

THE ROLE OF RELATIONSHIP SATISFACTION IN THE
USE OF INDIRECT AGGRESSIVE BEHAVIOR
AMONG INTIMATE COUPLES

By

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CHAPTER ONE

INTRODUCTION

Human aggressive behavior has been studied from many perspectives across many disciplines. Historically, philosophers, scientists, artists, and playwrights have made observations and assumptions regarding man's inhumanity to man. In the last century, psychological and social psychological researchers have examined aggression with a closer lens. The result is the observation that aggression occurs universally among men and women, children and adults. However, aggressive behavior remains pathologized in most research literature, and the definitions used to explain aggression tend to view this behavior within a moral framework that condemns acts of violence. In the past 25 years, researchers have suggested that violent aggressive behavior is only one aspect of aggression. According to Nadelson, Notman, Miller, and Zilbach (1982), aggression can be defined as both constructive and destructive, instinctual and defensive, but ultimately related to the expression of the individual's own aim and purpose. This more elaborate definition of aggression enables a variety of behavioral responses to be defined as aggressive when direct, physical, or violent responses are not used. In other words, aggressive behavior may serve the individual's need for expression without causing physical injury, but rather by inflicting or evoking psychological or emotional injury. Bjorkqvist, Osterman, and Kaukiainen (1992) termed this type of aggressive behavior "covert" or "indirect" aggression.

Indirect aggression is defined as behavior aimed at inflicting harm to a target in such a manner that the intent to harm is not recognized, a counter-attack is less likely, and if possible the aggressor will remain unidentified (Lagerspetz, Bjorkqvist & Peltonen, 1988). According to this definition, the aggressor makes use of the social structure to harm the target. The primary feature of indirect aggression is the covert nature of the act utilized to avoid the identification of the aggressor. Once termed, “passive-aggressive”, indirect aggression is not passive; it requires an action or response to a provocative situation, albeit usually a discrete action. A passive response requires no action. However, an individual in a provocative situation may select a passive response and therefore passivity or no action remains a viable response option, but one that cannot be considered aggressive. This confusion in the nomenclature of indirect aggression literature has complicated research efforts aimed at further empirical analysis of the behavior.

References to indirect aggression as “passive-aggression” may have originated during the standardization of the diagnosis “passive-aggressive personality disorder” (PAPD) included in the Diagnostic and Statistical Manual of Mental Disorders, 3rd edition (DSM-III; APA, 1980). This diagnosis was characterized by a tendency to “appear inept or passive...covertly designed to avoid responsibility or to control or punish others [and] to deny or conceal hostility” (Gunderson, 1997, p.1553, as cited in Kanter, 2002). This diagnosis was not included in future versions of the DSM, but the term “passive-aggressive” remains an artifact of this period. Women were most frequently diagnosed with PAPD (APA, 1980) and as a result, female aggressive behavior is often referred to as passive-aggressive behavior to this day.

In response to the stigma associated with PAPD, and the possibility of a gender bias in diagnosis, studies examining gender differences in aggression attempted to de-pathologize female aggressive behavior by exploring the methods women use to express aggression (Frodi, Macaulay, & Thome, 1977; Hyde, 1986; Macaulay, 1985). The literature investigating how men and women differ in the expression of aggression has helped advance the scientific understanding of indirect aggressive behavior. These studies have repeatedly shown that women may select indirect forms of aggression as a preferred mode of aggressive expression instead of direct aggressive behaviors used primarily by men. However, some studies have found that both men and women use indirect aggression within certain contexts, suggesting that the selection of an aggressive strategy may be more dependent upon context and less a function of gender specific behavior or gender norms (Bjorkqvist, 1994; Bjorkqvist, Osterman, & Lagerspetz, 1994; Bjorkqvist, Lagerspetz, & Kaukiainen, 1992a; Bjorkqvist et al., 1992; Bjorkqvist & Niemela, 1992; Eagly & Steffen, 1986; Lagerspetz et al., 1988; Schnake et al., 1997).

According to Schnake et al. (1997), indirect aggressive behaviors include “avoiding, spreading malicious rumors, interrupting, withholding helpful information, and questioning the target individual’s judgment” (p.952). Other indirect behaviors include: gossiping, telling false stories, planning secretly to bother the individual target, excluding the person from the social group, disclosing information held in confidence, and trying to get others to dislike the person (Bjorkqvist et al., 1992). The most prominent feature among these behaviors is the aggressor’s attempt to manipulate the social structure in order to remain unknown to the target person. Individuals are less

likely to self-report these behaviors as aggressive since this aggression is considered socially unacceptable in American culture.

Since the 1990's, research literature in human aggression has attempted to understand indirect aggressive behavior as a socially derived phenomenon. However, the study of indirect aggression remains in its infancy, and therefore much of the research literature examining indirect aggression lacks a theoretical framework to explain this behavior as a form of social interaction. The study of social structures and social components of interaction have been the focus of social psychological literature investigating aggression. Social psychological research suggests that aggressive behavior, and perhaps indirect aggressive behavior, can be framed according to the principles of social exchange theory.

Most models of social exchange theory are based on the principles of learning theory (operant behavior) and the principles of microeconomics (economic exchange theory). Theoretical emphasis is placed on the benefits to, and contributions of, individuals within social interactions. Four primary assumptions underlie social exchange theory: 1) assumptions about the social structure, 2) assumptions regarding the behavior of actors, 3) assumptions about the process of interaction, and 4) assumptions regarding the classes of benefits exchanged (Emerson, 1981). The application of social exchange theory to the observation of indirect aggression assumes that the aggressor will determine the benefits exchanged in the social interaction, according to the principles of operant behavior.

The fundamental assumptions of exchange theory are further applied to the study of indirect aggression by, 1) defining the social structure that will frame an indirect

aggressive behavior, 2) observing the behavior between individuals, 3) defining the context in which the interaction will take place, and 4) examining the benefit to the aggressor within the social interaction. According to Emerson's model of social exchange (1981), the term *indirect exchange* is used to classify exchanges that occur between three or more actors in the social interaction. This form of *indirect exchange* provides a model for the observation of indirect aggressive behaviors in that it allows the behavior to remain covert through the use of a third party.

The exchange model, set forth by Thibaut and Kelley (1959), further illustrates the role of exchange theory in the explanation of covert aggressive behaviors in social interaction. This exchange theory suggests that the social interaction is predicated on the characteristics of the social relation, not just the other person's behavior as suggested by Emerson (1981). Thibaut and Kelley's assumption emphasizes the patterns of interdependence between actors, as determined by their relative control over each other's outcomes (Cook, Fine, & House, 1995). The interdependence between individuals is an important variable in the use of indirect aggression as the aggressor attempts to manipulate the social structure in order to remain unknown to the target.

However, most exchange models, including Emerson's, have been primarily used to describe interactions that have some altruistic value to the individual or society. This is not stated in the theory itself, but rather by its application to human phenomena in a given context. According to Cook et al. (1995), "the theory makes no assumptions about *what* actors value, but it assumes that they will behave in ways that tend to produce whatever it is they do value" (p.210). This statement becomes important in the examination of indirect aggressive behaviors because most aggressive behaviors, direct

or indirect often do not appear to have an altruistic value. According to studies of indirect aggression, the value of an indirect aggressive behavior is determined by the aggressor using a cost-benefit analysis of the situation, or an “effect/danger ratio” as termed by Bjorkqvist (1994).

The concept of an “effect/danger ratio” as defined in indirect aggression literature seems to use the underlying principles of exchange value as outlined in social exchange theory, in that an individual may choose an indirect strategy based on their evaluation of the potential value of the social exchange (Bjorkqvist et al., 1992). In other words, the aggressor assesses the effect of the aggressive expression and then estimates the dangers involved, physical or psychological, to both the aggressor and the target of the aggression. The aggressor attempts to identify an aggressive strategy (direct or indirect) that will maximize the effect to the target while minimizing the risk to the aggressor. Indirect aggressive strategies are often considered less risky because the aggressor’s identity can remain hidden from the target.

Adults tend to use covert or indirect forms of aggression as a response to the complex social norms regulating aggressive behavior, which may influence the amount of risk associated with the behavior (Bjorkqvist et al., 1992; Schnake et al., 1997). However, the effects of social norms on individual behavior are contextual or situation dependent as each situation may have specific norms regulating behavior. In this respect, social norms may interact in the analysis of the effect/danger ratio involved with indirect aggression.

Research literature in indirect aggression has indicated that the study of aggression, particularly the study of covert or indirect forms of aggression, must consider

the contextual variables affecting aggressive expression. In other words, the social context where aggressive behavior occurs must be defined. Some examples of contextual variables may include, interpersonal or intimate relationships, work or employee relationships, or social encounters with strangers. The present study was designed to examine the behavior of intimate couples as a contextual domain.

Researchers have sought to understand the nuances involved in couples' interaction with the social environment from many perspectives. For example, psychological or emotional abuse between partners could be considered a form of indirect aggression, although it has not been conceptualized according to this definition in the literature. Research studies investigating relationship satisfaction and domestic violence have indicated that psychological abuse is often a component of marital conflict (Archer, 2000). And while psychological abuse may have many definitions in research literature, a primary feature of this behavior within intimate relationships is the use of power by one partner over another, and the covert nature of the behavior. The use of indirect aggressive strategies by both partners in an intimate relationship may represent a hidden or unknown component of psychological abuse. Therefore, exploring the use of indirect aggression between partners in intimate relationships may help researchers and clinicians to better understand how partners use the social context to indirectly harm one another.

The observation of indirect aggressive behavior between couples may shed light on the stimulus-response patterns at work within abusive relationships. The social norms, which prohibit direct aggressive behavior from women, may allow indirect forms of female aggressive behavior within certain conflicted social interactions. Men may also react to social norms in a given social context and choose to use indirect or direct

aggressive strategies. This use of indirect aggressive behavior may not be acknowledged by either partner, however it may function as a stimulus in the aggressive reactions of partners within an intimate relationship. Men and women may not fully understand how indirect aggressive interactions within a conflicted interpersonal context may lead to further aggressive behavior. Within an intimate relationship context, how and when couples choose indirect aggression as a response to conflict may be related to overall relationship satisfaction between partners.

Several studies have investigated the use of aggression among intimate partners (Archer, 2000; Capaldi & Crosby, 1997; Testa & Leonard, 2001). Aggressive behavior among couples has been associated with lower levels of relationship satisfaction among both men and women, however these studies have focused on the use of direct physical aggression typically associated with acts of domestic violence in popular culture. Only one study has investigated the relationship between indirect forms of aggression and relationship satisfaction among intimate couples (Linder, Crick, & Collins, 2002).

According to Linder et al. (2002), the use of indirect relational aggression may occur more often among romantic relationships as a way to avoid negative social sanctions associated with physical violence. Linder et al. examined relational aggression and overall quality of relationship among romantic partners. They found that poor relationship quality was associated with the use of relational aggression with equal levels of this form of aggression used by male and female romantic partners. These authors suggest that future studies examining relationship satisfaction and indirect relational aggression utilize methods other than self-report to measure aggressive behavior. The

current study was designed to simulate conflict for partners in order to observe and rate the occurrence of indirect aggression within romantic relationships.

Overall, the selection of an indirect aggressive behavior by either partner may be related to the amount of conflict evoked by a given situation. Relationship satisfaction among couples can be expected to vary according to the amount of conflict perceived by each partner in a given relationship situation. It is possible that partners who experience high levels of conflict will evaluate the cost-benefit ratio, as outlined in social exchange theory, and choose to use aggressive behavior based on their perceived personal value rather than the potential benefit to their partner. Each partner's self-reported level of satisfaction in the relationship may be directly related to their use of aggressive strategies in conflict resolution scenarios.

Statement of the Problem

Aggressive behavior has been studied from many perspectives, however recent studies describing alternative forms of aggressive behavior such as indirect aggression, have lacked a theoretical framework to explain the use of this form of aggression in social interaction. Social exchange theory offers a theoretical construct to frame the use of indirect aggression based on a cost-benefit analysis of social interaction. However, research studies have also indicated that the study of aggression must consider contextual variables. The use of aggression within intimate relationships represents a context where indirect aggressive behavior may occur, but few studies have investigated how indirect aggression is expressed between romantic partners.

Indirect aggressive behavior can be conceptualized as a form of *indirect exchange*, according to Emerson's model of social exchange theory (1981), which may occur within intimate relationships when couples attempt to resolve conflict. Lower levels of relationship satisfaction have been associated with the use of indirect aggression among romantic partners, however this relationship has not been directly observed in a laboratory setting. By asking couples to participate in a conflict resolution scenario, it may be possible to observe the expression of indirect aggression between intimate partners and examine the potential relationship between indirect forms of aggression and self-report levels of relationship satisfaction among intimate couples.

The current study used simulated role-plays involving a two-person dyad and a confederate third party to create a conflict scenario to allow for the observation of aggressive expression within intimate relationships. Couples were presented with a role-play scenario involving a conflict resolution task based on literature that outlines typical areas of conflict within relationships (Gottman, 1979; Spanier & Filsinger, 1983). The conflict task and the use of a confederate as a third party represented the social context designed to evoke conflict to assess whether or not partners would use indirect aggressive strategies. If indirect aggression is a socially derived phenomenon, then the theory of social exchange will apply to an individual's use of indirect aggressive behavior when presented with a conflicted problem-solving task scenario. Relationship satisfaction will be correlated with the expression of indirect aggression among couples in a simulated conflict scenario.

The expression of indirect aggressive behavior may depend on the level of potential conflict created by the simulated role-play scenarios, therefore each conflict

problem-solving task was designed to represent a different level of potential conflict ranging from low to high. Conflict simulations were constructed using an “outsider” position (third person confederate) for partners to align with in each scenario, in order to evoke a moderate amount of conflict and maximize the opportunity for indirect aggressive behavior to occur. The presence of a third party allowed the couple an opportunity to express indirect or covert forms of aggressive behavior by involving the third person in the relationship interaction. Couples’ relationship satisfaction may ultimately be related to whether or not indirect aggressive behavior is expressed within the relationship. The following research questions were addressed in this study.

Research Questions

1. What is the relationship between indirect aggressive behaviors and relationship satisfaction among intimate partners?
2. Is there an interaction effect for the frequency scores of indirect aggressive behavior by type of conflict task and order of the conflict task (high-low versus low-high)?
3. Is there a significant difference in the frequency of couples’ indirect aggressive behaviors between high and low conflict task?
4. Is there a significant difference in the frequency of couples’ indirect aggressive behaviors when the order of the task is varied (high-low versus low-high)?

