasses the methods used to harm the intended victim. With indirect aggression, the method of attack is covert; thereby the victim is unaware of their attack, while with relational aggression the additional strategies of "face to face" methods are employed, such as "threatening to end friendship if they don't do what they want" (Archer & Coyne, p. 216). Social aggression is thought to include the characteristics of both relational and indirect aggression (Archer & Coyne), but has added "negative facial expressions or body language" such as "dirty looks" and "rolling of the eyes" to their description (Archer & Coyne, p. 217). Whatever is the final result of this debate, the general consensus is each term describes a similar phenomena, leading to the categorization of all three terms under the heading of indirect aggression (Coyne, Archer, & Eslea, 2006; Little, Jones, Henrick, & Hawley, 2003).

The current research on indirect aggression has focused heavily on gender and the development of indirect aggression. In addition, research has considered the psychological and social implications for both the perpetrator and victim of indirect aggression. An important starting point in the examination of these factors is a consideration of the specific developmental theories that may relate to use of indirect aggression.

Developmental Theories Relating to Indirect Aggression

Multiple developmental theories have been suggested or linked to the use of indirect aggression. Several of these theories have attempted to account for the gender differences in the use of indirect aggression. Other theories have attempted to clarify social and developmental factors that influence the use of indirect aggression. One model presented by Crick and Grotpeter (1995) proposed that the choice of aggressive strategy was related to "the ways that best thwart or damage the goals that are valuable by their respective gender groups" (Crick & Grotpeter, 1995, p. 710). Specifically, since boys place more value on physical dominance in their social groups than girls, males are more likely to select or to engage in higher levels of physical aggression. Conversely, since relational issues play a prominent role in the social interactions for girls, it was hypothesized that girls are more likely to use methods of aggression that target an individual's friendships or social bonds (Crick & Grotpeter, 1995).

In the book *Social Aggression Among Girls,* Underwood (2003) offers another possible explanation of gender differences in a section titled the "Two Cultures Theory". This theory advances the idea that at an early age boys and girls prefer to play with same

sex playmates, and consequently, they are socialized in a manner that later sets up a gender unique aggressive style. Furthermore, based on this separate socialization, girls learn to value close relationships while boys learn to value “dominance and status”. In turn, both girls and boys learn to use aggressive strategies that most affect what they value most, for boys, physical aggression and for girls, social aggression. Not only are many of the assertions of “Two Cultures Theory” consistent with current research, but this theory also offers some possibilities on the roots of social aggression (Underwood, 2003).

Björkqvist, Lagerspetz, and Kaukiainen (1992) also attempted to account for the gender differences in the use of aggression. One conjecture suggests girls might realize at an earlier age that indirect aggression is a more effective method of hurting someone as opposed to a physical attack. Another speculation centered on the density of social networks between males and females. Björkqvist asserted that because girls developed relationships in smaller more intimate groups (as opposed to boys in larger, less personal groups of friends), the girls are more capable of hurting another though manipulation within these closer more personal relationships (Björkqvist et al., 1992).

Besides the explanation of gender differences, Björkqvist, Lagerspetz, and Kaukiainen (1992) presented a developmental theory of indirect aggression. The principal conclusion was direct, indirect, and verbal aggression all have differing (and at times overlapping) developmental trajectories, with direct aggression being the first aggressive strategy to develop in humans. Next, with the development of verbal skills and social intelligence other forms of aggressive behaviors develop, such as direct verbal aggression. Consequently, as the social norms against aggressive behavior increase and

humans develop a greater social intelligence, even more sophisticated and covert strategies of aggression are developed, such as indirect aggression. Another consideration with the increase in the use of indirect aggression is these strategies lessen the likelihood of retribution from the victim or an authority figure. Finally, as adulthood is reached and the consequences of using direct aggression become extremely high, even more advanced (and indirect) aggressive strategies are developed (Björkqvist et al., 1992). These developmental theories lay the foundation to examining indirect aggression across developmental ages.

Indirect Aggression in Preschool

Based on the need for early prevention and to gain a more complete picture of the development and consequences of indirect aggression, Crick, Casas, and Mosher (1997) undertook the first evaluation of indirect aggression (using the term relational aggression) in preschool children (ages of 3.5 to 5.5 years). Through the use of both peer nomination (subjects nominate 3 students who are then considered to be using the behavior) and teacher ratings, Crick et al. (1997) found relational aggression to be an aggressive strategy in children as young as 3 years old. Girls were reported to use more relational aggression than boys, while boys were found to use more overt aggression than their female counterparts. Both of these findings emerged only on the teacher's ratings of aggression. Also, when each of the participants in this study were grouped into four distinct categories — non-aggressive, overtly aggressive, relationally aggressive, and both overtly and relationally aggressive — 26% of the females were assigned to the relationally aggressive only category, while none of boys were placed in that category. In

regards to the social-psychological consequences associated with the perpetrators of relational aggression, the results were mixed. For girls relational aggression was associated with peer rejection and depressed affect (Crick et al.). For boys, the use of relational aggression was found to be positively associated with peer acceptance as rated by both their peers and teachers. One possible explanation for this discrepancy comes from past research where aggression among males has been shown to lead to controversial peer status (favored by some peers, disliked by others) (Crick et al.).

The results of Crick, et al. (1997) are then extended by Crick, Casas, and Ku (1999) in their examination of the impact of relational victimization on the social psychological function of 129 preschool students. In this study relational victimization was assessed using teacher reports, while social-psychological adjustment was measured using self-report and peer nomination. The authors also evaluated the stability of relational aggression over a one-month period. Results once again support the premise that relational aggression occurs in children as young as 3 years old. Furthermore, relational aggression appears to be a highly stable behavior over a one-month span. Based on peer reports, girls were found to experience more relational victimization than boys, while for both genders, victimization by relational aggression was related to lower levels of peer acceptance and greater levels of peer rejection in comparison to the non victimized students. Based on the teacher reports, victims of relational aggression were reported to have less positive peer relationships and more a greater level of internalizing difficulties. The authors also indicate that relational aggression is used more often in female-to-female aggression, while males chose to use more overt aggression (Crick, et

al., 1999). This is similar to the results found in Crick et al. (1997) where gender differences in the use of aggressive strategies emerged in preschool children.

The research into preschool and indirect aggression has been also been assessed in two cross-cultural studies. Similar to the other studies in preschool, both sets of authors chose to use the term relational aggression and chose to assess behavior through the use of teacher reports. In Hart, Nelson, Robinson, Olsen, and McNeilly-Chopue (1998) relational aggression was found to be weakly related to a mother's use of coercion for female preschool children, while the authors found no significant relationships between relational aggression and parenting style among boys. Contrary to the findings of other studies in preschool children, Hart et al. (1998) reported no gender differences in the use of either overt or relational aggression.

In the second cross-cultural study of aggression, Russell, Hart, Robinson, and Olsen (2003) assessed the parenting style and temperament and its impact on prosoical behavior, overt aggression, and relational aggression. Using children from Australia and the United States, Russell et al. (2003) found females to use more relational aggression, while males engaged in more overt aggression. This is consistent with the findings in both Crick et al. (1997) and Crick et al. (1999). Results also indicate temperament is not related to choice of aggressive strategy, while the results were inconclusive in regards to the connection between parenting style and relational aggression (Russell et al., 2003).

In another study using teacher reports, Boncia, Zeljo, and Yershove (2003) examined both gender differences and the relationships between language development, socioeconomic status and aggression in preschool children. The researchers found females to be engaged in the use of relational aggression more often than males, but in

regards to victimization by relational aggression both sexes were equally victimized. Relational aggression was found to positively correlate with a higher socio economic class and more advanced language skills, while physical aggression was found to negatively correlate with language skills. From these findings, Boncia et al. (2003) assert that these results support the premise that relational aggression is a unique form of aggressive behavior.

In conjunction with peer and teacher reports, three studies have incorporated observational methods to assess relational aggression. In the first study, Ostrov and Keating (2004) observed students in a both a structured free play setting and in a more structured coloring activity. Females were found to engage in more relational aggression, while males were found to engage in more physical aggression. Relational aggression was also found to be a stable behavioral pattern in different social settings (playground and structure activity) for girls but not for boys (Ostrov & Keating).

In the second observational study, Ostrov, Woods, Jansen, Casas, and Crick (2004) expanded the work from Ostrov and Keating (2004) by observing three preschool students engaged in a similar coloring activity. Ostrov et al. (2004) theorized that using three students would enhance the ecological validity of the study as past research has shown that among preschool children aggressive behavior occurs more often in groups of three or more. In this study, observers were trained to code four different types of behavior: relational aggression, physical aggression, verbal aggression, and non-verbal aggression (such as mean faces). The results of this study provided additional support for the idea that there are significant gender differences in aggressive strategies among preschool children. Females were found to be both the perpetrators and victims of

relational aggression significantly more than their male counterparts. The authors also used teacher reports of psychosocial adjustment to assess the connection between psychosocial adjustment and aggression. Results indicate that for boys the use of relational aggression is related to social exclusion. For girls, both the use of and victimization by relational aggression was found to be associated with lack of prosocial behavior, while victimization only was found to relate to peer rejection.

From these initial results, the Ostrov et al. (2004) then identified a subset of 19 preschool students who were intermittently observed over an 18-month span. Through the use of observational methods of free play and peer ratings of behavior, relational aggression was found to be a stable behavioral pattern over the course of one year.

Building on the work of Ostrov, et al. (2004), Crick, Ostrov, Burr, Cullerton-Sen, Jansen-Yeh, and Ralston used a combination of observational methods, peer ratings, and teacher reports to assess relational aggression and social behavior over an 18 month span. Results support the past research that has found preschool girls to engage in more relational aggression than boys (Crick, et al., 1999; Crick et al, 1997; Ostrov & Keating, 2004; Ostrov et al., 2004). Furthermore, girls chose to use relational aggression against other girls, which supports the results of Ostrov and Keating (2004). One significant finding was the relationship between peer rejection and aggression. The authors report that the use of relational aggression by girls and physical aggression by boys was found to predict peer rejection 18 months later.

Indirect Aggression Among Children and Adolescents

In contrast to the studies of indirect aggression in preschool, which exclusively used the term relational aggression, research with children and adolescents has varied in their use of terminology. Additionally, research among these age cohorts has primarily relied on the use of peer reports, as most research teams studying indirect aggression consider this to be the most reliable and valid way to assess aggressive behavior among these age groups. Finally, to gain an accurate picture of the gender differences and the developmental pathways of indirect aggression, research on this population have used a combination of both longitudinal and cross-sectional approaches.

The first research study of indirect aggression among children is found in Feshbach (1969) (Archer, 2001). Feshbach (1969) used observational methods to examine how 6 and 7 year old children treated a newcomer entering an existing group. Results indicate gender to be unrelated to the use of direct aggression (physical or verbal aggression) towards the newcomer. In contrast, the use of indirect aggression (peer rejection and social exclusion) showed clear gender differences, with females using these strategies more often than males. Feshbach (1969) also expanded our understanding of indirect aggression by including "ignoring or excluding of another person" as characteristics of indirect aggression. This is important as it serves as one of the defining characteristics of Lagerspetz et al.'s (1988) description of indirect aggression.

In a continuation of Feshbach's study (1969) with 6 and 7 year olds, Feshbach and Sones (1971) used observational methods to examine aggressive behavior in 8th (age 13-14) grade students toward newcomers. As in Feshbach (1969), girls and boys engaged in equal levels of direct aggression, while girls were found to "judge newcomers less

favorably than boys, were less welcoming, are were more likely than boys to ignore the newcomer's suggestions in arriving at a group decision" (p. 385). One inference made from these results is whether these gender differences where a "reflection of differences in hostility" between males and females (Feshbach & Sones, 1971). This is important conjecture as it serves as the bases from many of the studies of indirect aggression that have examined sex differences in the use of aggression.

Beginning in the late 1980s a systematic program of study of indirect aggression among children and adolescents was undertaken at Åbo Akademi University in Vasa, Finland (Owen, Slee & Shute, 2000). Two studies, Lagerspetz et al. (1988) and Björkqvist, Lagerspetz and Kaukiainen (1992), examined social network density and aggressive behavior of Finnish students ages 8, 11, and 15 through the use of peer estimations of aggressive behaviors. This type of peer rating differs from the peer nominations used in many of the studies of relational aggression. Peer estimations asked the subject to rate on a 5-point Likert scale (0 = never, 1 = seldom, 2 = sometimes, 3 = quite often, 4 = very often) how often <u>each</u> of their classmates behave when they are angry at or in a conflict with that child.

When combining the results of both Lagerspetz et al. (1988) and Björkqvist, et al. (1992), physical aggression was found to be more prevalent in males of all ages. Indirect aggression was more prevalent among girls at ages 11 and 15, but not at age 8. Results of these studies indicate that the social network density of girls and boys is similar for both groups at age 8, but by age 11 and 15, girls developed denser social groups and pairs. This is in contrast to the structure of the male social network, which did not change between age 8 and 15. Based on these results, the authors speculate that the development

of indirect aggression is dependent on maturation and social network density. As girls social networks develop tighter groups and pairs, they are better able to use the manipulation of the social milieu to inflict harm on their peers. One final conclusion drawn from the results of these two studies is that aggressive behavior seems to increase to age 11, where it peaks, and then levels off toward age 15 (Björkqvist, et al. 1992).

In a cross cultural study, Österman, et al. (1998) used a peer estimation method to assess aggression among 2000 children living in Finland, Italy, Poland, and Israel. Similar to the Lagerspetz et al. (1988) and Björkqvist et al. (1992) studies, aggressive behavior was assessed at ages 8, 11, and 15. The results indicated that females engaged in far more indirect aggressive strategies at all ages studied, while boys engaged in far more physically aggressive strategies (Österman et al., 1998). While these results partially support the results of Björkqvist et al. (1992) and Lagerspetz et al. (1988), one significant difference applies. Österman et al. (1998) found females to use more indirect aggression than males at all three age cohorts, while Björkqvist et al. (1992) and Lagerspetz et al. (1988) found no gender differences in the use of indirect aggression at age 8. Österman et al. (1998) does not offer an explanation of dissimilar findings at age 8, but it is important to note that by including representatives from four different cultures the result may not be comparable.

