

THE RELATIONSHIP BETWEEN APPEARANCE
SCHEMAS, SELF-ESTEEM, AND INDIRECT
AGGRESSION AMONG COLLEGE WOMEN

By

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CHAPTER I

INTRODUCTION

Research on human aggression has great value considering the adverse consequences of aggressive behavior. Stories about wars, gang violence, domestic violence, and terrorist attacks, among others, illuminate the detrimental effects of aggressive behavior on human psychosocial functioning. Aggression appears to be a collective part of the human condition in that it has been observed in people of all ages, cultures, educational levels, and socioeconomic backgrounds (Eagly & Steffen, 1986).

Early definitions of aggression included overt forms of aggressive behavior, such as physical assault, destruction of property, rape, and verbal attacks (Bandura, 1973). Many assumptions were made in initial studies of aggression that have not proven to be true. For instance, it was a widely accepted notion that males were more aggressive than females (Eagly & Steffen, 1986). This was due in part to the fact that males tend to engage in direct and overt forms of aggression more often than females, and overt aggression is more easily observed and measured (Eagly & Steffen, 1986). As a result, much of the early aggression research focused on direct forms of aggressive behavior in the male population. Such a narrow conception of aggression led to a male bias in the literature in which women's experience of anger and aggression was frequently disregarded and misunderstood.

Feminists argued that women are aggressive, but they have not been socialized to express their anger overtly due to sociopolitical and cultural socialization (Gilligan, 1993). For instance, in the classic book *Toward a New Psychology of Women*, Jean Miller (1986) emphasized, "In our own society, a woman's direct action can result in a combination of economic hardship, social ostracism, and psychological isolation-- and even the diagnosis of a personality disorder" (p. 10). Regarding traditional gender roles, men are typically socialized to be ambitious, aggressive, and competitive, while women are stereotypically socialized to be passive and nurturing, without resentful feelings of competitiveness and anger (Tanenbaum, 2002). Women are taught not to express anger and aggression openly because it is viewed as 'unladylike' (Gilligan, 1993). If women express this normal human emotion, including aggressive behaviors (e.g., yelling, hitting), they are sometimes ridiculed, shamed, labeled as "the bitch", and dismissed by others. Subsequently, a woman may behave in competitive and aggressive ways, but disguise her intent beneath a facade of politeness and collaboration (Tanenbaum, 2002).

The historical narrow conception of aggression presents new challenges and opportunities for researchers today. One of the present challenges is to gain a better understanding of women's expression of aggressive behaviors and factors that contribute to its use. Because women are often socialized to disguise their aggressive intent, women may opt for less explicit forms of aggressive behavior, otherwise known as indirect aggression (Bjorkqvist, 1994; Lagerspetz, Bjorkqvist, & Peltonen, 1988). Others have referred to this phenomenon as relational aggression (Crick & Grotpeter, 1995) or social aggression (Galen & Underwood, 1997). While indirect aggression is the selected

terminology used for this study, the other forms of nomenclature (e.g., relational, social) will be used when discussing studies relevant to the different groups of researchers.

Indirect Aggression

Feshbach (1969) was one of the first researchers to examine more subtle and ambiguous forms of aggressive behavior, and he labeled this type of aggression as 'indirect' aggression. Indirect aggression is defined as a behavioral response chosen by a person when direct forms of aggression are considered unacceptable or inappropriate according to the individual's appraisal of social norms (Lagerspetz et al., 1988). Indirect aggression has also been identified as a subtle form of aggression in which the aggressor harms the target person by damaging or manipulating his/her relationships or status in the peer group rather than by making overt attacks (Salmivalli & Kaukiainen, 2004). These types of indirect aggressive strategies include: gossiping, spreading rumors, social exclusion, and making hurtful remarks while it appears to be said in fun (Forrest, Eatough, & Shevlin, 2005). One of the most prominent characteristics of this strategy is the aggressor's attempt to manipulate the social structure in order to avoid direct attribution of the behavior (Bjorkqvist, Osterman, Kaukiainen, 1992b).

Indirect aggression has been correlated with psychological maladjustment problems (Crick & Grotpeter, 1995; Werner & Crick, 1999), jealousy/competition, status, appearance (Parker Schoening, 2005), perceptions of emotional support problems (Lord, 2005), fear of negative evaluation (Loudin, Loukas, & Robinson, 2003), and dissatisfaction in romantic relationships (Linder, Crick, & Collins, 2002). Relational aggression has been significantly associated with poor interpersonal functioning and psychological maladjustment problems, even among school age children (Crick &

Grottpeter, 1995). Parker Schoening (2005) conducted a qualitative study on middle school girls' use of relational aggression and found emerging themes of jealousy and competition, preoccupation with social status, popularity, appearance and the need to belong. Crick (1996) provided the first evidence that relational aggression is fairly stable over time and that it is predictive of future social maladjustment problems for boys and girls. Indirect aggression has been associated with perceptions of emotional support problems among the elderly (Lord, 2005), and dissatisfaction and dysfunction in romantic relationships (e.g., feelings of frustration, jealousy, ambivalence, anxious clinging behavior; Linder, et. al., 2002), which provide some evidence of the negative effects of this behavior on interpersonal relationships.

Among college students, indirect aggression has been significantly associated with lack of empathy and social anxiety (i.e., fear of negative evaluation; Loudin et al., 2003). Werner and Crick (1999) found among a sample of male and female college students, relational aggression was significantly correlated with increased levels of peer rejection, lower levels of prosocial behavior, and more antisocial and borderline personality traits. Of particular relevance to the current study, these researchers also found a significant relationship between relational aggression and bulimic symptoms (e.g., body image domain) among female participants only. The development of eating disorders results in part from one's desire to be more attractive, better, or more superior than their competition (Huon, Piira, Hayne & Strong, 2002; Rodin, Silberstein, & Striegel-Moore, 1984).

Indirect Aggression as a Competitive Strategy Between Women

Critics have argued that indirect aggression, including female's natural cattiness (e.g., complaining, backstabbing, manipulating, gossiping), was not worthy of serious academic attention when compared to more direct forms of aggressive behavior (e.g., Brown, 2003). However, evidence of the often negative and damaging interpersonal and psychological effects associated with relationally aggressive behaviors have been accumulating, which appears to be common in female interpersonal relationships (Brown, 2003; Crick, 1996; Crick & Grotpeter, 1995; Gilligan, 1993).

It has been suggested that women's indirect aggressive strategies are a form of competition and survival (Campbell, 1995) and that women often compete with each other in the body image arena (Campbell, 1995; Tanenbaum, 2002). Competition incorporates the desire to be better than or superior to another and usually stems from feelings of personal inadequacy, threat, insecurity, and the desire for power and resources (Tanenbaum, 2002). In American culture, competition between women is usually described as the "catfight" or "catty behavior". This form of unhealthy competition usually includes aggressive strategies designed to undermine or denigrate an adversary (Tanenbaum, 2002). Because women are often socialized to be covertly aggressive, they often compete with one another via indirect aggressive strategies.

Given that theorists suggest indirect aggressive behaviors are competitive strategies used between and among women, Tooke and Camire (1991) asked men and women about strategies they used to compete with rivals to attract the opposite sex. Results indicated men competed with other men via suggesting promiscuity and exaggerating superiority and popularity. Women revealed they competed with other

women by alterations to their appearance, such as dieting, wearing make up, and tight clothing. Additionally, other researchers found that attractiveness-related behavior appeared to be the most prevalent form or topic of female competition (Cashdan, 1998; Walters & Crawford, 1994). These findings imply that body image may be important area of competition for some women.

It is important to note that dieting, discussing other's appearance, or wearing tight clothing do not appear to be outwardly aggressive or competitive in and of itself. However, these types of behaviors can be used with the intent to harm or denigrate a rival's status and self-esteem. For instance, the aggressor may say to her friend in front of an attractive male, "How wonderful you've lost some weight. Do you plan on losing the rest?" or, "That shirt is ugly, but you could pull it off". Brown (2003) emphasized relational aggression creates a "climate of division and distrust among girls and eventually undermines women's psychological strengths" (p. 33). Because unhealthy competition can be prompted by feelings of inadequacy, threat, and insecurity, it is important to consider the underlying psychological processes that influence women to engage in these types of indirectly aggressive behaviors towards other women.

Given the relationship between indirect aggression and psychological maladjustment problems (Crick & Grotpeter, 1995; Werner & Crick, 1999), it is possible that women who engage in these types of behaviors towards other women may have unhealthy or maladaptive schemas about themselves and/or their appearance. The finding that relational aggression was significantly associated with bulimic symptoms among college female participants only (Werner & Crick, 1999) suggests body image

perceptions (e.g., appearance schemas) may play a unique role in women's use of indirect aggression as competitive strategies towards other women.

The college years often represent an important developmental time in a woman's life. Women are often socialized to value relationships in general, and social networks may be particularly important to females who are moving away from home for the first time. This is particularly evident in the Greek system, in which women often join sororities for social acceptance (Allison & Park, 2004). However, researchers reported that college students viewed relational aggression as "hurtful behaviors enacted by peers, in particular by women towards other women" (Morales, Crick, Werner & Shellin, 1999; cited in Werner & Crick, 1999, p. 2). While development of friendships with other women is especially important during this stage of development, socialization opportunities can be inhibited by women's cattiness towards other women. One factor these young women have in common is the pressure to conform to an ideal body image (Brown, 2003; Tanenbaum, 2002), which may create body image dissatisfaction and feelings of distress. Therefore, it is important to understand body image experiences of women and how this may be related to indirect aggression among women.

Body Image

During the college years, women are typically exposed to societal pressures to be thin and beautiful. Schulken and Pinciaro (1997) claim sorority women are a subgroup of the college population that has typically been associated with preoccupation with physical appearance. Cash, Theriault, and Annis (2004) claimed body image perception is fundamental to multiple areas of psychosocial functioning. They argued body image is related to one's self-concept and relationship with others, and it has significant

implications for psychological functioning and quality of life (Cash et al., 2004).

Psychological investment in one's appearance has been identified as an appearance schema central to women's body image perceptions (Cash, 2000). Our culture's narrow conception of beauty creates pressing issues for some women who are highly invested in their appearance, because they often try to live up to unrealistic standards that are usually impossible to achieve. For these women, failing to meet their unrealistic body image expectations may result in negative evaluations of their bodies (e.g., negative appearance schemas; body image dissatisfaction) and themselves in general (e.g., negative self-schemas, decreased self-esteem).

There is some evidence of a relationship between appearance schemas and self-schemas in women. Winterowd, Ledoux, Young, and Dorton (2005) explored appearance schemas, negative self-schemas, and attachment style with 197 female college students. Results indicated women with negative appearance schemas reported significantly more negative self-schemas and fearful and preoccupied attachment styles with men compared to women with positive appearance schemas.

Additionally, Braitman (2001) explored negative self-schemas and appearance schemas among women in general. This researcher found that women with low body satisfaction reported more negative self-schemas than those with high body satisfaction. This research is valuable and relevant to the current study because it provides evidence that views of one's self (e.g., self-esteem, self-schemas) are significantly associated with body image perceptions (e.g., body-esteem, appearance schemas) for some women. More research in this area is needed to better understand ways in which body image and self-

esteem issues impact women's interpersonal behaviors (i.e., indirect aggressive behaviors) towards other women. This is one aim of the present study.

Body dissatisfaction has been significantly associated with the development of eating disorders (Stice & Shaw, 1994; Twamley & Davis, 1999) and psychological variables such as social physique anxiety (Crawford & Eklund, 1994), lower global self-esteem (Harter, 1999), and fear of negative evaluation (Loudin et al., 2003). Given that fear of negative evaluation was significantly associated with increased rates of relational aggression, it is possible that women who have maladaptive beliefs about their body (e.g., dysfunctional appearance schemas) may be more likely to engage in indirect aggression towards other women if they encounter situations which lead them to negatively evaluate their body. However, no researchers to date have examined the relationship between body image (e.g., psychological investment in one's appearance, otherwise known as appearance schemas) and indirect aggressive behaviors among college women.

Body Image and Indirect Aggression

According to Cash and Pruzinsky (1990), body image is one's attitude towards their physical appearance whereas, "contextual events serve to activate schema-based processing of self-evaluative, affect-laden information about one's appearance (Cash, 2000, p. 1)". People use different strategies to cope with stressful thoughts, emotions, and situations in the context of a threat or challenge to their body image perceptions (Cash, Santos, & Fleming-Williams, 2005). They identified three different body image threat coping strategies: appearance fixing behaviors (e.g., conceal or correct a flawed physical feature), positive rational acceptance (e.g., mental and behavioral activities that emphasize the use of positive self-care, rational self-dialogue and acceptance of one's

experience), and avoidance strategies (e.g., behaviors designed to evade threats to one's body image thoughts and feelings). Although these researchers identified some strategies used when individuals are faced with internal distress due to body image threats, another important factor to consider is that some individuals may use externalizing behaviors to deal with these body image problems. More specifically, people may react aggressively and competitively under conditions of internal distress, threat, or challenge.

For example, if a woman evaluates her body negatively via negative cognitive processing (e.g., maladaptive appearance schemas), she may feel threatened and experience increasing levels of anxiety and decreased self-esteem if she concludes her body image is inferior to other women (“her competition”). Tedeschi and Nesler (1983) stated, “expression of anger may reduce anxiety because anger externalizes problems, whereas anxiety internalizes problems” (p.30). Thus, in order to cope with internal feelings of threat, anxiety, or insecurity about one’s negative body image perceptions (e.g., dysfunctional appearance schemas), coping efforts may include competitive behaviors such as indirect aggressive strategies directed towards women perceived as threatening. Consequently, indirect aggressive behaviors may function as a regulatory process to reduce feelings of anxiety and insecurity in situations that trigger one to negatively evaluate their body.

It is important to gain a better understanding of women's experience of anger as well as psychological variables that trigger the associated behavioral responses. In the literature addressing anger and direct forms of aggression, it is acknowledged that aggressive responses may be the result of one’s attempts to gain superiority and/or maintain status and self-esteem (Archer, 2001; Ireland, 2001; Tedeschi & Nesler, 1983).

It is less clear if indirect forms of aggression also function as a way to gain superiority and/or maintain status and self-esteem.

Feminists argue that women's appearance often serves as an expression and source of their social status and self-esteem (Brown, 2003; Campbell, 2002; Tanenbaum, 2002). Research has shown that physically attractive people generally are received more positively, are perceived as more successful and socially desirable, have more power and status, and are treated more leniently than less attractive people (Patzner, 1985). In other words, physically attractive people often have unfair advantages when compared to less physically attractive people. Feelings of inequality may provoke competitive and aggressive urges in women who believe they are inferior or less socially desirable than their competition (Tanenbaum, 2002).

While it is common for some women to be dissatisfied with their body image to a certain degree, body image threats may not have a significant effect on their overall self-esteem. However, some women do experience a significant decline in global self-esteem when they are faced with body image threats and challenges (Cash et al., 2005). Cash (2002) offered appearance schema theory as an explanation for why some individuals are more vulnerable in developing maladaptive body image beliefs than other individuals.

Appearance Schemas

Appearance schemas are psychological structures that people use to process self-related information about their appearance (Cash, Melnyk, & Hrabosky, 2003). In other words, appearance schemas are beliefs that one has about their body. Body size, shape, weight, and investment in one's appearance (examples of cognitive structures) all contribute to one's overall body image perception. While all humans develop appearance-

related schemas, the importance of appearance is more highly developed in some individuals identified as “appearance-schematic” (Labarge, Cash, & Brown, 1998).

Appearance-schematic individuals develop more elaborate appearance schemas in which their body image becomes the foundation of self-evaluation (Tiggemann, 2005). Therefore, the physical self becomes integral to an appearance-schematic individual's self-concept and feelings of worth as a person (Tiggemann, Hargreaves, Polivy & McFarlane, 2004). In regards to appearance schematicity, Cash and colleagues (2004) stated, “More clearly dysfunctional is an investment in beliefs that equate one’s appearance, its comparison with others, and its potential to affect one’s life as integral to one’s self-worth” (p. 314). In other words, the authors proposed it is dysfunctional and maladaptive when an individual becomes so highly invested in their physical appearance that it becomes the basis of their global self-worth or self-esteem. Cash (2002) posited self-esteem can be a significant personality factor that influences one’s body image attitude, whereas a “positive self-concept may facilitate development of a positive evaluation of one’s body and serve as a buffer against events that threaten one’s body image” (p. 41).

Consistent with appearance schema theory, Labarge et al. (1998) proposed that appearance-schematic individuals are highly attentive to appearance-related features, such as models in magazines or attractive people they encounter in their everyday lives (e.g., same-sex peers). Additionally, they become highly conscious of characteristics that make women appear more physically attractive (e.g., youth, being thin, fashionable). As appearance-schematic women are subjected to unrealistic societal standards for beauty, they may develop maladaptive or dysfunctional beliefs about their bodies (e.g., “I must

be thin and beautiful to be worthy to others”). This distorted style of thinking may contribute to decreased global self-esteem or an overall negative evaluation of their worth as a human being.

This negative evaluation of their overall self may engender greater feelings of threat and insecurity when compared to women whose appearance is not integral to their global self-esteem. In other words, body image dissatisfaction may lead to overall self-dissatisfaction for individuals identified as appearance-schematic. Thus, appearance-schematic women may experience significant emotional distress when faced with situations that lead them to negatively evaluate their bodies.

If a woman has distorted beliefs about her body, appearance schema-activation may have negative psychological and emotional consequences (Hargreaves & Tiggemann, 2002). Body image dissatisfaction has been shown to arouse negative emotions such as anger, depression, shame, and guilt (Cash et al., 2005; Hargreaves & Tiggemann, 2002). Because body image is integral to an appearance-schematic individual's self-concept, she may not only evaluate her appearance negatively, but she may also negatively evaluate her overall worth as a person (e.g., global self-esteem). Subsequent negative emotions (e.g., anger) and coping behaviors (e.g., indirect aggression) may be triggered as a result of this maladaptive psychological evaluation process. While appearance schemas may be related to women's feelings of anger and anger expression (e.g., indirect aggression), it is possible that global self-esteem may also be a significant contributing factor in women's tendency to use indirect aggression towards other women.

Self-Esteem

Rosenberg (1965) defined global self-esteem as a positive or negative attitude toward the self. In other words, global self-esteem is based on how positively or negatively one evaluates their entire self or worth as a person. According to Cash's (2002) appearance schema theory, self-esteem is a pivotal aspect of one's appearance schemas. In essence, their 'body' image is a representation of their 'self' image. Subsequently, when an appearance-schematic woman experiences situations she perceives as threatening to her body image (e.g., encountering an attractive female peer, observing models in magazines), her distorted style of thinking may lead her to conclude these threats are more about who she is as a person, or threats to her worth as a person to others.

It has been suggested that self-esteem is somewhat dependent on social acceptance and rejection (Leary & Downs, 1995). This concept is particularly evident in the Greek system where students who want to be accepted endure a social evaluation process. Tanenbaum (2002) asserts, "many young women yearn to be accepted by exclusive, female-only cliques, such as college sororities" (p. 68). Some women experience a greater level of self-esteem when they feel accepted by other people. Conversely, the stress of not fitting in typically results in decreased self-esteem.

Furthermore, self-esteem has been significantly related to one's perception of physical attractiveness (Eklund & Bianco, 2000). Sanford and Donovan (1984) theorized if a woman places high value on certain characteristics of herself (e.g., body-esteem), her global self-esteem will be strongly influenced by her specific self-esteem in that one area. In light of this concept, Harter (1999) found that college men and women who favored

their body image tended to report higher global self-esteem compared to participants who reported body image dissatisfaction.

Additionally, appearance has been linked to social acceptance and rejection (Feingold, 1992). Research provides evidence that attractive people are often treated better and perceived as more popular, mentally healthy, and intelligent than less attractive people (Feingold, 1992; Jackson, 2002). Because society places great importance on physical appearance and body image is associated with social acceptance and rejection, it seems possible that some college women would regard their body image as a critical determining factor for their self-esteem, social status and value to others. While physical appearance is important for most people, body image can become a very distressing aspect of life for appearance schematic individuals due to their distorted styles of thinking and dysfunctional belief systems about themselves and their bodies.

If a woman has negative beliefs about her self (e.g., low global self-esteem) and negative beliefs about her body (e.g., dysfunctional appearance schemas), she may have negative emotional (e.g., anger, depression, shame) and behavioral responses (e.g., other-destructive behaviors such as indirect aggression, or self-destructive behaviors such as eating disorders) in situations that trigger her distorted styles of thinking. Although there are many ways an individual might cope and react to this type of internal distress (e.g., avoidant strategies), of interest to this researcher are individuals who react aggressively in the face of body image and self-esteem threats.

Researchers have found a significant relationship between self-esteem and direct forms of aggression (Baumeister, Smart, & Boden, 1996; D'Zurilla, Chang, & Sanna, 2003). However, the direction of that relationship has varied from study to study. Some

researchers found a significant relationship between low self-esteem and aggression (Buss & Perry, 1992; Green & Murray, 1973), others found aggression is associated with high self-esteem (Baumeister et al., 1996), and others found specific domains of self-esteem are related to aggression (Webster & Kirkpatrick, 2006). The mixed findings indicate more research is needed to understand how self-esteem relates to aggressive behavior, particularly indirect aggressive behavior.

The inconsistent findings may reflect a problem in differentiating between positive global self-esteem, narcissism (Bushman & Baumeister, 1998), and specific domains of self-esteem (Webster & Kirkpatrick, 2006). The mixed findings may also reflect a bias in the measurement of aggression, which until recently, was only conceptualized as physical and direct forms of aggressive behavior. While it is conceivable that a woman with domain-specific self-esteem issues (i.e., self-perceived mate value) or narcissism issues may react aggressively in the face of body image threats and challenges, the focus of the current research is limited to understanding the role of global self-esteem in relation to women's use of indirect aggression. Thus, it is anticipated that women with low global self-esteem issues and maladaptive appearance schemas may use indirect aggression as a compensatory strategy to deal with feelings of internal distress in situations that trigger her distorted style of thinking.