Research Hypotheses

1. *What is the relationship between indirect aggressive behaviors and relationship satisfaction among intimate partners?*

It was hypothesized that the use of indirect aggressive behaviors will be significantly and negatively correlated with relationship satisfaction. Couples who use indirect aggression more often will report lower levels of relationship satisfaction than couples that use indirect aggression less often.

2. *Is there an interaction effect for the frequency scores of indirect aggressive behavior by type of conflict task and order of the conflict task (high-low versus low-high)?*

An interaction effect was predicted in the frequency of indirect aggression expressed by couples between the order of task presentation (high-low versus low-high) and across the repeated conflict tasks (high and low). Couples engaging in the high conflict task first were expected to have a higher frequency of indirect aggressive behavior in the low conflict task than those couples that engaged in the low conflict task first. Those couples that engaged in the low conflict resolution task first were expected to have an increase in frequency of indirect aggressive behavior across tasks, from low to high conflict.

3. *Is there a significant difference in the frequency of couples' indirect aggressive behaviors between high and low conflict task?*

It was hypothesized that the amount of conflict introduced in the role-play scenario (high amounts of conflict versus low amounts of conflict) would significantly affect the frequency of indirect aggressive behaviors used by couples, so that couples will use

indirect aggressive strategies more frequently during the high conflict resolution task than the low conflict resolution task.

4. *Is there a significant difference in the frequency of couples' indirect aggressive behaviors when the order of the task is varied (high-low versus low-high)?*

It was hypothesized that the order in which the conflict resolution task was presented to couples (high-low versus low-high) would affect the frequency of indirect aggression expressed by each couple. In other words, the frequency of indirect aggression used by couples who received the high conflict before the low conflict task (high-low order of task presentation) would significantly differ from the frequency scores of indirect aggression used by couples who received the low conflict before the high conflict task (low-high order of task presentation).

Significance of the Study

At present, our understanding of indirect aggression appears limited by an absence of empirical data to support the theoretical propositions suggested in the research literature. Advancements in the scientific investigation of indirect aggressive behaviors are needed to increase awareness regarding the influence of indirect forms of aggression in social interaction. Currently, few measures of indirect aggressive behavior exist in the published literature, and these measures have been constructed for specific populations with limited validity. This is due in part to the covert nature of the behavior itself, and the difficulties represented by a participant's tendency to report behavior in a socially desirable manner. The observation of indirect aggression using a simulated role-play

attempts to minimize the effects of social desirability on the empirical study of covert behavior in intimate relationships, and the criteria used to create a measure for the clinical observation of indirect aggression may be useful in future development of formal measure of indirect aggressive behavior.

Research findings suggest that the amount of interpersonal conflict experienced by individuals in partnered relationships may be related to the use of aggressive behavior between partners, and that low levels of relationship satisfaction are associated with greater amounts of interpersonal conflict (Gottman, 1979; Markman, 1984). The use of conflict resolution tasks in a simulated role-play setting may act as a vehicle to enhance our understanding of how the expression of indirect forms of aggression may relate to overall relationship satisfaction in intimate couples. The findings of this research may assist future researchers in the study of indirect aggression, as well as clinicians who may deal with indirect aggressive behaviors among couples in couples' therapy.

Assumptions of the Study

First, with regard to the conflict resolution tasks used in this study, the following assumptions were made: 1) indirect aggressive behavior would be considered a behavioral response option chosen by individuals in interpersonal relationships when presented with a conflict resolution task, 2) the conflict resolutions scenarios created for this study would provide enough provocation to elicit aggressive behavior strategies, and 3) the simulated nature of role-play task in a clinic laboratory setting would allow couples to respond to tasks in a realistic and truthful manner.

Second, in the observation of indirect aggression, it was assumed that this behavior could be reliably coded by independent raters through the viewing of the videotaped interactions of the couples. Furthermore, it was assumed that the criteria used to measure indirect aggressive behaviors (on the scoring protocol) were true indicators of these behaviors as used in previous research studies (Bjorkqvist, Lagerspetz, & Kaukiainen, 1992a; Bjorkqvist, Osterman, & Kaukiainen, 1992; Bjorkqvist & Niemela, 1992; Lagerspetz et al., 1988). Finally, it was also assumed that individuals would respond to the survey questionnaire measuring relationship satisfaction in an honest and truthful manner.

Definition of Terms

Intimate relationship. An intimate relationship is defined as a partnered relationship between two individuals that meets the following criteria: it is romantic in nature, they share the same dwelling, and they have been a committed relationship for at least one year.

Indirect aggression. Indirect aggression is defined as behavior aimed at inflicting harm to a target in such a manner that the intent to harm is not recognized, counteraggression is less likely, and if possible the aggressor will remain unidentified (Lagerspetz et al., 1988).

Relationship satisfaction. Relationship satisfaction is defined as a partner's perceived global satisfaction with his/her current relationship as reported on the Dyadic Adjustment Scale (Spanier & Filsinger, 1983).

Summary and Overview

The purposes of the present study were to: 1) examine the relationship between indirect aggression and overall relationship satisfaction among partnered intimate relationships, 2) explore potential differences in indirect aggression frequency by conflict level, and 3) examine potential differences in indirect aggression frequency by order of conflict task (high-low task presentation versus low-high task presentation) and type of conflict task presented to each couple. In order to observe and measure a covert or unsanctioned social behavior, such as aggression, simulated role-plays representing a conflicted resolution task involving a confederate third person were created. Information gathered in the laboratory simulations may enhance the body of knowledge examining indirect aggressive behavior as a form of social exchange within the intimate relationships of human beings. The research literature examining indirect aggression, social exchange theory, and relationship satisfaction will be reviewed in Chapter II.

CHAPTER II

REVIEW OF THE LITERATURE

The present study was developed to examine the use of indirect aggressive behavior as a form of social exchange in romantic relationships. The purposes of this study were to assess the relationship between indirect forms of aggression and level of relationship satisfaction among partners in intimate relationships and to explore potential differences in indirect aggression among partners given the type (low versus high conflict) and order (high-low versus low-high) of conflict scenarios. In previous studies, the exploration of indirect aggression has been limited by self-report methods and peer-nomination techniques. The present study was developed to measure indirect aggressive behavior through the direct observation of videotaped role-play scenarios. The review of literature relevant to the present study will be divided into three primary sections.

The first section will address the construct of aggression including a history of the research focused on direct forms of aggression, variations of direct aggression, followed by the history and definition of indirect forms of aggression. The second section will explore social exchange theory including definitions and principles of exchange theory, as well as the use of indirect aggression as a form of social exchange. The third section will address relationship satisfaction and will include an examination of the roles of social exchange theory and indirect aggression in relationship satisfaction among intimate couples.

Aggression

History

The 1960's proved to be a watershed decade for theory and research developments in aggression with seminal works by Buss (1961, 1971), Berkowitz (1969), Bandura (1973), and Lorenz (1966). Empirical studies were conducted on the forms of aggressive behavior that were observable, and therefore easily measured. Physical acts of aggression were the primary focus of most investigations because these behaviors could be easily replicated using electrical shock or some other form of physical provocation. As a result, direct forms of aggression received the most attention and the emergent body of research typically defined human aggression as direct and/or physical acts. However, as the following decades would show, not all aggressive acts are direct or physical and the development of a singular definition of human aggression became problematic.

Theories on human aggression began to address social motivation and the importance of the individual's interpretation of the aggressive situation as important non-observable variables in aggressive behavior. The focus of many research studies shifted toward the cognitive-attribution processes involved in the aggressive situation and the subsequent behavior. As a result, the operational definitions used to define aggression as "a response that delivers noxious stimuli to another organism" or "attack" (Buss, 1961, p.3) no longer accurately captured the nuances involved in human aggressive behavior. Observations were made to support hypotheses that suggested individuals may judge aggressive behavior based on the act, the victim, the aggressor, and the overall situation. Some studies have found that the perceived intent of the attacker was often a more

powerful determinant of a counterattack, than the amount of harm or injury that resulted (Geen & O'Neal, 1976). To date, the construct of aggressive behavior is largely categorized into two distinct categories, direct and indirect aggression, each with varying classifications and definitions. In many ways, obtaining a standard definition of direct and indirect aggression is similar to selecting from a smorgasbord of research definitions for each category. Clearly, a review of these varied definitions is warranted.

Direct Aggression

Since the 1960's, considerable efforts have been made to scientifically define what constitutes an aggressive act. Obvious examples of aggression are well documented in scientific and popular literature, and these range from war, physical assault, and destruction of property, to verbal insult and gossip. These acts are examples of the same phenomenon, aggressive behavior, but lack distinction between direct and indirect aggression. Because each example of aggressive behavior may vary greatly in nature, intent, intensity, injury, and frequency, attempts have been made to establish more scientifically viable definitions of aggression (Geen & O'Neal, 1976). Several researchers have focused on specific aspects of human aggressive behavior and developed definitions according to their own classifications.

Early studies in aggression sought to define aggression as direct aggressive behavior, and included physical and verbal acts of aggression (Bandura, 1973; Buss, 1961). However, new evidence regarding the complexity of variables associated with aggressive behavior began to challenge the popular hypotheses of aggression as strictly direct, physical, or verbal. An expanding body of aggression literature no longer

supported Bandura's notion that "if one wished to provoke aggression, the most dependable way to do so would be simply to physically assault another person, who would then be likely to oblige with a vigorous counterattack" (p.153). Alternative classifications emerged that sought to expand our understanding of the complexities surrounding aggressive behavior (Feshbach, 1964).

According to Feshbach (1964, 1971), aggressive behavior was classified as "unintentional" and "intentional" aggression, and he outlined three intentional reasons for aggression: expressive, instrumental, and hostile. These three reasons, as Feshbach referred to them, have been the focus of a considerable amount of research resulting in the generally accepted classifications of aggressive behavior as expressive, instrumental, or hostile aggression (Geen & O'Neal, 1976). However, the use of these classifications by other researchers maintained the popular notion that aggression is directly physical or verbal.

Feshbach (1971) considered expressive aggression as direct physical or verbal acts used to express emotions such as anger, frustration, or rage. In this regard, expressive aggression was conceptualized as secondary to an intense emotional experience that resulted in harm or injury, which may or may not be an intentional act directed at a target. By comparison, hostile aggression was considered an intentional aggressive act resulting in harm or injury to another person or entity. This classification received significant attention in past research (Buss-Durkee, 1976, Buss, 1971) leading to the development of standardized measures of hostility (e.g.; Buss-Durkee Hostility Scales). Although hostility is often operationalized as a separate construct related to

aggression, hostile forms of aggression remain prominent in studies conceptualizing aggressive behavior as directly physical or verbal.

Finally, Feshbach's (1971) classification of instrumental aggression was defined as behavior aimed at attaining personal or instrumental goals such as money, prestige, or social status, through the injury of another person or entity. Later researchers expanded Feshbach's classification of instrumental aggression to include aggressive behavior with a social purpose, and termed this behavior, "social-instrumental aggression" (Bandura, 1969; Sears, 1961). The distinctions made by Feshbach and other researchers within aggression literature remain important classifications of aggressive behavior within the category of direct aggression. However, the research studies that followed Feshbach's work have established additional permutations of these original classifications.

Variations of Direct Aggression. Rule (1974) indicated that the antecedents and consequences differed for varying types of aggression. He suggested that instrumental aggression could be differentiated as personal-instrumental and social-instrumental aggression, and he delineated differences between the antecedents and consequences of hostile and instrumental aggression. His theory suggested that hostile and personal-instrumental aggression produced similar consequences, but hostile and social-instrumental aggression required different antecedents and produced different consequences. As a result, researchers began to consider the antecedents and consequences of aggressive behavior as necessary variables in understanding the expression of direct aggression. New definitions of aggressive behavior were needed to operationalize aggression as a behavioral response influenced by variables such as

situation/context, social learning, intent, and moral judgment. However, the empirical study of aggression remained limited by a lack of efficient methods to measure behavioral variables and the weakening of popular theoretical views of aggression as strictly direct physical and verbal acts. The search for a scientifically viable definition of aggressive behavior continued.

The diversity of aggressive acts observed over decades of psychological research, as well as the differing variables surrounding aggressive behavior have complicated attempts to operationalize aggression as a single construct. As a result, recent research in human aggression has focused on the exploration of distinct aspects of aggressive behavior within the classifications of expressive, hostile, or instrumental aggression. The debate over whether aggressive behaviors are directly physical or verbally aggressive forms of expressive, hostile, or instrumental aggression has been replaced by controversy surrounding the variables that mediate aggression such as situation, context, and gender. Researchers over the past 25 years, using different populations (children, adolescents, and workplace employees), have found that the conceptualization of aggression as direct physical or verbal aggressive behavior does not account for a subset of aggressive behaviors characterized by an indirect approach to harm or injure (Eagly & Steffen, 1986; Bjorkqvist et al., 1988). As a result, a new program of research has emerged to explain the observation of aggressive behavior when the intent to harm the target is hidden or disguised.

According to Bjorkqvist et al. (1994), indirect aggression is considered a distinct category of aggressive behavior previously ignored in research literature because of the social nature of the behavior. Both the form and function of indirect aggressive behavior

are derived from the social interaction in that the aggressor attempts to utilize the social environment to hide his/her intent to harm. However, empirical research studies examining indirect aggression are relatively few when compared to the wealth of research data investigating direct forms of aggression. The present research study aims to expand this body of research by examining the use of indirect aggressive behavior between individuals in intimate/romantic, coupled relationships.

To summarize, the study of aggression has evolved since the early works of Buss (1966) and Bandura (1969). These researchers attempted to understand the directly observable acts of human aggression, physical and verbal, and in the process, shaped the theoretical and popular conceptualizations of aggressive behavior as aggression directly targeted at an individual, object, or entity. However, since the 1960's, our understanding of aggressive behavior has expanded and researchers have sought to observe, analyze, and understand aggression that is as equally noxious as physical and verbal aggression, but indirectly aimed at an individual or entity. The study of indirect aggression has its origins within several academic disciplines including, social and developmental psychology, sociology, and industrial and organizational psychology. Because the use of indirect aggressive behaviors required some form of manipulation of the social environment to be "indirect", this study has operationalized indirect aggression as a form of social exchange, which is further elaborated in the following sections.