In a more recent longitudinal study of over 3000 Canadian children (age 4 to 11), Vaillancourt, Brendgen, Boivin, and Tremblay (2003) used biannual caregiver's (93% mothers) interviews to assess the frequency of indirect and physical aggression. The authors found the use of both physical and indirect aggression to be established aggressive strategies at age 4. Results also indicate that once a child chooses a specific

type of aggressive behavior (physical or indirect) that becomes their primary aggressive strategy throughout childhood. One caveat to this finding is while both indirect and physical aggression were found to be stable behavioral patterns, physical aggression had greater stability than indirect aggression over the four years of the study. Results from Vaillancourt et al. (2003) support the findings of the preschool studies, as relational aggression in these studies was clearly identified as an aggressive strategy among young children and had a high degree of stability (Ostrov et al., 2004).

Parallel to the research on indirect aggression, Cairn and Cairns (1994) undertook an extensive longitudinal study at the University of North Carolina at Chapel Hill, entitled the Carolina Longitudinal Study (Cairns & Cairns, 1994). In this study, 625 children and their families were divided into two cohorts and then assessed over the course of either 6 or 9 years. The first cohort of 220 children was measured from the 4th grade until the 12th grade, while the second cohort of 475 children was measured from the 7th grade to the 12th grade. Each year, the subjects were interviewed in a semi-structured format and completed a wide variety of assessment measures. Week long behavioral observations were also made of the students considered to be “at risk”. The researchers also had parents and teachers rate the subjects on a number of behaviors and collected information from sources such as yearbooks, newspapers, and school reports. The subjects are assessed on their social network development (peer and self report), their at risk behavior, social cognition, interpersonal competence (assessed by parents, teachers and self report), maturation, academic progress, delinquency and crime, marriage and births, family status and runways, employment, health, accidents, and mortality.

The results of the Carolina Longitudinal Study were presented in a number of studies. Cairns et al. (1989) presented the results from cohort one. The authors found male levels of physical aggression to increase throughout the span of the study, while girls showed significant decreases in physical aggression from age 6 to 11. Girls resorted to differing forms of aggression that centered on "themes of social alienation" such as "manipulation of group acceptance through alienation, ostracism, or character defamation" (Cairns et al., 1989, p. 322). Furthermore these themes of social alienation escalated from 10 percent of the conflict among girls in the 4th grade (age 9-10) to over 30 percent in the 7th grade (age 12-13).

The second set of results from this longitudinal study were published in the book, *Lifelines and Risk* (Cairns & Cairns, 1994). In this book, the authors combined the results of both cohorts. One of first findings discussed in this collective study was that dominance and physical aggression were central themes of male aggression at all ages/grades in the study. Second, aggression in females shifts in early adolescence (age 11-12). At this stage of development, their conflicts center more on relationship issues, as opposed to the dominance issues reported by males. Finally, social aggression (the term decided upon by these authors) emerges as the prominent aggressive strategy in females from childhood to adolescence. Between the 4th and 10th grades, the use of social aggression increased from 14 percent of the conflicts between girls, to 56 percent of the reported conflicts by 10th grade (age 15-16). The results of these studies coincide with the research into indirect aggression where girls at age 8 showed little indirect aggression, while at age 11 and 15, indirect aggression was far more prevalent among girls than boys (Björkqvist et al., 1992; Lagerspetz et al., 1988).

In the third study of social aggression using the data from the Carolina Longitudinal Study, Xie, Cairns, and Cairns (2002) undertook a detailed analysis of the responses from the semi structured interviews. Results highlight some of the subtle but important characteristics of social aggression. First, the negative social interactions typically require more than three participants. The authors suggest that social aggression should only be examined in larger groups of three or more as opposed to dyadic interactions. Second, in 29% of the cases, social aggression was found to precede a physical or verbal confrontation between victim and the aggressor. In 22% of the cases, the conflict escalated between an outside participant (not the original perpetrator) and the victim. This is important for administrators and teachers to understand as early intervention in social aggression may prevent the development of more damaging forms of aggressive behavior. Third, in 9% of the cases the victims were unaware of the attacker's identity. This supports Björkqvist et al.'s (1992) assertion that one of the primary benefits of indirect aggression is for the victim to remain unaware of the attacker's identify, hence avoiding reprisal. Finally, Xie et al. (2002) found involvement in the school's social networks facilitated both the use of social aggression and the effectiveness of the attack. This also supports Björkqvist et al.'s (1992) conjecture that social networks are related to use of indirect aggression.

Analogous to the investigations of indirect aggression and social aggression, Crick and Grotpeter (1995) initiated their study of the construct of relational aggression. Using peer nominations similar to those found in the preschool studies, Crick and Grotpeter measured 491 American children in the 3rd through 6th graders (age 8 to 12) on their engagement in overt aggression, relational aggression, unhappiness/isolation, and

prosocial behavior. Crick and Grotpeter found relational aggression to be more prominent among females than males in all grades/ages, while males at all ages engaged in more physical aggression than females. Crick and Grotpeter then evaluated relational and overt aggression together to identify the aggressive individuals. They found that 27% of the males and 21.7% of the females could be labeled aggressive. In the discussion the authors emphasize the importance of this finding as much of the past research into aggression has failed to evaluate the different types of aggressive behavior. The authors speculate that when both overt and relational aggression is measured, the gender gap in use of aggression may not be as substantial as previously believed. While this is an important discovery, not all research has supported this assumption (Hayward & Fletcher, 2003).

While most of the studies of indirect, social, and relational aggression have shown clear developmental trends and gender differences, some research has not supported such clear distinctions and trends. Through the use of hypothetical vignettes, Galen and Underwood (1997) assessed social aggression in elementary school, middle school and high school students. The authors reported that social aggression was used equally among males and females in the 4th grade (age 9-10) and 7th grade (age 13-14), with significant gender differences not emerging until the 10th grade. At this developmental stage, girls were found to use more social aggression as compared to boys in the same grade. This result is in contrast to both Björkqvist et al. (1992) and Crick and Grotpeter (1995), who found significant gender differences in the use of indirect and relational aggression in middle school (ages 10-14).

Other inconsistent results come from the Haywood and Fletcher (2003) cross sectional study of relational aggression in Australian students in middle childhood (7-10)

and adolescence (age 13-16). Using peer nomination methods to assess aggression, Hayward and Fletcher (2003) found little evidence of relational aggression among elementary school children. However, adolescences females engaged in significantly more relational aggression than males. Similar to the Crick and Grotpeter study, Hayward and Fletcher compared males and females on their overall levels of aggressive behavior. In opposition to the results generated by Crick and Grotpeter (1995), Haywood and Fletcher found males to be more aggressive in both middle childhood and in adolescence even when relational and overt aggression was assessed together.

Several studies have found no gender differences in the use of indirect aggression. In a cross-cultural study of Italian children (ages 8-10) using teacher and peer nominations, no gender differences were found in the use of indirect aggression (Tomada & Schneider, 1997). The Delveaux and Daniels (2000) study of 6th graders also demonstrated no gender differences in the use of relational aggression. More recently, Toldos's (2006) study of Spanish adolescents (ages 14 to 17) using peer estimations found that physical and direct verbal aggression were used more often by males, while there were no gender differences in the use of indirect aggression.

Finally, our understanding of gender and covert aggression is further clouded as a number of studies have reported findings that suggest that males actually engage in more indirect aggression as compared to females. In a study of children in 2nd and 3rd grade (age 7-9), Hennington, Hughes, Cavell, and Thompson (1998), using peer nomination methods, found that boys used more relational aggression than girls. David and Kistner (2000) also found males to use more relational aggression than overt aggression in the 3rd, 4th and 5th grades (ages 8-11). In another study of aggression using peer estimations

with Finnish children (age 10, 12 and 14), boys were found to be significantly more aggressive than girls in the use of physical, verbal, and at least equal in their use of indirect aggression (Salmivalli & Kaukiainen, 2004). Similar to most of the research in this area, males used significantly more physical and verbal aggression in all the age cohorts. Regarding indirect aggression, boys showed an equal use of indirect aggression at all ages except age 10 when they used more indirect aggression than their female counterparts. These findings are in direct contrast to the results of Björkqvist, et al. (1992) and Lagerspetz, et al. (1988).

Besides the analyses of gender differences and age, the children in the Salmivalli and Kaukiainen (2004) study were evaluated on their overall use of aggression. From these results the researchers identified one highly aggressive group of students who used only indirect aggression when targeting others. This group was small in number (N = 36), but was composed entirely of females. It is interesting that eight years earlier Rys and Bear (1997) found similar results. In their study of 3rd (age 8-9) graders and 6th graders (age 11-12) using peer nominations (as opposed to peer estimations used in Salmivalli and Kaukiainen (2004)), no overall gender differences were found in the use of relational aggression (due to a large number of boys using both overt and relational aggression). When the researchers grouped children into groups based on aggression, the members of the group who used only relational aggression was almost entirely composed of females (20 out of 21).

Consequences of Indirect Aggression in Children and Adolescents

There is clear evidence that engaging in or being the victim of indirect aggression can have significant social and psychological implications for both children and

adolescents. In the Crick and Grotpeter (1995) study of relational aggression and adjustment difficulties, a number of notable results emerged. Evidence indicates that children between the ages of 8 and 12 who engaged in relational aggression (based on peer nominations) experienced higher levels of depression, loneliness, and social isolation. In another study of aggression in aggression in middle childhood, Rys and Bear (1997) found a significant relationship between type the of aggression and peer rejection. For girls, relational aggression was positively correlated to peer rejection, while for boys overt aggression (not relational) was linked to peer rejection. These results support Crick and Grotpeter's (1995) findings regarding gender differences in the consequences of the differing forms of aggression (relational and overt).

Added support for both of these finding comes from the Crick's (1996) study of the connection between social adjustment and relational aggression. In this study, children in the 3rd through the 6th grades were assessed using peer and teacher ratings of relational aggression. The results indicated that for females the use of relational aggression increases the risk of peer rejection. In another study, Craig (1998) examined the relationship between aggression and depression and anxiety. In this study, children in the 5th through 8th grades were assessed (though self report) on the impact of indirect, verbal, and physical aggression. Craig (1998) found the use of indirect and verbal aggression to be linked with anxiety (not physical), while all three forms of aggression (indirect, verbal, and physical) were linked to anxiety for the victims (Craig, 1998). In this study, Craig (1998) did not find aggression to be linked to depression, which is in contrast to the Crick and Grotpeter results linking relational aggression to depression. In a study of 9 to 12 year old children, Crick (1997) evaluated the influence of gender and the

type of aggression strategy on social psychological adjustment. Using peer nominations and teacher reports of aggression and adjustment, Crick (1997) found relational aggression to be linked to internalizing problems such as sadness, anxiety, or somatic complaints and externalizing problems such as blaming, defiance, and impulsivity (Crick, 1997). Additionally, Crick (1997) found that females who engaged in overt aggression and males who engaged in relational aggression scored significantly higher on teacher ratings of social psychological maladjustment.

Crick and Bigbee (1997) assessed the impact of relational victimization on 4th and 5th graders. Through the use of peer nomination techniques, Crick and Bigbee (1998) found multiple links between victimization and social psychological issues. For boys, relational victimization uniquely contributed towards lower levels of peer acceptance, increased levels of peer rejection, submissive behavior, social avoidance, and emotional distress. For females, relational victimization was linked to lower levels of peer acceptance, increased levels of peer rejection, submissive behavior, loneliness, emotional distress, lower levels of self restraint, and social anxiety. The researchers then controlled for overt aggression and overt victimization and found that relational victimization was uniquely linked to peer rejection, submissive behavior, feelings of loneliness, social avoidance, and emotional distress for boys, while for girls relational aggression was found to be related to lower levels of peer acceptance, decreased self restraint and greater levels of peer rejection (Crick & Bigbee, 1997).

In a similar study, Crick and Nelson (2002) examined the social psychological consequences of victimization by relational aggression among friends in 3rd through 6th grade children. Similar to many other studies in this area, a peer nomination method was

used to evaluate mean levels of aggressive behavior. Among males, the results indicated that being relationally victimized by friends was associated with increased levels of loneliness, psychological distress, internalizing problems, and externalizing problems. For girls, relational victimization by friends was associated with increased levels of social anxiety, social avoidance, loneliness, psychological distress, externalizing difficulties, and decreased levels of self restraint (Crick & Nelson, 2002).

In combination with the studies of children, Prinstein, Boergers, and Vernburg (2001) examined the links between aggression and social psychological adjustment in high school students, ages 14-18. Using a self-report format, the researchers assessed overt and physical aggression, depression, loneliness, self-esteem, externalizing symptoms, and social support. Relational aggression positively correlated with an increase in depressive symptoms, increased loneliness, and finally lower scores on a self-worth inventory. Additionally, individuals who were victims of both overt and relational aggression were the most susceptible to adjustment difficulties (Prinstein, et al., 2001).

In combination with their analysis of adjustment, Prinstein et al. (2001) examined both gender differences and the developmental characteristics of the different forms of aggression. In this study no gender differences were found in the use of relational aggression, which is in opposition to much of the literature on gender differences in aggression during childhood. This finding does offer some support to Björkqvist et al. (1992) conjecture that use of indirect aggression may equalize during adolescence and early adulthood. Second, Prinstein et al. (2001) found victimization by relational aggression to be more common than overt victimization for both boys and girls. Again, this finding is consistent with Björkqvist et al.'s (1992) theory that as children age, the

consequences of overt or direct aggression outweigh the perceived benefits, therefore, children will use greater levels of indirect aggression to escape punishment or retaliation. Finally, males engaged in greater levels of overt aggression, which is consistent with much of the research into aggression.