Statement of the Problem

In American culture, competition between women is usually described as the "catfight" or "catty behavior". This form of unhealthy competition usually includes indirect aggressive behaviors (Tanenbaum, 2002). Although theorists and researchers (e.g., Bjorkqvist et al., 1992c; Brown, 2003; Campbell, 2004; Tanenbaum, 2002; Werner

& Crick, 1999) have begun to address the topic of indirect aggression, few studies exist which explore indirect aggression as a competitive strategy among women.

Furthermore, several researchers addressing indirect aggression have primarily focused on the childhood population. There is limited research addressing indirect aggression in the young adult population. While there is some research on indirect aggression with college-age men and women (Loudin et al., 2003; Werner & Crick, 1999; Warner, 2004), no researchers to date have focused exclusively on college women's use of indirect aggression as a competitive strategy towards other women. Thus, little is known about the underlying psychological variables specific to college women who engage in this type of behavior towards other women.

Werner and Crick (1999) provided the first evidence that indirect aggression is significantly associated with bulimia for females only in their study examining relational aggression with sorority and fraternity students. Eating disorders are associated with body image dissatisfaction, self-esteem issues, and increased psychosocial maladjustment problems (Davis & McCabe, 2006; Stice & Shaw, 1994; Twamley & Davis, 1999). Considering the adverse consequences of eating disorders, body image dissatisfaction, and unhealthy competitive styles of behavior, little is known about the psychological, situational, and contextual factors that might influence women's use of indirect aggression towards other women in the body image and self-esteem domains. Furthermore, the assessment of indirect aggression is besieged by measurement problems due to the discrete nature of the construct being studied. It is critically important to examine the reliability and validity of the newly developed Indirect Aggression Scale

designed to measure indirect aggressive behaviors in the adult population (Forrest et al., 2005).

While there is some research supporting the relationship between self-esteem and direct and indirect forms of aggression (i.e., Baumeister et al., 1996; Dettinger, 2006; D'Zurilla, et al., 2003) and for the relationship between self-esteem and body image (i.e., Eklund & Bianco, 2000; Harter, 1999), no known researchers to date have explored the relationships between appearance schemas, global self-esteem, and indirect aggression among college women. This information could be of considerable importance to psychologists and other mental health professionals who wish to uncover the complex factors that affect women's relationships with one another.

Purpose of the Study

The purpose of this study was to explore the relationships between and among appearance schemas, global self-esteem, and participants' self-reported use of indirect aggressive behaviors towards other women by utilizing an online sample of college women. The exploratory nature of this research was a first step in a line of inquiry to identify possible psychological variables that may influence college women to use indirect aggression as competitive strategies towards other women. Of additional interest was utilizing the newly developed Adult Indirect Aggression Scale-Aggressor version (Forrest et al., 2005) to verify the reliability and validity of this measure to assess self-reported use of indirect aggressive behaviors in the young adult female population.

Significance of the Study

Currently, our understanding of factors that influence ways in which college women are indirectly aggressive and competitive with one another appears limited by the

minimal number of research studies related to this topic. Understanding the obstacles that possibly interfere with women building alliances and working together is one aim of the present study. Campbell (2004) theorized women compete with indirect aggressive tactics in the body image arena because youth and beauty is an area valued by men. Werner and Crick (1999) found a significant relationship between bulimia and relational aggression in their sample of college women, but not with their sample of college men. This finding provides evidence that body image is a relevant area of investigation in the study of indirect aggression between and among women. From a psychological perspective, women's cattiness towards other women may be influenced by their self-esteem and body image beliefs. However, researchers have yet to examine the unique psychological factors (e.g., appearance schemas and global self-esteem) that might influence college women to utilize indirect aggression towards other women.

While body image has been related to global self-esteem in one study (Harter, 1999) and self-esteem has been related to aggressive dispositions in other studies (Baumeister, et al., 1996; Buss & Perry, 1992; Webster & Kirkpatrick, 2006), it is unclear how appearance schemas and global self-esteem correlate to indirect aggressive behaviors among women. This is the first study to explore the relationships between appearance schemas, global self-esteem, and college women's self-reported use of indirect aggressive behaviors towards other women.

This study is also significant in that the psychometric properties of the Indirect Aggression Scale-Aggressor version (Forrest et al., 2005) will be further assessed (i.e., principle components analysis, internal consistency reliability) in this sample of college women. The Indirect Aggression Scale was designed to measure self-reported use of

indirect aggressive behaviors specifically among the adult population. Considering the investigation of indirect aggression is beset by measurement issues (Forest et al., 2005), this study may provide additional evidence that this scale is a valid and reliable instrument to measure self-reported indirect aggressive behaviors in the adult population.

It is hoped that the findings of this study will help health care professionals, including counselors and psychologists, understand the relationships among appearance schemas, global self-esteem, and indirect aggression to conceptualize and develop specialized treatment strategies to address body image, self-esteem, and interpersonal relationship issues among women.

Research Questions

1. What is the component structure of the Indirect Aggression Scale for this sample?
2. Are there significant relationships between and among indirect aggression, self-esteem and appearance schemas?
 - 2a. Is there a significant relationship between indirect aggression and self-esteem?
 - 2b. Is there a significant relationship between indirect aggression and appearance schemas?
 - 2c. Is there a significant relationship between self-esteem and appearance schemas?
3. What is the relationship of appearance schemas and self-esteem with indirect aggression?
4. Do appearance schemas contribute anything beyond what self-esteem provides in predicting indirect aggressive behaviors?

Research Hypotheses

1. What is the component structure of the Indirect Aggression Scale for this sample?

Given the exploratory nature of this question, a principle components analysis will be conducted. It is expected that the component structure of the Indirect Aggression Scale-A for this research sample will be similar to the component structure of the IAS-A in the previous research (Forrest et al., 2005)

2. Are there significant relationships between and among indirect aggression, self-esteem and appearance schemas?

The null hypothesis is that there will be no statistically significant bivariate relationships between and among indirect aggression, self-esteem, and appearance schemas.

2a. Is there a significant relationship between indirect aggression and self-esteem?

The null hypothesis is that there will be no statistically significant relationship between indirect aggression and self-esteem.

2b. Is there a significant relationship between indirect aggression and appearance schemas?

The null hypothesis is that there will be no statistically significant relationship between indirect aggression and appearance schemas.

2c. Is there a significant relationship between self-esteem and appearance schemas?

The null hypothesis is that there will be no statistically significant relationship between self-esteem and appearance schemas. A series of two-tailed

Pearson correlational analyses will be conducted to answer these research questions.

3. What is the relationship of appearance schemas and self-esteem with indirect aggression?

The null hypothesis is that appearance schemas and self-esteem will not have a statistically significant relationship with self-reported indirect aggression. Multiple regression analyses (Enter method) will be conducted to test this research question.

4. Do appearance schemas contribute anything beyond what self-esteem provides in predicting indirect aggressive behaviors?

The null hypothesis is that appearance schemas will not be a significant predictor of self-reported indirect aggression scores when the relationship between global self-esteem and indirect aggression is statistically controlled. A hierarchical regression analysis will be conducted to answer this question.

Assumptions

1. Participants answered all questionnaires openly and honestly.
2. The measures in this study were true indicators of participants' self-reported global self-esteem, appearance schemas, and use of indirect aggressive behaviors.
3. Indirect aggression is a measurable construct.
4. The Adult Indirect Aggression Questionnaire-aggressor version is a reliable and valid measure to assess participant's use of indirect aggressive behaviors towards other women.

Definition of Terms

Appearance Schemas: Cognitive structures that individuals develop about themselves to organize and guide the processing of self-related information about their physical appearance (Cash & Labarge, 1996; Cash et al., 2003). Appearance schemas are related to body image in that the different cognitive structures combined contribute to one's general body image perception. In other words, one's body image is made up of the various cognitive structures within the appearance schema domain.

Individuals identified as appearance-schematic will be highly selective to appearance-related information based on their pre-existing beliefs about the importance of appearance to the self (Hargreaves & Tiggemann, 2002). In this study, appearance schemas will be measured by the Appearance Schemas Inventory-Revised (ASI-R; Cash, 2003). Higher scores indicate more negative and dysfunctional beliefs about one's body image. Lower scores indicate more positive beliefs about one's body image. This measure includes two subscales: Motivation Salience and Self-Evaluative Salience, which will be defined below.

Motivational Salience: Motivational salience assesses the valuing and attending to one's appearance and engaging in appearance management behaviors (Cash, 2003).

Self-Evaluative Salience: Self-evaluative salience includes beliefs that appearance is an important determinant of one's quality of experiences and their worth as a person (Melnyk, Cash, & Janda, 2004). In other words, self-evaluative salience is one's psychological or schematic investment in their physical appearance. The Motivational Salience subscale reveals less dysfunctionality

relative to the Self-Evaluative Saliance subscale (Cash, 2003). In other words, engaging in grooming behaviors in order to look more attractive is not always maladaptive and does not necessarily indicate dysfunctional beliefs about appearance (Cash, 2003). However, there is a significant, positive relationship between the two subscales.

Body Image: A multi-dimensional construct that refers to a person's attitude and perceptual experience about their body, particularly about their physical appearance (Cash & Pruzinsky, 1990). Body image constructs include perception, attitude, cognition, behavior, affect, fear of being fat, body distortion, body dissatisfaction, cognitive-behavioral investment, evaluation, preference for thinness, restrictive eating, and body esteem (Brown, Cash, & Mikulla, 1990). In general, body image is a person's positive or negative attitude towards their body, particularly size, shape, and aesthetics (Cash, 2002).

Indirect Aggression: Indirect aggression, defined by Bjorkqvist et al. (1992b), is a behavior aimed at inflicting harm to a person in such a manner that intent to harm is disguised or not recognized, likelihood of a counter-attack is slim, and if possible, the identity of the aggressor will remain unknown. The aggressor may manipulate the social structure in order to disguise the aggressive behavior and/or avoid personal identification. Feminists theorized indirect aggressive behaviors are strategies some individuals use as a form of competition (Brown, 2003; Tanenbaum, 2002). Participants' self-reported use of indirect aggressive behaviors will be measured by the newly developed Indirect Aggression Scale-Aggressor version (Forrest et al., 2005). This measure includes 3

subscales: social exclusionary behaviors, malicious humor behaviors, and guilt induction techniques, which will be defined below.

Social Exclusionary Behaviors: The Social Exclusionary subscale measures participants' self-reported efforts to socially exclude others.

Malicious Humor Behaviors: The Malicious Humor subscale assesses the degree to which the participants report using humor to harm others.

Guilt induction techniques: The Guilt Induction Techniques subscale addresses self-reported behaviors whereby guilt is intentionally induced to harm others.

Global Self-Esteem: Global self-esteem is defined as a positive or negative attitude toward oneself (Rosenberg, 1965). It has also been defined as an evaluative component of how well a person prizes, values, approves, or likes him or her self (Blascovich & Tomaka, 1991). Rosenberg (1965) highlights the difference between high and low self-esteem. A person with high self-esteem respects him or her self, considers him or her self worthy, does not necessarily consider him or her self better than other individuals, but certainly does not view him or her self as worse. A person with high global self-esteem realizes that he or she is not perfect. Rather, they recognize their limitations and expect to grow and improve. On the other hand, low global self-esteem implies self-rejection, self-dissatisfaction, and an overall negative self-image. A person with low self-esteem lacks respect for the self he or she observes. The Rosenberg Self-Esteem Scale (Rosenberg, 1965) will be used in this study to measure participant's level of global self-esteem.

CHAPTER II

REVIEW OF LITERATURE

The purpose of this study was to examine the relationships of appearance schemas and global self-esteem with participants' self-reported use of indirect aggressive behaviors among college women. In this chapter, the research literature on aggression and indirect aggression, as well as body image and self-esteem issues will be reviewed. The first section will address the construct of aggression including the history and definition of direct and indirect forms of aggressive behavior. The second section will focus on body image issues (e.g., appearance schemas) for women and how that influences competitive behavior. The third section will address the construct of global self-esteem and will include an examination of how people's beliefs about themselves influence their interactions with others.

Aggression

History

Research on the conceptualization of human aggression has great value considering the adverse consequences of aggressive behavior. In extreme cases, human aggression has had devastating effects on individual's lives and well-being. Atrocities such as World War II and the Holocaust have produced worldwide concerns and tribulations for individuals victimized by such aggressive acts. It is no surprise that early researchers turned attention towards understanding human aggression (Bandura, 1973; Berkowitz, 1969; Buss, 1961).

In keeping with scientific standards, early researchers conducted empirical studies on observable forms of aggressive behavior in laboratory settings. Direct aggressive behavior was the primary focus of these studies because they could be easily observed and measured (Warner, 2004). Subsequently, early aggression literature indicated that human aggression was characterized by direct acts of physical and verbal behavior that were carried out with harmful intentions (Eagly & Steffan, 1986). As researchers continued to explore and understand this phenomenon, it became clear that there was more complexity to human aggression than was being defined (Feshbach, 1969). Original definitions of aggression did not account for types of aggressive behavior when the intent to cause harm was hidden or disguised. As researchers gained a better conceptualization of aggression, they began to focus on the differences between direct and indirect forms of aggressive behavior.

Definition of Aggression

Direct aggression is defined as any overt behavior directed toward another person that is carried out with the intent to cause harm. In addition, the perpetrator must believe the behavior will harm the target, and that the target is motivated to avoid the behavior (Baron & Richardson, 1994; Bushman & Anderson, 2001). Examples of direct forms of aggression are clearly cited in the literature and include behaviors such as physical assault, destruction of property, rape, and verbal attacks (Bandura, 1983; Baron & Richardson, 1994). Berkowitz (1969) argued that aggression is a direct result of the negative emotions elicited by antecedent aversive events (e.g., provocations). While these definitions were viable, they were somewhat limited. Thus, Feshbach (1969) extended these ideas and classified aggression as "intentional" and "unintentional". It was

suggested that expressive, instrumental, and hostile aggression were three different forms of intentional aggressive behavior.

Expressive aggression was defined as direct physical or verbal behaviors that resulted in harm or injury to a person or object. Feshbach and Sones (1971) considered this type of behavior to result from an intense emotional expression of anger, frustration, or rage. In other words, the aggressive behavior is a derivative of an intense negative emotional response, which may result in harm. The authors noted that in expressive aggression, the person's primary intent is to express the negative emotion. However, the person may or may not have intended to harm a target.

By contrast, hostile aggression was defined as an aggressive behavior wherein the person specifically intended to cause harm to a target (Feshbach & Sones, 1971). Hostile aggression has been regarded as being impulsive, driven by anger, and having the ultimate motive of harming a target (Anderson & Bushman, 2002). This classification most closely aligned with previous definitions of direct aggression. Because direct forms of aggression are easily observable, this led to the development of standardized measures of hostile aggression such as the Buss-Durkee Hostility Scales (Buss & Durkee, 1976).

Feshbach and Sones (1971) classified a third type of aggressive behavior, instrumental aggression, which was defined as an aggressive act aimed at attaining instrumental goals such as money, social status, or power through harming a target person or object. Instrumental aggression was considered a deliberate form of aggression and ultimately motivated by personal gain. It has also been described as, "a premeditated means of obtaining some goal other than harming the victim" (Anderson & Bushman, 2002, p. 29). Other researchers expanded upon Feshbach's notion of instrumental

aggression. For instance, Bandura's work on social learning and aggression created an additional slant to the notion of instrumental aggression. He argued that aggressive behavior can include a social objective and subsequently coined the term 'social-instrumental aggression' (Bandura, 1969).

Bandura (1969) was one of the first researchers to acknowledge that individuals do not ordinarily aggress in blatant, direct ways because these behaviors carry a high risk of consequences. Other researchers argued that aggressive behavior should be conceptualized in terms of context, social learning, intent, judgment, and gender (Bjorkqvist, Lagerspetz, & Kaukiainen, 1992a; Rule & Nesdale, 1974). The distinctions made between variations of aggressive behavior (e.g., intentional, unintentional, direct and indirect) highlighted the importance of conceptualizing aggression as a complex form of human behavior that is influenced by multitude of different variables. Of particular interest to this study is the influence of gender on aggressive behavior.

Gender Differences in Aggression

In aggression research literature, the majority of research focused on direct forms of aggression in the male population for variety of reasons. Direct aggression can be more easily observed and measured. Early researchers indicated that men were more aggressive than women (Eagly & Steffen, 1986; Frodi, Macaulay, & Thome, 1977; Hyde, 1984). Such a narrow view of aggression led to a gender bias in the literature. Early researchers sought to explain gender differences in aggression in terms of biological distinctions (Campbell, 1995; Maccoby & Jacklin, 1974). However, other investigators emphasized the role of cultural norms, gender roles, and socialization on gender

differences in aggressive behavior (Bandura, 1983; Bjorkqvist, et al., 1992a; Crick & Dodge, 1994; Gilligan, 1993).

Professionals in society also developed a cultural bias toward women who engage in anger expression and indirect aggressive behaviors as a way to resolve conflicts and to cope with their emotions. This was evidenced in the development of the passive-aggressive personality disorder diagnosis (APA, 1980), which was dropped from the next version of the diagnostic manual (DSM-IV) approximately 14 years later (APA, 1994). The fact that women were the primary recipients of this diagnosis exposed a cultural bias of societal attempts to pathologize women's experience of anger and aggression. What was apparent was the misunderstanding of the cultural (e.g., gender role socialization) influences on women's choice to utilize indirect aggressive strategies versus direct aggressive strategies.

In terms of social role theory, Eagly, Wood, and Diekmann (2000) argued that gender roles influence values and beliefs about gender traits, which impact different patterns of behavior. Because women are socialized differently than men, it stands to reason that gender role socialization would have an influence on women's choice to use indirect aggression versus direct forms of aggression. In line with this theory, Bandura (1973) postulated these social learning processes enable cultural values to be passed down through generations by parents, peers, schools, and the media to produce greater male than female direct aggression. This makes sense considering the male-dominant, patriarchy-based society, which approves of aggressive behavior in males but shames aggressive behavior in females (O'Conner, 1970).

In comparison to females, males are typically socialized to engage in more aggressive behaviors. This is particularly evident in the sports industry where dominance and competition is glorified. Feminists point out that historically, sports have predominately been the territory of men. In early 1900's, a director of physical education declared that competitive sport is an "unnatural activity for girls, likely to distort their natures" (Tanenbaum, 2002, p. 292). This yields the question, 'what is the socialized feminine nature'? American cultural values suggest in order for a woman to be truly feminine, she should be a happy, passive, quiet, non-confrontational caretaker. In addition, she must also be young, white, blonde, fashionable, and thin (Tanenbaum, 2002).

Since females typically value interpersonal relationships, they do not want to be regarded as hindering those relationships. Furthermore, cultural norms perpetuate the idea that women rely more heavily on social relationships than men, with the implicit role of being selfless and focusing on the needs of others. Because women are more likely than men to be caretakers, it does not follow that women are necessarily less angry or aggressive in their relationships. Quite the contrary! Their self-sacrifice and subjugation of needs can often lead to feelings of anger and resentment, whether it is expressed openly, indirectly, or often denied by women themselves. These feelings of anger and resentment can influence competitive reactions, which are characterized by a need to cope with an unequal world (Tanenbaum, 2002). Most often, however, women are not afforded the same 'rights' as men to openly express their anger without fear of social retribution. Feminists argued that women have not been socialized to express their anger openly due to sociopolitical and cultural influences (Brown, 2003; Gilligan, 1993). It was

suggested that females were taught not to openly express their anger and aggression because it is viewed as 'un-nice' and 'unladylike' (Gilligan, 1993). Therefore, if women express the normal human emotion of anger, including aggressive behaviors (e.g., yelling, hitting), they are often ridiculed, considered unfeminine, shamed, labeled as "the bitch" and sometimes dismissed by others.

Additionally, it was suggested that as females develop relationships, they learn about the importance of conformity (Tanenbaum, 2002). In other words, to be included, one must act and behave in socially acceptable ways. For a woman, that means conforming to the feminine gender role of being accommodating, happy, willing to please, youthful, thin and beautiful. Thus, the desire to be liked and to avoid negative social consequences may result in women developing ways to engage in less observable forms of anger and aggression as a compensatory strategy to conform to gender roles and maintain their relationships with others. To the extent a woman believes she will be shamed, labeled as "the bitch", retaliated against, or dismissed for expressing anger and aggression, she is more likely to display indirect and ambiguous aggressive forms of behavior.

Openly expressing aggressive behaviors would be in direct contrast to a woman's gender stereotype. The gender role variation captures the marked difference in how women and men are socialized to express aggression: it is acceptable for males only to openly express aggression. Despite the fact that social and cultural mores characterize the traditional feminine role as non-aggressive, it is unrealistic to think that women are never angry, bitter, resentful, dominant, competitive, or aggressive. These characteristics are normal emotions and behaviors for any human being, women included. However,

because some women believe the idea that being aggressive is acceptable only for men and they learn there are often more negative social consequences for being competitive and aggressive, they often hold back their anger or disguise it in ambiguous behaviors (Tanenbaum, 2002).

While early theorists (Eagly & Steffen, 1986; Frodi et al., 1977) argued that males were more aggressive than females due to gender role socialization, they did not account for the complexity and variation of aggressive forms of behavior. By taking a broader conceptualization of aggression into account, current researchers argue that women may be just as aggressive as men; however, women may differ in their expression of anger (Simon & Nath, 2004). For example, women may be more likely to engage in indirect forms of aggressive behavior such as gossiping about someone or excluding an individual from a group. Campbell (1999) reported that girls are significantly higher than boys on becoming friendly with someone as revenge. They use personal information about a female friend to gossip, shun, and ostracize her from the social network.

Tanenbaum (2002) declared, "Rather than confront the people whom we feel have wronged or unfairly bettered us, we express our aggression indirectly, through social sabotage, gossip, or vague double entendres" (p. 61). As researchers gained a better understanding of this construct as it related to women's experience, the expanding body of literature included alternative classifications of aggression, which included indirect forms of aggressive behavior.