Indirect Aggression

History

The study of indirect aggression evolved out of research literature exploring aggressive behavior in three distinct areas: childhood aggression, female aggression, and aggression in the workplace. The terms used to describe indirect aggression in research literature vary by the populations studied. Indirect aggression has been defined as covert aggression in studies examining this behavior among workplace employees (Bjorkqvist & Osterman, 1992), as relational aggression in research exploring indirect aggression in children and adolescents (Bjorkqvist & Niemela, 1992; Bjorkqvist et al, 1992a; Bjorkqvist et al, 1992b; Crick, Werner, Casas, O'Brien, Nelson, Grotpeter, & Markon, 1999), and as passive-aggressive behavior in studies investigating female aggression (Bjorkqvist et al, 1994). Indirect aggression was also termed "passive-aggressive" in the diagnostic criteria for passive-aggressive personality disorder, which was typically diagnosed in women (DSM-III; APA, 1980). This variation in the nomenclature for indirect forms of aggression has contributed to a lack of cohesion in the body of research investigating this phenomenon.

Furthermore, compared with other constructs in psychological research, the study of indirect aggression whether termed relational, covert, or passive has generated few empirical measures of indirect aggression. This lack of research measures often characterizes new constructs under investigation in psychological research. The present study seeks to provide empirical evidence supporting the observation of indirect aggression in a laboratory setting by testing the definitions used in the majority of research studies published thus far to date, and thereby assisting in the future development of empirically based measures of this construct. The few published

measures of indirect aggression developed with adult populations are outlined in the follow section.

Measurement of Indirect Aggression

A few measures of indirect aggression have been developed for use with child and adolescent populations with only two measures published to assess indirect aggression with adult populations. The Work Harassment Scale (WHS, Bjorkqvist & Osterman, 1992), and a modified version of the WHS, the Overt-Covert Aggression Scale (OCAS, Kaukiainen, Salmivalli, & Lagerspetz, 1997) are examples of the existing instruments used to measure indirect aggression in adult populations. Both of these measures include a self-report questionnaire as well as a peer-nomination form (asking for input regarding the individual's indirect aggressive behavior from their peer cohort). The peer-nomination technique included in the WHS and OCAS were adapted from the aggression scales originally developed by Eron, Lefkowitz, Huesmann, and Walder (1972) to measure childhood aggression, which were later modified by Bjorkqvist et al. (1992b) to create the Direct and Indirect Aggression Scales (DIAS). The internal consistency reliability of the subscale for indirect aggression on the DIAS using Cronbach's alpha was reported at .93 by the authors, but this scale has not been standardized for general research use at this time.

The items on the WHS and the OCAS were constructed using items from the indirect aggression subscale on the DIAS and modified to fit an adult workplace population by Bjorkqvist and Osterman (WHS, 1992) and Kaukiainen et al. (OCAS,

1997). Both the WHS and the OCAS include behavioral descriptors such as “tells bad or false stories”, “tries to get others to dislike the person”, and “says bad things behind the other’s back”, which were also used as descriptors on the original DIAS used with children and adolescents. However, the WHS and the OCAS were designed and modified for use with a specific population in a specific context, that of adults in a workplace setting and thereby limit their generalizability to other adult contexts. These measures also rely upon self-report and peer-nomination techniques to measure a behavior considered socially undesirable, which may limit their ability to adequately assess the use of indirect aggression by adults who may not choose to disclose their use of this behavior. At present, other methods of assessment, namely the direct observation of indirect aggression with adult populations, are conspicuously absent.

Overall, the lack of published instruments to measure indirect aggressive behavior among adults has significantly impacted the study of indirect aggression. It is possible that observations of indirect aggressive behavior within a clinical setting are needed to begin developing measures of indirect aggression specific to adult populations in other social contexts. The current study was designed to document the frequency of indirect aggressive behaviors in an adult population using the theoretical definitions and criteria developed in earlier studies with workplace employees.

Definition of Indirect Aggression

Despite the lack of quantitative measures needed in the study of indirect aggression, the theoretical definitions of indirect aggression have remained consistent

across studies with children, adolescents, and workplace employees. Indirect aggressive behavior is defined as a behavioral response selected by an individual when direct forms of aggression are deemed unacceptable or inappropriate according to the individual's appraisal of social norms (or developmental stage among children and adolescents, Lagerspetz et al., 1988). A more succinct definition of indirect aggression is a behavior aimed at inflicting harm to a target in such a manner that intent to harm is not recognized, a counter-attack is less likely, and if possible the aggressor will remain unidentified (Bjorkqvist et al., 1992b). According to this definition, the aggressor will make use of the social structure to harm the target, with the primary feature of indirect aggression defined as the covert nature of the act, utilized to avoid the identification of the aggressor.

Bjorkqvist et al. (1992b) identified several behaviors associated with observed acts of indirect aggression: (a) social manipulation with the intent to harm, or collude with others to harm (e.g.; gossip); (b) nonverbal behavior used as communication to harm another individual (e.g.; "the silent treatment"); (c) disclosure of private information or fabrication of information about others involved in the interaction, and (d) harmful behavior directed at another individual when the aggressor remains unknown or disguised (e.g.; slander). Bjorkqvist et al. (1994) and Kaukiainen et al. (2001) expanded this list of indirect aggressive behavior to include, interrupting, inhibiting individual expression, unfair judgment of work, derogatory comments about an individual's private life, gossiping, and starting negative rumors about an individual. Each of these behavioral strategies represents an indirect response option available to the individual in provocative social interactions, and requires some form of social manipulation to be successful. However, the manner in which an individual assesses and manipulates the social

environment to employ indirectly aggressive strategies requires a personal evaluation of the potential cost to the individual aggressor as well as an estimation of the perceived benefit to the aggressor associated with the aggressive act. In other words, the individual who chooses an indirect form of aggression may be influenced by their appraisal of several intervening variables including situation, context, and relationship to the target.

Effect/danger Ratio of Indirect Aggression

The type of indirect aggressive behavior selected by an individual in any situation is based on their appraisal of the consequences that are present within the given social context. Bjorkqvist et al. (1994) have termed this appraisal process the “effect/danger ratio”, which means that indirect aggressive behaviors are selected according to the benefits and possible consequences of the action. This effect/danger ratio is typically based on the indirect exchange between two partners and usually involves a third person as part of the social context. For example, gossip is considered a form of indirect aggression because the intent is to harm the target. The aggressor may utilize a third person to establish a rumor, tell a false story, or disclose secret information about the targeted individual in order to harm him/her. In this respect, the aggressor evaluates the benefits or value of the aggressive action (gossip) to him or herself (e.g.; increased social esteem), assesses the potential costs or risks of the behavior (e.g.; how likely they will be identified), and then chooses behavior based on this determination (e.g.; tells another person damaging information about the target of the aggression).

In research literature examining indirect aggression among adults, this effect/danger ratio has been correlated with different social variables using self-report methods and peer nomination techniques. Kaukiainen et al. (2001) suggested that the effect/danger ratio was associated with variables specific to the social context of the situation such as formation of in-groups or cliques within workplace settings, power differentials between employers and employees, as well as competitive work environments. An example of this type of social context from popular culture would be the quintessential water-cooler conversation believed to occur in corporate America and contribute to the formation of in-groups.

In studies by Bjorkqvist et al. (1992a, 1992b) and Crick et al. (1999), the effect/danger ratio was examined among adolescent populations using self-report methods and peer nomination techniques to observe indirect aggressive behavior. The social variables associated with the effect/danger ratio were similar in these studies to those purported by Kaukiainen et al. (2001) who used a workplace adult population. Adolescents reported the use of indirect aggression by their peers when certain variables were present: formation of cliques, knowledge of a power differential when an authority figure was involved (e.g.; telling false stories to a teacher or parent), and in the absence of an authority figure (e.g.; acts of bullying).

Because the use of the social structure is dependent upon social context, how an individual manipulates the social environment to indirectly harm an individual may vary across the multitude of social contexts experienced by adults. However, using the effect/danger ratio appears to be consistent across populations sampled and can be conceptualized as a personal cost/benefit ratio approximated by the aggressor in each

situation/context. The evaluation of a cost/benefit or effect/danger ratio is considered a fundamental component in the use of indirect aggressive behavior among adolescents and adults (Bjorkqvist et al., 1992a, 1992b; Crick et al., 1999; Kaukiainen et al., 2001).

Correlates of Indirect Aggression

First, the use of indirect forms of aggression among children and adolescents has been associated with the formation of *cliques*, observations of in-group/out-group behavior, and acts of bullying (Crick et al., 1999). Indirect or relational aggression with this population is considered distinct from other forms of aggression such as verbal or psychological abuse, with some overlap noted in the isolation of specific behaviors (e.g.; verbal insults, accusations, threats, intimidation, and coercion) (Kasian & Painter, 1992). In Crick et al., young adolescents were sampled from three junior-high schools and asked to report their use of indirect aggressive behavior, their experience as the target of indirect aggression, as well as this type of behavior among their peers using survey questionnaires. Results of this study found that adolescents experienced feelings of depression, anxiety, and isolation when they were targets of indirect aggression and students were more likely to report the use of indirect aggressive behavior by their peers than their own use of this behavior.

Second, in research examining the use of indirect or covert aggression in adult populations within a workplace setting, specific behaviors such as gossiping, intimidation, and coercion have been associated with job dissatisfaction, workplace harassment, symptoms of depression and anxiety, as well as an escalation of indirect

aggression to direct aggression through workplace-related acts of violence (Bjorkqvist & Osterman, 1992; Kaukiainen et al., 2001). Adult employees and employers within a corporate setting were asked to report the degree to which they used indirect aggressive behaviors in the workplace. Participants were also asked to report this type of behavior as observed in their workplace cohort. Results of this study found that participants who perceived themselves as the target of indirect aggression in the workplace endorsed greater symptoms of depression and anxiety than those participants that self-reported using indirect forms of aggression. The authors of this study suggested that the use of indirect aggression in the workplace might affect productivity and overall job satisfaction.

Third, in a study by Linder et al. (2002), young college-aged students were sampled and asked to report their use of indirect forms of aggression in romantic relationships and their perceived quality of these relationships. Results of this study found that both males and females equally reported using indirect aggressive behavior in romantic relationships and this behavior was associated with poor quality of relationship. Individuals who reported using indirect forms of aggression in romantic relationships also reported a lack of trust in the relationship, jealous feelings, and increased frustration. This study also found that the use of indirect aggression in romantic relationships was associated with a need for closeness or dependency in romantic partners as measured by self-report questionnaires created for the study.

Of interest, only one study to date has explored indirect aggression in adult romantic relationships. Furthermore, indirect aggressive behavior was measured by self-report questionnaires. The direct observation of indirect aggression has not yet been

incorporated into research in this area. This type of observation may enhance our understanding of how and when individuals utilize the social structure in their evaluation of the effect/danger or cost/benefit ratio associated with indirect aggressive behavior.

To summarize, the study of indirect forms of aggression has evolved out of psychological and sociological research examining aggressive behavior that is not directly physical or verbal in nature. However, the research in this area remains limited and fragmented by overlapping terminology and a lack of published measurement tools specific to indirect aggression with adult populations. Despite the current fragmented state of research in this area, certain fundamental aspects of this behavior have been established; the indirect nature and definition of this form of aggression, the utilization of the social environment by the aggressor, and the personal evaluation of a cost/benefit ratio, are common principles established across research studies. These common elements may be more succinctly unified through the development of an overarching theoretical framework from which to conceptualize indirect aggression across population and setting and the theory of social exchange may offer such a framework.

Social Exchange Theory

“All contacts among men rest on the schema of giving and returning the equivalence.”

—Georg Simmel, *The Sociology of Georg Simmel* (as cited in Blau, 1964, p.1)

This statement assumes a spirit of benevolence among humans that implies human beings will altruistically engage in forms of social exchange to give and receive positive rewards. However, when the “giving and returning” of equivalence interacts with social power and individual values, the behavior of individuals cannot reliably be

predicted. Aggressive behavior is often the result. The use of indirect aggressive strategies in social interaction follows many of the assumptions underlying social exchange theories, particularly in regard to the determination of costs and benefits involved in the management of negative social sanctions against the use of aggression. Much of the aggression literature to date has focused on the objectives of the aggressor, thereby neglecting the impact on the target. By framing indirect aggression within a social exchange model that emphasizes reciprocity of exchange, it may be possible to examine the impact of this behavior on both the aggressor and the target in a dyadic relationship.

Definition

Social exchange theory is grounded in social psychological literature. It has been widely used to describe how relations between individuals develop and change by focusing on the influences of the social structure in which these relations are positioned. Exchange theory attempts to explain how social processes and individual interactions lead to changes in the social structure. In short, social exchange theories are based on the assumption that “much of what we value and need in life can only be obtained from others” (Cook et al., 1995, p.210).

Social exchange theory can be broadly defined as the process by which self-interested individuals interact with other self-interested individuals to achieve personal goals or objectives that cannot be attained alone. In this respect, self-interest and interdependence are central themes underlying social exchange (Lawler & Thye, 1999).

The history of social exchange theory is rich with varying models ranging from purely sociological to socio-political and economic theories of exchange. Several theorists have developed models of social exchange and each model appears to offer subtle distinctions between individualistic goals and collectivistic interests (Blau, 1964; Emerson, 1962, 1981; Thibaut & Kelley, 1959). Social exchange theory has also been used as a framework for marital interaction by behavioral psychologists (Gottman, 1979; Hahlweg & Jacobsen, 1984), and the fundamental principle of a cost-benefit ratio underlying all models of social exchange seems well suited to study the psychological processes involved in the use of indirect aggression by adults in romantic relationships.

Principles of Social Exchange

Models of social exchange theories have been constructed using the principle of a cost-benefits analysis underlying the social processes of individual actors in society. Emerson (1981) posited two forms of exchange, direct exchange between two individuals forming a relationship dyad, and indirect exchange transactions occurring between three or more individuals. According to this model, the reciprocity of exchange in a relationship dyad can be indirectly provided through a third actor. Thibaut and Kelley (1959) suggested that the nature of reciprocity within social interactions must be predicted from the characteristics of the social relation, so that patterns of interdependence in relations are determined by each individual's control over the outcome (cost-benefit analysis). Similarly, Blau (1964) has identified the imbalance of power and reciprocity in social interactions as important components in the definition of patterns of interdependence. Each of these models uses the individual's cost-benefit

analysis as a determinant necessary for reciprocity and interdependence in the relationship, hence the establishment of a *social exchange*.