In another of study of relational aggression, Leadbeater et al. (2006) examined the cost and possible benefits of using relational and overt aggression. Using self-report assessments, Leadbeater et al. (2006) grouped the subjects into four categories; no aggression or victimization, aggressive but not victimized, both aggressive and victimized, no aggression but victimized. Results indicate that the victimized only group (either relational or overt aggression) reported the highest levels depressive symptoms and had the lowest scores on measures of popularity, peer acceptance, and prosocial attention. The aggressive/victimized group had fewer adjustment difficulties in comparison to the victimized only group, but still reported lower levels of prosocial attention and more depressive symptoms. The non-aggressive/victimized group reported few adjustment difficulties. The final group, aggressive without victimization, had the highest levels of popularity and received the most prosocial attention. This is a remarkable finding, as it indicates that without retribution, being aggressive had multiple benefits (without negative consequences) to the individual. The authors report that this finding is consistent with past research indicating that aggressive behavior has a degree of stability in childhood and adolescence as the benefits can outweigh the costs in some situations. Additionally, Leadbeater et al. (2006) found the use of aggressive behavior to be linked to victimization. This finding may mitigate the rewards of being aggressive, as

victimization within this study was linked with a number of negative social and psychological consequences.

In addition to these quantitative studies, a number of qualitative studies have examined the impact of indirect aggression. Talbott, Celinsk, Simpson, and Coe (2002) conducted a study of social aggression with thirty girls from an urban school system. The researchers identified three different scenarios that ended in either physical violence or physical threats. The first incident of physical violence occurred without evidence of social aggression, while both the second and third scenarios contained elements of social aggression. The second incident also contained numerous incidents of gossiping and backbiting that led to a verbal confrontation and then finally to a physical altercation. The third incident was similar to the second, but a teacher and family member were able to intervene before the confrontation took place. In the first two episodes, all individuals involved in the physical fighting were suspended from the school. In the third episode, two of the three individuals who were involved in using social aggression did not feel that outside intervention successfully resolved the conflict (which could have future long term consequences). From these scenarios, it appears that the adults would only intervene once the situations had escalated to physical violence, which indicates they were either unaware of the social aggression or believed it was beyond their control (Talbott, et al. (2002). The authors emphasize the need for school officials and educators to be more sensitive and proactive in the social interactions and dynamics in the school setting, which can reduce the level of physical aggression in schools (Talbott, et al., 2002).

In a qualitative study of 54 girls in the 10^{th} grade, Owens, Slee, and Shute (2000) found a wide range of thinking and behavioral reactions caused by indirect aggression.

The first reaction to indirect aggression was a state of confusion. During this state of confusion, the victim attempted to deny the significance of the indirect aggression. Next, many of the girls reportedly experienced significant psychological pain. Some of the specific experiences include hurt, fear, loss of self-esteem and self-confidence, anxiety and fear of future relationships. In some cases the psychological pain led to thoughts of leaving school, suicidal ideation or catastrophizing self talk. Students who engaged in catastrophizing self talk found social aggression to be far harder to deal with and had a more difficult time dealing with the psychological pain they were experiencing. In comparison to the girls who were paralyzed by the indirect aggression, a number of the girls chose to use indirect aggression to hurt the original perpetrators. Unfortunately, the use of this strategy led to different "gangs" of girls who were constantly attacking and putting each other down. Finally, in some cases, the individuals who were directly involved in the aggressive situations chose to deal with the indirect aggression by attempting to resolve the conflict in an one on one basis. One important finding was that indirect aggression has consequences beyond the targets and aggressors. Researchers found that many of the witnesses of the indirect aggression expressed fear and paranoia that indirect aggression could be targeted towards them (Owens, Slee, & Shute, 2000).

The results of these qualitative studies support many of the correlational findings about the consequences of indirect/relational/social aggression. In Talbott, et al. (2002), social aggression was found to be one pathway to direct forms of aggression (which has numerous psychological and physical consequences), while in Owens, et al. (2000), students clearly manifested psychological symptoms that could lead to significant interpersonal difficulties. Unfortunately, both studies chose to use only girls in the

examination of indirect and social aggression. This may have occurred from the general consensus that girls more often engage in indirect/relational/social aggression, but as outlined earlier in this literature review; it is still unclear if indirect/relational/social aggression is a gender specific mode of aggression.

Indirect Aggression in Adulthood

The use of indirect aggression has been demonstrated and supported in research among young and older adults (Björkqvist, Österman, & Lagerspetz, 1994; Crick & Werner, 1999). This research has also demonstrated that some of the gender differences evidenced in studies among youth, with regards to the use of indirect and overt aggression, may not be same among an older population. This research also has suggested that there may be long term and immediate psychological and social implications for those who have been or currently engage in this form of aggression as well as those victimized (Crick & Werner, 1999; Kaukiainen et al., 2001; Storch, Bagner, Geffken, & Baumeister, 2004).

In regards to differences across the variable of gender, there seems to be evidence that this difference may not be as clearly established among young and older adults. While Kaukiainen, Lagerspetz, Björkqvist, and Jokila (1993), in a study among 18 and 19 year olds, using peer nomination, found that females used greater amounts of indirect aggression as compared to males, however, several other studies have not supported these results. For example, in a study among young adults, Björkqvist, Österman, and Kaukiainen (1994) found no gender differences in aggressive strategies among 23-year-old adults (as presented in Green & Richardson, 1996).

Other studies of indirect and direct aggression in adulthood have further clouded the issue of gender differences. Using a self-report format with college students, Richardson and Green (1999) found no gender differences in the use of indirect aggression. Males were found to use more direct aggression than females. The authors also found male college students to use more direct methods of aggression toward other males, while females were victimized by higher levels of indirect aggression than males. This is similar to the results of Walker, Richardson, and Green (2000) study of aggression in older adults (ages 55-89). Using self-reports and interviews, the researchers found no gender differences in the use of indirect aggression. In regards to direct aggression males were found to engage in greater levels than females. The authors also found a relationship between social network and knowingness. Results indicate that the size of an individual's social network and the level of knowledge about those in their network facilitated their use of indirect aggression.

Both of the above studies support the findings of Green, Richardson, and Lago (1996) in a study of network density and aggression in college students. Using a self-report format, Green et al. (1996) found equal levels of indirect aggression used by male and female college students, while males engaged in greater levels of indirect aggression. Additionally, Green et al. (1996) found the social network density was related to greater use of indirect aggression among males but not females. This finding supports Björkqvist et al. (1992) assertion that social network density facilitates the use of indirect aggression.

In conjunction with the assessment of gender differences, additional research has found evidence for multiple variations of indirect aggression among adults. Björkqvist,

Österman, and Hjelt-Bäck (1994) examined aggressive strategies in the workplace; the authors found two differing forms of indirect aggression, social manipulation and rational aggression. Social manipulation was similar to indirect aggression, while rational aggression was described as "aggression disguised by rational arguments appearing and presented in rational forms as "no aggression at all," but experienced by the victim as injurious and unjust behavior." Some examples of rational aggression included "reduced opportunities to express oneself", being interrupted, being criticized, and "one's self of judgment being questioned" (Björkqvist, et al., 1994, p. 61). Results indicate that females engaged in more social manipulation while males used more rational aggression in the work place. These were critical findings as it supports the Björkqvist, Lagerspetz, and Kaukiainen (1992) theory that as children develop into adults, they slowly begin to use forms of aggressive behavior that are less likely to bring retaliation.

Further evidence of these differing forms of indirect aggression was examined in Kaukiainen et al. (2001). This research examined four distinct forms of aggression, direct overt, indirect manipulative, covert insinuative, and rational-appearing aggression. Direct overt behavior is similar to direct verbal aggression, while each of the other three forms are variations on the concept of indirect aggression. Rational-appearing is comparable to the concept defined in Björkqvist, et al. (1994), while indirect manipulative is similar to the definition of social manipulation also found in Björkqvist, et al. (1994). The final type of aggression considered in this study, covert insinuative was described as "the perpetrator makes an effort to hide his or her overt intentions to harm others by applying strategies, which disguise aggression in the form of discreet or malicious insinuations" (Kaukiainen et al., 2001, p. 363).

In another study, Forrest, et al. (2005) identified three differing forms of indirect aggression: social exclusion, malicious humor, and guilt induction. Social exclusion is similar to social manipulation found in Kaukiainen et al. (2001) study, while malicious humor was similar to the 'rational appearing aggression' from Björkqvist et al. (1994). Guilt induction was an unique factor that "mostly contained items that intentionally played upon guilt and emotions." Some of the behaviors the authors identified included "using emotional blackmail", "applying undue pressure", and "using their relationship with them to try and get them to change a decision" (Forrest, et al., 2005, p. 90). The authors reported no gender differences in the use of or victimization by these three forms of indirect aggression.

Consequences of Indirect Aggression in Adulthood

One of the earliest studies on the consequences of indirect aggression among adults was conducted by Björkqvist, Österman, and Hjelt-Bäck (1994). Using a self-report format, the authors focused on the use of indirect aggression in the work place. Results indicate that victimization by indirect aggression correlated with higher levels of depression, anxiety, and aggressiveness and in 19 of the 338 subjects, severe psychiatric symptoms were related to victimization (Björkqvist et al., 1994). Furthermore, women reported a greater level of harassment than men in the study. In another study, using a self-report method of assessing indirect aggression in adults, Kaukiainen et al. (2001) found victimization by the various forms of indirect aggression to impact males differently than females. Indirect aggression was correlated with physical, affective and psychosocial problems. Males also indicated they experienced greater levels of

victimization that their female counterparts. For females, the researchers found a relationship between indirect aggression and psychosocial problems.

In college students, several studies have evaluated the social-psychological issues for those individuals using relational aggression. Using peer nominations on 225 undergraduate members of fraternity and sororities (ages 18-23), Werner and Crick (1999) found relational aggression to correlate with a number of negative outcomes. Within this study, relational aggression among males was found to positively correlate with peer rejection and egocentricity, but for females the number of correlates was considerably higher. In women relational aggression was found to positively correlate with peer rejection, antisocial behavior, stimulus seeking, egocentricity, affective instability, identity problems, negative relationships, self-harm behavior, affective features of depression, and bulimic symptoms (Werner & Crick, 1999).

In a study conducted among college athletes, relational aggression (as assessed by peer nominations) was found to correlate with peer rejection for both male and female athletes. The study also reported results suggesting that for females, relational aggression correlated negatively with prosocial behaviors and related to alcohol problems (Storch, Werner, & Storch, 2003). In contrast to the result of Werner and Crick's (1999) study, relational aggression was not correlated to borderline personality characteristics, depression, or social support. Authors assert that the insignificant findings many be due to sampling issues or sample size.

In a more recent study on college students, Storch et al. (2004) assessed relational and overt aggression using self-report measures. In this study males were found to use greater levels of relational aggression in this study. The authors speculated the relational

aggression maybe a more effective method to obtaining the desired results for college men. In regards to the consequences, overt aggression was predictive of alcohol use for men. For women overt aggression was predicative of social anxiety, loneliness and depression. Relational aggression was associated with social anxiety, loneliness, depression and alcohol and drug problems but only for females (Storch et al., 2004). For men relational aggression was not linked to any of social psychological issues measured in the study.

Summary of the Literature on Indirect Aggression

From this review, a number of conclusions can be drawn about the nature and development of indirect aggression. First, indirect aggression develops in preschool and persists at least until late adulthood. Second, there seems to be differing developmental pathways for indirect aggression and physical aggression. Physical aggression seems to be the prominent form of aggressive behavior for males throughout preschool, elementary school and high school, while females seem to make a shift to indirect aggression between the ages of 10 and 14. Third, indirect aggression cannot be simply labeled "female" aggression, as research has shown that males engaged in the behavior with increasing frequency as they enter adulthood. Fourth, indirect aggression is harmful. Across this research it is apparent that indirect aggression has significant implications for those who engage in this behavior and those victimized by this behavior. One significant area of concern is how indirect aggression relates to social relationships, peer rejection and psychological adjustment (Crick & Grotpeter, 1995; Crick & Werner, 1999). While these issues are critical in childhood and adolescence, they continue to have a significant

impact on well-being of young adults, specifically college students. There is evidence that social relationships and peer relationships are a critical aspect of adjustment and potentially retention of college students. Thus it is critical that this population be considered in relation to indirect aggression.

Student Adjustment to College

In the fall of 2004 over 10.7 million students enrolled in a 4-year college (National Center for Educational Statistics). Unfortunately, college adjustment appears to be a complicated process for many students (Lau, 2003; Robbins, Lese, & Herrick, 1998; Tinto, 1993). Research has shown a large number of students entering college will fail to graduate within a 5 or 6 year time frame. Current research on graduation rates vary based on type of school and on the selection criteria of the school, but on average, only 56 percent of the students who enrolled in 1998 had finished their degree in 2004 (National Center for Educational Statistics). These statistics are similar to those outlined in 1993, where around 50 percent of the students in 4-year institution had not completed their degrees after 5 years (see Tinto, 1993 for a review). Furthermore, it appears that a large percentage of those who fail to complete college leave within the first year of admission. Of those students who enrolled between 1989-1990, around 30 percent had withdrawn within the first year, with less than half of those individuals returning to college within a four year span (U.S. Department of Education, 2004). Additionally, student departure has had a considerable financial impact on both the individual and the institution (Tinto, 1993).