Indirect Aggression

Definition

In recent decades, researchers found that definitions of aggression did not accurately identify a subset of aggressive behaviors in which an individual uses an indirect approach to harm someone (Eagly & Steffen, 1986). As a result, new research materialized to explain aggressive behavior when the intent to harm is hidden or disguised. Research on the topic of indirect aggression evolved in three different areas: childhood aggression, female aggression, and workplace aggression. The terminology used to describe indirect aggression varied within and between the populations studied.

For instance, Feshbach (1969) was one of the first researchers to examine the concept of indirect aggression and labeled it as such. Feshbach (1969) observed the reactions of boys and girls in dyads to the introduction of same- and opposite-gender newcomers. Indirect aggression was measured by observing participants' attempts to reject and exclude the newcomer. Feshbach (1969) acknowledged it was difficult to observe indirect aggression, which limited the range of measures. Additionally, the researcher pointed out discrepancies in the literature by claiming there was limited information regarding sex differences in the use of indirect social means of aggressive behavior.

In keeping with the original nomenclature as identified by Feshbach (1961), Lagerspetz, Bjorkqvist, and Peltonen (1988) used the term indirect aggression to describe children's deliberate attempts to leave out others from the group. Cairns, Cairns, Neckerman, Ferguson, and Gariepy (1989) conducted similar research on the childhood population, but used the term 'social aggression' to portray the social manipulation characteristics of indirect aggression. To complicate matters further, another group of researchers exploring indirect aggression in children and adolescent populations

established the term 'relational aggression' (Crick & Grotpeter, 1995). In studies examining indirect aggression among workplace employees, indirect aggression was identified as 'covert aggression' (Bjorkqvist & Osterman, 1992). Furthermore, the development of the passive-aggressive personality disorder (APA, 1980), which was typically diagnosed in women, also created confusion in classifying and defining indirect aggression.

Researchers argued the different names addressed various aspects of indirect aggression (Archer, 2001). For instance, Archer (2001) initially argued that Bjorkqvist and his colleagues' conceptualization of indirect aggression only addressed one form of indirect aggression, specifically, "that involving verbal suggestions to others that they combine to exclude and reject the individual concerned" (p. 268). He argued that not all forms of indirect aggression are social (e.g., do not involve communication) or relational (e.g., do not involve suggestions about relationships), so the terminology should have different classifications.

In contrast, Bjorkqvist (2001) argued that the various names are definitionally similar. He claimed that all types of aggression are social because, aggression "implies a conflict between at least two people or parties, and it always has to do with social relations" (p. 273). Furthermore, he claimed the concept of indirect aggression was established long before labels such as social and relational aggression and the invention of new labels create confusion. In a more recent article, Archer and Coyne (2005) supported this notion and claimed since there are very few overall differences between indirect, relational, and social aggression, they preferred the term indirect aggression as an umbrella term. They argued that researchers should "acknowledge that they are

dealing with essentially the same phenomenon but with minor differences of emphasis” (p. 226).

The variation in terminology has created a blurred conceptualization of indirect aggression and a lack of cohesion in the body of research focusing on this construct. Forrest and colleagues (2005) used the term 'indirect aggression' in the development of a new instrument designed to measure indirect aggressive behaviors among adults. The authors stated they, "preferred a definition which sees aggressive behaviors as strategies employed to achieve identified goals rather than as goals in themselves" (p. 85). Forrest and colleagues (2005) conceptualization of indirect aggression is consistent with the investigation of indirect aggression in the current research study. While indirect aggression is the selected terminology used for this study, the other forms of nomenclature (e.g., relational, social) will be used when discussing studies relevant to the different groups of researchers.

By definition, indirect aggression is a behavioral response chosen by a person when direct forms of aggression are considered unacceptable or inappropriate according to the individual's evaluation of normative behavior (Lagerspetz et al., 1988). Indirect aggression has also been identified as a subtle form of aggression in which the perpetrator harms the target by damaging or manipulating his/her relationships or status in the peer group rather than by making overt attacks (Salmivalli & Kaukiainen, 2004). Bjorkqvist et al. (1992a) described the concept of indirect aggression as a behavior aimed at inflicting harm to a person in which the intent to harm is disguised or not recognized, likelihood of a counter-attack is slim, and if possible, the aggressor will remain anonymous. Additionally, the aggressor may manipulate the group dynamics in order to disguise the

aggressive behavior and avoid personal identification. Feminists argued that indirect aggressive behaviors are strategies that women use to compete with one another (Brown, 2003; Campbell, 2003; Tanenbaum, 2002). The common denominator between these definitions is the emphasis on social interactions and behaviors that are manipulated in order to disguise or hide the aggressor's true intent (Forrest et al., 2005).

Several behaviors have been identified with observed acts of indirect aggression, such as interrupting, unfair judgment of work, starting rumors which may or may not be true, excluding an individual from the group, and rational-appearing aggression in which a person says something harmful/hurtful whilst making it appear to be said in politeness or fun (Bjorkqvist, Osterman, & Lagerspetz, 1994; Brown, 2003; Forrest et al., 2005; Kaukiainen et al., 2001). The indirect way in which individuals express aggression has created challenges for the scientific community. Due to the discreet nature of these behaviors, it is often difficult to accurately identify and measure. Subsequently, few instruments exist to measure indirect aggression in various populations.

Measurement of Indirect Aggression

To address measurement issues, researchers developed self- and peer-report instruments designed for use within childhood and adolescent populations (Bjorkqvist et al., 1992b; Crick & Grotpeter, 1995). The Direct and Indirect Aggression Scale (DIAS, Björkqvist, Lagerspetz, & Österman, 1992) is used as a peer estimated rating scale and has been used in both childhood and adult populations (Bjorkqvist et al., 1992; Warner, 2005). Instruments have also been designed to measure adult indirect aggression in specific settings. The Work Harassment Scale (WHS, Bjorkqvist & Osterman, 1992) and the Overt-Covert Aggression Scale (OCAS, Kaukiainen et al., 1997) have been used in

research focused on adult populations in the workplace and prison settings. Because the WHS and OCAS were designed for adults in specific settings, "research is possibly restricted by the fact that there have been no systematic studies to date that identified the forms adult indirect aggression takes in day-to-day adult interactions" (Forrest et al., 2005, p. 86).

Forrest and colleagues (2005) recognized the need to develop an instrument designed to measure participants' self-reported use of indirect aggressive behaviors in every day adult interactions. As a result, they developed the 25-item Adult Indirect Aggression Scale based upon findings from qualitative interviews. There are three subscales of the IAS. The Social Exclusionary scale measures participants' self-reported efforts to socially exclude others. The Malicious Humor scale assesses the degree to which the participants' report using humor to harm others. The Guilt Induction Techniques scale addresses self-reported behaviors whereby guilt is intentionally induced to harm others. Due to the recent development of this measure, it has not been widely used in research. Only two known published studies to date have utilized the Adult Indirect Aggression Scale (Forrest et al., 2005; Sergeant et al., 2006).

It is clear that empirical investigations of this construct are few considering the challenges of defining, observing, and measuring behaviors that are often concealed in networks of social structures and under veneers of humor and politeness. However, the few measures available and the increasing understanding of this type of behavior have provided opportunities for empirical investigation to occur. Addressing the development of indirect aggressive behaviors, Bjorkqvist, Osterman and Kaukiainen (1992c) conceptualized a developmental theory of aggressive forms of behavior.

Development of Indirect Aggression

Bjorkqvist and colleagues (1992c) postulated in early childhood, children begin using direct forms of aggression such as kicking and hitting because they have less developed verbal and social skills. Eventually, they learn this form of behavior is tolerated less in social situations, particularly among females due to gender role socialization. As children mature in verbal and social skills, they learn different ways of being aggressive without having to resort to physical force. Therefore, they replace overt forms of aggression with indirect forms of aggression, such as shouting, swearing and arguing. With further social maturation, children begin to develop less observable forms of aggressive behavior in which indirect verbal strategies tend to replace more direct means of aggressive behavior. The development and refinement of indirect aggression has been associated with increasing sophistication in social intelligence skills (Kaukiainen et al., 1999). When children develop more social intelligence, which allows them to analyze social relations, they are more able to manipulate others and behave in indirect aggressive ways.

In comparison to boys, girls are typically socialized to place a higher value on social relationships and connection to others. As a result, their social skills may develop at an earlier age than boys. Research has shown that girls generally develop forms of indirect aggressive behavior earlier than boys (Bjorkqvist et al., 1992a; b), although the prevalence of this behavior eventually evens out with age. Results from a meta-analysis across 70 studies showed no gender difference in the use of indirect aggression, although effect sizes varied according to age (Scheithauer & Petermann, 2002). This finding suggests that although females tend to engage in indirect aggression earlier than males,

both genders equally engage in indirect aggressive strategies as they mature into adolescence and adulthood. It is important to note, however, that whereas males generally engage in both direct and indirect forms of aggression, females typically utilize indirect forms of aggressive behavior. Gender role socialization may account for these gender differences in aggressive behavior.

Women are usually taught to inhibit expressions of anger and frustration because these behaviors are socially inappropriate or 'un-lady-like'. According to Hochschild's (1981) theory of emotion, cultural beliefs about emotion create expression norms that specify the emotions individuals should and should not feel and express in certain contexts. Therefore, if females are socialized from an early age that expression of anger is bad, they have to develop and rely on less observable forms of anger expression such as indirect aggression. The next section will highlight some of the recent studies examining the construct of indirect aggression.

Correlates of Indirect Aggression

Gender differences in aggression have generated theoretical propositions and empirical investigations in the body of literature focusing on indirect aggression. Bjorkqvist (1994) postulated that if behaviors for aggression are learned, females are likely to learn different strategies than males. From an evolutionary perspective, Campbell (1999) hypothesized that males typically engage in direct forms of physical aggression more frequently than females from a very early age.

Campbell (2004) theorized that women are more reluctant to engage in overt forms of aggression, specifically because they must survive in order to care for their children. She claimed that women's greater use of indirect forms of aggression and

competition is a result of their higher parental investment. In other words, in order to maintain survival, females engage in behavior that is low-risk for retaliation. Campbell suggested one way females compete with less fear of retaliation is through indirect acts that ostracize, stigmatize, or socially exclude their competition. This indirect form of aggression serves to inflict stress and damage the rival's reputation and social support. Furthermore, in accordance with evolutionary goals, she argued, "women usually compete for mates by advertising qualities valued by men (e.g., beauty and sexual exclusiveness) and by using indirect means of denigrating rivals (e.g., through gossip and stigmatization)" (p. 1).

Tananbaum (2002) elaborated on the claim that females engage in behavior that is low-risk for retaliation. Specifically, she theorized that due to women's unequal amount of power, many of the women she interviewed, "expressed fear of physical, economic, or emotional retaliation if they openly expressed opposition and competitiveness towards someone more physically or socially powerful, or they feared negative professional consequences" (p. 63). In other words, the manner in which a woman appraises and utilizes indirect aggressive strategies in the social environment requires a personal evaluation of the potential costs and benefits of their actions. Consistent with this line of thought, Bjorkqvist and colleagues (1994) developed the effect/danger ratio model of indirect aggression to account for why some individuals select indirect aggressive strategies versus overt aggressive behaviors.

Effect/Danger Ratio Model of Indirect Aggression

According to this model, individuals select certain behaviors based on their evaluation of potential costs and benefits (Warner, 2004). Bjorkqvist and colleagues

(1994) identified this process as the "effect/danger ratio", which means that an individual selects a behavioral strategy according to the potential costs and benefits of their actions. The indirect aggressive strategy is typically played out between dyads and usually involves a third person as part of the social context. It is important to note the aggressive act is typically done behind a person's back or disguised in humor or fun. It is of central importance because it means the indirect aggressive behavior is not directly attributable to the aggressor, and therefore it runs a lower risk of retaliation.

Rational appearing aggression is an example of indirect aggression that may occur between two people without necessarily involving a third party. Rational appearing aggression can be described as making a snide or sarcastic remark while making it appear to be said in fun or politeness (Forrest et al., 2005). In the context of the effect/danger ratio, the aggressor may make a comment so ambiguous that it is difficult for the victim to know how to interpret it (e.g., the aggressor's harmful intent is disguised 'in fun') (Kowalski, 2003). The victim has difficulty assessing the aggressor's intent and is therefore, less likely to retaliate. Furthermore, ambiguity allows perpetrators a way out (e.g., avoiding retaliation) when they realize their aggressive intent might be exposed. In order to decrease the likelihood of retaliation, they can always say, "I was just kidding" or place blame back on the victim as if they were the wrongdoers for questioning the aggressor's behavior. In this example, the aggressor is able to manipulate the social conversation in such a way that they lower the risk of personal retaliation while maintaining the effect of the aggressive and competitive act (e.g., harming the victim).

Researchers examined the effect/danger ratio regarding individual's self-reported use of indirect aggressive behaviors among adolescent and adult populations (Bjorkqvist

et al., 1992a, 1992b). Results indicated the effect/danger ratio was associated with variables related to social structures, such as formation of in-groups, cliques, and relationships with power differentials. In this respect, the evaluation of an effect/danger ratio is considered an elemental component in one's decision to use indirect aggressive strategies (Bjorkqvist et al., 1992 a, b).

Other Variables Associated with Indirect Aggression

The research literature reveals a number of variables associated with indirect aggression such as psychological and emotional maladjustment problems (Crick & Grotpeter, 1995; Crick et al., 1999; Linder et al., 2002; Werner & Crick, 1999), popularity (Cillessen & Mayeux, 2004; LaFontana & Cillessen, 2002), issues of jealousy, competition, status, and beauty (Parker Schoening, 2005), network density (Richardson and Green, 1996), perceptions of emotional support problems (Lord, 2005), empathy and social anxiety (Loudin et al, 2003; Sergeant et al., 2006).

Some evidence suggests that relational aggression can be positively associated with popularity, and relationally aggressive children can be perceived as having positive characteristics (Cillessen & Mayeux, 2004). Cillessen and Mayeux (2004) used peer nomination measures to conduct a 4-year longitudinal study examining developmental changes in the association between physical and relational aggression and social status on 440 girls and 465 boys from Grade 5 to Grade 9. It was found that popular adolescents used relational aggression to facilitate and maintain their social circles. Also, as participants grew older, they increasingly accepted direct and indirect forms of aggressive behavior in peers they liked and to peers they perceived as having status and power. On the flip side, it was found that over time, there was a significant negative correlation

between relational aggression and social likeability. In other words, just because they were popular didn't mean they were always liked. However, it was reported that the rewards of power and status associated with popularity outweighed the potential consequences of decreased likeability for the aggressors.

In a similar vein, Parker Schoening (2005) was interested in exploring the relationships between friendships, jealousy and relational aggression among preadolescent girls. Qualitative interviews were conducted with 29 middle school girls, 10 through 13 years of age. Results indicated themes of jealousy and competition, preoccupation with social status, popularity, appearance and the need to belong. The researcher claimed, "This research looked beyond the appearance of social status in order to understand its function" (p. 124). In other words, the researcher explored what achievement of social status meant to preadolescent girls. Themes emerging from this study revealed that girls used relational aggression as a way to achieve social status or popularity, and social status meant, "security, identity and a place to belong" (p. 124).

Cillessen and Mayeux (2004) indicated that relational aggression is positively associated with social skillfulness and favorable outcomes in gaining status and power in social circles. Subsequently, they argued that the social benefits of utilizing relational aggression may be an adaptive form of behavior. This idea is inconsistent with other studies indicating relationally aggressive individuals are more likely to experience social, emotional, and psychological maladjustment problems (Crick & Grotpeter, 1995; Richardson & Green, 1996; Werner & Crick, 1999), constructs that theoretically overlap to some degree with self-esteem problems.

Crick and Grotpeter (1995) examined 491 third- through sixth-grade children's peer- and self-report of relational aggression and overt aggression. Measures assessing self-reported loneliness, social anxiety, and depression were also administered to participants. Results provided evidence that girls were significantly more relationally aggressive than male participants, and relational aggression was significantly associated with problems in interpersonal functioning and psychological maladjustment problems for both genders (e.g., relationally aggressive participants reported significantly more experiences of being socially rejected and higher levels of loneliness, depression and isolation).

Richardson and Green (1996) examined the relationship between dense social networks and self-reported use of indirect aggression in 148 undergraduate college-age male and female participants. Results indicated that network density was correlated with aggressive responses in males but not associated with aggressive responses in females. In other words, females tended to use indirect aggression in dense and less dense social networks, whereas males tended to use indirect aggression in dense networks of friends. Furthermore, the researchers found that individuals who had been identified as using indirect aggression faced more social retributions than those who had not been identified. Negative consequences for both genders included peer rejection and negative well-being. Of interest, indirectly aggressive females reported feeling lonelier and more socially isolated than non-aggressive girls.

Crick and colleagues (1999) reported there is considerable evidence showing that relationally aggressive children are more likely to experience social, psychological, and emotional difficulties than are non-relationally aggressive children. Of interest, Crick's

(1996) study showed that children's tendency to use indirect aggression, "contributed significantly to the prediction of future maladjustment for both genders, and for girls, relational aggression was associated with increases in maladjustment over the course of the academic year" (Werner & Crick, 1999, p. 2). These studies suggest that individuals who have a tendency to use indirect aggressive strategies as children may also be susceptible to similar social, psychological, and emotional maladjustment problems as adolescents and adults if they continue to exhibit the same negative interpersonal style of using aggressive behaviors.

Because relational aggression is possibly stable over time and is associated with maladjustment problems, Lord (2005) utilized self- and peer-report instruments to examine the relationship between indirect aggression and perceptions of emotional support problems among 83 elderly men and women over the age of 60 living in a retirement community. Perceived social support problems have been associated with psychosocial adjustment problems and has been correlated with negative interactions with others (Lord, 2005). Results of this study indicated that participants who reported lower levels of perceived social support also reported being a victim and perpetrator of more indirect aggressive behaviors. This study indicates that social relationships, support, and status are uniquely related to indirect aggressive styles of relating to others. It also provides support for Crick's (1996) proposition that indirect aggression is possibly stable over time.

Linder and colleagues (2002) examined 104 college student's (70 females; 34 males) reports of relational aggression in the context of their romantic relationships. Results indicated relational aggression was positively correlated with frustration,

jealousy, ambivalence, anxious clinging behavior, and lower levels of relationship satisfaction for participants in this study. These results provide evidence that people who use interpersonally aggressive behaviors are likely to have maladjustment problems in their relationships.

Loudin and colleagues (2003) examined the cognitive factors of social anxiety and empathy to relationally aggressive behavior in 300 male and female college students, age 19 to 25 years old. They hypothesized that one's tendency to use relational aggression is influenced, in part, from how they interpret other's intentions. In other words, "people who make hostile or negative attributions regarding other's intentions, even when none are actually intended, may be more likely to use indirect aggressive behaviors to retaliate than individuals who do not make hostile attributions about other's intentions" (Loudin et al., 2003). These researchers suggested dispositional empathy, defined as the emotional and cognitive reaction of one individual to the observed experiences of another, may influence attribution styles. It was also hypothesized that social anxiety, defined as fearing negative evaluation and/or avoiding being with others, is another influencing factor on individual's attributions. Results from self-report measures utilized in this study indicated that participants who feared negative evaluation and individuals with poorer perspective taking skills were more likely than their peers to use relational aggression. The authors proposed, "It is possible that individuals who fear negative evaluation use relationally aggressive behaviors to deflect criticism/disapproval by focusing attention on the weaknesses of others" (Loudin et al., 2003, p. 437).

These findings are similar to Parker Schoening's (2005) study, which indicated that relational aggression functioned as a way to achieve security in situations that

threatened one's social status. If a person fears negative evaluation and subsequent lowering of social status within a group, they may engage in indirect aggressive and competitive strategies in order to protect their hierarchical position or value to others. As a result of American cultural values for beauty (e.g., thin, beautiful, youthful), women's body image often serves as an expression and source of their hierarchical position (Brown, 2003; Tanenbaum, 2002). Thus, if a woman has negative beliefs about her body, she may be more likely to fear negative evaluation from others. Of interest, fear of negative evaluation has been associated with the development of negative body image and eating disorders in women (Gilbert & Meyer, 2005). The development of body image dissatisfaction and eating disorders is a salient feature of social-psychological maladjustment problems for women.

In this vein, Werner and Crick (1999) examined the social-psychological adjustment of 225 sorority and fraternity members who engaged in indirect aggressive behaviors. A peer-nomination instrument was utilized to measure relational aggression and self-report instruments were used to measure the other variables. Several measures of maladjustment were included (e.g., Peer Assessment of Relational Aggression, Social Adjustment Scale, Satisfaction with Life Scale, The Personality Assessment Inventory, stress, depression and perceptions of nonsupport scales). It was reported that previous researchers failed to consider how aggression might be associated with adjustment problems that are more characteristic of women. Thus, the authors included two adjustment measures particularly relevant to females: features of borderline personality disorder and disordered eating patterns.

The researchers found that peer-rated relational aggression was associated with higher levels of peer rejection, lower levels of prosocial behavior, and more antisocial and borderline personality features for both genders. Of interest, results indicated relational aggression was also significantly associated with more bulimic symptoms, for women only. This is the first study to link relational aggression to eating disorders among women. Considering the adverse effects of eating disorders, body image dissatisfaction, and social maladjustment problems, these findings underscore the need for continued research in the area.

Although it is widely known that women often relate to other women in indirect aggressive and competitive ways (Tanenbaum, 2002), relatively little empirical information is currently available regarding the nature of indirect aggression in the college female population. Morales and colleagues (1999) reported, "College students identify relational aggression as examples of hurtful behaviors enacted by peers, in particular by women towards other women" (cited in Werner & Crick, 1999, p. 2). While it is acknowledged that some college women relate in hurtful, indirect aggressive ways towards their female peers, little is known about factors that may motivate college women to engage in these types of behaviors.

College is an important developmental time in a woman's life. Women are often socialized to value relationships in general, and social networks may be particularly important to girls who are moving away from home for the first time. This is particularly evident in the Greek system, in which women often join sororities for socialization opportunities and group acceptance (Allison & Park, 2004). Additionally, college is a time when women are typically exposed to societal pressures to be thin and beautiful.