Thibaut and Kelley's model of social exchange (1959) assumes that human behavior is governed by the desire to maximize positive experiences and minimize negative consequences so that participation in a relationship is maintained as long as it is deemed favorable. According to this model, a relationship is deemed favorable by the balance between costs and benefits, with benefits defined as the individual's satisfaction in the relationship and costs to the individual assumed to be dissatisfaction. However, this model of exchange also states that an individual's decision to maintain the relationship is not based solely on the balance of costs and benefits, but also depends upon the availability and attractiveness of alternatives to the relationship. The use of indirect aggressive behavior in relationships also depends upon an evaluation of the costs and benefits to the individual. Thibaut and Kelley's model of social exchange may provide a theoretical framework to better understand how the availability and attractiveness of alternative behavior responses in a given context might influence the use of indirect aggression between romantic partners.

Social Exchange Theory and Indirect Aggressive Behavior. The use of indirect aggression requires an evaluation of the risks and benefits associated with its use in social relationships, and an aggressive behavior is considered indirect when the social structure is manipulated to achieve the intended harm to the target, so that the identity of the aggressor remains hidden. In this respect, indirect aggressive behavior can be considered a form of social exchange. Using a model of social exchange to theoretically frame the

use of indirect aggression in romantic relationships appears prudent as the construct of indirect aggression currently lacks an overarching theoretical framework from which to effectively define its use in adult relationships.

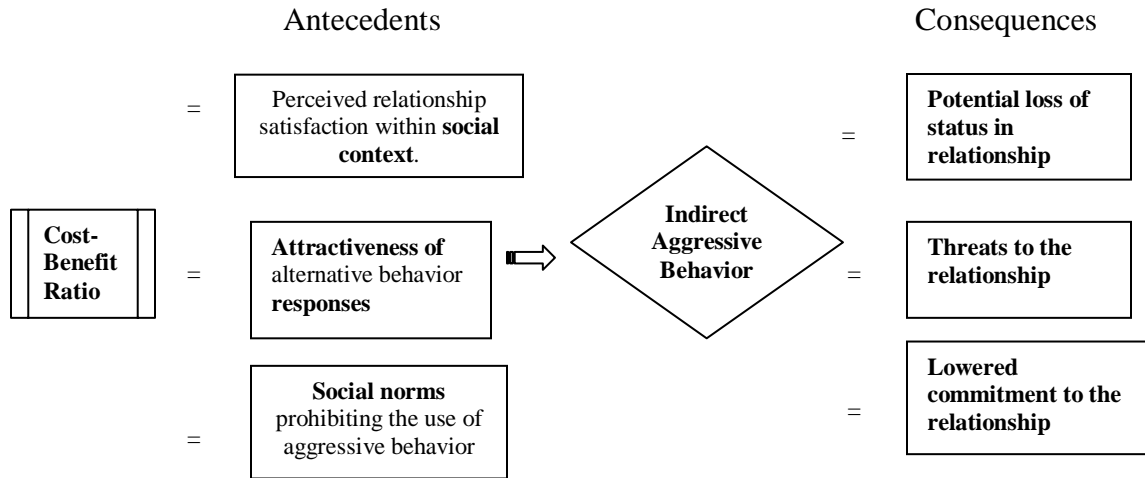
Thibaut and Kelley's model of social exchange (1959) has been further elaborated by Kelley (1983) and this expanded model is focused on determining the attractiveness and availability of alternatives to a relationship as a key factor in the evaluation of costs and benefits to the individual. This model assumes a level of commitment to the relationship by each participant in the relationship. According to Kelley, commitment is defined as the individual's psychological attachment to the relationship (i.e.; marital or romantic bonds in intimate couples as used in the current study) that must be distinguished from its antecedents and consequences.

Consequences are classified as behaviors, such as the indirect aggressive behavior observed in the current study, which may threaten satisfaction in the relationship. Antecedents or "causal conditions", as labeled by Kelley (1983), can be classified into three major categories: 1) the degree to which the relationship is attractive or satisfying, 2) the degree to which alternatives to the relationship are viewed as more or less attractive, and 3) the restraining forces of social constraints affecting the individual. To use Kelley's causal conditions as a framework for understanding the use indirect aggression as a form of social exchange between romantic partners, these three conditions can be translated into the following antecedents: 1) each partner's current perception of the relationship as satisfying in a given social context, 2) the degree to which alternative behavior responses are viewed as attractive, and 3) each partner's evaluation of the social norms inhibiting the use of aggressive behavior responses in

romantic relationships. A diagram of Kelley's model as applied to the current study is provided in Figure 1.

Figure 1

Antecedents and consequences of indirect aggression in the cost-benefit analysis.



In the present study, social exchange theory is used as a theoretical framework for the use of indirect aggression among romantic partners. Studies of marital interaction have also used exchange theories to conceptualize the nature of coupled relationships (Gottman, 1979; Markman, 1984), offering additional support for the use of social exchange theory as a framework for the use of indirect aggressive behavior in intimate couples.

Social exchange theory was used in a program of research including cross-sectional and predictive studies linking a model of good communication with a developmental model of marital distress. Markman (1984) used several measures in this

program of research to examine couples' communication skills and the perceptual accuracy of messages among couples across a five-year study. The emphasis on perceptual accuracy, meaning the intent of the message versus the content of the communication, in his study was consistent with the principles of social exchange theory set forth by Kelley and Thibaut (1978). The results of Markman's study indicated that the "negative communication behaviors rated by the speaker (intent) or listener (impact), and the global similarity between positivity of speaker and listener behaviors, are related to future marital discord." (p.263). However, the author asserts that while social exchange models offer a useful framework for investigating marital interaction, future studies should be sure to develop operational definitions of exchange and reciprocity.

According to Gottman (1979), social exchange theory offers a "compelling system for constructing models of cognitions about social interaction that may correlate with relationship satisfaction" (p. 216). In his study, Gottman constructed a "talk table" for romantic partners to rate the intended message of their partner during a discussion of various conflict situations. The results of this study indicated that couples who reported less satisfaction in their relationship also maintained interpersonal distance from their partner and appeared less effective at reading their partner's nonverbal behavior (intent of message). Overall, Gottman suggests that the level of communication skill is associated with marital relationship satisfaction and that marital communication is a form of behavior exchange between partners. In Gottman's words, "a relationship can be viewed as a marketplace in which two people exchange a set of behaviors from their repertoires and that these behaviors are exchanged with certain rewards and costs to each of the interactants." (p.216).

To summarize, social exchange theory assumes that individuals interact with each other to accomplish individual goals that cannot be achieved alone. Central to this theory is an evaluation of the costs and benefits associated with the interaction as determined by each individual, and an assumption that each individual will utilize the social structure to achieve their goals. Many models of social exchange have been developed. However, the central tenants of Thibaut and Kelley's model (1959) are well suited to explain the psychological processes associated with the use of indirect aggression among adults in an intimate relationship.

The exchange model proposed by Thibaut & Kelley in 1959 and Kelley and Thibaut in 1978, focuses on the interdependence of individuals within society much like the interdependence of romantic partners in an intimate relationship. In this respect, their model offers the most salient framework for understanding how individuals utilize the social structure in the use of indirect aggression within coupled relationships. Kelley (1983) expanded upon this theory to further elaborate the processes by which individuals evaluate the cost and benefits of the exchange interaction according to the antecedents and consequences associated with their level of commitment to the relationship. Finally, exchange theory has been used in research studies examining relationship satisfaction, and these studies may further explain how social exchange theory offers an efficient framework to better understand the use of indirect aggression among romantic partners.

Relationship Satisfaction

Relationship Satisfaction and Social Exchange Theory

As discussed above, social exchange theory has been used in the study of marital interaction (Gottman, 1979; Markman, 1984). Markman used social exchange theory as a framework for the linking of good communication and problem solving skills with a developmental model of overall marital distress or relationship satisfaction. According to this model, relationship satisfaction is associated with the exchange of positive messages with a focus on the intended message of a partner and the other partner's ability to accurately perceive these messages. In other words, a partner's intended message during problem-solving discussions is equal to the impact on the listener (i.e.; positive intent = positive impact). Although not directly stated by Markman, it is possible that the opposite of this position could be true; relationship *dissatisfaction* might be associated with the negative impact of messages and the inaccurate perception of these messages by the listener (i.e., intent still equals impact although negative).

Markman's (1984) model is based on the underlying assumption that the perception of the communication between partners is the focus of the exchange, rather than a focus on the overall content of the communication. When applying a social exchange model to the use of indirect aggression in marital interaction, Markman's theory seems to highlight how each partner's perception of the other's intended message may influence the cost-benefit analysis involved in choosing an indirect form of aggression within conflict situations. The perceived message may also be associated with the antecedents or causal conditions outlined in Thibaut & Kelley's (1959) model of social exchange thereby affecting each partner's appraisal of the social context in the use of indirect aggression.

Gottman (1979) used Thibaut and Kelley's (1959) model of social exchange as a framework linking communication and problem solving with a model of marital distress (relationship satisfaction). According to Gottman, this model of social exchange offers "a compelling system for constructing models of cognitions about social interaction that may correlate with relationship satisfaction" (p.216), in that the relationship dyad can be viewed as the arena in which two people exchange a set of behaviors with certain costs and rewards (benefits) to each partner. From Gottman's perspective, one possible behavior exchanged between partners might be the use of aggression in problem-solving situations. Furthermore, the reciprocity of the exchange or the balance between cost and reward might be correlated with the couples' overall relationship satisfaction. However, to experimentally apply this theory to couples' interactions a definition of relationship satisfaction is needed, and Gottman has suggested an instrument that accurately measures relationship satisfaction be used in this process.

Definitions of Relationship Satisfaction

Research literature investigating marital or relationship satisfaction in coupled dyads has polemically defined satisfaction in a relationship as distressed versus the non-distressed using outcome measures of relationship satisfaction to determine level of distress within a given population. In other words, marital satisfaction has been defined by using cutoff scores on measures of relationship satisfaction to label a couple as distressed or nondistressed (Filsinger, 1983a; Gottman, 1979; Markman, 1984; Spanier & Filsinger, 1983). However, this polarity in the definition of relationship satisfaction

(distressed versus nondistressed) seems to undermine the complexity of romantic relationships and does not fully address how situational and behavioral factors may influence perceived relationship satisfaction among couples at any given time.

For instance, several components have been identified as predictors of relationship satisfaction, including communication, trust, intimacy, passion, commitment, and attachment, however each of these components represents a separate psychological or behavioral construct associated with marital interaction in general (Spanier & Filsinger, 1983). Filsinger (1983a) suggested that relationship satisfaction is more related to the couples' perception of global satisfaction across marital domains, and less related to the specific components of marital interaction. Consequently, an adequate assessment of relationship satisfaction may be gathered by measuring couples' endorsement of global dyadic satisfaction on self-report questionnaires.

The Dyadic Adjustment Scale (DAS, Spanier & Filsinger, 1983) has four subscales of marital adjustment determined by items specific to global dyadic satisfaction. Some of these items include, "How often do you discuss or have you considered divorce, separation, or terminating your relationship?" "How often do you or your mate leave the house after a fight?" and "In general, how often do you think that things between you and your partner are going well?" The subscale of Dyadic Satisfaction on the DAS consists of 10-items measuring partner's satisfaction with the present state of and commitment to the relationship. The other three subscales, Dyadic Cohesion, Dyadic Consensus, and Affectional Expression, measure couples' engagement in mutual activities, degree to which couples' agree on important matters, and couples' satisfaction with sex and level of affection expressed in the relationship, respectively.

The DAS was used in the current study to measure relationship satisfaction because of its good psychometric properties (outlined in the Methodology section of Chapter 3), as well as its overall ability to discern relationship satisfaction from other marital interaction constructs.

To summarize, research studies investigating relationship satisfaction and marital distress have tended to define relationship satisfaction by labeling couples as distressed or nondistressed using cutoff scores on measures assessing a variety of components specific to marital interaction. Measures of relationship satisfaction have historically suffered from poor construct validity, however the subscale of Dyadic Satisfaction on the Dyadic Adjustment Scale (Spanier & Filsinger, 1983) has emerged as a reliable measure of relationship satisfaction. In general, social exchange theories (Thibaut & Kelley, 1959) have provided a framework for understanding relationship satisfaction and marital distress in dyadic interactions. In addition, this exchange theory seems to provide a similar theoretical framework to study the use of indirect aggressive behavior among romantic partners. A review of literature examining the relationship between aggressive behavior and couples' relationship satisfaction will offer evidence to support an investigation into the relationship between the use of indirect aggression and relationship satisfaction among romantic partners.

Correlates of Relationship Satisfaction

In the 1970's and 80's, the research literature investigating relationship satisfaction in partnered relationships was focused on identifying variables that contribute

to both marital satisfaction and relationship distress (Gottman, 1979; Hahlweg & Jacobson, 1984; Markman, 1984; Filsinger, 1983b). These researchers suggested that marital satisfaction was associated with good communication and problem-solving skills as well as a general ability to accurately perceive the intended messages communicated between partners. They also found that relationship satisfaction correlated with length of time together, amount of shared activities, and level of trust established in the relationship (Hahlweg & Jacobson, 1984).

Gottman (1979) as well as Filsinger (1983b) suggested that relationship distress was associated with a number of variables including higher rates of divorce, incidents of spousal abuse, poor communication and problem-solving skills, jealousy, and a lack of trust between intimate partners. In addition, Hahlweg and Jacobson (1984) asserted that partners in distressed relationships experienced higher rates of depression and anxiety associated with the distress. These authors used clinical samples drawn from couples engaged in marital therapy suggesting that the rates of depression and other affective symptoms associated with distressed relationships may be underreported and occur more often in the general population. However, recent research literature in relationship satisfaction has begun to examine the behaviors associated with marital distress and satisfaction.

Testa and Leonard (2001) and Archer (2002) investigated correlates of relationship satisfaction among romantic partners and found that partner violence was associated with sexual aggression, alcohol abuse, depression, post-traumatic stress disorder, and suicidality in both men and women. Cupach (2000) commented that other behaviors, in addition to partner violence, were associated with marital conflict. He

suggested that avoidance should be considered just as important as confrontation in evaluating the factors associated with relational conflict, and he encouraged future study investigating dyadic behavior patterns such as confrontation-avoidance and demand-withdrawal, as underlying components of relationship conflict.