Theory of College Departure

Based on these statistics, it is imperative to understand the reasons students fail to complete college. One comprehensive theory of student departure was offered by Tinto (1993) in his book "*Leaving College Rethinking the Causes and Cures of Student Attrition*". According to Tinto, there are three prominent themes found in the literature that impacts a person's ability to complete college. The first theme centers on the individual disposition of a person as they enter the institution. The second theme encompasses the interactional experiences of the individual after enrollment, and the final theme relates to the forces external to the institution that impacts the individual (Tinto, 1993).

The first theme of individual disposition has been separated into two specific characteristics, "intention" and "commitment". Intention is related to an individual's educational or occupational goals upon entrance into school. In addition, Tinto asserts that "the higher levels of one's occupational or educational goals, the greater likelihood of college completion" (Tinto, 1993, p. 38). Commitment refers to a person's motivation or personal drive. A person may have the intellectual ability to complete college and have high levels of personal aspirations in life, but without the motivation to complete the work, they will be unable to complete college (Tinto, 1993).

The second theme encompasses the interactional experiences the individual encounters once enrolled in college. This theme has been divided into four categories: adjustment, difficulty, incongruence, and isolation (Tinto, 1993). The first category, adjustment refers to a person's initial ability to cope with the academic demands, social isolation (from leaving home), and the overwhelming number of new experiences one is

faced with when first entering college. Some examples of adjustment difficulties include living away from home for the first time, having appropriate social/academic skills to adapt to a new environment, or having the adequate coping skills to deal with new problems they face. The second category, difficulty, primarily refers to the ability of the student to handle the academic rigors of higher education. Difficulty also refers to the quality (or lack of) of a student's study skills and habits. The third category found under the theme of interactional experience is incongruence. According to Tinto, incongruence "refers in general to the mismatch or lack of fit between the needs, interests, and preferences of the individual and those of the institution" (Tinto, 1993, p. 50). A person who struggles in this area may believe they are unable to fit into either the social and/or academic life aspects of the college environment. It is important to clarify that a person's perception of incongruence matters far more that what an outside observer would perceive (Tinto, 1993).

The final category is isolation, which is composed of a person's connection to the social or academic fabric of the college. To further highlight the importance of social isolation, Tinto (1993) cites one of the conclusions drawn from the Pascarella and Terenzizni (1979) research into college attrition.

> Research demonstrated that the degree and quality of personal interaction with other members of the institution are critical elements in the process of student persistence. By contrast, the absence of sufficient contact with other members of the institution proves to be the single most important predictor of eventual departure even after taking account of the independent effects of background, personality, and academic performance. (Tinto, 1993, p. 56)

The third theme leading to college departure, external forces, has been divided into obligations and finances. Obligation refers to outside influences that could eventually lead to college departure. Some examples include maintenance of past relationships/ friendships and/or family pressures or commitment. Finances include issues such as losing one's job or having to choose between employment or attending the institution (Tinto, 1993).

There are two final considerations with this model. First, these themes and categories overlap tremendously. An example would be an individual who is highly motivated to achieve but is unable to meet the academic demands of the institution. Second, Tinto asserts that many other factors such as race, age, sex, social class, two year versus four year institutions, commuting versus non-commuting schools, and finally the size of the institution can impact an individual's ability to graduate (Tinto, 1993).

College Adjustment

Based on Tinto's (1993) model, it is clear that student departure cannot be simply attributed to any one issue. Furthermore, factors both before and after enrollment impact an individual's ability to graduate. These conclusions are comparable with the information in Gerdes and Mallinckrodt's (1994) longitudinal study of college retention. In this article a number of factors similar to those found in the Tinto's model are presented, but different terminology is used to describe these factors. Gerdes and Mallinckrodt outline both the issues that influence retention before enrollment and describe three specific dimensions of the student's life after enrollment that impact retention. These three dimensions are the academic, the social and the emotional (Gerdes & Mallinckrodt).

The academic dimension has been divided into academic adjustment and institutional commitment. Academic adjustment refers to an individual's motivation, behavior, and contentment with the academic environment of the institution. Institutional commitment refers to an individual's connection with their institution or a strong dedication to complete a college degree (Gerdes & Mallinckrodt, 1994).

The second dimension of college life is centered on the social aspects of college. Social adjustment refers to being "integrated into the social life of college, forming a social network, and managing new social freedoms" (Gerdes & Mallinckrodt, 1994, p. 281). Researchers are finding that social aspects of college are as important as academic issues in their impact on college adjustment (Boulter, 2002; Gerdes & Mallinckrodt, 1994; Martin, Swartx-Kulstad, & Madson, 1999; Tinto, 1993).

Some of the specific issues found in the literature that impact social adjustment include loneliness (Rotenburg & Morrison, 1993), homesickness (Beck, Taylor, & Robbins, 2003), social support (Mallinckrodt, 1988; Mallinckrodt & Leong, 1992), social networks (Hay & Oxley, 1986), and faculty support (Gerdes & Mallinckrodt, 1994; Lau, 2002). Other social factors such as involvement in extracurricular activities (Woo & Bilynsky, 1994), social alienation (Baker & Siryk, 1980) and marginality (disconnections or exclusion from groups) (McGaha & Fitzpatrick, 2005) have been found to significantly impact student adjustment.

In a study of social networks and support, Hay and Oxley (1986) reported a number of interesting results. First, network conflict increased throughout the course of the study (first twelve weeks of the freshman year). Second, this conflict was negatively associated with psychological well being and had a negative impact on college

adaptation. Unfortunately, this study does not outline the specific nature of these conflicts.

The final dimension impacting college departure refers to the personal and emotional adjustment of the individual. Problems such as depression (Sax, Bryant, & Gilmartin, 2002; Sharer, 1985), anxiety (Papas & Loring, 1985 as cited in Gerdes & Mallinckrodt, 1994), and low self-esteem (Gerdes & Mallinckrodt; Mooney, Sherman, & Lo Preston, 1991) may predispose an individual to leave college before completion. Additionally, depression has been found to be one of the most common mental health issues among college students (Gerdes & Mallinckrodt).

One important consideration in regards to each of these adjustment issues is the overlap between each dimension. Emotional issues, such as depression, have been linked to both social and academic issues in college students (Sax, et al., 2002). Other social issues such as homesickness have been linked to both depression and social anxiety among college freshmen (Urani Miller, Johnson, & Petzel, 2003). Furthermore, researchers have found problems with roommates/classmates to have a negative emotional impact on the individual, while supportive relationships with peers have been found to strengthen the social and emotional health of a first year college student (Kenny & Stryker, 1994; Sax, et al., 2002). In addition, other researchers have found links between increased psychological health and the quality of peer relationships among college students (Frey, Beesley, & Miller, 2006).

This research clearly provides evidence that social and personal relationships are crucial components of the process of college adjustment. Based on the research concerning indirect aggression it can be hypothesized that indirect aggression may affect peer and social relationships in the college environment and thus may directly affect college adjustment. While no studies have directly examined the impact of indirect aggression on a college student's social and emotional adjustment, a number of overlapping characteristics between indirect aggression and college adjustment indicates a possible association.

Some of the specific issues linked to indirect aggression included peer rejection, social anxiety, loneliness, alcohol and drug problems, antisocial behavior, aggression, stimulus seeking, egocentricity, affective instability, identity problems, negative relationships, self-harm behavior, affective features of depression, and bulimic symptoms (Björkqvist et al., 1994; Storch, et al., 2003; Storch et al., 2004; Werner & Crick, 1999). Many of these specific issues, such as depression, loneliness, anxiety, peer rejection and negative relationships, are found in college adjustment literature as impacting a student's social and personal-emotional adjustment (Gerdes & Mallinckrodt, 1994). Based on the similarities it is possible indirect aggression may be one of the underlying causes of these psychological issues. Furthermore, if indirect aggression leads to the development of these psychological issues, then it would be appropriate to infer that indirect aggression could lead to a decrease in a person's social or personal-emotional adjustment.

Indirect aggression specifically uses the social milieu to harm another individual. Research into college adjustment has shown that healthy social networks and support are

crucial to a successful college adjustment. If indirect aggression undermines a person's social support and networks, then both their social and personal-emotional adjustment could be negatively impacted.

As indicated above, most literature has only examined the use of indirect aggression and its links to social psychological issues. This is problematic, as victimization by indirect aggression has been found to be associated with a number of social and psychological issues in children and adolescents. Based on this premise one could conclude that college students experience the same difficulties. Furthermore, these difficulties may influence a student's social or personal-emotional adjustment to college. Finally, due to the lack of research in this area it is worthwhile to examine victimization by indirect aggression on a college level.

III. METHODOLOGY

This chapter describes the procedures and methodology used in conducting this research. This study investigated the relationship between the perpetration and victimization by indirect aggression on three different components of college adjustment; overall adjustment to college, social adjustment to college, and personal-emotional adjustment to college. Within this chapter are the research questions, sample selection and description, an overview of the instruments, the data collection process, and the methods of data analysis.

Research Questions

1. Does being a perpetrator of indirect aggression relate with overall college adjustment?
2. Does victimization by indirect aggression relate with overall college adjustment?
3. Does being a perpetrator of indirect aggression relate with two sub scales of college adjustment (social adjustment and personal-emotional adjustment)?
4. Does victimization by indirect aggression relate with two sub scales of college adjustment (social adjustment and personal-emotional adjustment)?

5. Are there gender differences in the use of indirect aggression among college students?

6. Are there gender differences in victimization by indirect aggression among college students?

Participants

The population of this study was composed of a non-random sample of undergraduate students. Participants were at least 19 years old and enrolled in a large southeastern university. Students were recruited from undergraduate classes in psychology and counseling.

Instruments

Demographics

A separate demographic questionnaire was created for this study. The participants were asked their current academic standing (Freshman, Sophomore, Junior, Senior), semester of enrollment, their age and gender. Additional questions assessed the frequency in which the participants have experienced loneliness, depression, anxiety, were involved in campus activities, and their use of campus psychological services since arriving at college. Participants rated the frequency of each of these experiences on a 5-point Likert scale, with 1 being ‘never’, 2 ‘once or twice’ 3 ‘sometimes’ 4 ‘often’ and 5 ‘regularly’.

The five questions that assess loneliness, depression, anxiety, involvement in campus activities, and use of campus psychological services were drawn from the Baker and Siryk’s (1989) research into the variables influencing a person’s social adjustment

and personal-emotional adjustment to college. Information gathered from these items was used during data analysis to control possible influences on the participant's overall adjustment, social adjustment and personal-emotional adjustment scores.

Indirect Aggression Scales—Aggression Version (IAS-A):

The IAS-A is a self-report measure designed to measure usage of indirect aggression against someone else. Response format is based on a 5-point Likert scale, with 1 being 'never', 2 'once or twice', 3 'sometimes', 4 'often', and 5 'regularly'. The administrators of the original instrument asked the participants to think about their usage of indirect aggression in the past 12 months. They were then presented the instrument. This 12-month criterion will be adapted for this study, as participants will be asked to think about their use of indirect aggression since arriving in college. In addition, these directions will written be on IAS-A.

There are three subscales for the IAS-A, 'Use of malicious humor', 'Social exclusionary behavior', and 'Guilt induction techniques'. The first subscale, 'Use of malicious humor', was comprised of 9 items and "constitutes behaviors in which humor was used to harm the victim" (Forrest, et al., 2005, p. 89). The second subscale is 'Social exclusionary behavior', which is composed of 10 items and includes "behaviors that work socially exclude the victim" (Forrest, et al., 2005, p. 89). The final factor was "Guilt induction techniques', which was comprised of 6 items and "consisted of behaviors whereby guilt is intentionally induced" (Forrest, et al., 2005, p. 89).

The means and standard deviations of the IAS-A were reported for the three subscales based on gender. The authors did not report an overall mean or standard deviation. The mean and standard deviation for 'Use of malicious humor' was 18.86 with

a standard deviation of 6.64 for males, while for females the means was 17.80 with a standard deviation of 5.11. The mean and standard deviation for 'Social exclusionary behavior' was 15.73 with a standard deviation of 5.02 for males, while for females the mean was 15.87 with a standard deviation of 4.07. The mean and standard deviation for 'Guilt induction techniques' was 12.48 with a standard deviation of 3.88 for males, while for females the mean was 12.33 with a standard deviation of 3.93.

No overall Cronbach's alpha was reported for the IAS-A, but the authors reported an alpha for each of the subscales. For the 'Social exclusionary' subscale the Cronbach's alpha was .82. For the 'Use of malicious humor' subscale the Cronbach's alpha was .84. For the 'Guilt induction' subscale the Cronbach's alpha of .81.

Indirect Aggression Scales—Target Version (IAS-T)

The IAS-T is a self-report measure designed to measure the experience of being the victim of indirect aggression. Response format is based on a 5-point Likert scale, with 1 being 'never', 2 'once or twice', 3 'sometimes', 4 'often', and 5 'regularly'. The administrators of the original instrument asked the participants to think about when they had experienced this behavior with in the past 12 months. They were then presented the instrument. This 12-month criterion will be adapted for this study, as participants will be asked to think about when they had experienced this behavior since arriving in college. In addition, these directions will be written on IAS-T.

There are three subscales for the IAS-T, 'Use of malicious humor', 'Social exclusionary behavior', and 'Guilt induction techniques'. The first subscale, 'Use of malicious humor', was comprised of 9 items and "constitutes behaviors in which humor was used to harm the victim" (Forrest, et al., 2005, p. 89). The second subscale is 'Social

exclusionary behavior', which is composed of 10 items and includes "behaviors that would socially exclude the victim" (Forrest, et al., 2005, p. 89). The final factor was 'Guilt induction techniques', which was comprised of 6 items and "consisted of behaviours whereby guilt is intentionally induced" (Forrest, et al., 2005, p. 89).