Schulken and Pinciaro (1997) claimed sorority women are a subgroup of the college population that has been anecdotally associated with preoccupation with body image and appearance.

Cash, Theriault, and Annis (2004) argued that one's body image perception is a socially constructed phenomenon, and "it is reciprocally related to how people experience their interactions with others" (p. 90). Werner and Crick's (1999) recent finding that relational aggression was strongly associated with bulimic symptoms in their sample of college women indicates that body image issues might play a unique role in why women use indirect aggression as a way to compete with other women.

Our culture's narrow conception of beauty creates pressing issues for women who try to live up to unrealistic standards that are usually impossible to achieve. Research provides evidence that body dissatisfaction is a pervasive problem with a number of negative consequences (Hargreaves & Tiggemann, 2002). Problems include increased eating disorders (Rosen, Saltzberg, & Srebnik, 1989), increased activation of anger (Hargreaves & Tiggemann, 2002) and decreased self-esteem (Harter, 1999). Furthermore, researchers reported in their sample of male and female adolescents (e.g., 245 boys and 173 girls), female participants' self-reported negative body images were strongly associated with poor relationships with other girls, whereas male participants' negative body images were significantly associated with poor opposite-sex peer relationships (Davison & McCabe, 2006). The fact that bulimia has been linked to indirect aggression in females only seems congruent to previous findings that negative body image is associated with eating disorders, feelings of anger and anger expression (e.g., indirect aggression) and poor same-sex relationships with other girls.

Additionally, Loudin and colleague's (2003) finding that college students who had greater fears of negative evaluation also tended to engage in increased rates of relational aggression suggests it is possible that women who have body image concerns may also be more likely to engage in indirect aggression if they encounter threatening social situations which lead them to negatively evaluate their appearance. However, no known study to date has examined the relationship between body image perceptions (e.g., appearance schemas) and indirect aggression among the college female population. The adverse consequences of eating disorders, body dissatisfaction, and aggressive behaviors underscore the importance of gaining a better understanding of how these variables are related to the unique experiences of women.

Indirect Aggression and Body Image

Researchers have shown that physically attractive people generally are received more positively, are perceived as more successful, possess more socially desirable traits, have more power and status, and are treated more leniently than less attractive people (Jackson, 2002; Patzer, 1985). In other words, physically attractive people often have unfair advantages when compared to less physically attractive people. Feelings of inequity may provoke competitive and aggressive urges in people who believe they are inferior and less socially desirable, which may spur angry and resentful feelings towards those people receiving privileged and preferential treatment (Brown, 2003; Tanenbaum, 2002). The social effects of body image are real, and it creates large differences between those who are considered physically attractive and unattractive. Subsequently, many women become pre-occupied with their body image and engage in behaviors to maximize the social rewards of being thin and beautiful (e.g., compete with rivals by using indirect

aggressive strategies to make them look worse by comparison) and minimize the costs of being overweight and unattractive (e.g., crash diets, food restriction, development of eating disorders).

Homans (1961) postulated there are reasons people attribute such great importance to their physical appearance. Essentially, people act towards self-interest: they behave in ways that maximize rewards and minimize costs. On a cultural level, societal importance of beauty and thinness may strongly influence women's beliefs about their bodies. For instance, negative social feedback, such as teasing and criticism, may have long-lasting effects on one's beliefs about their body. Cash and colleagues (2004) claimed, "These reflected appraisals convey two core messages to the developing person: (1) "What I look like affects my worth in the world," and (2) "What I look like is unacceptable" (p. 90). Subsequently, some women may develop maladaptive or dysfunctional beliefs about their bodies if they don't believe they compare to societal standards of beauty. Cash and colleagues (2004) further stated one's body image perception is equally related to how they experience others and interact with them. Thus, in an effort to maximize the social advantages of being considered more physically attractive, some women may compete with other women who make them feel inferior or less physically attractive by comparison. Thus, engaging in competitive and indirect aggressive behaviors, even if the behaviors are maladaptive, may function as a way to increase status and self-esteem, gain social advantages, and contribute to one feeling better or more superior than their competition.

Brown (1998) argued females are socialized to ventriloquise patriarchal attitudes about appropriate female appearance and behavior. Thus, feminists proclaim women

often compete (e.g., using indirect aggressive strategies) in areas they think men value (Brown; 2003; Campbell, 2004; Tanenbaum, 2002) such as body image, status, and power. Campbell (1995) found women only competed in areas available to them and areas that were also valued by men: acquiring a mate and raising children. She argued because males generally value beauty and thinness, this is the area where women use indirect aggressive strategies to compete the most.

Tooke and Camire (1991) asked men and women about strategies they used to compete with rivals and attract the opposite sex. Results indicated that men competed with other men via suggesting promiscuity and exaggerating superiority and popularity. Women revealed they competed with other women by alterations to their appearance, such as dieting, wearing make up and tight clothing. These results indicate that some women place high value on their body image and often compete in the body image domain. Additionally, other researchers found attractiveness related behavior appeared to be the most prevalent form or topic of female competition (Cashdan, 1998, Walters & Crawford, 1994). In other words, these results indicate body image may play a unique role in women's tendency to engage in indirect aggressive and competitive strategies towards other women.

Gossiping about rivals' appearance and reputation is an indirect aggressive strategy that women often use to compete with other women. Martin (1997) examined recorded conversations between male, female and mixed-sex dyads to investigate topics of gossip between and within genders. After removing obvious gender cues, participants were asked to identify the gender composition of the paired groups, and they were able to identify pairs with greater than chance accuracy. Participants reported using the topic of

conversation as a chief cue: women regularly discussed matters relating to other's appearance more often than men. In line with this study, Campbell (1986) argued that upon entering a group, a new woman is often seen as a threat, and group members employ aggressive tactics to compete with her. These tactics can include indirect aggressive strategies such as gossiping about her physical appearance, spreading false rumors, or damaging her reputation by labeling her as a whore or slut.

Hines and Fry (1994) conducted a qualitative study by examining themes that surfaced from ethnographic interviews of 95 middle-class women in Buenos Aires, Argentina. The women participants reported they were competitive, jealous, and envious of one another, and indirect aggressive strategies primarily centered on the areas of fashion and physique. Consistent with the social nature of indirect aggression, they found that women engaged in competition via indirect aggressive strategies within the context of their social relationships. Specifically, they found the women in their study used relationships in their attempts to socially exclude a particular woman perceived as a threat. For instance, indirectly aggressive participants would spread rumors or reveal information that made the woman seem less socially desirable or favorable. In other words, women from this study were well schooled in the socialization arena and often used the social knowledge gained about each other in an effort to compete with their rivals.

Hines and Fry (1994) reported the women in their study valued the traditional gendered roles of their culture, that is, in subordinate roles to men. The researchers reported the large majority of these women reacted negatively when shown an advertisement that depicted women in more powerful roles (e.g., decision-making roles).

There were similar negative reactions when the participants viewed ads that depicted Argentine women outside their traditional subordinate roles. The researchers concluded the women supported the traditional male values of their culture and in essence, supported the existence of male supremacy. Similarly, a review of Western societal literature revealed that women are often stronger enforcers of the double standard on sexual conduct and reputations than are men (Baumeister & Twenge, 2002). By damaging rival's reputations (e.g., labeling her a slut), self-esteem, and social support networks, aggressors are able to diminish their rival's status and increase their own status among their peers.

In a cross-cultural self-report survey investigating female aggression in 317 societies, Burbank (1987) found that female aggressive behavior is related to female competition over issues relevant to their livelihood and status within the culture. In Western culture, status and social acceptance is greatly enhanced by physical attractiveness and thinness, which suggests that women are likely to compete in this area. Burbank highlighted that female participants primarily used indirect aggressive strategies against their competition in the areas of sex and marriage, which suggested that attractiveness may be an elemental component of female status across many cultures. To the extent a woman views herself as physically unattractive and lower on the social hierarchy, she may be more likely to engage in indirect aggression as a way to denigrate her competition and make herself look better by comparison. Indirect aggressive behavior may serve as a way to maximize the personal rewards (e.g., increased status, privileged treatment, acquisition of a mate, money, and power) of being perceived as more physically attractive or superior than one's competition. If body image does have a

unique role in women's tendency to use indirect aggression, then it is important to gain a better conceptualization of the body image construct.

Body Image

Body image is defined as a multi-dimensional construct that refers to a person's attitude about their body, particularly about their physical appearance (Cash & Pruzinsky, 1990). "A woman's body image can be clear and detailed, fuzzy and vague, it can encompass her entire body or only certain parts, and be accurate or inaccurate" (Sanford & Donovan, 1984, p. 369). People often derive positive or negative attitudes about their physical appearance by socially comparing themselves to other's physical appearance. Social comparison is a process whereby we evaluate how we measure up in comparison to others (Festinger, 1954). In the area of body image, women tend to gather information about other women's physical appearance for the purpose of evaluating the way they look. Sanford and Donovan (1984) alleged a principle reason so many women have body image problems is that the western culture sends the message that women must be beautiful to be worthy and sets up standards for beauty that are usually impossible for women to achieve. Thus, the social comparison process typically occurs in the context of societal standards for beauty. Women may become dissatisfied with their bodies if they place high value in living up to societal standards for beauty that are usually impossible to achieve.

Hargreaves and Tiggemann (2002) asserted, "current societal standards for beauty inordinately emphasize the desirability of thinness, an ideal accepted by most women, but impossible for many to achieve" (p. 288). This notion has been identified as the thin-ideal. Specifically, the media has an over-representation of people who are unusually thin

and beautiful. Researchers claimed the average person spends a great deal of time observing physically attractive people in the media (Feingold, 1992; Hargreaves & Tiggemann, 2002). Individual's perceptions of attractive people also occur in the context of their everyday lives. For instance, women are influenced by family and peer pressures to be more physically attractive. Subsequently, these women often compare themselves to their physically attractive family members or peer groups as a standard for how they should look.

As a result of family, peers, media and cultural influences, women are often subjected to unrealistic standards for beauty. Idealistic standards such as the thin-ideal also influence some women to develop unrealistic body image expectations. In fact, body image dissatisfaction is so common among women, researchers coined the term *normative discontent* (Rodin, Silberstein, & Striegel-Moore, 1984). Research provides evidence that body dissatisfaction is a pervasive issue with a number of negative consequences and associated problems including depression (McCarthy, 1990), social anxiety (Grant & Cash, 1995), negative self-schemas (Braitman, 2001; Winterowd, Ledoux, Young, & Dorton, 2004), negative appearance-schemas (Cash et al., 2003) eating disorders (Rosen et al., 1989), lowered self-esteem (Harter, 1999; Richards, Casper, & Larson, 1990) and increased activation of anger (Hargreaves & Tiggemann, 2002). Of particular relevance to this study is the finding that body image dissatisfaction is related to increased activation of anger and decreased self-esteem.

Hargreaves and Tiggemann (2002) examined self-reported body dissatisfaction in 195 female and 206 male high school students who were exposed to 20 appearance-related or 20 nonappearance-related television commercials. Appearance-related

commercials contained female actors who symbolized societal ideals of thinness and attraction. Nonappearance-related commercials did not contain any women who resembled societal ideals of beauty. These researchers used schema theory to, "explore the underlying psychological processes by which media images and other sociocultural influences might affect body dissatisfaction" (p. 303). It was found that, "not only did exposure to appearance-related commercials lead to increased schema activation, but the regression analyses showed that schema activation partially mediated the effect of commercial viewing on appearance dissatisfaction (p. 303). Additionally, results of this study indicated women in the appearance-related condition reported feeling significantly angrier and less confident than women in the nonappearance-related condition. This study lends support to the current research investigation of the relationship between appearance schemas (e.g., body image) and anger expression (e.g., indirect aggression).

Idealized media images, unrealistic beliefs and maladaptive schemas can have negative effects on the body image perceptions of women. However, not all women are subjected to such negative evaluations of their bodies. Cash (2002) offered appearance-schema theory as an explanation for why some individuals are more vulnerable in developing negative body image beliefs than other individuals

Appearance Schemas

As individuals interact with their family, significant others and the external world, they begin to develop core beliefs about themselves in relation to the world (Beck, 1964). Researchers have referred to these core beliefs as "schemas" (Beck, 1964; Markus, 1977; Young, 1994). Schemas are defined as cognitive generalizations that individuals develop about themselves to organize and process self-related information (Cash & Labarge,

1996). In other words, a schema is similar to a lens through which an individual processes information (Young, 1994). People develop healthy and unhealthy schemas in different domains of life.

Developing in a culture that says one has to be thin and beautiful to be worthy and valuable sets the stage for the possible development of dysfunctional or maladaptive appearance schemas. Throughout development, maladaptive schemas may become more enduring and rigid, thus creating interpersonal difficulties (Young, 1994). Additionally, people with maladaptive appearance schemas can have dysfunctional and/or unrealistic views of their bodies in relation to the social world. Of particular interest to the current study is the appearance schema domain.

Appearance schemas are cognitive structures that people use to process self-related information about their physical appearance (Cash et al., 2003). Many times, women use other women as a reference group to process information related to their body image. As women are subjected to unrealistic standards for physical appearance through familial, cultural and sociopolitical pressures, maladaptive appearance schemas may become more enduring and rigid, thus creating mood and body dissatisfaction. It is likely that women may develop maladaptive appearance schemas as a result of significant negative experiences related to their physical appearance in comparison to other's appearance. Consistent with the cognitive-behavioral perspective, Cash et al., (2003) stated, "Contextual events activate schema-based processing of self-evaluative, affect-laden information about one's appearance (p. 2).

As outlined by Rotenberg, Taylor, and Davis (2003), cognitive priming is the process by which the accessibility of a particular schema is increased by recent or

repeated exposure to a similar schema. The proposal that body image is a cognitive schema that affects processing of appearance related information is consistent with the cognitive priming hypothesis (Altabe & Thompson, 1996). For example, women who experience body image dissatisfaction are vulnerable to the effects of negative cognitive (e.g., regarding themselves as inferior compared to a physically attractive female peer) and emotional processing (e.g., increased anger, decreased self-esteem) related to their appearance. In other words, these women may be more susceptible to negative thoughts, emotions, and behaviors towards themselves and others when processing information that seems threatening or distressing in some way.

Researchers tested the cognitive priming hypothesis in relation to body image by evaluating the effects of positive and negative mood induction procedures on 80 female undergraduate students (Rotenberg et al., 2003). Results indicated participants who reported having high negative body image at pretest and were instructed to evaluate their physical appearance, demonstrated increases in negative body image perceptions after exposure to a negative mood induction procedure. Conversely, participants reported a reduction in negative body image perceptions after exposure to a positive mood induction procedure. These research findings yield support for the cognitive priming hypothesis, which is consistent with the conceptualization of body image as a cognitive schema (Rotenberg et al., 2003).

Theorists suggest when a person's schema becomes activated, they have a heightened sense of awareness to additional information that fits their cognitive lens (Altabe & Thompson, 1996). In the case where maladaptive appearance schema exists, schema activation of threatening and distressing information may have negative

cognitive, emotional, and behavioral consequences (Hargreaves & Tiggemann, 2002). For example, a female with negative appearance schemas may become highly alert to other attractive females. Because she has negative beliefs about her body, she may conclude she is unattractive in comparison to her competition. This psychological evaluation process may increase her body image dissatisfaction (e.g., negative beliefs about herself) and strongly influence negative emotional (e.g., increased activation of anger) and behavioral (e.g., indirect aggressive strategies) reactions. Body image dissatisfaction has been shown to arouse negative emotions such as anger and depression (Hargreaves & Tiggemann, 2002).

Researchers conclude that while all humans develop basic appearance-related schemas, the importance of appearance to the self is more highly developed in some individuals identified as “appearance schematic” (Labarge et al., 1998). In other words, for some individuals, appearance is strongly tied to their sense of self and worth as a human being. Appearance-schematic individuals develop more elaborate appearance schemas in which their appearance becomes the core basis of self-evaluation (Tiggemann, 2005). Therefore, appearance becomes crucial and integral to an appearance-schematic individual's self-concept and feelings of worth as a person (Tiggemann et al., 2004). Cash (2002) posited self-esteem may be the most pivotal personality factor that influences one's body image attitude, whereas “A positive self-concept may facilitate development of a positive evaluation of one's body and serve as a buffer against events that threaten one's body image” (p. 41).

Labarge and colleagues (1998) proposed appearance schematic individuals will be selectively attentive to appearance-related aspects of presented material, such as models

in magazines or attractive people they encounter in their everyday lives. Research provides evidence that appearance schema activation acts as a mediating variable between a priming event (e.g., models in commercials, exposure to attractive females in everyday life) and changes in mood and body dissatisfaction (Hargreaves & Tiggemann, 2002). Specifically, individuals who scored higher on appearance-schematicity as measured by the Appearance Schemas Inventory, also reported increased body dissatisfaction and negative mood (e.g., anger) when exposed to thin-ideal appearance-related commercials.

Similarly, Sinton and Birch (2006) conducted a study examining individual and sociocultural influences on pre-adolescent girls' self-reported appearance schemas and body image dissatisfaction. The researchers used a median split on the Appearance Schemas Inventory (Cash & Labarge, 1996) to categorize participants into high and low appearance schemas. Results indicated a significant positive correlation between high appearance schemas scores and levels of depression, perceptions of parental influence on weight concerns, appearance related interactions with other girls, body image dissatisfaction, and awareness of media messages when compared to participants in the low appearance schema category. One critique of this study is that the researchers did not utilize the newer and more psychometrically sound version of the appearance schemas inventory (Appearance Schemas Inventory-Revised; Cash, 2003), which may have affected the results of this study. However, the results are generally consistent with previous findings.

Consistent with Cash's (2002) cognitive-behavioral model on body image, individuals who have negative appearance schemas may have distorted or dysfunctional

thoughts and beliefs about their appearance (e.g., magnifying and over-generalizing defects, excessive use of appearance-related causal attributions for negative events, and biased social comparisons). For these women, appearance schema activation may induce negative emotional experiences, which subsequently influence self-regulatory coping behaviors to deal with the internal distress.

Cash (2002) hypothesized the development and maintenance of one's body image perception (e.g., appearance schemas) is influenced by historical and proximal events. Historical events include familial and cultural socialization concerning the values and standards of physical appearance, experiences with others, one's actual physical characteristics, and personality factors. Proximal events are characterized by situations that trigger and maintain appearance related thoughts and beliefs such as self-talk and emotional reactions. Each situation contributes to the individual's self-evaluation of their body image by activating their appearance schematic process. To the extent an individual engages in distorted and dysfunctional thinking about their body image, they are likely to experience distressing reactions such as anxiety, shame, guilt, decreased self-esteem and anger. Consequently, behavioral strategies designed to minimize or cope with the psychological and emotional distress may reflect the individual's distorted and dysfunctional style of thinking. Negative strategies may include (but are not limited to) eating disorders, surgical alteration of body parts due to body image dysphoria, and/or the development of direct and indirect aggressive behavioral strategies to compete with rivals who make one feel inferior.

Correlates of Negative Body Image

Negative body image has been associated with a wide array of variables such as internalization of the thin-ideal (Cash, 2003; Hargreaves & Tiggemann, 2002), eating disorders (Stice & Shaw, 1994; Twamley, & Davis, 1999), decreased self-esteem (Harter, 1999), social comparison, (Cash et al., 2003), and social rejection (Feingold, 1992). Researchers indicated greater appearance schema investment is correlated with, “greater internalization of societal/media ideals of appearance, poorer body-image evaluation, more body-image dysphoria, and poorer overall body-image quality of life” (Cash, 2003, p. 2). According to Cash (2003), it is important to evaluate a person’s core beliefs regarding the importance of appearance in one’s life.

In a study conducted by Cash, Cash, and Butters (1983), women were exposed to one of three conditions: magazine photos with physically attractive people, magazine photos of physically attractive people which were identified as professional models, and magazine photos with physically unattractive people. Participants in the physically attractive condition rated their own attractiveness lower than did people in the other two conditions. Results suggested that peer-groups may be an important appearance comparison target or source of threat and competition in addition to professional models in the media. This finding is important when considering that body dissatisfaction and disordered eating may be more prevalent in certain social groups if the shared value emphasizes societal standards for beauty and thinness.

This is particularly evident in the Greek system, where sorority women make up a social group that has been associated with a fixation on appearance and 'fitting in' (Schulken & Pinciario, 1997). Schulken and Pinciario (1997) examined 627 sorority

women's body size perceptions and weight-related attitudes and behaviors to determine if sorority members constituted a subgroup of college women who may be at increased risk for eating disorders. Results indicated that sorority participants reported having a greater fear of becoming fat, were more dissatisfied with their bodies, and were more concerned with dieting and weight than college woman from previous studies. The participants did not score higher on self-report scales of bulimia, but results did indicate this social group shared the 'thin-ideal' body profile as the acceptable standard for beauty.

Another study investigating characteristics of women who rushed sororities found participants were more attractive, had higher family incomes, and reported that they were more willing to try to fit in (Atlas & Morier, 1994). It has been suggested that self-esteem is somewhat dependent on social acceptance and rejection (Leary & Downs, 1995). This concept is particularly evident in the Greek system where students who want to be accepted endure a social evaluation process. "Many young women yearn to be accepted by exclusive, female-only cliques, such as college sororities" (Tanenbaum, 2002, p. 68). Some women experience a greater level of self-esteem when they feel accepted by other people. Conversely, the stress of not fitting in typically influences decreased self-esteem.

Self-esteem has been strongly associated with one's level of physical attractiveness (Eklund & Bianco, 2000). Harter (1999) found participants who reported more positive body image tended to report higher global self-esteem. Additionally, physical attractiveness has been linked to social acceptance and rejection (Feingold, 1992). These are important considerations when examining social groups, such as college sororities, that place high value on physical attractiveness and peer acceptance. The social climate of valuing beauty and thinness and individuals' strong desire to be accepted by

others may influence many of these women to become preoccupied with their body image in order to be more highly valued and accepted by their peers. Furthermore, when some women fail to live up to societal standards of beauty, they may be at greater risk for developing unhealthy coping styles (e.g., use of indirect aggressive strategies), dysfunctional appearance schemas, low-self esteem, and body dissatisfaction.