Overall, these authors illustrate that the correlates of relationship satisfaction and distress are both psychological and behavioral in nature. The use of indirect forms of aggression among intimate partners may affect the quality of an intimate relationship, however, the psychological effects of this behavior are not well understood at this time. In fact, few studies have examined the relationship between indirect aggression and overall marital or romantic relationship quality (Linder et al., 2002; Capaldi & Crosby, 1997).

Relationship Satisfaction and Aggression

The use of aggression in romantic relationships has negative consequences for the quality of the relationship as well as the overall psychological adjustment of each partner (Lloyd & Emery, 1994; Testa & Leonard, 2001; Capaldi & Crosby, 1997). Researchers who investigated the impact of physical aggression on marital satisfaction found that premarital aggression perpetrated by husbands was associated with lower marital satisfaction over the first 30 months of marriage, lower marital stability among wives, and marital dissolution after the first year of marriage (Heyman, Feldbau-Kohn, Ehrensaft, Langhinrichsen-Rohling, & O'Leary, 2001).

In a study examining the observed and reported use of psychological and physical aggression in young couples, Capaldi and Crosby (1997) found that relationship satisfaction was significantly associated with psychological aggression by not physical aggression. The authors also stated that psychological aggression “generally precedes physical aggression and has been reported by many physically abused women to have a more severe impact than the physical abuse.” (p.186). The researchers defined several components to psychological abuse that overlap with current behaviors associated with indirect aggression among romantic partners: verbal insults, degradation, threats to end the relationship, ridicule, withdrawal from interactions, and the ignoring. These behaviors were considered characteristics of the psychological aggression measured in this study.

However, in previous research studies the construct of psychological aggression has not been well defined. Several of the aggressive behaviors used in these studies to measure psychological aggression might be more accurately considered acts of indirect relational aggression, as their intent is to harm both the relationship and the individual partner (e.g.; threats to end relationship, withdrawal from interactions, and ignoring the other partner). Recent research studies have attempted to examine these aggressive behaviors as relational aggression.

Relationship Satisfaction and Indirect Aggression

According to Archer (2000), the majority of research using romantic partners has focused on the use of direct physical aggression, and he suggests that other forms of

aggression (psychological or relational aggression) may lead to physical aggression. In his meta-analytic review of sex differences in the use of physical aggression between heterosexual partners, Archer found that women were more likely than men to report using physical aggression in romantic relationships, however, men were found to have injured their partners more frequently than women. This review included 82 studies investigating physical aggression and its consequences in romantic relationships. Studies were included in the meta-analysis if they met the following criteria: an effect size could be calculated for the sex difference in the study, the source of data was included in the study, the measurement instrument was coded, and the country of origin as the age of participants was coded in the original study. However, Archer noted that the comparison between married and dating samples within the studies included in the meta-analysis should be considered a potential confound in that studies using married participants included couples whereas studies examining dating relationships may have included individual respondents.

Overall, Archer's review (2000) suggested that social sanctions against the use of aggression in romantic relationships might affect the self-report of such behavior in research studies. Considering these findings, other forms of aggression such as indirect relational aggression may occur in romantic relationships. A further analysis into the types of aggression used within romantic relationships seems both timely and necessary to better understand partner aggression. Research studies over the past decade have begun to examine the variations of aggressive behavior used by romantic partners from an outcome perspective, such as behaviors that often result in psychological abuse and victimization (Capaldi & Crosby, 1997; Morales & Crick, 1999). However, research has

also emerged investigating indirect aggression from a behavioral perspective by exploring the occurrence of the behavior itself (Linder et al., 2002; Werner & Crick, 1999). In sum, the study of indirect or relational forms of aggressive behavior among intimate couples has begun to receive more attention from researchers, but at present, this research has been primarily focused on adolescent romantic relationships.

Werner and Crick (1999) found that college-aged adults endorsed the use of relational aggression, which was defined as the manipulation of relationships as a means of harm in cross gender relationships. Romantic relational aggression has been correlated with antisocial and borderline personality features, depression among young females, and negative psychological adjustment among both men and women (Morales & Crick, 1999). Results of these studies also suggested that not only does indirect relational aggression occur between romantic partners, it may be considered normative within a young adult population (Linder et al., 2002). However, whether the use of romantic relational aggression is associated with the quality of the relationship had not been established.

Linder et al. (2002) investigated the association of romantic relational aggression and the quality of these romantic relationships. This is the only published study directly examining the relationship between these two variables. According to Linder et al., less is known about relational or indirect romantic aggression than other forms of aggression such as physical violence. They hypothesized that romantic relational aggression would be negatively associated with positive relationship qualities such as trust, and positively associated with negative relationship qualities such as jealousy. This study sampled 104 college students and administered two pencil and paper questionnaires measuring partner

aggression and victimization, the *Self-report Measure of Aggression and Victimization* (Morales & Crick, 1998; unpublished), as well as quality of romantic relationship, the *Adult Romantic Relationship Questionnaire* (Brennan & Shaver, 1995).

Results of this study indicated no significant sex differences in the use of romantic relational aggression between men and women. In addition, they found that lower levels of relationship satisfaction were associated with relational aggression. According to Linder et al. (2002), those individuals who reported using relational aggression also reported jealous, less trust in their partner, and increased frustration in their relationship. These authors suggested that the use of relational aggression among romantic partners might be one way intimate partners cope with these feelings. However, this study was limited by the use of self-report questionnaires to measure relational aggression. The authors suggested that future studies utilize other forms of measurement (i.e.; outsider report of indirect aggressive behavior, observation of indirect aggressive behavior between partners, etc.) to improve the reliability of measuring this type of aggressive behavior.

To summarize, relationship satisfaction has been defined in terms of satisfaction as well as distress, using cutoff scores on measures of relationship satisfaction to define these categories. However, most measures of relationship satisfaction have included affective symptoms as variables associated with satisfaction or distress, with few instruments defining relationship satisfaction as an independent factor. The Dyadic Adjustment Scale (DAS; Spanier & Filsinger, 1983) is the most commonly used measure of relationship satisfaction because it includes a separate subscale for relationship

satisfaction that is not confounded by other components of relationship satisfaction such as trust, intimacy, or jealousy.

In addition, several researchers have conceptualized marital interaction as a form of behavior exchange between partners using Thibaut & Kelley's (1959) model of social exchange theory (Gottman, 1979; Markman, 1984). Relationship satisfaction has been associated with communication and problem-solving skills as well as dyadic behavior patterns such as avoidance-confrontation and demand-withdrawal behaviors among intimate partners (Cupach, 2000). However, partner violence in relationships has been associated with psychological variables such as depression, PTSD, and suicide (Archer, 2000). Recent studies have begun to examine forms of partner violence that are relational or indirect in nature. The study conducted by Linder et al. (2002) represents the only study investigating the relationship between indirect forms of aggression and relationship satisfaction among romantic partners. Overall, the research literature in relationship satisfaction has only recently begun to explore the behaviors, such as indirect aggression that may affect the quality of romantic relationships.

Summary

The study of indirect aggression remains in its infancy and reliable measures of this construct are few. Two fundamental principles have been associated with the use of indirect aggression: 1) the individual's evaluation of the costs and benefits associated with indirect acts of aggression, and 2) the individual's manipulation of the social context as central to the use of this type of aggression. These principles define the nature of

indirect aggression and suggest that individuals who use indirect forms of aggression appraise social interactions as a form of social exchange between the risks and rewards, or costs and benefits associated with the social context. In this respect, theories of social exchange offer a theoretical framework from which a unified conceptualization of indirect aggression across domains may be established.

The social exchange model of Thibaut and Kelley (1959) has been used in the study of marital interaction through the observation of a behavior exchange in the relationship dyad. The use of indirect aggression as a form of social exchange among intimate partners has not been studied in previous research studies, although findings of research literature investigating indirect relational aggression among romantic partners have indicated that the use of indirect aggressive behavior is associated with lower levels of relationship satisfaction (Linder et al., 2002). However, these studies have been limited by methodology using self-report measures of aggression.

The present study was developed to examine the relationship between the use of indirect aggressive behavior and relationship satisfaction among intimate couples. This investigation used social exchange theory as a theoretical basis to better understand how romantic couples might utilize the social structure in two person dyads and three-person triads in their evaluation of the cost-benefit analysis associated with the use of indirect aggression. Results of this study may contribute to research literature examining indirect aggression through the direct observation of this behavior using the behaviors already defined in previous studies. In addition, the results of this study may inform the practice of couples therapy by illustrating how indirect and relational forms of aggressive behavior among romantic partners affect relationship satisfaction and how indirect

aggression may be related to the types of conflicts faced by couples and the order of these conflict experiences. The methodology of this study is further described in Chapter III.

CHAPTER III

METHODOLOGY

This chapter provides an overview of the methods used in this study. The methodology of this study consisted of the following sections: (1) Participants, (2) Conflict Resolution Tasks, (3) Independent Raters, (4) Measures, and (5) Procedure.

Participants

Participants in this study included 31 couples in a committed long-term romantic relationship. The couples that participated in the study were screened by the principal investigator to meet the following criteria: they were in a committed relationship for at least one year, they shared the same residence, they were not concurrently involved in couples/marital therapy, and they denied a history of domestic violence. The partners in this sample were male-female couples and described themselves as heterosexual. The sample used in this study was drawn from a southwestern university, and participants were recruited through advertisement in local newspapers. Each couple was paid \$20 for their participation in the study.

Couples ranged in age from 18-55 years old with a mean age of 26.23 (n=31) for female partners and 27.19 (n=31) for male partners. The mean number of years spent in the relationship was 5.5 years, with a median of three years for each couple (N=31).

Nineteen couples (N=31) were married for an average of three years, and 11 couples (N=31) reported between one and four children with 20 couples (N=31) reporting no children.

The majority of the participants were Caucasian (71% of male partners, n=31; and 84% of female partners, n=31), with the remaining participants identifying themselves as East Asian /Indian (10% of male partners, n=3; and 10% of female partners, n=3), African American (3%, n=1 of both male and female partners), Native American (10% of male partners, n=32; 3% of female partners, n=1), and Hispanic (10% of male partners only, n=2).

The occupation, amount of education, and annual income reported for each partner varied between male and female partners. Twenty of the 31 couples reported the occupation of one or both partners as a student (32% of male partners, n=11, and 48% of female partners, n=15). Non-student partners (n=32) reported occupations ranging from skilled labor to professional careers, and 13% of female partners (n=4) were homemakers. The mean education level for female partners was 15.32 years (n=31) and 14.9 years (n=31) for male partners. Annual income was reported separately for each partner on the Demographic Information Form (see Appendix C). The average annual income for male partners fell between \$10,000-15,000 however, 22% of males (n=7) reported an income of \$5,000 or less, 38.7% (n=12) reported between \$15,000 and \$30,000 per year, and 9.7% (n=3) reported an annual income between \$30,000 and \$50,000. The average annual income for female partners was less than male partners at between \$5,000 and \$10,000 with 48.4% (n=15) reporting an income of \$5,000 or less, and 6.5% (n=2) reporting an annual income between \$30,000 and \$50,000.

Conflict Resolution Scenarios

Two role-play scenarios were constructed to represent high and low conflict resolution tasks using scenarios frequently encountered by partners in an intimate relationship. The purpose of these role-play scenarios was to observe couples' potential use of indirect aggression to resolve lower and higher conflict scenarios. The two conflict resolution tasks were derived from six domains (sex, managing children, handling finances, interacting with in-laws, discussing events of the day or planning, and disciplining children) representing marital conflict as outlined by Gottman (1979). For ethical reasons, the sexual relationship of a couple and the familial relationships of participants were beyond the scope of this simulated role-play experiment. Issues related to children-rearing practices were not included in this study given that not all of the couples would have children. Handling finances and planning events were the two domains chosen as the conflict resolution tasks for the couples in this study. According to Gottman (1979), handling finances created higher amounts of marital conflict than event planning among marital dyads, therefore the high conflict task used in this study involved financial issues and the low conflict task involved event planning.

Because some forms of indirect aggressive behavior require utilization of the social structure to hide the aggressive intent of the aggressor, a third person or confederate was included in each role-play scenario to facilitate the use of indirect forms of aggression (Bjorkqvist et al., 1994). A psychology graduate student was hired as a research assistant to serve as the confederate in both conflict resolution tasks. Each role-

play scenario offered an opportunity for social interactions between partners as a dyad, between each partner and the confederate as a dyad, and between the couple and the confederate as a triad in the following scripted order: 1) the couple interacted together to resolve the conflict task, 2) the couple interacted with the confederate and presented the results of the task, 3) a partner was asked to leave the room while the remaining partner interacted with the confederate to discuss the results of the task, 4) the other partner was asked to leave the room while the remaining partner interacted with the confederate to discuss the results of the task, and 5) both partners interacted with the confederate to receive approval of the completed task.

High Conflict Resolution Task

The high conflict resolution task involved handling finances and couples were asked to imagine participating in a loan application process. The confederate acting as the third person in this interaction served as a loan officer in this role-play scenario. The goal of this conflict resolution task was to successfully negotiate a loan package as a couple and present this package to the loan officer explaining any negative credit history so that the loan would be approved.

In order to create an environment with enough potential conflict for aggressive strategies to be used by the couple, the high conflict task included the following elements: a simulated negative credit history based on the couples' annual income (as reported by partners on the Demographic Information Form) to serve as a threat to the couples' ability to complete the task, a third person (confederate) to create the social

environment required for some forms of indirect aggression to be used, and a monetary incentive if the conflict was resolved. The simulated negative credit history was arbitrarily created to incorporate credit card debt and a history of late payments to affect the debt-to-income ratio used in determining loan approval. This history is presented in the role-play task as presented to couples and is included in Appendix B.

The scripted stages of the high conflict task were as follows: 1) The couple was instructed to imagine themselves in a scenario where they needed to request a loan from a bank and they were asked to use the supplemental information provided by the principal investigator to create a loan package including the amount of money to be borrowed, the purpose of the loan, the length of the loan. The couple was also asked to generate an explanation for their negative credit history to convince the confederate to approve their loan; 2) Once the couple reached an agreement on the above issues, they were asked to present their loan package to the confederate acting as a loan officer and to discuss their credit history; 3) one partner was then asked to leave the room and the remaining partner was questioned by the confederate (loan officer) regarding their explanation of negative credit history; 4) the remaining partner was then asked to leave the room and the other partner joined the confederate to discuss their explanation of negative credit history; and 5) both partners joined the confederate who determined whether or not the couple's loan was approved. The task condition, as presented to participants, is included in Appendix B.