The means and standard deviations of the IAS-T were reported for the three subscales based on gender. The authors did not report an overall mean or standard deviation. The mean and standard deviation for 'Use of malicious humor' was 19.61 with a standard deviation of 6.78 for males, while for females the means was 20.64 with a standard deviation of 5.79. The mean and standard deviation for 'Social exclusionary behaviour' was 20.28 with a standard deviation of 5.84 for males, while for females the mean was 21.15 with a standard deviation of 6.42. The mean and standard deviation for 'Guilt induction techniques' was 13.58 with a standard deviation of 3.99 for males, while for females the mean was 14.12 with a standard deviation of 4.42.

No overall Cronbach's alpha was reported for the IAS-T but the authors reported an alpha for each of the subscales. For the 'Social exclusionary' subscales the Cronbach's alpha was .89. For the 'Use of malicious humor' subscale the Cronbach's alpha was .87. For the 'Guilt induction' subscale the Cronbach's alpha of .81.

Student Adaptation to College Questionnaire (SACQ)

This study utilized the Student Adaptation to College Questionnaire (SACQ; Baker & Siryk, 1989) to measure the four domains of student adjustment to college. The original 52-item version of the SACQ was created in 1980, but was expanded and modified to the current 67-item version in 1984 (Baker & Siryk, 1980, 1984). According to the authors, development of the SACQ was based on the assumption that "adjustment

to college is multifaceted and involves demands varying in kind and degree and requiring a variety of coping responses (or adjustments) that will themselves vary in effectiveness" (Baker, McNeil, & Siryk, 1985). This assumption is similar to the conclusions of Gerdes and Mallinckrodt in their 1994 study and appears to overlap Tinto's (1993) theory of institutional departure (Krotseng, 1992).

The SACQ is a self-report instrument using a 9-point Likert type scales (9 = closely applies to me, 1 = doesn't apply to me at all). The SACQ contains four subscales and a full-scale score of overall student adjustment. Higher scores on the SACQ indicate greater levels of adjustment.

The four scales are academic adjustment, social adjustment, personal-emotional adjustment and goal commitment/institutional attachment subscale. The academic adjustment subscale consists of 24 items and refers to "the various facets of educational demands characteristic of the college experience" (Baker & Siryk, 1986, p. 32). The social adjustment subscale contains 20 items and pertains to "various facets of the interpersonal-societal demands inherent in that experience" (Baker & Siryk, 1986, p. 32). The personal-emotional subscale is composed of 15 items "aimed at determining how the student is feeling both psychologically and physically, that is, whether he or she is experiencing general psychological distress and its somatic accompaniments" (Baker & Siryk, 1986, p. 32). The final scales, goal commitment/intuitional attachment, is composed of 15 items "relating to the student's feelings about being in college in general and at the college of attendance in particular, especially to the quality of the relationship or bond that is established between the student and the institution" (Baker & Siryk, 1986, p. 32). The items on the Academic, Social, and Personal-Emotional subscales do not

overlap, while the Institutional Attachment subscale is composed of 8 items from the social subscale, one from the academic subscale.

Reliability of the SACQ is acceptable. The coefficient alpha for the Academic Adjustment ranges from .81 to .90, the alpha for Social Adjustment subscale ranges from .83 to .91, the alpha for the Personal-Emotional Adjustment subscale ranges from .77 to .86 and the coefficient alpha ranges from .85 to .91 for the Attachment subscale. The full scales alpha ranges from .92 to .95 (Dahmus & Bernardin, 1992).

Construct validity was presented in a number of studies that examined the connections between the SACQ and real life behaviors and outcomes. Academic Adjustment was found to significantly correlate with grade point average and election to an academic honor society (Baker & Siryk, 1989). Personal-emotional was found to negatively correlate with contact with campus psychological services during the freshman year. The Attachment subscale was also significantly correlated with attrition. Baker and Siryk found significant correlations between social adjustment and two criteria, involvement in campus activities and being chosen as a campus dormitory assistant. Dahmus and Bernardin (1992) reported that the construct evidence for the Social adjustment subscale is modest.

Baker and Siryk (1989) report an extensive list of studies with significant correlations between the subscales and two types of tests/variables, personality characteristics (including mental health variables) and environmental-related experiences. Some of the more prominent personality variables that have been correlated with the SACQ include self-esteem, loneliness, social avoidance, mental health inventory, and a psychological distress inventory. Some of the environmental-related experiences (tests)

that have been correlated to the SACQ include, perceived support from friends, social support, life events checklist, life experiences survey, and adolescent hassles scale (see Baker & Siryk, 1989 for a review).

Procedure

During the last 5 minutes of a class session, the researcher explained the requirements of the study to a group of potential subjects. Subjects were informed that participation is voluntary and that extra credit (at their instructor's discretion) would be provided for those who participate. After the introduction, 172 individuals volunteered to take a survey packet. These individuals were directed to return the survey packets during the first 5 minutes of the following class. At the beginning of the next class period, the individuals who returned their packet were provided a certificate of completion for the extra credit.

Each individual who choose to participate was provided a survey packet containing the following materials; informational sheet, the demographics assessment, the SACQ, the IAS-A, and the IAS-T. Each packet and the assessments contained within were coded with a number between 1 and 172. All assessments were hand scored by the examiner. The results were then entered into SPSS. The order of the IAS-T and the IAS-A were counterbalanced to control for the impact of ordering affects. In packets numbered 1 to 85 the IAS-T was presented first, while for packets 82 to 172 the IAS-A was presented first. The information sheet provided a brief description and purpose of the study. The information sheet also informed students that the results are confidential and cannot be connected to individual participants.

Of the original 172, 130 completed all four assessments. Two individuals completed both the IAS-T and IAS-A, but they failed to fully complete the SACQ. Three individuals completed the both the IAS-T and the SACQ, but they failed to complete the IAS-A.

Data Analysis

To address research question one through four, bivariate correlations and regression analysis was used. More specifically, the independent variables of perpetration by 'Use of malicious humor', 'Social exclusionary behavior', and 'Guilt induction techniques' and victimization by 'Use of malicious humor', 'Social exclusionary behavior', and 'Guilt induction techniques' were used to predict the dependent variables of overall college adjustment, social adjustment to college, and personal-emotional adjustment to college. A multivariate analysis of variance (MANOVA) was used to examine gender differences in the use of aggression in research questions 5 and 6. Three subscales from the IAS-T served as the dependent variables in question 5 and the three subscales for the IAS-A was the dependent variables for question 6. Each statistically significant multivariate test will be followed using univariate one-way ANOVAs to determine specific gender differences for each of the subscales.

Summary

This chapter provided an overview and description of this proposed study; this included a discussion of the participants, undergraduate students from a large southeastern university. Procedure methods were discussed as were the collection of data

using a demographic questionnaire, the Indirect Aggression Scales (IAS) and Student Adjustment to College Questionnaire (SACQ). Two version of the IAS were used in this study. The IAS-Target version measures victimization by indirect aggression and IAS-Aggressor version measures the use of indirect aggression. The social adjustment and personal-emotional adjustment subscales of the SACQ measured the participant's social and personal-emotional aspects of college adjustment.

IV. RESULTS

This chapter will present the results of the data analysis. Additionally, this chapter will outline this study's methodology, the demographic information, the statistical methods used in this study, and the results of the statistical analysis.

Participants

The following demographic information was obtained for this study, year of enrollment, age, gender, and academic standing (freshman, sophomore, junior, senior). All 135 individuals who participated in this study completed the demographic assessment. A majority of the individuals who participated in this study entered college in the fall of 2004 or later. 114 females and 21 males participated in this study. In regards to academic standing, 14 of the subjects identified themselves as sophomores, 49 as juniors, and 71 as seniors. Participants ranged in age from 19 years old to 31, with a mean age of 21.12 and a standard deviation of 1.55.

In conjunction with the above demographic information, participants were evaluated on the frequency that they experienced loneliness, depression, anxiety, to the degree they have been involved in campus activities, and their use of campus psychological services since arriving at college. These variables were chosen based on Baker and Siryk's (1989) research into the factors influencing a person's social

adjustment and personal-emotional adjustment to college. They were used in the first four research questions to control for outside influences affecting the results. Additionally, past research has shown these variables to be related with the various forms of indirect aggression. Based on these findings, the bivariate correlations between perpetration and victimization by indirect aggression and frequency the participants have experienced loneliness, depression, anxiety, been involved in campus activities, and their use of campus psychological services since arriving at college is reported in Table 1.

Table 1

Bivariate Correlations Between Perpetration and Victimization by Indirect Aggression With Loneliness, Depression, Anxiety, Involvement in Campus Activities, and Use Of Campus Psychological Services

	Loneliness	Depression	Anxiety	Activities	Psychological
Perpetration Subscales					
1. Social Exclusionary	.047	-.001	-.224**	.053	-.058
2. Use of Malicious Humor	-.020	-.048	.120	-.094	-.013
3. Guilt Induction	-.034	-.036	.137	-.039	.060
Victimization Subscales					
1. Social Exclusionary	.227**	.250**	.360***	-.072	.248**
2. Use of Malicious Humor	.087	.108	.194*	-.003	.067
3. Guilt Induction	.224**	.256**	.305***	-.112	.232 **

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

Reliabilities

SACQ

The full scale alpha ranges from .92 to .95. The coefficient alpha for the four subscales of the SACQ ranged from .81 to .90 for Academic Adjustment, .83 to .91 for Social Adjustment subscale, .77 to .86 for the Personal-Emotional Adjustment subscale ranges, and from .85 to .91 for the Attachment subscale (Dahmus & Bernardin, 1992). Table 2 compares the reliabilities of the results from this study with those reported by Dahmus and Bernardin (1992) for the SACQ.

IAS-T

No overall Cronbach's alpha was reported for the IAS-T, but the authors (Forrest, Eatough, & Shevlin, 2005) reported an alpha for each of the subscales. For the 'Social exclusionary' subscale the Cronbach's alpha was .89. For the 'Use of malicious humor' subscale the Cronbach's alpha was .87. For the 'Guilt induction' subscale the Cronbach's alpha of .81. Table 2 compares the reliabilities from the results of this study with those reported for the authors of the IAS-A.

IAS-A

No overall Cronbach's alpha was reported for the IAS-A, but the authors (Forrest, Eatough, & Shevlin, 2005) reported an alpha for each of the subscales. For the 'Social exclusionary' subscale the Cronbach's alpha was .82. For the 'Use of malicious humor' subscale the Cronbach's alpha was .84. For the 'Guilt induction' subscale the Cronbach's alpha of .81. Table 2 compares the reliabilities from the results of this study with those reported by the authors of the IAS-A.

Table 2

Reliability Analyses for SACQ, IAS-T, and IASA

	Baker & Siryk (1989) Cronbach's Alpha	Current Study Cronbach's Alpha
SACQ		
Academic Adjustment	.81 to .90	.89
Social Adjustment	.83 to .91	.84
Personal-Emotional Adjustment	.77 to .86	.85
Institutional Attachment	.85 to .91	.89
Full Scale	.92 to .95	.94
Indirect Aggression Scale-Target Version		
	Forrest, et al. (2005) Cronbach's Alpha	Current Study Cronbach's Alpha
Social Exclusionary	.89	.78
Use of Malicious Humor	.87	.86
Guilt Induction	.81	.79
Indirect Aggression Scale-Aggressor Version		
	Forrest, et al. (2005) Cronbach's Alpha	Current Study Cronbach's Alpha
Social Exclusionary	.82	.89
Use of Malicious Humor	.84	.90
Guilt Induction	.81	.82

Does being a perpetrator of indirect aggression relate with overall college adjustment?

The sum of the bivariate correlations between perpetration of indirect aggression and overall college adjustment is reported in Table 3. None of the three subscales of the Indirect Aggression Scale–Aggressor Version had a significant relationship with overall college adjustment. The bivariate correlations for the three subscales were as follows: for Social exclusionary (r = -.085, p > .05), for Use of malicious humor (r = -.042, p > .05), and for Guilt induction (r = -.126, p > .05).

None of the three subscales of the Indirect Aggression Scale – Aggression Version (Social exclusionary, Use of malicious humor, and Guilt induction) were related to overall college adjustment ($R^{=}$ .132, $\underline{F}$ (3, 126) = .740, p > .05). The three subscales of the Indirect Aggression Scale–Aggression Version accounted for 1.7% of the variance in overall college adjustment. The sum of this regression analysis is reported in Table 3.

Table 3

Bivariate Correlations between Perpetration by Indirect Aggression with Overall College Adjustment, Social Adjustment and Personal/Emotional Adjustment to College

Indirect Aggression Subscales	Overall	Social	Personal/Emotional
1. Social Exclusionary	-.085	-.010	-.096
2. Use of Malicious Humor	-.042	.061	-.048
3. Guilt Induction	-.126	-.023	-.102
4. Multiple R [a]	.132	.096	.115

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

[a] = Three Subscales of the Indirect Aggression Scales–Aggression Version (Social Exclusionary, Use of Malicious Humor, Guilt Induction)

To control for possible influences on the participant's overall adjustment, the variables of loneliness, depression, anxiety, involvement in campus activities, and use of campus psychological services (as assessed on the demographic survey) were entered first into a linear regression equation. These variables (loneliness, depression, anxiety, involvement in campus activities, and use of campus psychological services) were found to have a significant relationship with overall adjustment to college ($R^2 = .384$, $\underline{F}$ (5, 124) = 15.42, $p < .001$). These five variables accounted for 38% of the variance in overall college adjustment. The sum of this regression analysis is reported in Table 5.

Once the variables of loneliness, depression, anxiety, involvement in campus activities, and use of psychological services were controlled for, none of the three subscales of the Indirect Aggression Scale–Aggression Version (Social exclusionary, Use of malicious humor, and Guilt induction) (R^2 change = .007, $\underline{F}$ (3, 121) = .489, $p > .05$) were found to be related with overall college adjustment. The three subscales of the Indirect Aggression Scale–Aggression Version accounted for .7% of the variance in overall college adjustment beyond what was explained by the variables of loneliness, depression, anxiety, involvement in campus activities, and use of psychological activities. The sum of this regression analysis is reported in Table 5.