There is evidence that body dissatisfaction is associated with levels of emotional expression (Hayaki, Friedman, & Brownell, 2002). Studies provided evidence that female participants with eating disorders reported being less assertive compared to female participants who reported having normal eating patterns (Hayaki et al., 2002; Mizes, 1989; Williams et al., 1993). Women who internalize negative gender socialization messages may become less assertive in general, particularly in expressing emotions such as anger and aggression. Subsequently, they may use covert means of anger expression such as indirect aggressive and competitive behaviors.

Researchers examining the relationship between emotional expression and body dissatisfaction hypothesized body dissatisfaction could be altered through improving general levels of emotional expression (Hayaki et al., 2002). Thus, questionnaires were administered to 141 female undergraduate students assessing self-reported emotional expression, body dissatisfaction, non-assertiveness, and depression. Results indicated participants who reported greater body dissatisfaction also reported lower levels of emotional expression when controlling for the effects of BMI, non-assertiveness, and depressive symptoms.

Given that some women with eating pathology and body dissatisfaction are less assertive and less emotionally expressive, they may be more likely to internalize

problems with self-esteem, body image, and disordered eating. As a result, they may be less likely to develop healthy coping strategies to deal with situations and experiences that pose threats or challenges to their body image perceptions. For instance, if a woman compares her body image to a physically attractive female peer, that peer may pose a sense of threat or challenge to the woman who considers herself less physically attractive by comparison. If the woman has negative thoughts and beliefs about her own body (e.g., dysfunctional appearance schemas) and low self-esteem (e.g., dissatisfaction with herself), the negative cognitive processing may trigger negative behavioral strategies designed to cope with the internal distress. Specifically, she may react competitively with indirect aggressive strategies in her desire to surpass or one-up her threatening competition. "Coping is a survival mechanism conceptualized as a transaction between an individual and the environment in which a response is directed at minimizing the psychological, emotional, and physical burdens associated with the stressful situation" (Cash et al., 2005, p. 192).

Researchers developed the Body Image Coping Strategies Inventory (BICSI), in an effort to measure how individuals report managing the distress that result from threats or challenges to their body image (Cash et al., 2005). The researchers proposed an individual utilizes cognitive and behavioral tactics to adjust or cope with the distressing thoughts, emotions, and situations in the context of a threat or challenge to their physical appearance. They identified three different body-image threat coping strategies: appearance fixing behaviors, positive rational acceptance, and avoidance strategies.

Items in the appearance fixing factor consist of behaviors designed to change one's appearance by concealing or correcting a flawed physical feature (e.g., "I make a

special effort to hide or "cover up" what's troublesome about my looks). Positive rational acceptance strategies consist of mental and behavioral activities that emphasize the use of positive self-care, rational self-dialogue and acceptance of one's experience (e.g., "I remind myself of my good qualities"). Avoidant strategies entail behaviors designed to evade threats to one's body image thoughts and feelings (e.g., "I make no attempt to cope or deal with the situation"). Although the BICSI includes some strategies used when individuals are faced with internal distress due to body-image threats, another important factor to consider are individuals who react aggressively and competitively under conditions of internal distress, threat or challenge.

Researchers provided evidence that some individuals react competitively and aggressively under conditions of threat or challenge (Buss & Perry, 1992; Dioguardi, 2003) rather than reacting merely avoidant or passive. However, the authors (Cash et al., 2005) of the BICSI did not include aggressive/competitive strategies that individuals may use in order to cope with the distressing thoughts, emotions, and situations involving a threat to their physical appearance, although it is widely acknowledged that some individuals use competitive and indirect aggressive strategies as a coping skill under threatening situations (Gibbons-Bertero, 2003). D'zurilla et al. (2003) claimed that assessment of clients with an aggressive disposition suggests their behavior can often be conceptualized as a maladaptive attempt to solve or cope with a problem. This concept seems congruent to previous research findings that reported indirect aggression is associated with higher social-psychological adjustment problems (Crick, 1996; Werner & Crick, 1999).

Consequences of Negative Body Image

The consequences of a woman's negative beliefs about her body are many. She may feel inferior, insecure, incompetent, depressed, and angry. She may be resentful towards others who appear to have an unfair advantage. Tanenbaum (2002) emphasized, "The essence of resentment is a real or imagined powerlessness, which can lead to the denigration of everything you are not" (p. 55). Thus, it is natural to react in competitive and aggressive ways as a way to balance the inequalities.

Research provides evidence that physically attractive people are often perceived as more social, dominant, mentally healthy and intelligent than less attractive people (Feingold, 1992; Jackson, 2002). Consequently, the 'beautiful people' often receive more preferential treatment and resources (e.g., significant other, financial success, status, power). Less physically attractive women may feel threatened by more physically attractive females because they have less access to preferential treatment, resources and power. This may serve as a motivator for women to engage in coping behaviors that make their bodies more physically attractive as well as use indirect aggression to make their competition appear worse by comparison. Whereas Cash et al. (2005) proposed individuals simply engage in appearance fixing behaviors, positive rational acceptance, and avoidant coping strategies under conditions of body image threats, it is possible that some women may also use indirect aggressive strategies (e.g., gossip, snide remarks, social exclusion) to compete with one another under conditions that are particularly threatening or distressing. This concept may be particularly salient for appearance-schematic individuals.

In a society that equates the value of a woman with thinness and beauty, women may experience increasing levels of anxiety and decreased self-esteem when they believe their physical appearance is inferior to other female peers. Thus, “expression of anger may reduce anxiety because anger externalizes problems, whereas anxiety internalizes problems” (Tedeschi & Nesler, 1983, p.30). In other words, by externalizing a problem, a woman can rationalize there is nothing wrong with her and attribute blame or wrongdoing to an outside source. Unfortunately, the outside source may be a physically attractive female peer that threatens the woman’s sense of value and self-esteem as determined by her dysfunctional appearance schematic thought process. Consequently, one function of anger and aggression may be to cope with feelings of insecurity and/or inferiority (Tedeschi & Nesler, 1983). When a person feels insecure, there is a corresponding perception of lowering of status and loss of power in the context of interpersonal relationships.

If a woman believes her body image is inferior to other women, it is likely to influence her perception of her status, power, and evaluation of herself (e.g., self-esteem). If a woman’s investment in her physical appearance is so highly developed (e.g., appearance-schematic) that it becomes the core basis of her self-evaluation, it may become an unhealthy, dysfunctional, and maladaptive psychological process with many negative consequences. Because body image is integral to an appearance-schematic individual's self-concept, she may not only evaluate her appearance negatively, but she may also negatively evaluate her overall worth as a person (e.g., global self-esteem). Subsequent negative emotions (e.g., anger) and coping behaviors (e.g., indirect aggression) may be engendered as a result of this maladaptive psychological evaluation

process. While appearance schemas may be related to women's feelings of anger and anger expression (e.g., indirect aggression), it appears global self-esteem may also be a significant contributing factor in women's tendency to use indirect aggression towards other women whom they perceive as threatening to their body image and self-esteem.

Self-Esteem

Development of Self-Esteem

Rosenberg (1965) described self-esteem as a positive or negative attitude toward the self. Self-esteem is defined as an evaluative component of how well a person "prizes, values, approves, or likes him or herself" (Blascovich & Tomaka, 1991 p. 115). Although self-esteem is described as a positive or negative view of the self, it can fall along a continuum of different meanings. On one hand, a person may believe she is "very good", as in superior to others. Or she may believe she is "good enough", as in accepting both positive characteristics and imperfections (Rosenberg, 1965). According to Orenstein (1994), self-esteem develops from two different spectrums: how a person views herself, aspects of herself, or performance in areas that are important to her, and how a person believes others perceive her.

Often times, females seek social acceptance for their sense of value, which allows others to confer their sense of worth (Orenstein, 1994). These two fundamental avenues (e.g. self and others) are ways in which self-esteem is built up or torn down. If a woman places greater value on other's evaluation of her then she places on personal evaluation of herself, she becomes more susceptible to developing self-esteem issues. Thus, a woman who has self-esteem problems may experience a significant decreased sense of esteem if another person criticizes or makes her feel threatened in some way.

It has been suggested that self-esteem is somewhat dependent on social acceptance and rejection (Leary & Downs, 1995). Some women experience a greater level of self-esteem when they feel accepted by other people. Conversely, when some women are socially rejected, they experience a decrease in self-esteem. Contrary to women who have positive self-esteem, females who have self-esteem problems generally experience internal distress when they feel rejected or threatened in some way. Physical attractiveness has also been strongly associated with one's level of self-esteem (Eklund & Bianco, 2000). Thus, a self-esteem model was designed to explain differences between people who have a positive or negative body image.

Self-Esteem and Body Image

In lieu of the self-esteem model, Feingold (1992) hypothesized one's perception of attractiveness is largely influenced by their global self-esteem. Specifically, people who have high self-esteem in general also have a more positive view of their body. Conversely, people who have unstable or low self-esteem have more negative views about their physical appearance. The finding that global self-esteem is a strong personality correlate of self-rated physical attractiveness provides strong support for the self-esteem model (Feingold, 1992).

Researchers provided support for the self-esteem model in their studies examining the relationship between self-esteem and body image. Specifically, it was reported that participants who reported having positive self-esteem also reported body satisfaction. Conversely, participants reporting low self-esteem reported more body image dissatisfaction (Henriques & Calhoun, 1999; Russell, 2002; Worsley, 1981). In other words, a woman's view of herself is based partly on how satisfied she is with her body.

Researchers reported the most frequent reason overweight persons gave for participating in weight control programs was their desire to improve their body image and self-esteem (Hayes & Ross, 1987).

Sanford and Donovan (1984) theorized there are actually two types of self-esteem: global and specific. Global self-esteem is the measure of how much a person likes and approves of herself as a whole. Specific self-esteem involves how much she likes and approves of certain aspects of herself. They claimed if a woman places high value on a certain aspect of herself (e.g., body-esteem), her global self-esteem will be greatly affected by her specific self-esteem in that one area.

Evidence supports a common link between self-evaluations of body image and global self-esteem. Specifically, Harter (1999) found that individuals who reported having more positive body image tended to report higher global self-esteem. Additionally, Cash (2003) provided evidence of a significant relationship between body image perceptions (e.g., appearance schemas) and global self-esteem (as measured by the Appearance Schemas Inventory-Revised version and the Rosenberg Self-Esteem Scale).

Because society places great importance on physical appearance, many women regard physical attractiveness as an area that is important to their life. Thus, for some women, body image may serve as an important source of global self-esteem. If an appearance-schematic individual internalizes societal ideals of beauty and places high value on her physical appearance to confer her sense of worth, she is likely to have self-esteem problems if she fails to meet the cultural expectations for beauty. In other words, it is hypothesized that a woman who is high on appearance schematicity will most likely

have decreased global self-esteem compared to women who are aschematic, or low on appearance schematicity.

Davison and McCabe (2005) examined the relationships between body image and psychological, social and sexual functioning with 211 men and 226 women who ranged from 18 to 86 years of age. Participants completed several self-report questionnaires measuring body satisfaction, body image importance and behaviors, appearance comparison, self-esteem, depression, and sexual functioning. It was found that body image concerns were more prevalent among women than men. Specifically, in comparison to men, this study revealed women participants focused more on the social aspects of body image, compared their appearance to others more often, and were more concerned about being negatively evaluated. Additionally, body image was significantly and positively associated with self-esteem for all groups.

If a woman has negative beliefs about her self (e.g., low self-esteem) and significant negative beliefs about her body (e.g., dysfunctional appearance schemas), it follows that she may have negative emotional and behavioral reactions to persons or situations that trigger her distorted styles of thinking. Evidence suggests that self-esteem is strongly related to anger and aggression (D'Zurilla et al., 2003). It is possible that a woman with self-esteem and body image problems may use indirect aggression as a compensatory strategy to deal with feelings of internal distress. The next section will examine the relationship between self-esteem and aggressive dispositions.

Self-Esteem and Aggression

Baumeister and Leary (1995) claimed humans have social needs that include: viewing oneself positively (high self-esteem); believing others have a favorable view of

the self (social-esteem); and belonging to a social group that one views in a favorable light (group-esteem). Anderson and Bushman (2002) claimed it is a widely accepted notion that, "threats to these needs are often the source of aggressive behavior" (p. 44).

Although researchers established a link between self-esteem and aggression (Baumeister, Smart, & Boden, 1997; Buss & Perry, 1992; D'Zurilla et al., 2003), research on this topic has produced mixed findings. Some studies reported low-self esteem is related to aggressive dispositions (Buss & Perry, 1992; Green & Murray, 1973). For instance, in the development of the multidimensional Aggression Questionnaire, Buss and Perry (1992) reported significant negative correlations between self-esteem and the different dimensions of anger and hostility. This study supports the proposition that low self-esteem is associated with aggressive tendencies.

However, other studies reported aggression is associated with high self-esteem (Baumeister et al., 1997). Baumeister and colleagues (1997) hypothesized when an individual with an inflated self-concept is negatively evaluated by others, the discrepancy generates a sense of threat. The cognitive state of "threatened egotism" influences the individual to either: a) accept the negative evaluation and lower their self-concept, or b) reject the negative appraisal in order to maintain a positive view of their self. The first route might decrease self-esteem and increase negative emotions toward the self. Alternatively, the second path would maintain positive self-esteem, but instead would produce negative emotions toward the source of the threat, possibly leading to aggressive acts.

In an effort to examine the inconsistent findings, Perez, Vohs, and Joiner (2005) examined the opposing theories that high self-esteem and low self-esteem is responsible

for aggression. They assessed 140 college students' self-esteem and physical aggression via self-report measures. Additionally, each subject brought a current roommate to participate in the study. The roommates were asked to report the participant's level of self-esteem. The findings indicated that both theories might be correct. In support of both theories, self-esteem was related to aggression in a curvilinear fashion, such that very low and very high self-esteem people were more likely to report physical aggression than people with moderate self-esteem. Even further, researchers argue that aggression may also be explained by domain specific self-esteem.

To test the relationship between domain specific self-esteem and aggression, Webster and Kirkpatrick (2006) administered self-report measures of self-perceived mate value, social inclusion, global self-esteem, and aggression measures to 81 male and female college students. Results indicated that as social inclusion decreased, aggression and hostility increased. Further, the more participants perceived themselves as a valuable romantic partner, the less they used aggression. Higher global self-esteem marginally predicted decreased aggression when compared to participants with lower global self-esteem. This study provides additional evidence that self-esteem is related to direct forms of aggression, and it is possible that self-esteem is also related to indirect forms of aggression. The limited research that has been done seems to point in this direction.

For instance, researchers found a significant negative correlation between 477 female college students self-reported hostility towards other women and their global self-esteem and collective self-esteem (Cowan, Neighbors, DeLaMoreaux, Behnke, 1998). Hostility towards women was defined as resentment and mistrust of women, and collective self-esteem was defined as one's positive or negative affiliation to their gender

group. Dettinger (2005) suggested that while hostility is distinct from indirect aggression, the two constructs seem to share a common core.

Dettinger (2005) concluded that, “It is possible that there is also a link between low collective self-esteem and indirect aggression towards other women” (p. 25). She examined 180 male and female participants from a computer company and insurance company using self-report measures: the Work Harassment scale as the measure of indirect aggression, and the Rosenberg Self-Esteem Scale and the Collective Self-Esteem Scale as measures of self-esteem. Results from this study indicated there was no significant relationship between participant’s collective self-esteem and being the victim of indirect aggression. However, there was a relatively weak significant correlation between global self-esteem and indirect aggression, whereas male and female participants who reported higher global self-esteem reported experiencing less indirect aggression and participants who reported lower self-esteem reported experiencing being the victim of more indirect aggressive acts..

While this research sheds some light on the relationship between indirect aggression and self-esteem, it targets individuals who are the victims of indirect aggression rather than on the perpetrators of indirect aggression. It is clear more research is needed to explore the relationship between self-esteem and perpetration of indirect aggression rather than just focusing on individuals who are targets of indirect aggressive behaviors.

There is scant research in the literature that focuses specifically on the relationship between self-esteem and indirect aggression as it is currently defined and measured. Bushman and Baumeister (1998) noted some of the inconsistent findings in the

literature may reflect a problem in differentiating between positive self-esteem and narcissism. Similarly, the controversial findings may reflect a bias in the measurement of aggression, which until recently was only conceptualized and measured as physical and direct forms of aggressive behavior.

It is important to note the focus of this study is on global self-esteem, rather than narcissism or domain specific self-esteem, because 1) this was an exploratory study designed to establish baseline knowledge about the relationship between global self-esteem, appearance schemas, and indirect aggression in the aggressor population, 2) there was existing evidence that global self-esteem was significantly related to indirect aggression (i.e., Dettinger, 2005), and 3) there was existing evidence providing support for the relationship between global self-esteem and appearance schemas (Cash, 2002, Cash et al., 2004). Although controversy remains prominent on this topic, there is support that links self-esteem to aggressive dispositions. These findings underscore the importance of gaining a better understanding of the relationship between self-esteem and aggressive types of behavior, including indirect aggression.

Summary

Despite evidence that indirect aggression has negative implications for social behavior, little research has been done examining factors that may contribute to its use among the young adult female population. Aggression appears to be a universal part of the human condition, and women commonly use indirect aggressive strategies to compete against one another. This behavior has been described as the 'catfight' between women (Tanenbaum, 2002) and 'girl fighting' (Brown, 2003). It is clear that the construct of indirect aggression is complex and the correlates are many and varied. Because woman

often compete with other women in the body image arena, and body image has been shown to be strongly linked to global self-esteem (Harter, 1999), this study was developed to examine the relationship between appearance schemas, global self-esteem, and indirect aggression.

The overarching theoretical framework used for this study is cognitive theory. The application of the cognitive model to the observation of indirect aggression assumes that when a woman reacts competitively with indirect aggressive tactics, her behaviors are a result of her thoughts and beliefs about herself and the situation. Competitiveness is motivated by the desire to feel superior or better than others (Tanenbaum, 2002). Via extrapolation of cognitive theory, it is hypothesized that some women's desire to compete with other women is related to their beliefs or schemas of inferiority and inadequacy in the areas of body image and global self-esteem. Specifically, it is hypothesized that women identified as appearance schematic will be more vulnerable to dysfunctional styles of thinking about their selves and their bodies and will also be more likely to engage in indirect aggressive strategies as a way to compete with other women.

Results of this study may contribute to research literature examining indirect aggression as it takes place in adult everyday interactions, specifically among the young adult female population. Discovering if, and how, appearance schemas and global self-esteem are related to female's tendency to use indirect aggression could be of considerable importance to psychologists and other mental health professionals who wish to uncover the complex factors that hinder client's functioning in different areas of their lives (e.g., negative body image, eating disorders, negative self-esteem, unhealthy

interpersonal relationships with other women). The methodology of this study is further described in Chapter III.

CHAPTER III

METHODOLOGY

Participants

A total of 286 female college students from a rural, Midwestern, state university participated in this online study. In cases where less than 10% of data for a particular scale was missing, the mean score for each missing data item for the sample was entered. Of the 286 participants, 10 participants were missing significant amounts of data (more than 10% of a measure and more than one measure) resulting in 276 participants. After examining case wise diagnostics, three outliers were revealed and subsequently were not used in the analyses of this study. Of the 273 participants, 89% self-identified as single (n = 243), 7.7% self-identified as partnered (n = 21), 2.6% self-identified as married (n = 7), and .4% self-identified as divorced (n = 1) or widowed (n = 1). In terms of sexual orientation, 98.5% of this sample self-identified as heterosexual (n = 269), .4% self-identified as lesbian (n = 1), .7% self-identified as bisexual (n = 2), and one participant did not provide this demographic information. The majority of this sample identified as Caucasian (n = 214; 78%). Approximately 26% of participants self-identified as being racially diverse: African-American (n = 16; 5.9%), American Indian (n = 24; 8.8%), Asian (n = 14; 5%), Hispanic (n = 12; 4%), Bi-racial (n = 13; 4%), Multi-racial (n = 2; 1%) and 1.8% of participants self-identified as “other” race (n = 5).

In regard to academic class, approximately 40% of the sample self-identified as freshman students (n = 111), 19% self-identified as sophomore students (n = 52), 19%

self-identified as juniors ($n = 53$), 19% self-identified as seniors ($n = 52$), and 2% self-identified as graduate students ($n = 5$). Ages ranged from 18 to 25 ($m = 20.05$, $sd = 1.62$). Regarding family income, 28% reported an average family income of 90,000 ($n = 75$) or more, with a range of less than 10,000 to 90,000 or more. The mean height for this sample was 5 feet 5 inches tall ($sd = 2.65$ in) and the average weight was 139.5 pounds ($sd = 27.89$ lbs). See Table 1 for the demographics of this sample.

Measures

The data for this study was collected electronically. Participants completed a set of four questionnaires including a demographic form, the Rosenberg Self-esteem Scale, Appearance Schemas Inventory-Revised, and the Indirect Aggression Scale-Aggressor version. See Appendix E for the measures used in this study.

Demographic Form. The researcher collected information concerning age, gender, race/ethnicity, annual family income, highest level of education completed, year in college (e.g., freshman), marital status, sexual orientation, height, and weight on the demographic form. Participants completed this form only after they read the informed consent and agreed to participate in this study (see Appendix D)

Rosenberg Self-Esteem Scale (RSES; Rosenberg, 1965). The RSES is a 10-item measure of one's global self-esteem or feelings of self-worth (i.e., attitude toward oneself). Five of the items are positively framed, (i.e., "I feel that I am a person of worth, at least on an equal plane with others") and five of the items are negatively framed, (i.e., "All in all, I am inclined to feel that I am a failure"). Participants rate each item on a 4-point Likert scale (1 = strongly agree, 4 = strongly disagree). Higher scores indicate a positive view of oneself or higher global self-esteem. Specifically, the individual believes

that she is a person of worth, respects herself for what she is and does not stand in awe of herself. Lower scores indicate decreased self-esteem, self-rejection, self-dissatisfaction and lack of respect for the self she observes (Rosenberg, 1965).