As mentioned earlier, a monetary incentive was incorporated into the high conflict resolution task to allow each partner to choose behavioral response options based on their own evaluation of the potential costs and benefits involved in resolving conflict and to

create an environment conducive to the expression of indirect aggression (Bjorkqvist et al., 1994). According to social exchange theory, an incentive for conflict resolution is necessary to establish an “exchange value” for the aggressor in the social interaction (e.g.; what they are willing to risk to complete the problem-solving task). The establishment of this type of cost-benefit ratio is a fundamental principle in relationship negotiations and problem-solving ability underlying social exchange theory (Cook et al., 1995).

Successful completion of this conflict resolution task required couples to gain approval of their loan from the confederate (loan officer). This requirement was built into the task to intensify the amount of potential conflict associated with each partner’s evaluation of the costs and benefits associated with conflict resolution. At the end of the study, each couple was given a total of \$30: \$10 for the approval of their loan in the high conflict resolution task and \$20 for their participation in the study. The loan package for all 31-couples was approved by the confederate and each couple was awarded \$30 at the end of the study.

Low Conflict Resolution Task

The low conflict resolution task involved planning a vacation as a couple with the third person confederate acting as a travel agent in this role-play scenario. Couples were asked to negotiate travel plans for a vacation destination and they were provided with several travel brochures from which to select a travel destination. Each couple was instructed to create a vacation package that included a destination, their length of stay,

considerations for time off from work or school, and accommodations for childcare or pet care issues involved in travel (if applicable).

This low conflict resolution task was constructed to minimize the amount of stress involved in resolution. The goal of the task was to agree upon the issues involved in travel (as described above) and present a cohesive vacation package to the confederate (travel agent). There was no monetary incentive incorporated into this role-play scenario. The scripted stages of the low conflict task were as follows: 1) The couple was instructed to imagine planning for a vacation and to reach an agreement on the issues described above, 2) Once the couple reached an agreement regarding the issues involved with the task, they were then asked to present their vacation plans to the confederate acting as a travel agent, 3) one partner was asked to leave the room and the remaining partner was questioned by the confederate (travel agent) regarding his/her agreement with the proposed travel plan, 4) the remaining partner was then asked to leave the room and the outside partner joined the confederate to discuss his/her agreement with the proposed travel plan; and 5) both partners joined the confederate to solidify plans for the upcoming vacation. The task condition, as presented to participants, is included in Appendix B.

The order of the two conflict resolution tasks was randomized for the coupled-participants in this study (N=31) by choosing random numbers to determine order. In the high-low presentation (n=17), couples were asked to complete the high conflict task first followed by the low conflict task and in the low-high presentation (n=14), couples were asked to complete the low conflict task first followed by the high conflict task. The couples were aware that these conflict resolution tasks would be videotaped and they consented to be videotaped. These videotapes would be reviewed by raters and coded for

couples' use of indirect aggressive tactics in resolving conflicts in the high and low conflict conditions.

Independent Raters

Two independent raters were recruited from a graduate program in psychology at a western university and were trained by the principal investigator in the use of the Rater Scoring Protocol. Each rater was paid \$350 for approximately 10 hours of work per week. Total participation time did not exceed two months.

The raters were trained to rate the frequency of indirect aggressive behaviors used by the couple as observed in videotaped sessions of couples' participation in role-play scenarios. Both raters viewed all 31-videotaped sessions and rated the frequency of indirect aggression used by couples in the low conflict resolution task and a high conflict resolution task.

Rater Scoring Protocol for the Frequency of Couples'

Indirect and Direct Aggressive Behaviors

A priori descriptions were used to identify and measure indirect aggressive behaviors among couples (Bjorkqvist et al., 1992b; Schnake, et al., 1997). The nine-items representing indirect aggression on the Rater Scoring Protocol included the following: 1) body gestures OR body movements made in response to verbal or nonverbal language of other partner, 2) facial gestures such as eye glances, glares, rolling eyes, or frowns, 3) ignoring or withdrawal behaviors, 4) verbal interruptions, 5) sighing/groaning behavior, 6) using the "outsider" position to create a dyad when more

than two people are present, 7) verbal statements intended to degrade, discredit, harm, or undermine an individual that are expressed indirectly, 8) any use of humor (joking behavior or laughter) that is intended to degrade, discredit, or harm the other, 9) attempts to join with confederate to resolve conflict situation (see Appendix B for the Rater Scoring Protocol).

Descriptions of direct aggressive behavior were also included in the Rater Scoring Protocol to measure direct aggressive behaviors in the event that such behavior should occur during either conflict resolution task. Items 10 and 11 on the Rater Scoring Protocol included two categories of direct aggression, physical and verbal. Some examples of the descriptions used in these categories include: (a) physical manifestations or gestures toward objects or individuals such as, grabbing, pushing, slamming fists/objects, throwing objects; (b) direct verbal statements intended to degrade, discredit, or harm an individual, which must be expressed directly to the individual such as, name calling, use of profanity, or statements regarding individual characteristics expressed to the individual. These items were not analyzed in the present study, as direct aggressive behavior among couples was not a variable included in final analyses, however the ratings of aggressive behavior among couples will be analyzed in a future study.

The Rater Scoring Protocol developed for this study used a 5-point Likert Scale to rate 11 items, with nine items describing indirect aggressive behaviors and two items describing direct aggressive behaviors (physical and verbal aggression). Items were anchored with the following descriptors: “1” = not at all; “2” = a little; “3” = somewhat; “4” = moderately; “5” = extremely. Frequency of behavior was determined by the number of times a behavior was observed during the videotaped task and the following

guidelines were used in the rating procedure: 1= “not at all” frequent (a behavior has *not been observed at all* in the segment); 2= “a little” frequent (a behavior has occurred *at least once* in the segment); 3= “somewhat” frequent (this behavior has occurred *at least more than once*); 4= “moderately” frequent (this behavior has occurred *at least more than twice*); 5= “extremely” frequent (this behavior has occurred *at least more than three times*).

To effectively use the Rater Scoring Protocol in the observation of couples’ behavior for each scripted task, the conflict tasks were divided into five scoring segments (Segments A-E) according to the five stages of the task. The viewing time of these segments by each rater was limited so that the frequency of indirect aggressive behavior observed was not influenced by the amount of time taken to complete the task. These time limits were as follows: 1) the couple negotiates the task together as a dyad (15 minutes), 2) the confederate enters the room to form a triad and the couple presents their plan (10 minutes), 3) one partner is asked to leave to form dyad with the confederate and the other partner and discuss results of the task (5 minutes), 4) the second partner is asked to leave to form a dyad with the confederate and the first partner and discuss results of the task (5 minutes), and 5) the couple is reunited with the confederate to form a triad and resolve the conflict (5 minutes). Because the nature of some segments required more time to complete than others (e.g., couple negotiates the task together versus one partner interacting with the confederate alone), the time limits were created to reflect the average amount of time used by couples to complete each segment. These timed segments are found in Appendix B.

Internal consistency reliability estimates were calculated for the total indirect aggression frequency scores (the ratings on the nine items on the Rater Scoring Protocol across the segments) in the low and high conflict conditions. The Cronbach alpha coefficients for the total indirect aggression frequency scores for the high conflict task (N=31) and the low conflict task were .92 and .91 respectively.

Rater Training

Each rater participated in four consecutive days of training in order to learn the Rater Scoring Protocol, to gain a formal understanding of the constructs under investigation (indirect aggressive behavior), and to obtain preliminary interrater reliability before beginning independent rating of videotaped data. A total of five videotaped sessions (high and low tasks) were viewed to insure rater reliability over the four-day training session. Due to the small sample size of this study, these tapes were included in the final analyses (N=31).

During the first day of training, raters were provided with an orientation to the project and the constructs under investigation in this study. They were provided with a copy of the research proposal and the Rater Scoring Protocol. Time was spent reviewing the guidelines of participation including confidentiality of data, timeframes for participation (less than two months), and securing a commitment for participation from both raters.

The second day of training was spent conducting an item-by-item review of the Rater Scoring Protocol and discussing the breakdown of each task into time-limited scoring segments A-E. Raters were instructed to rate the frequency of indirect aggressive

behaviors used by the couple for use in the present study. Raters were also instructed to rate the frequency of behaviors used by each partner for use in future research studies. Time was spent confirming time schedules for weekly meetings to address rater concerns as they arose and each rater presented their remaining questions related to the constructs of the study. The raters were encouraged to provide feedback regarding the Rater Scoring Protocol and this feedback included issues regarding the format of the protocol for ease of scoring and behavioral descriptions to be included as examples of the behavior for each item. Once the raters and the research investigator agreed on these issues, the Rater Scoring Protocol was modified.

Day Three of the rater training was spent viewing two-videotaped sessions and scoring practice protocols for both high and low conflict resolution tasks. After viewing each session, raters were encouraged to offer feedback regarding their experience and time was spent addressing the rater's concerns regarding the poor sound quality of the videotapes and clarifying issues related to frequency of indirect aggressive behaviors. Raters agreed to rate three more videotapes during the fourth and final day of training.

The final day of training was spent viewing three videotaped sessions of both high and low conflict tasks. Interrater agreement was assessed at the end of the final day of training. The raters' total indirect aggression frequency scores (items 1-9 on the Rater Scoring Protocol across segments) for the high conflict and low conflict segments across all five videotapes were correlated with one another. The correlations were squared to assess the proportion of interrater agreement. The proportion of interrater agreement for indirect aggression was 96.4% ($r^2 = .964$) for the high conflict task and 86.5% ($r^2 = .865$) for the low conflict task.

Based on these squared correlations, the interrater agreement was considered more than adequate. Then, each rater was given the next set of videotaped sessions to be scored independently over a one-week time span. Raters were instructed to view tapes alone and in a quiet environment to avoid distractions. They were encouraged to contact the research investigator at any time if problems arose. Both raters were also asked to meet weekly with the principal investigator to address questions arising during the independent scoring process and to exchange videotapes between raters. During these weekly meetings, each rater discussed their concerns involving the videotapes viewed over the past week (e.g.; difficulty discerning between similar behaviors observed on some tapes, how to avoid overlap in coding behaviors that might fit more than one item on the protocol, and how to separate complex behavior chains involving the couple), and at the end of the weekly meeting each rater was assigned another set of videotapes to be coded.

Because each rater was asked to rate all 31-videotapes, it was not possible to have the same videotape viewed by each rater during the same week. This limitation did not allow for a weekly assessment of rater reliability but rather a midpoint analysis after both raters viewed 16 of the remaining 26 videotapes. Overall, interrater agreement was assessed at three points during the six-week rating period: 1) at the end of the training period, 2) after 16-videotapes were independently rated and, 3) after all 31-videotapes were viewed and rated by each rater.

Interrater Agreement. The independent raters used in this study viewed all 31-videotaped sessions containing two role-play scenarios (high and low conflict resolution tasks). As mentioned above, five of the 31-videotaped sessions collected in this study were viewed during the four-day training period to establish interrater agreement prior to

beginning independent ratings. The remaining videotaped sessions (n=26) were viewed by both raters, and each rater was assigned five to ten videotaped sessions per week to rate the frequency of indirect aggression among couples.

Using the Rater Scoring Protocol, each rater indicated how frequently the couples used indirect aggressive behaviors (Items 1-9) during each of the five time-limited segments (Segments A-E) in both the high conflict and low conflict tasks. Each rater's reported frequencies on items 1-9 for the couple on each segment (A-E) of the Rater Scoring Protocol were summed to create a segment frequency score for each rater. These five segment frequency scores were also collapsed into one total frequency score for each conflict task. Interrater agreement was determined at the segment level of the task using the segment frequency score. However, to insure agreement between the two raters, the total frequency score was used to determine total agreement for each task (low and high conflict).

Interrater agreement was assessed using a squared Pearson's moment correlation analysis (r^2) at three separate intervals: (1) at the end of training (n=5), (2) midway through the six-week scoring period (n=16), and (3) at the conclusion of the scoring period (N=31). At the first interval (n=5), the proportion of interrater agreement, using r^2 across segments A-E, was 96.4% ($r^2 = .964$) for the high conflict task and 86.5% ($r^2 = .865$) for the low conflict task. At the second interval (n=16), interrater agreement, using r^2 across segments A-E, was 84.6% ($r^2 = .846$) for the high conflict task and 82.8% ($r^2 = .828$) for the low conflict task. Interrater agreement at the third and final interval (N=31) was 72.4% ($r^2 = .724$) for the high conflict task and 52.3% ($r^2 = .523$) for the low conflict task.

Measures

The couples in this study completed the Dyadic Adjustment Scale and a demographic form. These measures are presented in Appendix B.

Dyadic Adjustment Scale (DAS; Spanier & Filsinger, 1983)

The DAS was developed to assess marital adjustment among couples. It has been widely used with both married and unmarried couples. The DAS consists of 32-items weighted on a 5-point Likert scale with four interrelated dimensions or subscales: 1) Dyadic Consensus (the degree to which the couple agrees on matters of importance to the relationship); 2) Dyadic Cohesion (the degree to which the couple engages in activities together); 3) Dyadic Satisfaction (the degree to which the couple is satisfied with the present state of the relationship and is committed to its continuance); and 4) Affectional expression (the degree to which the couple is satisfied with the expression of affection and sex in the relationship). In the present study, the subscale of Dyadic Satisfaction was used to measure relationship satisfaction.

The internal consistency reliability of the DAS using Cronbach's alpha was .96 for total Dyadic Adjustment, .90 for the subscale Dyadic Consensus, .86 for the subscale Dyadic Cohesion, .94 for the subscale Dyadic Satisfaction, and .73 for the subscale Affectional Satisfaction (Spanier & Filsinger, 1983). The DAS was also found to have content, criterion-related, and construct validity in several studies and is considered a

reliable and valid measure of dyadic adjustment (Margolin, 1981; Spanier, 1976; Spanier & Thompson, 1982).