Does victimization by indirect aggression relate with overall college adjustment?

The sum of the bivariate correlations between victimization by indirect aggression and overall college adjustment is reported in Table 4. All three subscales of the Indirect

Aggression Scale–Target version had a significant relationship with overall college adjustment. The bivariate correlations for the three subscales were as follows: for Social exclusionary (r = -.349, p < .001), for Use of malicious humor (r = -.192, p < .05), and for Guilt induction (r = -.358, p < .001).

The three subscales of the Indirect Aggression Scale–Target Version (Social exclusionary, Use of malicious humor, and Guilt induction) were related to overall college adjustment (R = .402, F (3, 129) = 8.299, p < .001). The three subscales of the Indirect Aggression Scale–Target Version accounted for 16% of the variance in overall college adjustment. The sum of this regression analysis is reported in Table 4.

To control for possible influences on the participant's overall adjustment, the variables of loneliness, depression, anxiety, involvement in campus activities, and use of campus psychological services (as assessed on the demographic survey) were entered first into a linear regression equation. These variables (loneliness, depression, anxiety, involvement in campus activities, and use of campus psychological services) were found to have a significant relationship with overall adjustment to college (R^2 = .384, F (5, 127) = 15.84, p < .001). These five variables accounted for 38% of the variance in overall college adjustment. The sum of this regression analysis is reported in Table 5.

Once the variables of loneliness, depression, anxiety, involvement in campus activities, and use of psychological services were controlled for, none of the three subscales of the Indirect Aggression Scale–Target Version (Social exclusionary, Use of malicious humor, and Guilt induction) (R^2 change = .031, F (3, 124) = 2.146, p > .05) were found to be related to overall college adjustment. The three subscales of the Indirect Aggression Scale–Target Version accounted for 3% of the variance in overall college

adjustment beyond what was explained by the variables of loneliness, depression, anxiety, involvement in campus activities, and use of psychological activities. The sum of this regression analysis is reported in Table 5.

Does being a perpetrator of indirect aggression relate with two subscales of college adjustment (social adjustment and personal-emotional adjustment)?

Social Adjustment

The sum of the bivariate correlations for perpetration of indirect aggression with social adjustment and personal-emotional adjustment is reported in Table 3. The three subscales of the Indirect Aggression Scale–Aggressor Version did not have a significant relationship to social adjustment to college. The bivariate correlations for social adjustment and the three subscales of the Indirect Aggression Scales–Aggressor Version were as follows: for Social exclusionary (r = -.010, p > .05), for Use of malicious humor (r = .061, p > .05), and for Guilt induction (r = -.023, p > .05).

None of the three subscales of the Indirect Aggression Scale–Aggression Version (Social exclusionary, Use of malicious humor, and Guilt induction) were related to social adjustment to college ($R^{=}$ .096, $\underline{F}$ (3, 126) = .394, p > .05). The three subscales of the Indirect Aggression Scale–Target Version accounted for 1.4 % of the variance in overall college adjustment. The sum of this regression analysis is reported in Table 3.

To control for possible influences on the participant's overall adjustment, the variables of loneliness, depression, anxiety, involvement in campus activities, and use of campus psychological services (as assessed on the demographic survey) were entered first into a linear regression equation. These variables (loneliness, depression, anxiety, involvement in campus activities, and use of campus psychological services) were found

to have a significant relationship with a person's social adjustment to college (R^2 = .375, F (5, 124) = 14.87, p < .001). These five variables accounted for 37% of the variance in social adjustment to college. The regression analysis for the control variables and social adjustment is reported in Table 5.

Once the variables of loneliness, depression, anxiety, involvement in campus activities, and use of psychological services were controlled for, none of the three subscales of the Indirect Aggression Scale–Aggression Version (Social exclusionary, Use of malicious humor, and Guilt induction) (R^2 change = .013, F (3, 121) = .847, p > .05) were related to social adjustment to college. The three subscales of the Indirect Aggression Scale–Aggression Version accounted for 1.3% of the variance in social adjustment in college beyond what was explained by the variables of loneliness, depression, anxiety, involvement in campus activities, and use of psychological activities. The regression analysis for the indirect aggression and social adjustment is reported in Table 5.

Personal-Emotional Adjustment

The sum of the bivariate correlations for perpetration of indirect aggression with personal-emotional adjustment is reported in Table 3. Two of the three subscales of the Indirect Aggression Scale–Aggression Version had a significant relationship with personal-emotional adjustment to college. The bivariate correlations between personal-emotional adjustment and the three subscales of the Indirect Aggression Scale–Aggressor Version were as follows: for Social exclusionary (r = -.096, p = .27), for Use of malicious humor (r = -.048, p = .58), and for Guilt induction (r = -.102, p = .24).

None of the three subscales of the Indirect Aggression Scale–Aggression Version (Social exclusionary, Use of malicious Humor, and Guilt induction) were related to personal-emotional adjustment to college ($R = .115$, F (3, 126) = .566, $p > .05$). The three subscales of the Indirect Aggression Scale–Target Version (Social exclusionary, Use of malicious humor, and Guilt induction) accounted for 1.3 % of the variance in overall college adjustment. The sum of this regression analysis is reported in Table 3.

To control for possible influences on the participant's overall adjustment, the variables of loneliness, depression, anxiety, involvement in campus activities, and use of campus psychological services (as assessed on the demographic survey) were entered first into a linear regression equation. These variables (loneliness, depression, anxiety, involvement in campus activities, and use of campus psychological services) were found to have a significant relationship with a person's personal-emotional adjustment to college ($R^2 = .309$, F (5, 127) = 11.02, $p < .001$). These five variables accounted for 30% of the variance in personal-emotional adjustment to college. The regression analysis for perpetration of indirect aggression and personal-emotional adjustment is reported in Table 5.

Once the variables of loneliness, depression, anxiety, involvement in campus activities, and use of psychological services were controlled for, none of the three subscales of the Indirect Aggression Scale–Aggression Version (Social exclusionary, Use of malicious humor, and Guilt induction) (R^2 change = .005, F (3, 121) = .308, $p > .05$) were related to a person's personal-emotional adjustment to college. The three subscales of the Indirect Aggression Scale–Aggression Version accounted for .05% of the variance in social adjustment in college beyond what was explained by the variables of loneliness,

depression, anxiety, involvement in campus activities, and use of psychological activities. The sum of regression analysis for perpetration of indirect aggression and personal-emotional adjustment is reported in Table 5.

Does victimization by indirect aggression relate with two subscales of college adjustment (social adjustment and personal-emotional adjustment)?

Social Adjustment

The sum of the bivariate correlations for victimization by indirect aggression with social adjustment and personal-emotional adjustment is reported in Table 4. Two of the three subscales of the Indirect Aggression Scale–Target Version had a significant relationship with social adjustment. The bivariate correlations for social adjustment and the three subscales of the Indirect Aggression Scales–Target Version were as follows: for Social exclusionary (r = -.236, $p < .01$), for Use of malicious humor (r = -.036, $p > .05$), and for Guilt induction (r = -.244, $p < .01$).

Three subscales of the Indirect Aggression Scale –Target Version (Social exclusionary, Use of malicious humor, and Guilt induction) were related with social adjustment to college ($R = .320$, $\underline{F}$ (3, 129) = 4.912, $p < .01$). The three subscales of the Indirect Aggression Scale–Target Version accounted for 10% of the variance in overall college adjustment. The sum of this regression analysis is reported in Table 4.

To control for possible influences on the participant's overall adjustment, the variables of loneliness, depression, anxiety, involvement in campus activities, and use of campus psychological services (as assessed on the demographic survey) were entered first into a linear regression equation. These variables (loneliness, depression, anxiety, involvement in campus activities, and use of campus psychological services) were found

to have a significant relationship with social adjustment to college ($R^{2 =}$ .376, F (5, 127) = 15.27, p < .001). These five variables accounted for 37% of the variance in social adjustment to college. The sum of regression analysis for victimization by indirect aggression and social adjustment is reported in Table 5.

Once the variables of loneliness, depression, anxiety, involvement in campus activities, and use of psychological services were controlled for, none of the three subscales of the Indirect Aggression Scale–Target Version (Social exclusionary, Use of malicious humor, and Guilt induction) (R^2 change = .014, F (3, 124) = .847, p > .05) were found to be related to social adjustment in college. The three subscales of the Indirect Aggression Scale–Aggression Version accounted for 1.4% of the variance in social adjustment in college beyond what was explained by the variables of loneliness, depression, anxiety, involvement in campus activities, and use of psychological activities. The sum of regression analysis for victimization by indirect aggression and social adjustment is reported in Table 5.

Personal-Emotional Adjustment

The sum of the bivariate correlations for victimization by indirect aggression with personal-emotional adjustment is reported in Table 5. All three of the subscales of the Indirect Aggression Scale–Target Version had a significant relationship with personal-emotional adjustment to college. The bivariate correlations between personal-emotional adjustment and the three subscales of the Indirect Aggression Scale–Target Version were as follows: for Social exclusionary (r = -.402, p < .001), for Use of malicious humor (r = -.093, p > .05), and for Guilt induction (r = -.255, p < .01).

Three subscales of the Indirect Aggression Scale–Target Version (Social Exclusionary, Use of Malicious Humor, and Guilt Induction) were related to personal-emotional adjustment to college ($R = .415$, $\underline{F}$ (3, 129) = 8.959, $p < .001$). The three subscales of the Indirect Aggression Scale–Target Version (Social exclusionary, Use of malicious humor, and Guilt induction) accounted for 17.2% of the variance in overall college adjustment. The sum of this regression analysis is reported in Table 4.

To control for possible influences on the participant's overall adjustment, the variables of loneliness, depression, anxiety, involvement in campus activities, and use of campus psychological services (as assessed on the demographic survey) were entered first into a linear regression equation. These variables (loneliness, depression, anxiety, involvement in campus activities, and use of campus psychological services) were found to have a significant relationship with personal-emotional adjustment to college ($R^2 = .309$, $\underline{F}$ (5, 127) = 11.36, $p < .001$). These five variables accounted for 30% of the variance in overall college adjustment. The sum of regression analysis for victimization by indirect aggression and personal-emotional adjustment is reported in Table 5.

When controlling the variables of loneliness, depression, anxiety, involvement in campus activities, and use of psychological services, the three subscales of the Indirect Aggression Scale–Target Version (Social exclusionary, Use of malicious humor, and Guilt induction) (R^2 change = .050, $\underline{F}$ (3, 124) = 3.24, $p < .05$) were found to relate to personal-emotional adjustment to college. The three subscales of the Indirect Aggression Scale–Aggression Target accounted for 5% of the variance in social adjustment in college beyond what was explained by the variables of loneliness, depression, anxiety, involvement in campus activities, and use of psychological activities. The sum of

regression analysis for victimization by indirect aggression and personal-emotional adjustment is reported in Table 5.

Table 4

Bivariate Correlations between Victimization by Indirect Aggression with Overall College Adjustment, Social Adjustment and Personal-Emotional Adjustment to College

Indirect Aggression Subscales	Overall	Social	Personal/Emotional
1. Social Exclusionary	-.349***	-.236**	-.402***
2. Use of Malicious Humor	-.192*	-.036	-.093
3. Guilt Induction	-.358***	-.244**	-.255**
4. Multiple R[a]	.402***	.320**	.415***

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

[a] Three Subscales of the Indirect Aggression Scales–Target Version (Social Exclusionary, Use of Malicious Humor, Guilt Induction)

Table 5

Relationship between Indirect Aggression with Overall College Adjustment, Social Adjustment, and Personal-Emotional Adjustment

Dependent Variables	Perpetration by Indirect Aggression		Victimization by Indirect Aggression	
	R^{2a}	R^2 Change [b]	R^{2a}	R^2 Change [c]
1. Overall Adjustment	.384***	.007	.384***	.031
2. Social Adjustment	.375***	.013	.376***	.014
3. Personal/Emotional Adjustment	.309***	.005	.309***	.050*

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

[a] Loneliness, Depression, Anxiety, Involvement in Campus Activities, Use of Campus Psychological Services

[b] Three Subscales of the Indirect Aggression Scale–Aggression Version (Social Exclusionary, Use of Malicious Humor, Guilt Induction)

[c] Three Subscales of the Indirect Aggression Scale–Target Version (Social Exclusionary, Use of Malicious Humor, Guilt Induction)

Are there gender differences in the use of indirect aggression among college students?

Table 6 outlines the gender differences in the use of indirect aggression among college students. Additionally, the means, standard deviations, and the results of the ANOVA for the three subscales of the Indirect Aggression Scale–Aggressor Version are summarized. The multivariate test of significance found a Hotelling's T^2 of 0 .172 (p <

001). This finding indicates that there are significant gender differences on the three subscales of the Indirect Aggression Scale–Aggressor Version among college students.

When specifically evaluating the gender differences in the three difference subscales of the Indirect Aggression Scales–Aggression Version, a univariate analysis (ANOVA) was employed. There were no significant differences on the 'Social exclusionary' ($F(1,130) = 3.88$, $p = .051$) or the 'Guilt induction' ($F(1,130) = 3.77$, $p = .054$) subscale. There was significant gender difference on the subscale of 'Use of malicious humor' subscale. Males use significantly more of this type of indirect aggression ($F(1,130) = 20.68$, $p < .001$).

Are there gender differences in victimization by indirect aggression among college students?

Table 6 outlines the gender differences in victimization by indirect aggression among college students. Additionally, the means, standard deviations, and the results of the ANOVA for the three subscales of the Indirect Aggression Scale–Target Version are summarized. The multivariate test of significance found a Hotelling's T^2 of 0 .150 ($p <$ 001). This finding indicates that there are significant gender differences on the three subscales of the Indirect Aggression Scale–Target Version among college students.