The normative sample for the RSES was 5,024 high school juniors and seniors from ten randomly selected public schools. This sample represented both genders and a diversity of social classes, races, religious groups, rural and urban communities and nationalities (Rosenberg, 1965). Since the development of this instrument, the RSES has been used extensively with college students and adults (i.e., Allison & Park, 2004; Cash et al., 2004; Strickland, 2004).

The RSES is a widely used measure of self-esteem with strong reliability and validity (Silberstein, Striegel-Moore, Timko, & Rhodin, 1988). The RSES has good internal consistency (Cronbach alpha = .88) and test-retest reliability ($r = .85$) (Rosenberg, 1965; Silber & Tippett, 1965). Additionally, a recent study provided evidence of the reliability of the RSES by reporting an internal consistency of .95 for men and .94 for women (Cash et al., 2004). The internal consistency reliability estimate for the RSES for this sample was .90.

Research has shown a significant relationship between self-esteem and body image (Cash, 2003; Henriques & Calhoun, 1999; Russell, 2002). Specifically, the Body Image Quality of Life Inventory was significantly positively correlated with the RSES (men = $p < 0.001$; .68; women = $p < 0.001$; .61) providing evidence of convergent validity for the RSES (Cash et al., 2004). It has been suggested that the RSES be the standard test against which new self-esteem measures are evaluated (Robinson, Shaver, & Wrightsman, 1991).

The Appearance Schema Inventory-Revised (ASI-R; Cash, 2003). The ASI-R is a 20-item measure designed to assess one's psychological investment in their physical appearance. Participants rate each item on a 5-point Likert scale, (1 = strongly disagree, 5 = strongly agree). The ASI-R consists of two subscales: Motivational Saliency (8 items, e.g., "I try to be as physically attractive as I can be.") and Self-Evaluative Saliency (12 items, e.g., "When I see good-looking people, I wonder how my own looks measure up.").

Motivational saliency assesses the valuing and attending to one's appearance and engaging in appearance management behaviors. Higher scores indicate one places higher value on their appearance and engages in more appearance management behaviors to make their self look more physically attractive. Self-evaluative saliency includes beliefs that one's appearance is an important determinant of one's worth and experiences (Melnyk et al., 2004). In other words, it is one's psychological or schematic investment in their physical appearance. Higher scores indicate individuals will be more selectively attentive to appearance-related aspects of presented material, such as models in magazines or attractive people they encounter in their everyday lives.

It is important to note the motivational saliency subscale reveals less dysfunctionality relative to the self-evaluative saliency subscale (Cash, 2003). In other words, valuing and engaging in grooming behaviors in order to appear more attractive is not always maladaptive and does not necessarily indicate dysfunctional appearance schemas. However, there is a significant, positive relationship between the two subscales. Participants who score higher on the self-evaluative subscale also score higher on the motivational saliency subscale (Cash, 2003). Researchers (e.g., Cash et al., 2004;

Winterowd, Ledoux, Young & Dorton, 2005) have used the ASI-R total score rather than the subscale scores due to the higher internal consistency reliability of the overall score in comparison to the two subscale scores. The ASI-R total score appears to be a more reliable than the subscales and therefore will be used in the analyses of this study.

The normative sample for this measure consisted of 468 college women and 135 college men. The sample consisted of African American and Caucasian American college students 18 years of age and older. In terms of gender and race, Cash and colleagues (2003) reported, "women were more invested in their appearance on the composite ASI-R scales and on both subscales. White women were more self-evaluatively invested in their appearance than were African American women" (Cash, 2003, p. 3).

Empirical evidence provides evidence that the ASI-R is a reliable and valid measure. Internal consistency on the composite ASI-R scale for women in the normative sample was .88. Internal consistency for the Self-Evaluative Salience and Motivational Salience subscales for women in the normative sample were .82 and .90, respectively (Cash, 2003). Additionally, Cash et al (2004) examined the relationship between the newly developed Body Image Quality of Life Inventory (BIQLI) and other measures of body image dimensions. Specifically, they calculated Pearson correlations between the BIQLI and the ASI-R. Cash et al (2004) provided evidence of the reliability of the ASI-R by reporting both ASI-R subscales were satisfactory (Cronbach alphas > .80) for both males and females in their study. The internal consistency reliability estimates for this sample were as follows: .88 for overall score, .83 for the Self-Evaluative Salience subscale, and .81 for the Motivational Salience subscale. As mentioned previously, the ASI-R total score will be used in the analyses of this study.

The ASI-R has been significantly related to other body image measures (e.g., Body-Image Ideals Questionnaire, Body Image Quality of Life Inventory, Situational Inventory of Body Image Dysphoria, Multidimensional Media Influence Scale-Internalization Subscales), providing evidence of its convergent validity. It has also been significantly correlated with measures assessing aspects of psychosocial functioning such as global self-esteem and social self-presentational perfectionism (e.g., Rosenberg Self-Esteem Scale, Perfectionistic Self-Presentation Scale, Eating Attitudes Test-26). Of particular relevance to this study, the ASI-R was significantly negatively correlated (men = $p < .05$; $-.20$; women = $p < .001$; $-.40$) with the Rosenberg Self-Esteem Scale for both men and women in the normative sample, suggesting that individuals who have greater dysfunctional appearance schemas also have lower levels of global self-esteem. Results indicated, "somewhat stronger associations for women than men and with greater dysfunctionality of Self-Evaluative Salience than Motivational Salience" (Cash, 2003, p. 3). The ASI-R is considered to be a psychometrically sound instrument to assess one's schemas about the importance of appearance in one's life (Cash, 2003).

Indirect Aggression Scale-Aggressor Version (IAS-A; Forrest et al., 2005). This 25-item scale measures participants' self-reported use of indirect aggression towards someone else. Original instructions required participants to think about the extent to which they used each of the 25 behaviors towards other people in the past 12 months, using a 5-point Likert Scale (1 = never; 5 = regularly). For the purposes of this study, the original instructions were modified to assess women's use of indirect aggression toward other women instead of people in general. Specifically, participants were instructed to

think about when they had used this behavior towards another woman (women) in the past 12 months.

There are three subscales of the IAS-A. The Social Exclusionary scale measures participants' self-reported efforts to socially exclude other people (10 items, e.g., "spread rumors about them"; Cronbach alpha = .82 for the normative sample). The Malicious Humor scale assesses the degree to which the participants report using humor to harm other individuals (9 items, e.g., "made negative comments about their physical appearance"; Cronbach alpha = .84 for the normative sample). The Guilt Induction Techniques scale addresses participants' self-reported use of behaviors whereby guilt is intentionally induced to harm others (6 items, e.g., "pretended to be hurt and/or angry with them to make them feel bad about themselves"; Cronbach alpha = .81 for the normative sample).

The normative sample consisted of 196 college females and 88 college males with a mean age of 25 years old. The sample represented both genders and a diversity of social classes, races, religious groups, rural and urban communities and nationalities reflecting a fairly heterogeneous sample (Forrest et al., 2005). The subscales have good internal consistency reliability (Cronbach alphas ranged from .81 to .84 for the three subscales). Item discrimination was examined providing support for discriminate validity of the measure. Maximum Likelihood exploratory factor analyses were conducted on the subscales, which provided evidence of the internal construct validity of the measure. (Forrest et al., 2005). Factor 1 (use of malicious humor) accounted for 14.83% of the variance, factor 2 (social exclusionary behaviors) accounted for 12.25 % of the variance, and factor 3 (guilt induction techniques) accounted for 8.81% of the variance within the

IAS-A data. "The cumulative variation accounted for by these three factors is 35.89%" (Forrest et al., 2005, p. 89).

Additionally, a second version (IAS-T; Indirect Aggression Scale-target version) of this measure was developed to assess being a victim of indirect aggression. Both versions were found to have the same three subscales providing evidence for concurrent validity of this measure (Forrest et al., 2005). Although the authors preliminary research concludes psychometric properties of the two instrument versions are adequate, further validation work using confirmatory factor analysis is needed (Forrest et al., 2005).

Internal consistency reliability estimates for the IAS-A total score and subscale scores with this sample were as follows: .94 for the overall score, .89 for the Social Exclusionary subscale, .88 for the Malicious Humor subscale, and .81 for the Guilt Induction subscale. The principle components analysis of the IAS-A for this sample will be discussed in Chapter 4, Results.

Procedure

The data for this study was collected electronically. Female students were recruited from the Oklahoma State University Department of Psychology experiment sign-up site powered by Experimetrix sign-up software. Individuals in this participant pool are required to register with the Experimetrix experiment scheduling system by providing their email address and creating a confidential password. After registering, they are able to browse through a menu of experiments and voluntarily sign up for which ever experiment(s) they choose.

The current study was posted as an online experiment option limited to females only and was advertised as an investigation of factors related to body image. Students

required to complete a research project for course credit were informed by their course instructor of alternative methods to receive course credit if they chose not to participate. Those females who agreed to participate in this study read an informed consent form and were told that participation time should not exceed 30 minutes. They were informed their responses would not be connected to their names in any way and the data would be maintained in a secure computer database for the next five years. Clicking on the accept button indicated their agreement to voluntarily participate in the study. Upon completion of the study, participants were provided with a counseling resource list and encouraged to contact a counseling agency, if necessary.

The current investigation was part of a larger study during which time participants completed a demographic sheet and nine questionnaires, including the Appearance Schemas Inventory-Revised scale (ASI-R; Cash, 2003), the Relationship Questionnaire (RQ; Bartholomew & Horowitz, 1991), the Social Comparison Scale (SCS; Allen & Gilbert, 1995), the Rosenberg Self-Esteem Scale (RSES; Rosenberg, 1965), the Revised Restraint Scale (RRS; Herman & Polivy, 1980), the Indirect Aggression Scale-Aggressor version (IAS-A; Forrest et al., 2005), the Body Image Quality of Life Inventory (BIQLI; Cash & Fleming, 2001), the Situational Inventory of Body Image Dysphoria (SIBID; Cash, 2000), and the Body Areas Satisfaction Scale (BASS) of the Multidimensional Body-Self Relations Questionnaire (MBSRQ; Cash, 2000). The primary investigator used the RSES, ASI-R, and IAS-A for this dissertation project.

CHAPTER IV

RESULTS

The purposes of this study were to identify the component structure of the IAS-A, to explore the relationships between and among appearance schemas, self-esteem, and indirect aggression among college age women, including possible predictors of indirect aggression, as well as to investigate the unique contribution of appearance schemas in predicting indirect aggression when the relationship between self-esteem and indirect aggression was statistically controlled.

This chapter was organized by the research questions for this study. A principle component analysis was conducted to identify the component structure of the IAS-A. Pearson product moment correlations were conducted to determine the relationships among the research variables. A multiple regression analysis was conducted to explore the linear relationship of appearance schemas and self-esteem with indirect aggression. A hierarchical regression analysis was conducted to explore the relationship of appearance schemas and indirect aggression after statistically controlling for the relationship between self-esteem and indirect aggression. In the regression analyses, global self-esteem, as measured by the RSES, and appearance schemas (e.g., total score), as measured by the ASI-R, were the predictor variables. Indirect aggressive behaviors, as measured by the IAS-A, was the criterion variable.

Question 1

What is the component structure of the Indirect Aggression Scale-Aggressor version for this sample?

To conduct a meaningful factor analysis, Grill and Longshore (1996) recommended that there should be a minimum of 10 participants per item. Therefore, a minimum of 250 participants were needed for this study. The current sample included 273 participants.

It was expected that the component structure of the IAS-A for this research sample ($n = 273$) would be similar to the component structure of the IAS-A in the previous research literature (Forrest et al., 2005). This measure has not been widely used in research studies yet given that it was developed in 2005 (Forrest et al., 2005). Thus, a principle components analysis was conducted on the IAS-A items for this sample to determine the component structure of the IAS-A.

Based on the Kaiser rule (e.g., retain factors with eigenvalues greater than 1; Kaiser, 1970) and an inspection of the scree plot (Cattell, 1966), a one component solution was extracted. The one component had an eigenvalue of 9.18 and accounted for 36.73 % of the total variance in Indirect Aggression scores. All of the IAS-A items, except Item 1, loaded significantly (.40 or higher) on this component. Item 1 (“Used my relationship with them to get them to change a decision”) had an item loading of .38 and was retained due to the theoretical significance. See Figure 1 for the scree plot of the principle component analysis on the IAS-A ($n = 273$). See Table 3 for the item loadings on the one component solution of the IAS-A for college students ($n = 273$). A mean, standard deviation, and score range was calculated for the IAS-A. See Table 4 for the

descriptive statistics of this measure. The internal consistency reliability estimate for the IAS-A overall score for this sample was .94.

In summary, the component structure of the IAS-A for this sample was different than for the original sample in that only one component was found compared to three components in the original sample (Forrest et al., 2005).

Question Two

2. Are there significant relationships between and among indirect aggression, self-esteem and appearance schemas?

Pearson product moment correlations (two-tailed) were conducted to examine the relationships between and among indirect aggression, self-esteem, and appearance schemas. The null hypothesis was that there would be no statistically significant bivariate relationships between and among indirect aggression, self-esteem and appearance schemas. See Table 5 for a correlation matrix of the research variables.

2a. Is there a significant relationship between indirect aggression and self-esteem?

Indirect aggression was significantly and positively correlated with global self-esteem ($r = .15, p < .05$). Therefore, the null hypothesis was rejected. While this correlation was statistically significant, the strength of the relationship was relatively small. Participants in this study who reported more positive global self-esteem tended to report using more indirect aggressive behaviors towards other women. Participants who reported more negative global self-esteem tended to report using fewer indirect aggressive behaviors towards other women.

2b. Is there a significant relationship between indirect aggression and appearance schemas (e.g., total score)?

The null hypothesis was that there would be no statistically significant relationship between indirect aggression and appearance schemas. However, participants' use of indirect aggression was significantly and positively correlated with appearance schemas ($r = .25, p < .01$). Therefore, the null hypothesis was rejected. While this correlation was statistically significant, the strength of the relationship was relatively small.

Appearance schemas were measured by the Appearance Schema Inventory-Revised (ASI-R; Cash, 2003). Higher scores on the ASI-R indicate more psychological investment in one's appearance as a basis of self-evaluation and lower scores on the ASI-R indicate less psychological investment in one's appearance. Participants in this study who reported more psychological investment in their physical appearance as a basis for self-evaluation tended to report engaging in more indirect aggressive behaviors towards other women. Participants who reported less psychological investment in their appearance as a basis for self-evaluation tended to report using fewer indirect aggressive behaviors towards other women.

2c. Is there a significant relationship between self-esteem and appearance schemas?

The null hypothesis was that there would be no statistically significant relationship between global self-esteem and appearance schemas. Global self-esteem was significantly and positively correlated with appearance schemas ($r =$

.26, $p < .01$). Therefore, the null hypothesis was rejected. While this correlation was statistically significant, the strength of the relationship was relatively small. Participants in this study who reported more psychological investment in their physical appearance as a basis of self-evaluation tended to report more positive global self-esteem. Participants who reported less psychological investment in their appearance as a basis for self-evaluation tended to report more negative global self-esteem.

Question Three

3. What is the relationship of appearance schemas and self-esteem with indirect aggression?

The null hypothesis was that appearance schemas and self-esteem would not have a statistically significant linear relationship with indirect aggression. To answer this research question, a multiple regression analysis (enter method) was conducted to ascertain if global self-esteem and appearance schemas together significantly predicted participant's use of indirect aggressive behaviors towards other women. The predictor variables were entered into the equation simultaneously. The results of this analysis indicated that appearance schemas and global self-esteem were significant predictors of indirect aggression, $R = .27$; $F(2, 270) = 10.36$, $p < .001$ (see Table 6). The combination of these two variables accounted for 7 %, ($R^2 = .071$) of the unique variance in indirect aggressive behavior scores. Therefore, the null hypothesis was rejected.

Question Four

4. Do appearance schemas contribute anything beyond what self-esteem provides in predicting indirect aggressive behaviors?

The null hypothesis was that appearance schemas would not be a significant predictor of indirect aggression when the relationship between global self-esteem and indirect aggression was statistically controlled. A hierarchical regression analysis (stepwise) was calculated to study the effect of appearance schemas on indirect aggression after having controlled for self-esteem. Appearance schemas emerged with an $R = .25$; $F(1, 271) = 18.48$, $p < .001$ (See Table 7), and accounted for 6 %, ($\Delta R^2 = .064$), of the unique variance in indirect aggression. Therefore, the null hypothesis was rejected.

CHAPTER V

DISCUSSION

The purposes of this study were to explore 1) the component structure of the Indirect Aggression Scale, 2) the relationship between and among appearance schemas, global self-esteem, and indirect aggression, 3) the relationship of appearance schemas and global self-esteem with indirect aggression, and 4) the unique contribution of appearance schemas in predicting indirect aggression once the relationship between global self-esteem and indirect aggression was accounted for and statistically controlled. The theoretical and practical implications of the findings will be discussed in addition to exploring possible limitations of this study and directions for further research.

Indirect aggression is a relevant issue for women in patriarchal cultures, such as the United States. Given gender role socialization issues, women may turn to indirect rather than direct aggressive strategies considering indirect aggressive behavior is usually not attributable to the person who initiated it, and therefore runs a lower risk of retaliation. Some researchers have shown there are benefits and rewards associated with the use of indirect aggression (i.e., Cillessen & Mayeux, 2004), and others have argued there are negative social, emotional, and psychological problems associated with indirect aggression (i.e., Crick et al., 1999; Werner & Crick, 1999). While the study of indirect aggression is a relatively new area of study, the majority of researchers have focused on school aged children and adult workplace and prison populations.

Subsequently, Forrest and colleagues (2005) recognized the need to develop an instrument designed to measure self-reported indirect aggressive behaviors in every day adult interactions. They developed the 25-item Adult Indirect Aggression Scale. Preliminary psychometric evaluation of this instrument in the original study indicated there were three subscales of the IAS-A: Social Exclusionary subscale, Malicious Humor subscale, and the Guilt Induction Techniques subscale. One aim of the present study was to provide additional reliability and validity information for this measure by conducting an internal consistency reliability analysis and a principle component analysis.

Validity of the Indirect Aggression Scale-Aggressor version

In the original scale development, Forrest and colleagues (2005) found three significant components of indirect aggression (IAS-A): Social Exclusion, Malicious Humor, and Guilt Induction Techniques. Cronbach alphas ranged from .81 to .84 for the three subscales in the original study.

Results of the current study, however, indicated that the overall IAS-A score was more reliable than the subscale scores. Internal consistency reliability estimates for the IAS-A total score and subscale scores for this sample were as follows: .94 for the overall score, .89 for the Social Exclusionary subscale, .88 for the Malicious Humor subscale, and .81 for the Guilt Induction subscale.

A one-component solution emerged for the IAS-A for this sample, accounting for 36.73 % of the variance in indirect aggression scores. In the original study, the three components (Social Exclusionary, Malicious Humor, and Guilt Induction) accounted for a total of 35.89% of the variance in indirect aggression scores (Forrest et al., 2005). Although Forrest and colleagues (2005) aimed to explore variations of indirect

aggression, findings from the current study indicate that indirect aggression may be better conceptualized and measured as an overarching construct.

For this sample, IAS-A scores ranged from 25 to 125, with an average overall score of 44, which appears comparable to the overall average IAS-A score for women in the original sample ($m = 46$) and in a study examining indirect aggression in gay ($m = 40$) and heterosexual ($m = 41$) males (Sergeant et al., 2006). While interpretation of results should be approached with caution, the consistency in mean scores across these studies suggest that on average, participants self-reported use of indirect aggressive behavior for this sample is similar to the previous samples of participants (Forrest et al., 2005, Sergeant et al., 2006). The low average scores across these studies imply the there may be restriction of range issues. This may be due, in part, to the social undesirability of indirect aggressive behavior, whereas participants may not be as likely to admit the true prevalence of this behavior (Osterman et al., 1994). The effect of social desirability in self-report measures is a common limitation to consider in any research and could have affected the findings in this study.

Additionally, the results may have been affected by other factors given the on-line nature of this study. There may have been environmental factors, such as time (i.e., how much time each participant took to complete the measures), location differences (i.e., completing the survey at home, work, and/or school), and potential disruptions that could not be controlled in such an on-line study, which may have affected women's responses to survey questions. While random errors of measurement are present in any self-report study, the results of the principle components analysis as well as the internal consistency reliability estimate of the IAS-A (overall score) in this study provide some additional

evidence that this scale is a valid and reliable instrument to assess college women's self-reported use of indirect aggressive behaviors toward other women.

What is questionable now is whether there are three distinct and meaningful components of indirect aggression, as found in the original study, or is indirect aggression the overarching construct being measured, as was found in this study? Given that the use of this instrument is still in its infancy, more validation work is needed to confirm the reliability and validity of the IAS-A.

The Relationships between and among Self-Esteem, Appearance Schemas, and Indirect Aggression

Self-Esteem and Indirect Aggression. The overarching theoretical framework used for this study was cognitive behavioral theory. The application of the cognitive model to indirect aggressive behaviors assumes that when a woman reacts competitively with indirect aggressive tactics, her behaviors are a result of her thoughts and beliefs about herself and the situation. It was anticipated that some women's desire to compete with other women with indirect aggressive strategies was related to their beliefs or schemas of inferiority and inadequacy. In other words, indirectly aggressive women might have global self-esteem problems.

On the contrary, there was a statistically significant positive relationship between global self-esteem and indirect aggression among college women in this sample. College women who reported more positive global self-esteem reported using more indirect aggressive behaviors towards other women; women who reported lower global self-esteem reported using fewer indirect aggressive behaviors towards other women. While the strength of the relationship between indirect aggression and global self-esteem was

relatively small, these findings were consistent with some research findings supporting the relationship between indirect aggression and positive/resilient qualities of the person initiating those behaviors, in particular, popularity, social status, and positive characteristics (Cillessen & Mayeux, 2004; Parker Schoening, 2005). However, these findings were also contradictory to research findings supporting the relationship between indirect aggression and maladaptive features, such as increased depression, social isolation, and bulimic symptoms (Cashdan, 1998; Hines & Fry, 1994, Werner & Crick, 1999).