The DAS is scored by summing the numbers assigned to each response (0-5) on the 5-point Likert scale to derive a total score. The DAS total score for Dyadic Adjustment is considered the most meaningful score to clinicians and researchers however subscale scores may be more meaningful to specific research or topic areas. According to Spanier and Filsinger (1983), a couple score from the DAS can be derived by “adding the individual scores, taking the difference between them, and/or by averaging them.” (p.164). Hahlweg and Jacobson (1984) discuss the current standards of practice for deriving couples’ scores from individually administered measures such as the DAS. These authors support the methods suggested by Spanier and Filsinger (adding individual scores, taking the difference, and/or averaging scores). In the present study, a couple score for the subscale of Dyadic Satisfaction was generated by summing the individual scores reported by each partner. The couple score for Dyadic Satisfaction was used the final analyses.

The DAS was administered to each partner after the completion of each of the two conflict resolution tasks. The internal consistency reliability of the DAS subscale for this sample was assessed using Cronbach’s alpha and yielded an overall coefficient alpha of .98. The DAS, as presented to each couple is included in Appendix B.

Demographic Form

The demographic form was used to collect information regarding the age, sex, race/ethnicity, number of years on the relationship, individual annual income, highest level of education completed, occupation, religious affiliation, marital status, and parental status, including the number of children. Each member of the couple completed this form after they signed the consent form, but before they participated in the role-play scenarios (See Appendix B for a copy of the demographic form).

Procedure

Participants were solicited via advertisement in the local Stillwater community newspaper requesting couples to participate in a research project exploring relationship satisfaction. The principal investigator interviewed each partner by telephone to determine eligibility criteria (length of relationship greater than one year, age of both participants greater than 18 years of age, both partners must reside in the same dwelling, and no history of domestic violence). During the screening interview, candidates were informed of the procedures used to collect data: 1) complete two pencil and paper questionnaires (DAS and Demographic Form), 2) participate in two videotaped role-play scenarios designed to observe communication patterns between intimate partners involving an interaction with a third person, and 3) discuss their experience with the principal investigator at completion of the study during a debriefing session.

Participants were told that they would be paid \$20 for their time and that the total participation time would not exceed two hours. Participants were also informed that they could earn an additional sum of money during the procedure (\$10) as part of a role-play scenario, however they were not told how much money would be awarded prior to

participation. Eligible participant-couples were scheduled to meet the principal investigator and the research confederate (a psychology graduate student hired as a research assistant for this study) at the Counseling Psychology Clinic in Willard Hall at Oklahoma State University. The role-play scenarios, the administration of self-report measures, and the debriefing session were conducted at this research clinic facility.

Once a time was scheduled for each coupled-participant, the principal investigator greeted participants when they arrived, introduced the confederate, and discussed informed consent procedures for participation. Coupled-participants were asked to sign an informed consent form outlining the nature of the study and the videotape process of the role-play scenarios (see Appendix B). Consent forms were collected and stored separate from other study materials (videotapes and questionnaires) in a locked cabinet. Once collected, videotaped and questionnaire data were stored in a separate locked cabinet.

After consent to participate was obtained, couples were asked to fill out the Demographic Form. These forms were collected and the first conflict resolution task was explained to the couple. The couple was provided with a written description of the task to refer to during the role-play (see Appendix B). Once the couple indicated to the principal investigator that they understood the task, the investigator left the room and videotaping of the role-play scenario began. Couples were informed that the research confederate would enter the room once they ended their discussion regarding the assigned task. By viewing the couple through a one-way mirror, the research confederate was able to determine when the couple finished discussing the task, and she joined the coupled in the videotaped session to assume her role as either a loan officer (high conflict task) or

travel agent (low conflict task). At the conclusion of the first role-play scenario, the couple was separated and asked to complete the DAS in separate rooms within the clinic facility. They were reminded of the confidentiality of their answers and assured that no discussion of their answers with their partner would be part of the study.

After completing the DAS, the couple was reunited with the principal investigator and the second role-play conflict resolution task was explained. As described above, a written copy of instructions was provided to the couple and once the couple indicated an understanding of the task, the principal investigator left the room and videotaping of the role-play began. The research confederate entered the role-play as described above. Once the couple completed the second role-play scenario, each partner was again asked to complete the DAS in a separate location from their partner. Participants were then asked to join the principal investigator for a debriefing session.

Couples were debriefed as to the nature of the study (observing the use of indirect aggressive behavior among intimate couples) and asked to discuss their feelings regarding participation. Counseling resources were provided in the informed consent materials in the event that the couple experienced distress due to their participation in this study. At the end of the debriefing session, couples were awarded with \$20 for their participation in the study plus an additional \$10 as part of the high conflict task. All couples successfully completed each task and they were awarded \$30. Participants were thanked for their participation and no follow-up procedures were included in this study.

CHAPTER IV

RESULTS

The purpose of this study was to explore the relationship of relationship satisfaction and the use of indirect aggressive behavior among intimate couples. The results of the statistical analyses will be presented according to each of the four research questions developed for this study. Please note that all of the tables referred to in this chapter are listed in Appendix A.

Original data analyses with this sample revealed one outlier in the high conflict task and one outlier in the low conflict tasks using standard graphical analyses of the data (scatter plot). Both of these scores were zeros. It was determined that these scores were due to the fact that data for one task in two cases was missing. In each case, participants completed both tasks however only one task in each case was recorded and included in data collection. Because indirect aggression was to be measured by the independent rating of videotaped data for *both* high and low conflict tasks for each couple to be later used in a repeated measures analysis, these two outlier cases were not considered representative of the intended sample population. According to Tabachnick and Fidell (1996), “if cases are not part of the population, they are deleted with no loss

of generalizability of results to your intended population.” (p.69). Using this rationale, the two outlier cases were deleted from the data set.

Research Questions

Question One

What is the relationship between indirect aggressive behaviors and relationship satisfaction among intimate partners?

To answer research question 1, Pearson product moment correlations were calculated to examine the relationship between indirect aggressive behavior and relationship satisfaction in both high and low conflict tasks. It was hypothesized that the use of aggressive behaviors, specifically indirect aggressive behavior, would be significantly and negatively correlated with relationship satisfaction. Couples with more frequent use of indirect aggressive behaviors in conflict resolution tasks were expected to report lower levels of relationship satisfaction than those couples with less frequent use of indirect aggression in conflict resolution tasks. However, the frequency of indirect aggression among couples was not significantly related to the level of relationship satisfaction endorsed by couples in high conflict resolution tasks ($r = -.21, p = .14, N=29$) and low conflict resolution tasks ($r = -.17, p = .19, N=29$). (See Table 1 in Appendix A).

A significant positive correlation was found between relationship satisfaction scores in the high and low conflict tasks ($r = .97, p < .01, N=29$). Partners' perceptions of

their relationship satisfaction after completion of one conflict resolution task were positively related to their perceptions of relationship satisfaction after completion of the second task (see Table 1). Couples' scores on the subscale for Dyadic Satisfaction on the DAS (Spanier & Filsinger, 1983) were used in final statistical analyses (as described in Chapter 3). The DAS is designed to measure relationship satisfaction as a stable construct associated with intimate relationships. Consequently, participant-couples' scores at each administration of the subscale were highly correlated (after both the high and low conflict task).

The total possible range of scores for the Dyadic Satisfaction subscale was 0-50. In this study, couples reported similar levels of relationship satisfaction at each administration of the DAS subscale, as reflected in the means and standard deviations of these scores for the subscale Dyadic Satisfaction after the high conflict task ($M=81.07$, $SD=9.71$) and the low conflict task ($M=81.45$, $SD=9.01$). Overall, the ranges of scores on the DAS subscale were 61 to 94 after the completion of the high conflict task and 65 to 92 after completion of the low conflict task.

Question Two

Is there an interaction effect for the frequency scores of indirect aggressive behavior by type of conflict task and order of the conflict task (high-low versus low-high)?

To answer research questions 2-4, a split-plot factorial analysis of variance (ANOVA) was conducted. The frequency scores of indirect aggression for each couple

across the type of task (i.e., high and low conflict tasks) were used as the within-subjects repeated measure in the ANOVA, and the order in which each task was presented (high-low presentation versus low-high presentation) was used as the between-subjects or grouping variable. Couples (N=29) were randomly assigned to either the high-low group (n=16) or the low-high group (n=13).

It was hypothesized in research question 2 that there would be an interaction effect for conflict task (high versus low) and the order of task presentation (high-low versus low-high) on the frequency of indirect aggressive behavior used by couples. In other words, couples engaging in the high conflict task first were expected to have a higher frequency of indirect aggressive behavior in the low conflict task than those couples that engaged in the low conflict task first. Those couples that engaged in the low conflict resolution task first were expected to have an increase in frequency of indirect aggressive behavior across tasks, from low to high conflict.

Results of the split-plot factorial ANOVA indicated no significant interaction effect for indirect aggression by order of conflict task and type of conflict task $F(1, 27) = 1.12, p = .30$. See Table 2 for the means and standard deviations of the frequency of indirect aggression scores by order of task and type of task.

Question Three

Is there a significant difference in the frequency of couples' indirect aggressive behaviors between high and low conflict task?

It was predicted that the type of conflict task would significantly affect the frequency of indirect aggressive behaviors used by couples. Couples were expected to choose indirect aggressive strategies more frequently during the high conflict resolution task than the low conflict resolution task. Results of this analysis found no main effect for type of task on the frequency of indirect aggression among couples, $F(1, 27) = .004, p = .95$. See Table 2 for the means and standard deviations for the frequency of indirect aggression scores by type of task.

Question Four

Is there a significant difference in the frequency of couples' indirect aggressive behaviors when the order of the task is varied (high-low versus low-high)?

It was hypothesized that the frequency of indirect aggressive behavior expressed by couples in the high-low task presentation group would significantly vary from the frequency of indirect aggression expressed by couples in the low-high task presentation group. In other words, couples engaging in the high conflict task first were expected to have a higher frequency of indirect aggressive behavior in the low conflict task than those couples that engaged in the low conflict task first. Conversely, those couples that engaged in the low conflict resolution task first were expected to have an increase in frequency of indirect aggressive behavior across tasks, from low to high conflict. Results of hypothesis testing using a split-plot factorial ANOVA indicated no significant main

effect for the order of the task, $F(1, 27) = .862, p = .36$. See Table 2 for the means and standard deviations of the frequency of indirect aggression scores by order of task.

However, a post-hoc power analysis of the statistical tests used in this study was conducted to determine the amount of power associated with the hypothesis testing. Results of this test indicated low power, $\kappa = .26, df(1,27), d = .25$ (GPOWER; Faul & Erdfelder, 1992). The effects of low statistical power on hypotheses testing will be addressed in Chapter V.

CHAPTER V

DISCUSSION

The results of this study will be discussed in this chapter. The discussion will be organized into the following sections: 1) an overview of the study, 2) the factors associated with hypothesis testing, 3) a discussion of the three research hypotheses, 4) the limitations of the study, 4) possible future directions, and 5) a conclusion.

Overview

The study of indirect forms of aggressive behavior is a new research area within the large body of research investigating human aggression. Indirect aggressive behavior is not directly physical or verbal, and has been defined as the aggressive actions of individuals who intend to harm others but utilize the social context to hide their intent (Bjorkqvist et al., 1994). Current research in this area has been limited by the availability of only a few published measures designed to measure indirect aggression in adult populations. Indirect aggression has been observed in adult populations including workplace employees and romantic relationships, but these studies have largely relied

upon self-report measures of indirect aggression (Bjorkqvist & Osterman, 1992; Kaukiainen et al., 1997; Linder et al., 2002).

Considering the negative social norms associated with aggressive behavior in general, self-report measures of aggression may not adequately assess the use of indirect forms of aggression, as individuals may tend to answer questionnaires in a socially desirable manner. The research on indirect aggression may be enhanced by studies designed to observe this behavior in a laboratory setting instead of relying on self-report measures alone. This type of observational research may provide a more reliable assessment of indirect aggression among couples, which may lead to improvements in the development of standardized self-report measures of indirect aggression.

Aggressive behavior among romantic partners has been well documented (see meta-analytic review by Archer, 2002). However, there is only one published study on the use of indirect or relational forms of aggression in romantic relationships (Linder et al., 2002). In Linder's study, romantic partners used indirect aggression to harm one another and those partners who endorsed using indirect aggressive behaviors reported poor relationship quality. Further investigations into the use of indirect aggression and the impact of this behavior on level of relationship satisfaction among adult romantic partners may provide additional evidence to support the findings of Linder et al.

The previous research on indirect aggression appears fragmented by multiple studies conducted across several research domains namely, social psychology, developmental psychology, industrial/organization psychology, and anthropology. As a result, a theoretical framework from which to operationalize this behavior has not been fully developed across research studies. However, the principles of social exchange

theory, specifically the theory of exchange posited by Thibaut and Kelley (1959) seems well suited to explain the psychological processes involved in the use of indirect aggressive behavior. This theory assumes that human behavior is governed by the desire to maximize positive experiences and minimize negative consequences so that participation in a relationship is maintained as long as it is deemed favorable.

The type of cost-benefit ratio outlined by Thibaut and Kelley (1959) is similar to the operating mechanism underlying the use of indirect forms of aggression. Individuals evaluate the costs and benefits or effects and dangers associated with the use of indirect aggression in social interactions and then manipulate the social environment to minimize the personal costs associated with the behavior (hide their identity and/or intent) and maximize the personal benefit associated with their behavior (personal gain associated with harm to another individual). This interdependence between the individual and the social environment is aligned with Thibaut and Kelley's model of social exchange. A research study designed to measure the frequency of indirect aggression used by romantic partners as a form of social exchange may offer evidence to support the use of social exchange as a theoretical framework for the study of indirect aggression.

The present study was designed to directly observe the use of indirect aggression among intimate couples through role-play scenarios involving two conflict resolution tasks (high level conflict and low level conflict). Relationship satisfaction was also measured to explore the relationship of indirect aggression among couples and relationship satisfaction. Researchers and practitioners alike may benefit from an increased understanding of how the use of indirect aggression among romantic partners

relates to relationship satisfaction, particularly when this form of aggression has been associated with an escalation to more direct forms of physical aggression (Archer, 2000).

Furthermore, the high conflict task used in this study was designed to increase the exchange value associated with resolving the conflict task by adding an additional incentive/reward (money) to this task. The increased exchange value (monetary reward) associated with the social interaction (conflict task) was used to support the theoretical proposition that indirect aggression should be considered a form of social exchange.