When specifically evaluating the gender differences in the three difference subscales of the Indirect Aggression Scales–Target Version, an univariate analysis (ANOVA) was employed. There were no significant differences on the 'Social exclusionary' ($F(1,130) = .774$, $p = .38$) or the 'Guilt induction' ($F(1,130) = 2.39$, $p = .124$) subscale. There was significant gender difference on the subscale of 'Use of

malicious humor' subscale. Males use significantly more of this type of indirect aggression (F (1,130) =8.09, p = .005).

Table 6

Comparison of Gender Differences in Perpetration of Indirect Aggression Among College Students

	Overall Sample Mean (SD)	Male Mean (SD)	Female Mean (SD)	F
Type of Perpetration[1]				
1. Social Exclusionary	15.50 (4.20)	15.18 (5.18)	17.14 (3.94)	3.892
2. Use of Malicious Humor	15.31(5.18)	19.71 (6.41)	14.47 (4.49)	20.68***
3. Guilt Induction	9.56 (3.10)	10.76 (3.30)	9.34 (3.03)	3.77
Type of Victimization[2]				
1. Social Exclusionary	17.47 (5.92)	16.42 (4.17)	17.66 (6.18)	.774
2. Use of Malicious Humor	16.00 (5.99)	19.33(7.81)	15.38 (5.42)	8.09**
3. Guilt Induction	10.71 (3.78)	12.09 (4.24)	10.71 (3.67)	2.36

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

[1] The multivariate test of significance found a Hotelling's T^2 of .172 ($p < .001$).

[2] The multivariate test of significance found a Hotelling's T^2 of .150 ($p < .001$).

V. DISCUSSION

The concept of indirect aggression was first mentioned in the literature in the early 1960s (Buss, 1961 as cited in Björkqvist, 1994), but it was not until the late 1980s and middle 1990s, that research began on this form of aggression. A number of explanations have been offered on why researchers failed to explore this type of aggression, but the primary reason appears to be an overwhelming focus on the more direct forms of aggression, such as physical violence (Werner & Crick, 1999). This trend is now being reversed, as multiple researcher teams have undertaken a systematic study of indirect aggression (Cairns, Cairns, Neckerman, Ferguson, & Gariépy, 1989; Crick & Grotpeter, 1995; Lagerspetz, Björkqvist, & Peltonen, 1988). While this research has led to substantial gains in our understanding of indirect aggression, a number of issues have emerged.

One of the primary issues in the study of indirect aggression is the competing terminology used to describe the phenomena. Currently, three different terms are used in the literature to describe indirect aggression. The first, simply called indirect aggression, was operationalized and studied by Lagerspetz, Björkqvist, and Peltonen in1988. The second term, relational aggression, was developed and studied by Crick and Grotpeter in their 1995 study. The third term used in the literature is social aggression, which was first identified in the Cairns, Cairns, Neckerman, Ferguson, and Gariépy's (1989) longitudinal

study of aggression, but was not specifically examined until Galen and Underwood's 1997 study. While this debate on which best describes this form of aggression is ongoing, there is some consensus that all three subtypes describe the same construct (Archer & Coyne, 2005); therefore, for the purposes of this study, the term 'indirect aggression' was choose to describe the construct.

Another issue in the research on indirect aggression is the primary focus on children and adolescents. Much of the early and current research has focused on the development, gender differences, and the psychosocial impacts of indirect aggression on individuals under the age of eighteen. This has left a significant gap in the research on college students and adults (Storch, Bagner, Geffken, & Baumeister, 2004; Werner & Crick, 1999). This gap is concerning, as the limited research on college students and adults has identified a number of the same detrimental psychosocial issues related with indirect aggression found in the younger populations. Some of the more concerning commonalities include depression, anxiety and aggressiveness (Björkqvist, Österman, & Hjelt-Bäck, 1994).

This study had two intended purposes. The first was to examine the relationship between being a perpetrator and/or the victim of indirect aggression and college adjustment. It was hypothesized that both, the use of indirect aggression and victimization by indirect aggression, would have a detrimental impact on an individual's ability to adjust to the college environment, specifically in the areas of social and personal-emotional adjustment. Secondly, this research study examined gender differences in both the use of indirect aggression and victimization by indirect aggression. Past research indicated that women engage in indirect aggression and are

more often victimized by indirect aggression than men during childhood and adolescence (Björkqvist, Lagerspetz, & Kaukiainen, 1992; Crick, Casas, & Mosher, 1997; Crick & Grotpeter, 1995; Lagerspetz et al., 1988). However, some research indicates that as men mature, they will increase the use of indirect aggression, thereby equalizing the levels used by men and women (Björkqvist, et al., 1992; Richardson & Green, 1999).

Presentation of Instruments

To control for possible impact of order effects, the presentation of the instruments was counterbalanced. Half of the participants received the materials in the following order: informational sheet, IAS-A, SACQ, IAS-T, and the demographics assessment. The order of the IAS-A and IAS-T was reversed for the remaining participants.

Demographics

Participants were recruited from undergraduate classes in psychology and counseling and were at least 19 years old. 172 undergraduate students from large a southeastern university volunteered to participate in this study. Of the 172, 135 students returned a survey packet. 130 students completed all four assessments while two individuals completed both the IAS-T and IAS-A, but failed to fully complete the SACQ. Three individuals completed the IAS-T and the SACQ, but failed to complete the IAS-A. All 135 students completed the demographic assessment.

Relationship between Being a Perpetrator of Indirect Aggression and Overall College Adjustment

The first research question examined the relationship between perpetration of indirect aggression and overall college adjustment. According to Baker and Syrik (1989), four factors influence an individual ability to adjust to college, academic adjustment, social adjustment, personal-emotional adjustment, and attachment to the institution. Results did not support a relationship between use of indirect aggression by the perpetrator and college adjustment.

A number of possibilities exist for these non-significant findings. First, overall college adjustment is a complicated multidimensional construct (Tinto, 1993). The use of indirect aggression may impact one area of an individual's adjustment, but this deficiency may be offset by adjustment in other areas of college life. Another possibility comes from the research on those who engage in indirect aggression. Some studies have shown a strong correlation between indirect aggression and social intelligence (Björkqvist, Österman, & Kaukiainen, 2000), which may lead to greater ability to adjust to the college environment.

Relationship between Victimization by Indirect Aggression and Overall College Adjustment

The second research question examined the relationship between victimization by indirect aggression and college adjustment. As stated in the discussion of research question one, college adjustment is composed of four different forms of adjustment (academic adjustment, social adjustment, personal-emotional adjustment, and attachment to the institution). The results of this analysis led to a number of significant results.

First, each of the three subtypes of victimization correlated with overall college adjustment. The 'Social exclusionary' and 'Guilt induction' subtypes were the most strongly related to decreased levels of overall college adjustment. This is consistent with the past literature that has shown a relationship between psychosocial problems and indirect aggression. Also, the 'Social exclusionary' and the 'Guilt induction' behaviors are very similar to the concept of relational aggression, while the third subtype 'Use of malicious humor' has a number of items that could be considered direct verbal aggression and would not be characterized as relational aggression. This finding underscores the importance of clearly defining the behaviors included in the construct of indirect aggression and lends some support to the idea that relational aggression is a distinct form of indirect aggression.

When college adjustment is examined in conjunction with the other variables that impact college adjustment (loneliness, depression, anxiety, involvement in campus activities, and use of campus psychological services), the results indicate that these control variables explained far more of the variance in college adjustment than victimization by indirect aggression. While this finding may eliminate the significance of the relationship between victimization by indirect aggression and college adjustment, is it important to note that each of the subtypes of victimization was found to strongly relate with significant increases in the control variables of depression, loneliness, anxiety, and use of campus psychological services. Again this is consistent with past research that has found a significant relationship between indirect aggression and loneliness, anxiety, and depression. Further research is needed to examine the exact pathways by which

victimization by indirect aggression could influence college adjustment, as this conclusion was not possible due to the research design of this study.

Relationship between Being a Perpetrator of Indirect Aggression and Social Adjustment and Personal-Emotional Adjustment to College

The third research question examined the relationship between perpetration by indirect aggression and two difference aspects of college adjustment, social and personal-emotional adjustment. Social adjustment is related to a number of factors such as involvement in social activities in college, social skills, "establishing social autonomy", loneliness, and "lack of social support" (Baker & Siryk, 1989, p. 15). Personal-emotional adjustment is related to use of campus psychological services, anxiety, depression, and a "greater degree of psychological distress" (Baker & Siryk, 1989, p. 15). Results did not support a relationship between either social or personal-emotional adjustment to college with use of indirect aggression.

Similar to the discussion research question one, a number of factors may have contributed to these non-significant results. First, while an individual may have difficulty coping in one component of social or personal-emotional adjustment to college, the other components of these variables may have offset the overall relationship with perpetration. Additionally, in this study, one of the subscales, 'Social exclusionary', was found to significantly relate with anxiety. This is consistent with past research showing a relationship between anxiety and indirect aggression (Craig, 1998) and suggests that while indirect aggression may be related to some of the components of personal-emotional adjustment, but other areas of the construct offset this deficit. Also, as stated earlier in the discussion, the research into indirect aggression has found that some

individuals who engage in indirect aggression have a higher level of social intelligence (Björkqvist, Österman, & Kaukiainen, 2000). This ability may possibly help individuals better understand the college environment and thereby limit their adjustment difficulties.

Relationship between Being a Victim of Indirect Aggression and Social Adjustment and Personal-Emotional Adjustment to College

The fourth research question examined the relationship between victimization by indirect aggression and social and personal-emotional adjustment to college. Results on this research question were mixed. Therefore the results comparing social adjustment and personal-emotional adjustment with victimization by indirect aggression will be discussed separately.

Social Adjustment

Results indicate that being a victim of indirect aggression is significantly related to decrease levels of social adjustment to college. Two of the subtypes of victimization by indirect aggression, the 'Social exclusionary' and 'Guilt induction', were significantly correlated with social adjustment. Again, the more direct form of indirect aggression (Use of malicious humor) was unrelated to social adjustment. This reinforces the idea that the various subtypes of indirect aggression may have different consequences, however, more research is needed to draw any firm conclusions.

Victimization by indirect aggression was then analyzed in conjunction with the five variables assessed on the demographic instrument. Results from the analysis indicate that the variables of loneliness, depression, anxiety, involvement in campus activities, and use of campus psychological activities explained significantly more variance in social adjustment to college than victimization by indirect aggression. As stated in the

discussion of research question two, victimization by indirect aggression was related to a number of these control variables. Victimization by ‘Social exclusionary’ and ‘Guilt induction’ was found to relate with increased levels of loneliness, depression, anxiety, and use of campus psychological activities, while ‘Use of malicious humor’ significantly related to anxiety. Further research is needed to determine the exact nature of the relationship between victimization by indirect aggression and the control variables used in this study.

Personal-Emotional Adjustment

Significant negative correlations were found between victimization by indirect aggression and personal-emotional adjustment. Similar to the relationship between social adjustment and victimization, lower levels of personal-emotional adjustment was found to correlate with increased the scores on the ‘Social exclusionary’ and ‘Guild induction’ subscales of indirect aggression. ‘Use of malicious humor’ was not found to be related to personal-emotional adjustment.

The relationship between victimization and personal-emotional adjustment was then examined in combination with the variables of loneliness, depression, anxiety, involvement in social activities, and use of campus psychological service. Findings indicate that even with the influence of these five variables, indirect aggression was significantly related to personal-emotional adjustment. This is one of the first findings on the impact of victimization by indirect aggression among college students. Most of the past research has focused on the relationship between use of indirect aggression and psychosocial issues, while this study specifically examined both use and victimization by indirect aggression. Additionally, this finding highlights the need for further research into

how victimization by indirect aggression affects an individual's personal-emotional adjustment to college.

Gender Differences in the Use of Indirect Aggression and Victimization by Indirect Aggression Among College Students

For both research questions five and six, males were found to use more indirect aggression and to be victimized more often by indirect aggression, but only regarding the 'Use of malicious humor' subtype. This is consistent with past research on aggression that generally finds males to engage in more direct forms of aggressive behavior. While 'Use of malicious humor' is a specific subtype of indirect aggression, many of the behaviors listed within the subscales involve face-to-face insults that are designed to be hurtful but are presented in a joking or humorous manner (Forrest, et al., 2005). This finding supports the assertion that as males mature, they will engage in less high-risk aggressive behaviors and instead choose more covert method of aggression. Finally, and contrary to findings from a number of other studies on college students, no gender differences were found on the 'Social exclusionary' or 'Guilt induction' methods of aggression.

Limitations

One of the primary limitations for this study was the correlational design. While significance was found between a number of the independent and dependent variables, causation cannot be assumed. Additionally, each of the five control variables was found to relate to the various forms of indirect aggression which possibly had an effect on the results of the analysis. Another limitation is the non-random nature of data collection

which may impact the ability to generalize this study to other populations. Furthermore, the small number of males (n = 21) is a concern when evaluating gender differences in research questions number 5 and 6. In future studies, a more randomized approach to data collection along with a more equal level of males and females may allow greater generalizability to college students. Also, while participation was voluntary, extra credit was offered for participation in the study, which may have influenced the subject's decision to participate. The use of self reports to measure victimization and perpetration by indirect aggression no such word is a possible concern. It has been argued by a number of researchers that due to the controversial nature of aggression, self report many not be the most effective method to assess the behavior. Further research is needed to determine if results of self reports versus other forms of assessment of indirect aggression are equally accurate. Finally, this study is first to use the Indirect Aggression Scales (Aggression and Target Versions) as an independent variable and because of this the reliability and validity are possibility suspect.