Appearance Schemas and Indirect Aggression. Appearance schemas were significantly and positively related to indirect aggression. Participants who reported higher appearance schema scores (i.e., higher scores indicate more dysfunctional styles of thinking about one's body image) reported using indirect aggressive behaviors more frequently towards other women. Participants who reported lower appearance schema scores (i.e., lower scores indicate more positive body image) reported using fewer indirect aggressive behaviors towards other women. However, the strength of the relationship was relatively small. The findings of the present study were consistent with previous findings that indirect aggressive competitive behavior has been significantly and positively associated with body image issues among girls and women (Cashdan, 1998; Hargreaves and Tiggemann, 2002; Hines & Fry, 1994; Martin, 1997; Werner & Crick, 1999). However, it is important to consider other potential factors that may have influenced the results and thus explain the findings.

For instance, participants in this study reported a low to moderate range of scores on both the Indirect Aggression Scale-Aggressor version and the Appearance Schemas

Inventory-Revised. The mean scores on IAS-A were comparable to other studies, which means that college women, on average, do not use, or do not accurately report their use of indirect aggression that often. Furthermore, on average, participant's scores on the ASI-R were in the low to moderate range, which means that most participants from this sample did not endorse high appearance schematic levels. Therefore, the relationship between these two constructs might have been stronger if there was a greater range in scores.

Additionally, we still need more knowledge about the contextual factors in which this type of behavior occurs. For instance, we do not know if the use of indirect aggression is targeted towards all women in general, to one person and not another, to particular groups of women, or in certain social situations (i.e., when feeling threatened by another attractive female). Aside from our understanding that appearance schemas are a unique underlying psychological variable that predicts college women's self-reported use of indirect aggression towards other women, the current measure of indirect aggression does not account for other contextual factors that may have influenced the results of this study. Knowing more about the context in which indirect aggressive behavior occurs is an important area for future research.

Appearance Schemas and Self-Esteem. Participants who reported greater investment in their appearance as a basis for evaluating their self-worth (i.e., higher appearance schema scores) also reported having higher levels of global self-esteem. Participants who reported less investment in their body image as a basis for self-evaluation (i.e., lower appearance schema scores) tended to report lower levels of global self-esteem.

Results of this study are contradictory to the majority of research findings in this body of investigation. Most studies indicate a significant, negative correlation between appearance schemas and global self-esteem (i.e., Cash & Pruzinsky, 1990; Cash & Labarge, 1996; Cash 2002; Cash et al, 2003; Cash et al., 2004; Cash et al, 2005). The discrepancy in findings may be explained by 1) the small strength of the relationship between these two variables and/or 2) the fact that participants in this study may be generally engaging in healthy styles of thinking about themselves overall, even if they have some body image insecurities, or 3) the possibility that the two constructs may share a significant overlap in theoretical similarities.

First, while the positive correlation is significant, its strength is relatively small. The restriction of range of scores may have affected the results of this study. Second, it is important to note that high scores on the ASI-R indicate maladaptive styles of thinking about one's body image, which can lead to body image distress. Low scores on the ASI-R indicate healthy and adaptive styles of thinking about one's body image. The low to moderate range of scores on the ASI-R represented in this study suggest that, on average, participants are dealing with some body image insecurities, but not highly dysfunctional body image perceptions as might be reflected in a clinical population.

Third, it is possible that the two constructs may share a significant overlap in theoretical similarities. Sanford and Donovan (1984) theorized there are actually two types of self-esteem: global and specific. Global self-esteem is the measure of how much a person likes and approves of herself as a whole. Specific self-esteem is the measure of how much she likes and approves of certain aspects of herself. They claimed if a woman

places high value on a certain aspect of herself (e.g., body-esteem), her global self-esteem will be greatly affected by her specific self-esteem in that one area.

Appearance-schematic individuals (higher scores on the ASI-R; Cash, 2003) develop more elaborate schemas in which their appearance becomes the core basis of self-evaluation or self-esteem (Tiggemann, 2005). It is possible that appearance schemas may function as a specific domain of self-esteem for participants in this study. In other words, the possibility of a significant theoretical overlap between global self-esteem and appearance schemas may have affected the results in this study. Future researchers should explore how specific domains of self-esteem are associated with women's use of indirect aggression towards others.

Appearance Schemas, Self-Esteem, and Indirect Aggression. When appearance schemas and global self-esteem were considered together in understanding indirect aggression, results indicated that they contributed about 7% of the unique variance in indirect aggression. While the linear relationship of appearance schemas and global self-esteem with indirect aggression was statistically and theoretically significant, it still left a large amount of indirect aggression unexplained.

Do appearance schemas contribute anything above and beyond what self-esteem provides in predicting indirect aggressive behaviors? Based on hierarchical regression findings, the answer to this question is yes. Results indicated that appearance schemas still accounted for 6 % of the unique variance in indirect aggression scores when the relationship between self-esteem and indirect aggression was statistically controlled. For this sample of college women, appearance schemas do appear to be more meaningful in understanding women's use of indirect aggression compared to global self-esteem (given

hierarchical regression findings). In summary, the main findings from this study are that women with higher global self-esteem and more negative body image perceptions were more likely to engage in indirect aggression towards other women than those with lower global self-esteem and more positive body image perceptions.

The significant relationship found between indirect aggression and appearance schemas in this study is consistent with previous findings that indirect aggressive competitive behavior is significantly and positively associated with body image issues among girls and women (Cashdan, 1998; Hargreaves and Tiggemann, 2002; Hines & Fry, 1994; Martin, 1997; Werner & Crick, 1999).

Cashdan (1998) and Martin (1997) found that gossiping about a rival's appearance and reputation was an indirect aggressive strategy that college women used to compete with other women in the body image domain. Similarly, Werner and Crick (1999) found that relational aggression was significantly and positively associated with body image issues (i.e., bulimic symptoms) among their sample of college female participants.

Findings from the present study contribute to the research literature which indicates that women may be competing with their rivals (i.e., using indirect aggressive strategies) in the body image domain as a result of their negative appearance schemas. In other words, it is possible that to the extent a woman views herself as physically unattractive compared to her peers as a result of her body image insecurities, she may be more likely to engage in indirect aggression as a way to denigrate her competition's reputation to make herself feel more superior by comparison.

Hines and Fry (1994) found comparable results in their qualitative study. The women tended to be very competitive, jealous, and envious of one another, and indirect aggressive strategies primarily centered on the areas of fashion and physique. The researchers concluded participants used indirect aggression in their relationships to socially exclude a particular woman perceived as a threat to their social status or ability to obtain a potential mate.

Similarly, in study examining high school students, it was hypothesized that if an individual has dysfunctional appearance schemas, exposure to appearance-related commercials may lead to body image dissatisfaction. Results indicated participants who were exposed to images of thin-ideal models reported increased feelings of body image dissatisfaction and anger when compared to participants in the non appearance-related condition (Hargreaves and Tiggemann, 2002).

While perceived threat was not directly assessed in the present study nor in the Hargreaves and Tiggemann (2002) study, it is possible that participants felt threatened as a result of their underlying psychological issues of body image insecurity, even if they feel good about themselves overall (as findings from the current study suggest). Psychologically, they may be struggling with mild negative appearance schemas and emotionally reacting with feelings of anger and jealousy. Subsequently, they may engage in indirect aggressive and competitive behaviors with other women they perceive as threatening as a compensatory strategy to deal with their psychological insecurities in the body image domain.

Given that studies have shown a significant, negative relationship between body image and self-esteem (Cash, 2002; Cash, 2003; Harter, 1999), and low self-esteem was

significantly related to direct forms of aggression (Buss & Perry, 1992; Green & Murray, 1973), it was anticipated that there might be a significant negative relationship between self-esteem and indirect forms of aggression. Supporting this idea, Cowan and colleagues (1998) found a significant negative correlation between female college students' self-reported feelings of hostility (a construct that overlaps to some degree with indirect aggression) towards other women and their global self-esteem. In another study exploring the relationship between indirect aggression and global self-esteem among victims of indirect aggression, it was found that participants who reported higher global self-esteem reported experiencing less indirect aggression and participants who reported lower self-esteem reported experiencing being the victim of more indirect aggressive acts.

Thus, while it was anticipated that indirectly aggressive women would report having lower levels of global self-esteem, results from this study did not support this idea. Sociopolitical and cultural factors may help explain the profile that emerged for women in this study, that is, women with higher global self-esteem and more negative body image perceptions were more likely to engage in indirect aggression than those with lower global self-esteem and more positive body image perceptions.

In Western culture, being thin and attractive seems to be an elemental component of female status and power, which suggests that women are more likely to have insecurities in the body image arena even if they feel good about themselves overall and thrive in all other areas of their life. Subsequently, they may use indirect aggression against each other to compete more in the body image domain versus other areas as a way to gain access to the social advantages of being thin and beautiful.

Thus, one function of indirect aggression is that it may serve as a way to maximize the personal rewards (e.g., increased status and self-esteem, privileged treatment, and acquisition of a mate, money, and power) of being perceived as superior to one's competition and to establish and maintain dominance in a social system that places high value on appearance. The findings of the present study as well as previous research findings provide evidence that indirect aggression can be significantly and positively related to resilient qualities of women initiating those behaviors, such as higher self-esteem (as was found in this study), as well as other positive qualities, including popularity, security, and social status (Cillessen & Mayeux, 2004; Parker Schoening, 2005).

Given researchers have documented potential benefits associated with the use of indirect aggression (i.e., increased popularity, security, power; Cillessen & Mayeux, 2004; Parker Schoening, 2005), it is possible that participants may actually enhance their overall self-esteem by using indirect aggressive strategies in an adaptive way, even though they feel insecure about their bodies. This idea may help explain the research findings of this study which indicated participants who used mild to moderate levels of indirect aggression endorsed more positive global self-esteem, but also endorsed more body image insecurities.

In regard to potential adaptive functions, the use of indirect aggression may also be commonplace in the formation of in-groups and out-groups. Thus, while indirect aggression can lead to disconnections for individuals in the out-group, it may be somewhat adaptive in that it can actually facilitate connections for individuals in the social circle. If this is normative social behavior, relational aggressors may feel better

about themselves and more connected to those around them than if their behavior is shunned or discouraged by others.

Indirect aggression as normative behaviors for women may also reflect new trends in gender role socialization. For instance, male-dominated characteristics of power, aggression, independence, and superiority are a highly valued recipe for success in American culture. Some women may choose to integrate indirect aggression into their repertoire of skills as a way to equalize the power imbalance, and to ultimately be more competitive and successful in a culture that values male-dominated characteristics. Thus, it is possible that consequences of such actions can be rewarding (i.e., increased self-esteem, social status) if women's environments support it.

In the context of global self-esteem, it seems likely that the status and power of popularity, friendships, and positive characteristics may all contribute to the aggressor's positive view of the self. Further research is needed to see whether women who have positive self-esteem and who use indirect aggressive tactics also have the rewards of power, popularity, and a sense of security in their relationships as found in other studies. Researchers should also go beyond broad domains of self-esteem and investigate the role of more specific domains of self-esteem in relation to indirect aggression.

It is possible that women may feel a sense of security in their relationships as a result of their indirect aggression, albeit, a false sense of security, which might temporarily elevate their over self-esteem. Having a better understanding of the role of attachment style and how connected or disconnected women feel from other women and/or men may provide important information in understanding the relationship between

self-esteem and women's use of indirect aggressive competitive strategies towards other women.

While indirect aggression has been significantly associated with positive characteristics, there are other research findings to support the maladaptive aspects of indirect aggression on personal and social well-being. The use of relational aggression has been associated with social, emotional, and psychological maladjustment problems in children (Crick & Grotpeter, 1995), and decreased likeability when indirect aggression was used over time (Cillessen & Mayeux, 2004). It has also been associated with more life dissatisfaction, higher rates of bulimic symptoms, more sadness, pessimism (Werner & Crick, 1999), loneliness, and social isolation in college students (Richardson & Green, 1996). These constructs theoretically overlap to some degree with self-esteem problems. In summary, research findings regarding the use of indirect aggression in childhood, adolescent, and college student populations imply that there are adaptive as well as maladaptive aspects of indirect aggression.

This exploratory research study sheds some light on the relationships between and among appearance schemas, global-self esteem, and indirect aggression. A meaningful profile of college women who use indirect aggression towards other women emerged: women with higher levels of global self-esteem, yet more negative appearance schemas tended to use indirect aggressive behaviors toward other women. Do appearance schemas add to the understanding of indirect aggression, above and beyond what self-esteem in general explains? Yes. Compared to global self-esteem, body image issues seem to be a more salient factor in explaining college women's use of indirect aggression. However, there is still much to learn about the factors that influence indirect aggression by women

towards women. Despite these statistically significant and theoretically significant findings, over 90% of the variance in indirect aggression scores was not accounted for by the variables in this study. Thus, further research is needed to uncover the other significant factors associated with indirect aggression by college women towards other women.

Implications for Practice

The main purpose of this research was to explore the relationships between and among appearance schemas, global self-esteem, and indirect aggression among college women. The rationale for this research is that factors related to women's aggression towards other women are important from a psychological and interpersonal framework. Psychologically, the issue is what differentiates those women who are more relationally aggressive from those who are less so and whether a woman's competitive behavior is related to her perceptions about herself and her body.

Interpersonally, the use of indirect aggression appears to focus on damaging women's reputations, which negatively affects women's relational self. Without a doubt, women's relationships with other women have been identified as one of the most complicated issues highlighted by feminists (Caplan, 1981). Some women's failure to relate in a positive way towards other women is, "an impediment to women's collective struggle, leading to competition with other women rather than shared cooperative goals (Cowan et al. 1998, p. 268). Thus, it is important that psychologists begin to understand whether indirect aggression has adaptive and maladaptive functions in the formation of social groups and hierarchies and what the costs and benefits are in women's interpersonal relationships when they engage in this type of behavior.

These are important considerations when examining social groups of college women, for example, sororities and women housed in residence halls, which may place a high value on physical attractiveness and peer acceptance. The social climate of valuing beauty and thinness and individuals' strong desire to be accepted by others may influence many of these women to become preoccupied with their body image in order to be more highly valued and accepted by their peers. Subsequently, if these women fail to live up to societal standards of thinness and beauty, they may be at greater risk for developing unhealthy coping styles (e.g., use of indirect aggressive strategies) to deal with their body image insecurities, even if they are thriving in other areas of their lives.

The findings of the present study suggest that getting clients to work on maladaptive beliefs about themselves and their bodies, to explore self-regulatory coping mechanisms when dealing with distressing and threatening situations, and to explore their defenses in developing and/or maintaining relationships with other women are imperative. Even if there are some benefits and adaptive ways to use indirect aggression for the aggressor, it still may be hurtful and/or detrimental to be on receiving end of indirect aggression. Helping clients to build more positive connections with women through other means besides indirect aggression is important. Equally important is for psychologists and other professionals in the college setting to be aware of these issues in order to facilitate prevention and intervention efforts among the female college student population.

In working with clients, it is important to recognize potential maladaptive coping skills, as one can then teach corrective behaviors and adaptive cognitions (i.e., positive rational acceptance strategies) and/or more appropriate interpersonal process skills.

Equally important would be for mental health professionals to address the potential emotional aspects of women's underlying anger and aggression. Allowing clients to process their anger may lead to the identification of other feelings such as sadness, fear, shame, and embarrassment. Processing the range of distressing emotions are important directions toward healing.

Furthermore, this study contributes to the literature in that it provides additional evidence that the Indirect Aggression Questionnaire-Aggressor version is a valid and reliable instrument to assess college women's self-reported use of indirect aggressive behaviors towards other women. However, in light of findings from the current study, it appears indirect aggression may be more accurately measured as a global construct (i.e., total score) rather than a dimensional construct (i.e., three subscales) as was originally proposed by Forrest et al. (2005). Additional validation work is badly needed to explore the discrepancy in these findings.

As previously mentioned, there are many issues involved in the assessment of indirect aggression due to measurement issues. While any study using self-report methods has limitations, this study does provide additional psychometric support that researchers, mental health professionals, and other helping professionals can utilize this instrument as a reliable and valid assessment tool in research and in applied settings.

Psychologists and other mental health professionals might use this instrument as a screening device to increase their conceptualization and treatment of client's interpersonal issues. Bear in mind, however, that while the IAS-A has some clinical and research utility, there are risks in using this self-report measure alone to assess indirect aggression. Due to the limited use of this measure and limited research supporting its

reliability and validity, this measure should be used with caution and in conjunction with other data collection methods such as clinical interviews and naturalistic observations, especially when developing treatment and intervention plans in therapy.

Other uses of this measure might include teachers and professors administering this instrument in the classroom as a springboard for psycho-educational and discussion purposes. Likewise, professionals in the domestic violence field might utilize the indirect aggression questionnaire as a screening device to gain a better understanding of interpersonal dynamics that may perpetuate the vicious cycle of abuse. This instrument may also aid researchers in developing additional theoretical frameworks as we continue the study of indirect aggressive behaviors between and among women.

Limitations of the Study

There are several limitations to this study given the sample selected, the data collection process, and the limited scope of this study, including the measurement of the key constructs in this study. The participants were predominately single, White, heterosexual female college students from a rural, southwestern state university. Since the participants who completed this study were a largely homogenous group, it limits the ability to generalize findings to a larger, diverse population.

Additionally, considering this was an online research study, participants may have completed measures in different locations (e.g., on-campus, from home). This may have affected the results of this study because the experimenter had little control over environmental factors (e.g., time, location, disruptions) that may have affected participation. However, all participants followed standardized administration procedures

consistent with the design of this study (e.g., accessed the surveys online, reviewed the informed consent, and completed surveys).

While there are certainly a number of variables that may be related to indirect aggression, I limited the focus to the exploration of the relationship of global self-esteem and appearance schemas with indirect aggression among college women. The exploratory nature of this research was a first step in a line of inquiry to identify the possible contributors to indirect aggression among college women. Furthermore, participants in this study reported a low to moderate range of scores on all measures in this study. Thus, restriction of range problems may have influenced the results of this study.

Another criticism of this study is that the measurement of indirect aggression has several limitations. First, it is difficult to directly observe indirect aggressive behaviors so most researchers have relied on self-report and peer-nomination techniques to measure indirect aggressive behaviors. However, concerns have been raised that due to the social undesirability of indirect aggressive behavior, participants may not be as likely to admit the true prevalence of this behavior (Osterman et al., 1994). Social desirability is problematic because of its potential contaminating influence on the relationships between the main research variables of this study.

Another danger in using self-report assessments to measure behaviors is that researchers are not actually measuring a behavior. Rather, these assessments are measuring self-reported memories of behavior. Memories are often confounded and may be a misrepresentation of actual indirect aggressive behaviors. Thus, the use of self-report measures may have affected the results of the study. However, these potential

confounding variables are common limitations to consider in any research using self-report measures. This study was no exception.

Another limitation of this study is the restricted use of the Adult Indirect Aggression Scale in research studies to date. The majority of researchers investigating indirect aggression have used peer nomination techniques with children in a classroom setting (Forrest et al., 2005). However, Forrest and colleagues (2005) suggested, "Peer nomination is neither appropriate nor practical for measurement of indirect aggression in adult populations which lack comparable peer groups" (p. 87). Thus, they recently developed the self-report Adult Indirect Aggression Scale to address this issue. Aside from the current study, only two published studies to date have utilized the Adult Indirect Aggression Scale (Forrest et al., 2005; Sergeant et al., 2006). The fact that there are few empirical studies to support the reliability and validity of this measure is a limitation of this study. While the current study provides some psychometric support for the Indirect Aggression Scale as a reliable and valid measure, more validation work is badly needed.

Furthermore, on average, participant's scores on all measures in this study fell into the low to moderate range, which means that most participants from this sample endorsed relatively healthy appearance schematic levels, overall positive self-esteem, and low to moderate use of indirect aggressive behaviors towards other women. Therefore, the relationship between these constructs might have been stronger if there was a greater range in scores, but the greater range of scores was not adequately represented in this study.

It is also important to note that the relationship between self-esteem and women's use of indirect aggression towards others may be curvilinear in nature. While a

curvilinear relationship between self-esteem and indirect aggression was not found in this study, this may be due to the fact that the Rosenberg Self-Esteem Scale measures a global construct, which does not account for pathological levels of self-esteem (i.e., narcissism). If a true curvilinear relationship exists between self-esteem and direct aggression as reported by Perez and colleagues (2005), then it may be more appropriate to use a measure assessing very low and very high self-esteem (i.e., narcissism) in relation to indirect aggression.

Another limitation of the present study is that it does not account for the possible sequential and contextual relationships between indirect aggression, self-esteem and body image. Given the paucity of research on the construct of indirect aggression, it is not widely understood. Thus, it is unclear whether engaging in indirect aggressive behaviors leads to self-esteem, body image, social, emotional, and psychological maladjustment problems, whether it precedes these problems, and in what contexts these behaviors occur. Since this study is limited by the use of correlational data to understand the relationship between appearance schemas, global self-esteem, and indirect aggression in broad domains, additional longitudinal research is needed to better understand the relationship between these variables in more contextually oriented domains. Hopefully, future researchers will be able to provide us with more information on the causal relationships between self-esteem, appearance schemas, and indirect aggression.

Areas for Further Research

In light of the limitations of the present study, future researchers may find more meaningful results with a more representative sample of participants, including women with a more diverse range of age, race, socioeconomic status, sexual orientation, and

level of education. It is possible that these demographic variables play a significant role in women's use of indirect aggression towards other women, which may provide contextually oriented information as we further our understanding of the relationship dynamics between and among women.

Additionally, although online studies are being utilized more frequently due to cost and time effectiveness, future researchers may want to collect data in a more controlled setting in an effort to contend with the possible confounds of extraneous contextual variables. Several methodological issues have been identified in the literature regarding the use of self-report measures (Hofstee, 1994; Kolar et al., 1996). While the majority of researchers in the field use peer-nomination instruments to study indirect aggression, Forrest and colleagues (2005) claimed peer-nomination is neither appropriate nor practical in assessing indirect aggression in adult populations which lack comparable peer groups. Although this exploratory study utilized the newly developed self-report Adult Indirect Aggression Scale to verify reliability and validity information, it is possible that peer-nomination is a better assessment alternative. Naturalistic and experimental observations may be another way to measure indirect aggression. More research is needed to identify the most effective means to study indirect aggression in the adult population who lack comparable peer groups.