Implications

This study is one of the first investigations on the impact of indirect aggression on college students. A number of past research studies have examined the relationship between use of indirect aggression and it psychosocial correlates, but this is one of the first studies to examine the impact of victimization. The results indicate the victimization by indirect aggression is significantly related to an individual's personal-emotional adjustment to college. While the exact nature of the relationship cannot be extracted from the results, it is important for college counselors and advisors to be aware of this finding.

Furthermore, during intake assessments and informational meetings, college counselors and administrators should assess if an individual is experiencing indirect aggression and if this victimization is causing significant emotional impacts. Professionals working with the victims of indirect aggression need to be sensitive that for some individuals this form of aggression can have negative emotional and possible social ramifications.

Besides those individuals who work directly with the victims of indirect aggression, it is important for those individual in leadership positions to be aware of the impact of indirect aggression. As indirect aggression occurs in a covert (or even disguised as a joke) manner, some individuals may be unaware or unconcerned about the behavior. Training for dorm leaders and student leaders may be an important first step in identifying indirect aggression and thus preventing individuals from being continually targeted. In the analysis of the individual surveys, a number of individuals reported experiencing indirect aggression on almost a daily bases. This is concerning as there are no studies on the long term impact of individuals who experience daily assaults by indirect aggression, but based on the current research, it could be assumed this individual would be at high risk for a multitude of psychosocial issues.

While the study found only one significant correlation between perpetration by indirect aggression and anxiety there are a number of important recommendations that can be made. First, some of the individuals engaging in indirect aggression may be unaware of its impact. In this case, explanations in the student handbooks or campus flyers could be used to draw attention to the impact of indirect aggression. Secondly, for the individuals who willingly use indirect aggressive behavior, college administrators need to handle the manner similarly to other the forms of aggressive behavior. Another

possibility to deal with this behavior is to remove the covert element of the behavior. As discussed in number of research studies, one of the primary reasons individuals choose to engage in this form aggression is to reduce the likelihood of discovery or retaliation. If an individual who engages in this behavior believed that their actions would be made known, which could possibly reduce the occurrence of the behavior.

The finally implication is in regard to gender differences. The results of the study indicate that some forms of indirect aggression are used equally by both males and females. Additionally, it appears that males used more of certain forms of aggressive behavior. This is a significant finding as much of the research on younger population has found females use a greater level of indirect aggression. This finding also supports the theory that as males mature they decrease the use of the more direct forms of aggression they engage in the more indirect forms of aggression (Björkqvist, et al., 1992). More research is needed to confirm this hypothesis.

Summary

The results of this study suggest that victimization by indirect aggression may have a significant negative impact on a person's personal-emotional adjustment to college. Additionally, victimization was found to be related to overall college adjustment and social adjustment, but this relationship is difficult to determine due the influence the variables of loneliness, depression, anxiety, involvement in campus social activities, and use of campus psychological services. In regards to perpetration by indirect aggression, no significant relationships were found with overall college adjustment, social adjustment, or personal-emotional adjustment to college. Recommendations include

increasing the awareness of college counselors and advisors on the impact of indirect aggression and training for student leaders both on campus and in the dorms to prevent long term abuse by indirect aggression. Finally, while it appears that indirect aggression may influence student retention, follow up studies are need to determine if the same negative relationships found in this study, impact students within the first year of their enrollment.

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APPENDICES

APPENDIX A

INDIRECT AGGRESSION SCALE—TARGET VERSION

Indirect Aggression Scale—Target Version

Since enrolling in college how often has someone or a group <u>made you the target</u> of the following experiences?

Please indicate how frequently the following have occurred:

ITEMS 1-13	1 never	2 once or twice	3 sometimes	4 often	5 regularly
1. Made other people not talk to me					
2. Withheld information from me that the rest of the group is let in on					
3. Intentionally embarrassed me around others					
4. Excluded by a group					
5. Called me names					
6. Stopped talking to me					
7. Used their relationship with me to try and get me to change a decision					
8. Used my feelings to coerce me					
9. Made fun of me in public					
10. Pretended to be hurt and/or angry with me to make me feel bad about myself					
11. Turned people against me					
12. Made me feel that I don't fit in					
13. Spread rumors about me					

<u>PLEASE TURN THE FORM OVER NOW AND COMPLETE STATEMENTS 14-25</u>

ITEMS 14-25	1 never	2 once or twice	3 sometimes	4 often	5 regularly
14. Used emotional blackmail on me					
15. Criticized me in public					
16. Used private in-jokes to exclude me					
17. Put undue pressure on me					
18. Used sarcasm to insult me					
19. Played a nasty practical joke on me					
20. Made negative comments about my physical appearance					
21. Omitted me from conversations on purpose					
22. Imitated me in front of others					
23. Purposefully left them out of activities					
24. Done something to try and make me look stupid					
25. Tried to influence me by making me feel guilty					

APPENDIX B

INDIRECT AGGRESSION SCALE—AGGRESSOR VERSION

Indirect Aggression Scale—Aggressor Version

Since enrolling in college how often have you engaged in the following behaviors <u>against another person</u>?

Please indicate how frequently the following have occurred:

ITEMS 1-13	1 never	2 once or twice	3 sometimes	4 often	5 regularly
1. Used my relationship with them to try and get them to change a decision					
2. Used sarcasm to insult them					
3. Tried to influence them by making them feel guilty					
4. Withheld information from them that the rest of the group is let in on					
5. Purposefully left them out of activities					
6. Made other people not talk to them					
7. Excluded them from a group					
8. Used their feelings to coerce them					
9. Made negative comments about their physical appearance					
10. Used private in-jokes to exclude them					
11. Used emotional blackmail on them					
12. Imitated them in front of others					
13. Spread rumors about them					

<u>PLEASE TURN THE FORM OVER NOW AND COMPLETE STATEMENTS 14-25</u>

ITEMS 14-25	1 never	2 once or twice	3 sometimes	4 often	5 regularly
14. Played a nasty practical joke on them					
15. Done something to try and make them look stupid					
16. Pretended to be hurt and/or angry with them to make them feel bad about him/her-self					
17. Made them feel that they don't fit in					
18. Intentionally embarrassed them around others					
19. Stopped talking to them					
20. Put undue pressure on them					
21. Omitted them from conversations on purpose					
22. Made fun of them in public					
23. Called them names					
24. Criticized them in public					
25. Turned people against them					

APPENDIX C

DEMOGRAPHICS ASSESSMENT

Demographics Questionnaire

Please answer the following questions:

Year and Semester when first enrolled: _____

Age: _____

Gender: Female Male

Academic Standing: Freshman Sophomore Junior Senior

Please indicate how frequently the following have occurred:

ITEMS 1-5	**1 never**	**2 once or twice**	**3 sometimes**	**4 often**	**5 regularly**
1. Since enrolling in college how often have you experienced loneliness?					
2. Since enrolling in college how often have you been depressed?					
3. Since enrolling in college how often have you experienced anxiety?					
4. Since enrolling in college how often have you been involved in campus activities?					
5. Since enrolling in college how often have you made use of campus psychological services?					

APPENDIX D

INFORMATION SHEET

INFORMATION SHEET

for Research Study Entitled
Indirect Aggression and College Student Adjustment

You are invited to participate in a research project designed to assess the factors that impact an individual's ability to adjust to college. The study is being conducted by John Klem under the supervision of Dr. Jamie Carney, Committee Chair and Professor at Auburn University. This study is designed to investigate the impact of indirect aggression on student social and personal/emotional adjustment to the college environment. You were selected as a possible participant because of your year of enrollment at Auburn University. In addition, you must be at least 19 years old to participate.

If you are eligible and choose to participate, you will complete four assessment instruments that will take about 30 minutes of your time. Once the four assessments are completed please place the forms back in the enveloped you received the information in, seal it, and return the packet to your course instructor. I do not anticipate any possible risks or discomforts associated with participation in this study, but a list of counseling centers has been provide to you in case you experience any distress during or after participation in the study.

Any information obtained in connection with this study will remain anonymous. There will be no way to connect assessment data with specific individuals. The codes found on the questionnaires are used to link your responses, but I will not be asking you to identify yourself and I will not be keeping a code list. Information collected through your participation will be used in a doctoral dissertation, may be published in a professional journal, and/or presented at a professional meeting.

There are no realistic benefits from participating in this study. You may withdraw from participation at any time, without penalty, however, after you have provided anonymous information you will be unable to withdraw your data since there will be no way to identify individual information. Your decision whether or not to participate will not jeopardize your future relations with Auburn University or Counselor Education, Counseling Psychology, or School Psychology department or you class grade.

If you have any questions I invite you to ask them now. If you have questions later please feel to contact me at John Klem at 334-525-3011 or klemjoh@auburn.edu or my faculty advisor, Dr. Jamie Carney at 844-2885 or carnejs@auburn.edu and we will be happy to answer them.

For more information regarding your rights as a research participant you may contact the Auburn University Office of Human Subjects Research or the Institutional Review Board by phone (334)-844-5966 or e-mail at hsubjec@auburn.edu or IRBChair@auburn.edu.

HAVING READ THE INFORMATION PROVIDED, YOU MUST DECIDE WHETHER TO PARTICIPATE IN THIS RESEARCH PROJECT. IF YOU DECIDE TO PARTICIPATE, THE DATA YOU PROVIDE WILL SERVE AS YOUR AGREEMENT TO DO SO. THIS LETTER IS YOURS TO KEEP.

_____	_____	_____
John Klem, M.S.	Date	Print Name

Referral List

Mental Health Providers in Auburn/Opelika

Provider	Services	Phone No.	Cost/Hour
Crisis Center	Phone Counseling	334-821-8600	No charge
Student Counseling Services at Auburn University	Individual and Group Therapy	334-844-5123	No charge
Auburn University Psychological Services Center	Marriage, Family, and Individual Therapy	334-844-4889	$75, Intake $5-55 based on income
Clinical Psychologists	Individual and Group Therapy	334-821-3350	$120, Intake $100, Treatment, per
East Alabama Mental Health Center	Individual and Group Therapy	334-742-2700 334-742-2877 (after hours)	$8-80 based on income
Safe Harbor at Auburn University	Counseling for victims and friends of victims of rape and dating violence	334-844-5123	No charge
Auburn Family Therapy		334-821-3631	$50-100 per hour
Anne Harzen, Ph.D.		334-745-0923	$80, Personality Assessment $100, Treatment per
Psychological Associates, LLC 1915 Professional Circle		334-826-1699	$120, Intake $100, Treatment per
East Alabama Psychiatric Services (Medication referrals only)		334-821-0238	
Auburn-Opelika Psychology Clinic		334-742-9555	

APPENDIX E

SCRIPT

SCRIPT for the Research Study Entitled

"The Impact of Indirect Aggression on College Student Adjustment"
John Klem Primary Researcher

My name is John Klem and I am a doctoral student in Auburn University's Department of Counselor Education, School Psychology, and Counseling Psychology. I am under the supervision of Dr. Jamie Carney, Committee Chair and Professor

I am asking for your participation in a research project designed to assess the factors that impact an individual's ability to adjust to college.

This study focuses on indirect aggression among college students and its relationship to college student's adjustment to the college environment.

Your decision to participate in this study is voluntary.

To participate in this study you need to be age 19 and above.

If you choose to participate, you will be asked to complete four assessment instruments that will take about 30 minutes of your time.

Once you complete the measures, please place them back into the survey packet envelope and seal the envelope.

You will have the opportunity to return the packets to me during the first 5 minutes of your next class session.

I do not anticipate any possible risks or discomforts associated with participation in this study, but a list of counseling centers has been provide to you in case you experience any emotional discomfort during or after participation in the study.

There are no benefits from participating in this study.

Your course instructor has agreed to compensate individuals who participate with extra credit. You will be provided a certificate verifying your participation in the study when you return the survey packet. Turn the certificate into your course instructor to receive extra credit.

All data collected in this study is anonymous so once you have decided to participate and return your survey packet your data will not be able to be withdrawn from the study.

If you have any questions feel free to ask them now or used the contact information enclosed in the assessment packet to contact me at a later date

APPENDIX F

AUBURN UNIVERSITY INSTITUTIONAL REVIEW BOARD APPROVAL TO CONDUCT STUDY

Office of Human Subjects Research
307 Samford Hall
Auburn University, AL 36849

AUBURN
UNIVERSITY

Telephone: 334-844-5966
Fax: 334-844-4391
hsubjec@auburn.edu

September 25, 2007

MEMORANDUM TO: John Klem
Counselor Education Counseling Psychology

PROTOCOL TITLE: "The Impact of Indirect Aggression on College Student Adjustment"

IRB AUTHORIZATION NO.: 07-107 MR 0709
APPROVAL DATE: September 19, 2007
EXPIRATION DATE: September 18, 2008

The referenced protocol was approved "**Minimum Risk**" at the IRB Meeting on **September 19, 2007**, pending revisions. (Final revisions were received on **September 25, 2007**.) Please reference the IRB authorization number in any correspondence regarding your project.

Please remember that any anticipated change in the approved procedures must be submitted to and approved by the IRB prior to implementation of the planned activity. Any unanticipated problems involving risk to subjects or others require immediate suspension of the activity and an immediate written report to the IRB.

If you will be unable to file a Final Report on your project before **September 18, 2008**, you must submit a request for an extension of approval to the IRB no later than **August 31, 2008** to be included on the agenda for the September 2008 IRB meeting. If your IRB authorization expires and/or you have not received written notice that a request for an extension has been approved prior to **September 18, 2008**, you must suspend the project immediately and contact the Office of Human Subjects Research.

A Final Report will be required to close your IRB project file. You are reminded that you must use only the IRB-approved, stamped **information letter** (enclosed) when you recruit participants.

If you have any questions concerning IRB procedures or this Board action, please contact the OHSR at 844-5966.

Sincerely,

Peter W. Grandjean, Chair
Institutional Review Board for the Use of
Human Subjects in Research

Enclosure
cc: Dr. Holly Stadler
Dr. Jamie Carney