The current results highlight several other important topics for future research as well. For instance, while this study provides additional validity information for the newly developed adult Indirect Aggression Scale-Aggressor version (Forrest et al., 2005), more research is needed to determine whether the construct of indirect aggression is better conceptualized and measured as an overarching construct, as findings from the current

study suggests, as a three factor solution, as the Forrest et al. (2005) study suggests, and whether or not this measure can be adapted to measure self-reported indirect aggressive behaviors in specific contexts. It is likely that indirect aggression is a behavior that is targeted at certain individuals and in certain situations rather than a behavior that is used more globally with others. It is hoped that future researchers will address these issues.

Additionally, there is scant research that focuses specifically on the relationship between self-esteem and indirect aggression. To complicate matters, the debate over terminology (i.e., indirect aggression, relational aggression, social aggression) has created a blurred conceptualization of indirect aggression and a lack of cohesion in the body of research focusing on this construct. Subsequently, more research is needed to 1) refine the construct of indirect aggression in order to further theoretical formulations, 2) better understand the relationships between and among self-esteem, body image, and indirect aggression, and 3) explore the relationships between self-esteem, body image, and indirect aggression in the perpetrator population rather than just focusing on individuals who are victims of indirect aggressive behaviors.

Further, having a better understanding of the context(s) in which college women are using indirect aggression, how people in their lives respond to it, and how they personally feel about using such strategies may all contribute to how indirect aggression relates to global self-esteem among college women. Whether the social benefits of indirect aggression continue beyond the college experience and whether they translate into adjustment or maladjustment at different stages of life are also important considerations for future research (Cillessen & Mayeux, 2004). Equally vital is gaining a

better understanding of the differences in adaptive versus maladaptive characteristics of indirect aggressive behaviors.

It is also important to note that the relationship between self-esteem and women's use of indirect aggression towards others may be curvilinear in nature. If a true curvilinear relationship exists between self-esteem and aggression as reported by Perez and colleagues (2005), then future researchers will need to use a measure assessing very low and very high self-esteem (i.e., narcissism) in relation to indirect aggression.

Given researchers have found a significant positive correlation between domain-specific self-esteem and direct forms of aggression (Webster & Kirkpatrick, 2006), future researchers should explore the relationship between different domains of self-esteem and indirect aggression. For instance, a woman might have positive global self-esteem, but have low self-esteem in a specific area of her life. She may be more likely to compete against other women using indirect aggressive tactics if she feels threatened in a specific self-esteem domain, such as body image esteem. Thus, it would be helpful to investigate how perceived threat in certain contextual domains is associated with women's use of indirect aggression towards others. For instance, by interviewing women who engage in this behavior regularly versus those who do not via qualitative research, we may gain a better understanding of the personal and contextual factors associated with indirect aggression among women.

Further, understanding the role of attachment style may also be an important area for research. It is possible that if women feel a sense of security in their relationships as a result of their indirect aggressive behaviors, they might actually have higher levels of global self-esteem, as was found in this study. Having a better understanding of

attachment style to both women and men may provide important information in understanding women's use of indirect aggression.

In addition to indirect aggression and self-esteem, results of the current study encourage links to other research on indirect aggression and body image. Loudin and colleagues (2003) found that college students who had greater fears of negative evaluation also tended to engage in increased rates of relational aggression. This finding suggests it is possible that women who have distorted body image perceptions may also be more likely to engage in indirect aggression if they encounter threatening social situations which lead them to negatively evaluate their appearance. Understanding the role of social comparison processes, fear of negative evaluation and perceived threats to one's body image may be fruitful in identifying other factors associated with indirect aggression.

In line with this idea, Cash and colleagues (2005) developed the Body Image Coping Strategies Inventory (BICSI), in an effort to measure how individuals typically manage the internal distress that result from threats or challenges to their body image. They identified three different body-image threat coping strategies: appearance fixing behaviors, positive rational acceptance, and avoidance strategies. Although the BICSI identifies some strategies used when individuals are faced with internal distress due to body-image threats, another important factor to consider are individuals who react aggressively and competitively under conditions of internal distress, threat, or challenge.

Researchers provided evidence that some individuals react competitively and aggressively under conditions of threat or challenge (Buss & Perry, 1992; Dioguardi, 2003) rather than reacting merely avoidant or passive. However, the authors (Cash, et al.,

2005) of the BICSI did not include aggressive/competitive strategies (i.e., indirect aggression) that individuals may use in order to cope with the body image threats and challenges. Including indirect aggressive coping strategies may prove useful in the development of a more comprehensive assessment and may also further our basic understanding of an experience common to many women.

It would also be helpful to know more about how body image and self-esteem directly impact women's choices to engage in indirect aggression with both men and women, and whether indirect aggression is a behavioral strategy, a reflexive response, or both, depending on context. Assuming context is significant, then to what extent, with whom, and in what contexts do women engage or suppress this behavior? It is clear that many questions remain unanswered in this body of literature. Therefore, it is important that researchers continue to refine theoretical frameworks, methodological issues, and assessment issues in the study of indirect aggression in order to advance our understanding of this very important topic for women.

Summary

In summary, this study provides psychometric support that researchers, mental health professionals, teachers, and other helping professionals can utilize the adult Indirect Aggression Scale-aggressor version as a reliable and valid assessment tool for college women. However, it should be used with caution considering there is limited research supporting the reliability and validity of this measure. Nevertheless, results from the current study indicate it has promise in further research. Additionally, results of this study indicate that indirect aggression was significantly related to global self-esteem and

appearance schemas for this sample of college women, although the strength of the relationships between and among the variables were relatively small.

While body image and self-esteem have a theoretically meaningful relationship to indirect aggression both separately and together, appearance schemas appear to be of more concern. Body image perceptions (e.g., appearance schemas) seem to play a unique role in women's use of indirect aggression as competitive strategies towards other women. Yet, results also suggested that a large percentage of the variance in indirect aggression is still unexplained. Results may have been affected by the use of self-report measures, the restricted range of scores, as well as the nature of the on-line study format. Other research methods, beyond self-report, may be necessary to gain a clearer picture of the relationship between women's self-esteem, body image, and use of indirect aggression towards other women. There is still much to learn about women's use of indirect aggression towards other women. It is hoped that future research will be conducted on this very important topic for women.

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APPENDICES

APPENDIX A

Tables

Table 1

<u>Demographics</u>		
<u>Variable</u>	<u>n</u>	<u>Percent</u>
<u>Sexual Orientation</u>		
Heterosexual	269	98.5
Lesbian/Gay/Bisexual	3	1.1
<u>Race/Ethnicity</u>		
Caucasian	214	78.0
African-American	16	5.90
American Indian	24	8.80
Asian	14	5.00
Hispanic	12	4.00
Bi-racial	13	4.00
Multi-racial	2	1.00
Other	5	1.80
<u>Age</u>		
18-19	126	45.00
20-21	92	33.80
22-23	46	16.90
24-25	8	2.90
<u>Marital Status</u>		
Single	243	89.00
Married	7	2.53
Partnered	21	7.70
Divorced/Widowed	2	.40
<u>Year in College</u>		
Freshman	111	40.70
Sophomore	52	19.00
Junior	53	19.40
Senior	52	19.00
Graduate	5	1.80
<u>Family Income</u>		
\$10,000 or less	30	11.00
\$10,001-15,000	4	1.50
\$15,001-20,000	8	2.90
\$20,001-25,000	10	3.70
\$25,001-30,000	7	2.60
\$30,001-40,000	17	6.20
\$40,001-50,000	16	5.90
\$50,001-60,000	23	8.40
\$60,001-70,000	38	13.90
\$70,001-80,000	22	8.10
\$80,001-90,000	21	7.70
\$90,000 or more	75	27.50

Table 2

Means and Standard Deviations of Participants' Height and Weight (n = 273)

<u>Variable</u>	<u>M</u>	<u>SD</u>
<u>Height</u>	5 ft 5 in	2.65 in
<u>Weight</u>	139.15 lbs	27.89 lbs

Table 3

Means, Standard Deviations, and Range of Scores

<u>Variable</u>	<u>M</u>	<u>SD</u>	<u>Score Range</u>
<u>Appearance Schemas Inventory-R</u>	69.1	11.2	20-100
<u>Indirect Aggression Questionnaire-A</u>	43.7	11.9	25-125
<u>Rosenberg Self-Esteem Scale</u>	18.9	5.1	10-40

Table 4

Item Loadings on the One Component Solution for the Indirect Aggression Scale-
Aggressor Version for College Students (n = 273)

<u>Question</u>	<u>Component</u>
Used my relationship with them to get them to change a decision.	.38
Used sarcasm to insult them.	.51
Tried to influence them by making them feel guilty.	.62
Withheld information from them that the rest of the group is let in on.	.57
Purposefully left them out of activities.	.62
Made other people not talk to them.	.58
Excluded them from a group.	.68
Used their feelings to coerce them.	.65
Made negative comments about their physical appearance.	.48
Used private in-jokes to exclude them.	.67
Used emotional blackmail on them.	.48
Imitated them in front of others.	.61
Spread rumors about them.	.56
Played a nasty practical joke on them.	.60
Did something to try and make them look stupid.	.75
Pretended to be hurt/angry to make them feel bad about themselves.	.61
Made them feel like they don't fit in.	.71
Intentionally embarrassed them around others.	.70
Stopped talking to them.	.51
Put undue pressure on them.	.60
Omitted them from conversations on purpose.	.65
Made fun of them in public.	.67
Called them names.	.56
Criticized them in public.	.61
Turned other people against them.	.66

Table 5

Correlation Matrix of the Main Study Variables Including the IAS-A Overall Score, the ASI-R Composite Score, and the RSES (n = 273)

Measure	IAS-A	ASI-R	RSES
IAS-A	1	.25**	.15*
ASI-R	--	1	.26**
RSES	--	--	1

*p < .05

**p < .01

IAS-A = Indirect Aggression Scale-A

ASI-R = Appearance Schemas Inventory-Revised

RSES = Rosenberg Self-Esteem Scale

Table 6

Multiple Regression Model for the Prediction of Indirect Aggression by Appearance

Schemas Composite Score and Global Self-Esteem (n = 273)

Predictors	R	R ²	F	B
Appearance Schemas and Self-Esteem	.27	.07	10.36**	.24** .21

*p < .05

**p < .01

R = Multiple correlation coefficient

R² = R square

F = F value for the regression equation

B = Unstandardized regression coefficient

Table 7

Hierarchical Regression for Global Self-Esteem and Appearance Schemas Composite

Score as Predictors of Indirect Aggression when Controlling for Global Self-Esteem

Predictors	R	R ²	F	B	β
Self-Esteem					.09
Appearance Schemas	.25	.06	18.48**	.27**	.25**

*p < .05

**p < .01

R = Multiple correlation coefficient

R² = R square

F = F value for the regression equation

B = Unstandardized regression coefficient

β = Standardized regression coefficient

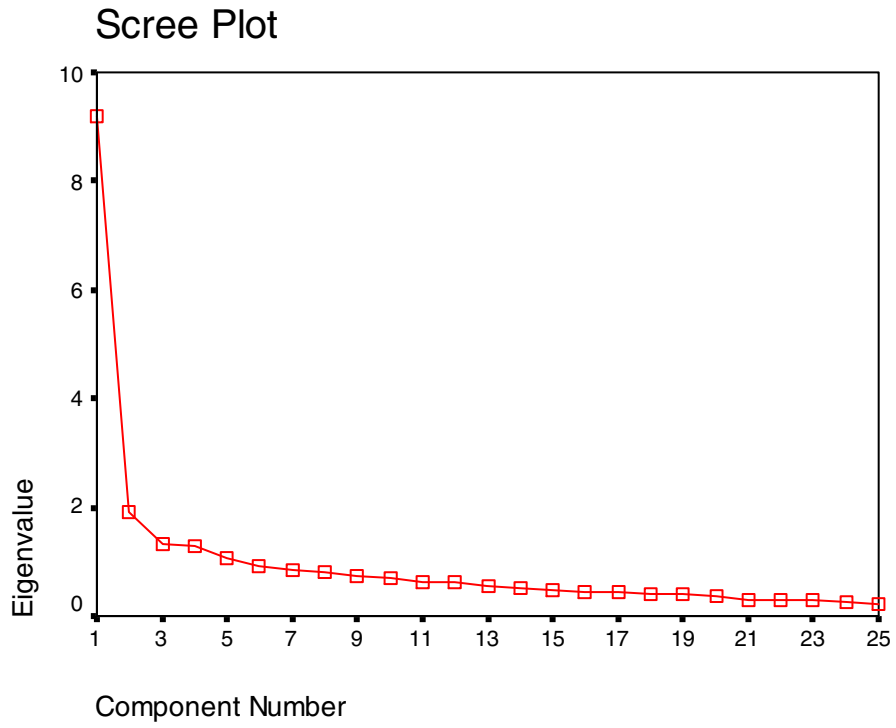
APPENDIX B

Figures

Figure 1

Scree Plot of Principle Component Analysis on the Indirect Aggression Questionnaire-

Aggressor Version (n = 273)



APPENDIX C
Informed Consent Form

Informed Consent Form

You are invited to participate in a study exploring women's feelings about themselves, including their body image, and their relationships with others. **Participation in this study involves the completion of nine questionnaires and a demographic form, which should take approximately 30 minutes to complete.**

The potential benefit of participating in this study is an increased awareness of how you feel about your self, your body, and your relationships with others. There are no foreseeable risks in participating in this study.

Participation in this study is completely voluntary. If you choose to participate, please complete the questionnaires in this study. There is no penalty for not participating and you have the right to withdraw your consent and participation at any time. You will receive one hour (or "unit") of credit for participating in this study. If you are unable to participate or are not interested in participating, you can attend one Undergraduate Research Colloquia or write one 3-4 page paper on a designated research topic (as agreed upon by your instructor) to earn the equivalent one credit (or "unit").

All information collected in this study is strictly confidential. No individual participants will be identified. Your instructor will not know your individual responses to the questionnaires. However, we will indicate that you have participated in this study by assigning you one research credit in the Experimetrix database. Your participation in this study is greatly appreciated. If you have any questions concerning this study, please feel free to contact Carrie Winterowd, Ph.D. (405) 744-6040. You may also contact Sue Jacobs, Ph.D., Chair, IRB committee, Oklahoma State University, Stillwater, OK 74078 at (405) 744-9895 if you have questions about participant rights related to this study.

If you agree to participate, please click on the "Accept" button. If you do not wish to participate, please click the "Decline" button. By clicking the "Accept" button, this will serve as your electronic signature for participation in this study.

(ACCEPT) Yes, I want to participate in this research study.

(DECLINE) No, I do not wish to participate in this study.

APPENDIX D
Demographic Sheet

APPENDIX E

Measures

RSES

Directions: Please circle the number that best represents your level of agreement with each statement.

	1	2	3	4
	Strongly Agree	Agree	Disagree	Strongly Disagree
1. I feel that I'm a person of worth, at least on an equal plane with others.	1	2	3	4
2. I feel that I have a number of good qualities.	1	2	3	4
3. All in all, I am inclined to feel that I am a failure.	1	2	3	4
4. I am able to do things as well as most other people.	1	2	3	4
5. I feel I do not have much to be proud of.	1	2	3	4
6. I take a positive attitude toward myself.	1	2	3	4
7. On the whole, I am satisfied with myself.	1	2	3	4
8. I wish I could have more respect for myself.	1	2	3	4
9. I certainly feel useless at times.	1	2	3	4
10. At times I think I am no good at all.	1	2	3	4

IAS-A

Instructions: As you read each question, think about how often you have used the behavior against another female(s) in the past 12 months. Please circle the number that best represents how often each behavior occurred in the past 12 months. Please answer **honestly** and remember this survey is confidential and will not be connected to you in any way.

1	2	3	4	5
Never	Once or Twice	Sometimes	Often	Regularly

- | | |
|--|-----------|
| 1. Used my relationship with them to get them to change a decision. | 1 2 3 4 5 |
| 2. Used sarcasm to insult them. | 1 2 3 4 5 |
| 3. Tried to influence them by making them feel guilty. | 1 2 3 4 5 |
| 4. Withheld information from them that the rest of the group is let in on. | 1 2 3 4 5 |
| 5. Purposefully left them out of activities. | 1 2 3 4 5 |
| 6. Made other people not talk to them. | 1 2 3 4 5 |
| 7. Excluded them from a group. | 1 2 3 4 5 |
| 8. Used their feelings to coerce them. | 1 2 3 4 5 |
| 9. Made negative comments about their physical appearance. | 1 2 3 4 5 |
| 10. Used private in-jokes to exclude them. | 1 2 3 4 5 |
| 11. Used emotional blackmail on them. | 1 2 3 4 5 |
| 12. Imitated them in front of others. | 1 2 3 4 5 |
| 13. Spread rumors about them. | 1 2 3 4 5 |
| 14. Played a nasty practical joke on them. | 1 2 3 4 5 |
| 15. Did something to try and make them look stupid. | 1 2 3 4 5 |
| 16. Pretended to be hurt/angry to make them feel bad about themselves. | 1 2 3 4 5 |
| 17. Made them feel like they don't fit in. | 1 2 3 4 5 |
| 18. Intentionally embarrassed them around others. | 1 2 3 4 5 |
| 19. Stopped talking to them. | 1 2 3 4 5 |
| 20. Put undue pressure on them. | 1 2 3 4 5 |
| 21. Omitted them from conversations on purpose. | 1 2 3 4 5 |
| 22. Made fun of them in public. | 1 2 3 4 5 |
| 23. Called them names. | 1 2 3 4 5 |
| 24. Criticized them in public. | 1 2 3 4 5 |
| 25. Turned other people against them. | 1 2 3 4 5 |

APPENDIX F
Counseling Referral List

Counseling Referral List

Participating in this research study may provide you with more insight into your own feelings and beliefs about your body image, self-esteem and relationships to other women. Should any problems or distressing issues arise as a result of participating in this research project, please contact a counseling agency to address your concerns. Again, thank you for your participation in this study.

This is a list of local agencies that provide counseling services to college students.

Counseling Psychology Clinic
408 Willard Hall
Oklahoma State University
Stillwater, OK 74078
(405) 744-6980

University Counseling Services
316 Student Union
(405) 744-5472
002 Student Health
(405) 744-7007

Reading and Math Center (counseling services are available here)
102 Willard Hall
Oklahoma State University
Stillwater, OK 74078
(405) 744-7119

Psychological Services Center
118 North Murray Hall
Oklahoma State University
Stillwater, OK 74078
(405) 744-5975

VITA

Tamara Renee Young
Candidate for the Degree of
Doctor of Philosophy

Thesis: THE RELATIONSHIP BETWEEN APPEARANCE SCHEMAS, SELF-ESTEEM, AND INDIRECT AGGRESSION AMONG COLLEGE WOMEN

Major Field: Educational Psychology with emphasis in Counseling Psychology

Biographical:

Personal Data: Born in Lawton, OK on November 18th, 1979, the daughter of Connie Parker and granddaughter of Curtis and Yvonne Parker. Engaged to be married to Dr. Trevor Richardson. Godparent to Addison, Savannah, and Josie Hull.

Education: Lawton Senior High School: Diploma, 1998
Cameron University: B.S in Psychology, 2002
Completed the Requirements for the Doctoral in Philosophy degree at Oklahoma State University in December, 2007.

Experience:

Pre-doctoral Psychology Intern

University Counseling Center, Florida State University (APA-Accredited)
Tallahassee, FL August 2006 to August 2007

Intake Counselor

University Counseling Services, Oklahoma State University
Stillwater, OK August 2005 to May 2006

Sexual Assault & Domestic Violence Counselor/Advocate

Stillwater Domestic Violence Services, Inc.
Stillwater, OK May 2004 to July 2005

Practicum Therapist

Counseling Psychology Clinic, Oklahoma State University
Stillwater, OK August 2003 to May 2004

Bereavement Counselor

Hospice of Lawton Area
Lawton, OK August 2002 to May 2003

Professional Memberships:

American Psychological Association of Graduate Students
Association for Behavior and Cognitive Therapy (ABCT)
Southwestern Psychological Association

Name: Tamara Renee Young

Degree Conferred: December, 2007

Institution: Oklahoma State University

Location: Stillwater, Oklahoma

Title of Study: THE RELATIONSHIP BETWEEN APPEARANCE SCHEMAS, SELF-ESTEEM, AND INDIRECT AGGRESSION AMONG COLLEGE WOMEN

Pages in Study: 162

Candidate for the Degree of Doctor of Philosophy

Major Field: Educational Psychology

Scope and Method of Study:

This research was an exploratory study designed to examine the relationships between and among appearance schemas, global self-esteem, and indirect aggression among college women. Of additional interest was utilizing the newly developed adult Indirect Aggression Scale (Forrest et al., 2005) to verify the reliability and validity of measure to assess self-reported use of indirect aggressive behaviors in the young adult population. Participants were 273 college women who completed online self-report measures via the OSU Experimetrix system on dimensions of body image, self-esteem, and the use of indirect aggressive behaviors towards other women.

Findings and Conclusions:

Although theorists and researchers (e.g., Bjorkqvist et al., 1992c; Brown, 2003; Campbell, 2004; Tanenbaum, 2002; Werner & Crick, 1999) have begun to address the topic of indirect aggression, few studies exist which explore indirect aggression as a competitive strategy among women. The main findings from this study are that women with higher global self-esteem and more negative body image perceptions were more likely to engage in indirect aggression towards other women than those with lower global self-esteem and more positive body image perceptions. Additionally, a principle components analysis and internal consistency reliability analysis provided some additional evidence that the newly developed adult Indirect Aggression Scale-aggressor version (Forrest et al., 2005) is a valid and reliable instrument to assess college women's self-reported use of indirect aggressive behaviors toward others. Implications of this study and future directions for research are discussed.

ADVISOR'S APPROVAL: Carrie Winterowd, Ph.D.