Factors Associated with Hypotheses Testing

In the statistical analyses used to test the research hypotheses of the present study, no significant results were found. The use of indirect aggressive behavior was not significantly correlated with relationship satisfaction and the use of indirect aggression did not significantly differ by type of conflict task or by order of presentation of each conflict task among intimate couples. There are several possible explanations for the failure to find significant results in this study. The most salient of these explanations is associated with the low power of statistical tests used to test research hypotheses.

Issues of low power in this study were related to the small number of couples sampled as well as the reliability and validity associated with the conflict resolution tasks used to measure indirect aggression. These issues are fully discussed in the Limitations of the Study section at the end of this chapter. However, because the sensitivity or power of an experiment refers to its ability to detect differences when they are present, low statistical power may be related to errors in hypothesis testing and a brief discussion of power is needed (Keppel, 1991; Tabachnick & Fidell, 1996).

The present study did not achieve sufficient statistical power to fairly test the research hypotheses. Tests of research hypotheses may not have been sensitive enough to detect significant relationships and/or differences between and among the variables of interest. At this time, there is no consensus on the relevance of statistically nonsignificant results in behavioral science research and it is argued that when statistically nonsignificant results are due to issues of low power (greater probability of Type II error), the possible theoretical significance of these results should be interpreted (Keppel, 1991).

For example, the lack of a significant correlation between relationship satisfaction and indirect aggression in the present study would suggest that the null hypothesis is true; these variables are not significantly related. However considering the issues of low power involved in this study suggesting a high probability of a Type II error and considering Keppel's opinion as stated above, this finding may be theoretically meaningful and should be interpreted. The possible theoretical or practical significance of each of the research hypotheses in this study will be interpreted with the understanding that statistical significance was not achieved, and a thorough discussion of the limitations affecting the results of this study will be included in a separate section.

Discussion of Results

Relationship Between Indirect Aggression and Relationship Satisfaction

The use of indirect relational aggression in romantic relationships has been associated with lower levels of relationship satisfaction (Linder et al., 2002). In the present study, it was predicted that couples who used indirect aggressive behaviors more frequently in the conflict resolution tasks would report lower levels of relationship satisfaction than couples who did not use indirect aggression as often. A significant negative correlation was expected, however, these variables were not significantly correlated.

In this study, there was no significant relationship between the use of indirect aggressive behavior and relationship satisfaction among couples in low and high conflict situations. One possible explanation for this finding is that an individual's level of satisfaction in an intimate relationship is perhaps a more global aspect of the relationship itself, so that the perception of satisfaction in a relationship may not be influenced by situational factors such as the use of indirect aggression in a conflict task. In other words, how a romantic partner behaves in a contrived or simulated role-play task may not affect their perception of the overall quality of the relationship. In this respect, relationship satisfaction may be a more constant or stable variable than expected.

In this study, relationship satisfaction was measured using the Dyadic Adjustment Scale (DAS; Spanier & Filsinger, 1983) after the completion of each conflict task. This provided a measure of relationship satisfaction at two separate intervals. Of interest, the couples' level of relationship satisfaction after the first conflict task was significantly related to their level of relationship satisfaction after the second conflict task. This finding suggests that relationship satisfaction remained stable across tasks in this study.

Although no significant correlation was found between indirect aggression and relationship satisfaction, there may be some theoretical significance to this finding. A negative correlation between these variables was predicted and a negative, but nonsignificant, correlation was found. Couples that endorsed a higher frequency of indirect aggression also reported lower levels of relationship satisfaction in both the high conflict and low conflict tasks. Only one other group of researchers has investigated the relationship between indirect aggression and relationship satisfaction among couples (Linder et al., 2002), and these authors found a significant negative correlation between these two variables. When compared to Linder et al., the negative (but nonsignificant) correlation between relationship satisfaction and indirect aggression found in the present study appears theoretically meaningful; both studies found a negative relationship between indirect aggression and relationship satisfaction. This similarity in findings may also be practically significant because of differences in methodologies used in both studies: self-report versus direct observation.

Differences in the Frequency of Indirect Aggression
by Order and Type of Conflict Task

Indirect aggression has been considered a precursor to the use of direct physical forms of aggression in romantic relationships (Capaldi & Crosby, 1997; Linder et al., 2002; Testa & Leonard, 2001). This hypothesis suggests a possible escalation of conflict in romantic relationships and the behaviors chosen by partners to resolve conflict. If indirect aggression does precede direct forms of physical aggression, then an escalation

in the use of indirect aggressive behavior across stressful or conflicted situations should also be expected in couples' resolution of conflict tasks. The present study hypothesized such an escalation in the use of indirect aggressive behavior by examining a possible interaction effect between the type of conflict task (high versus low) and the order in which these tasks were presented (high then low task versus low then high task) on the frequency of indirect aggression scores.

The present study used two conflict tasks (high and low) to measure the frequency of indirect aggressive behavior among couples. To test for a possible interaction effect between the order of tasks presented to couples and the type of conflict task (high conflict and low conflict) on the frequency of indirect aggression used by couples, this study randomized the order in which these two tasks were presented to coupled-participants. Some couples (n=13) were asked to resolve a low conflict situation first followed by a high conflict task (low-high order of presentation) with the remaining couples (n=16) presented with the high conflict task first followed by the low conflict task (high-low order of presentation). The frequency of indirect aggressive behavior used by couples was expected to increase or escalate across tasks from low to high, and either remain constant or increase across tasks from high to low.

However, there was no interaction between the order of the conflict task and the type of task in the frequency of indirect aggressive behavior among couples in this study. In other words, couples that experienced the low conflict task before the high conflict task did not statistically differ in the use indirect aggression than those couples that experienced the high conflict task first followed by the low conflict task next. This

finding did not support a meaningful increase in the use of indirect forms of aggressive behavior (from low to high conflict tasks) as predicted in research hypotheses.

Theoretically, there may be some meaningful interpretations of the nonsignificant findings found in hypothesis testing. As stated previously, indirect forms of aggression have been hypothesized as a precursor to more direct forms of aggression in romantic relationships (Capaldi & Crosby, 1997; Linder et al., 2002; Testa & Leonard, 2001). And yet, no researchers have investigated the possibility that an escalation in indirect aggression may occur in romantic relationships prior to the use of direct aggression.

The present study was not designed to challenge the hypotheses of the authors mentioned above, however research hypotheses (predicting a possible interaction in the effect of indirect aggressive behavior across conflict tasks when the order of tasks was varied) indirectly challenged the assumption that aggression escalates by type of behavior (eg; indirect forms of aggression lead to increased indirect aggression, leading ultimately to direct forms of aggression). The results of this study do not offer evidence to support the hypotheses of previous researchers purporting a possible escalation of aggression by type of behavior within romantic relationships; no significant differences were found in the frequency of indirect aggression used by couples across conflict tasks. In other words, a lack of significant findings in the present study suggests that the behaviors chosen by partners to resolve conflict did not significantly increase or escalate across conflict tasks, when the behavior chosen was indirect aggressive behavior.

Differences in Indirect Aggression by Type of Conflict Task

The frequency of indirect aggressive behaviors used by couples was expected to vary by social context (high versus low conflict task). There were no significant differences in the frequency of couples' indirect aggressive behavior between the high and low conflict tasks as predicted. One possible explanation for the lack of significant differences may be that the use of indirect aggression among couples is more related to a couples' overall style of interaction and less related to a couples' strategy for conflict resolution as proposed in this study. In other words, couples in this sample may have used indirect aggressive behavior as a form of communication rather than as a conflict resolution strategy so that the frequency of this behavior was not affected by conflict level (high or low).

Another possible explanation for the lack of significant differences between high and low conflict tasks may be related to issues inherent in the nature of these tasks. First, the potential of each task (low versus high) to discriminate between high and low sources of marital conflict may have been limited in ways not controlled for in the study. The conflict tasks used in this study may not have generated enough tension or marital conflict to elicit significant amounts of indirect aggressive behavior between the high and low conflict task. For instance, this study proposed that getting a loan approved (high conflict task) would be more stressful for couples than negotiating travel plans (low conflict task), but it is possible that these tasks did not differ in meaningful ways to the couples sampled.

It is also possible that the two tasks did not adequately represent sources of conflict experienced by couples in everyday situations. Although these tasks were based on previous research identifying sources of marital conflict (Gottman, 1979), these two

conflict tasks were contrived situations that may not reflect the actual conflicts that occur for these couples. In other words, role-play scenarios cannot fully mimic reality.

Furthermore, the couples sampled in this study may have responded to the artificial nature of the clinic setting and inhibited their normal reactions to the situations presented. Because couples were asked to imagine themselves in the simulated role-play scenarios, which were also videotaped, it is possible that couples were not able or willing to respond authentically to the conflict tasks; couples may have self-monitored their behavior in front of a video camera. Future studies using real life scenarios involving sources of marital conflict specific to each individual couple may yield more statistically meaningful results.

Overall, the frequency of indirect aggressive behavior did not significantly differ by type of conflict task in this study. The limitations of the tasks used in this study may have contributed to this finding and future researchers should address these limitations by modifying the types of conflict scenarios used with couples.

Differences in Indirect Aggression by Order of Conflict Task

The frequency of indirect aggressive behavior used by couples was expected to vary by the order in which each couple was presented with the conflict task. As stated in the sections above, couples that received the high conflict task first (high-low presentation) were expected to use indirect aggression more often in the low conflict task than couples that completed the low conflict task first (low-high presentation). However, results of hypothesis testing did not show a significant difference in the frequency of

indirect aggression used by couples when the order of the task was varied. In other words, couples used indirect aggressive behavior similarly in both tasks regardless of which task they completed first.

It is possible that the low amount of statistical power associated with this study may have impacted the ability of the statistical tests used to detect differences in the use of indirect aggression by order of task presentation, if significant differences did exist. However, it is also possible that the nature of the tasks chosen to represent high and low conflict in this study did not adequately create high versus low amounts of conflict for couples. The experience of getting a loan approved (high conflict task) may not have been experienced by couples as substantially more stressful than planning a vacation (low conflict task), so that when the order of completion of each task was varied neither task had generated enough conflict to affect the use of indirect aggression in the subsequent task.

To summarize, the results of hypotheses testing yielded no statistically significant findings in this study. Although there appears to be some merit in an examination of the theoretical significance of these nonsignificant results as discussed above, the most salient explanations of the nonsignificant findings may be found in an analysis of the limitations associated with this study. Future researchers may wish to take heed of these issues.

Limitations of the Study

This study has several limitations and an examination of these limitations may offer other meaningful interpretations of the results. First, the amount of statistical power associated with this study was low and represents perhaps the most serious limitation to the analyses used to test research hypotheses. Low power was most likely due to the small number of couples used in statistical analyses (N=29). Results of a post-hoc power analysis indicated that a sample size larger than 50 couples would have provided greater statistical power in hypothesis testing (current power at .26 with a sample size of 29, estimated power of .91 with a sample size of greater than 50; GPOWER; Faul & Erdfelder, 1992).

Using a much larger sample size than was used in this study may yield significant results in future studies and increase the generalizability of these results to the larger population of couples. Historically, small sample size has been a factor in couples research due to the methods used in direct observational/experimental research designs, which are both labor intensive and expensive. However, direct observation yields more robust data than survey research and is considered a more effective measurement of couples' behavior. Direct observation methods were chosen for this study with the understanding that a small sample size would be a significant limitation.

Second, the lack of statistically significant findings in this study may have been related to the validity of the high and low conflict scenarios developed to measure indirect aggression among couples. These two conflict resolution tasks were created using sources of marital conflict from previous research literature (Gottman, 1979) and may not have generated enough conflict for couples in a role-play scenario to adequately measure the frequency of indirect aggression. In addition, the sources used to define the

high conflict task (financial issues) and low conflict task (travel planning) may not have generalized to the couples sampled. In other words, these two tasks may not have been a valid measure of conflict, leading some couples to perceive the high conflict task as less provoking than the low conflict task, and vice versa. The conflict tasks used in this study may not have adequately discriminated between high and low levels of conflict needed to create a fair test of research hypotheses. In this regard, the conflict tasks used to measure indirect aggressive behavior this study were questionable in terms of their validity and represent a significant limitation.

Couples were asked to imagine themselves in the simulated role-play scenarios and it is possible these conflict tasks were not adequate representations of everyday situations for the couples sampled in this study. However, simulated role-play scenarios were chosen to measure indirect forms of aggression because using sources of real-life conflict from each individual couple may have caused undue harm to research participants. Researchers in the future might choose to use real-life conflicts for couples to observe indirect and/or direct aggression as long as resources (e.g., couples counseling following the study, information on conflict management) are available to address these issues following participation in such a study. In addition, clinical samples of distressed couples could be used in future research to observe couples that endorse problems with aggression in their relationship to better understand the factors associated with indirect aggression and direct aggression.

Another limitation of this study was the laboratory clinic setting used to observe participant's behavior and the videotaping involved in the study. The clinic setting may have been perceived as artificial or sterile by couples, thereby inhibiting honest responses

to the conflict tasks. However, because aggressive behavior is often considered socially inappropriate behavior, couples may have modified their behavior according to social norms prohibiting the expression of aggressive behavior. In addition, each role-play scenario was videotaped for later analysis by independent raters and the presence of a video camera and a one-way mirror may have contributed to the artificiality of the clinic setting. The use of in-vivo simulated role-plays was chosen for this study because an observation of indirect aggressive behavior as it might occur in the couples' daily life was not possible, however the simulated nature of these role-play tasks should be considered a limitation in this study.

Another significant limitation of this study that may have affected the results of this study was the decay in interrater agreement using the Rater Scoring Protocol. Decay in interrater agreement refers to the gradual decline in agreement between raters over the course of the rating period. In this study, two independent raters were trained to use the Rater Scoring Protocol and separately viewed the 31 videotapes in this study. As described in Chapter Three, interrater agreement was assessed at three intervals, after viewing five videotapes during the training sessions, 16 additional videotapes, and again once all 31 videotapes were coded. Overall, interrater agreement was high at the first interval, slightly but not significantly lower at the second interval, but considerably lower at the end of the training period. In this respect, the reliability of agreement between the two raters decayed over the three intervals. Overall, interrater agreement for this study was moderate to mediocre (see Interrater Agreement in Chapter Three).

Because the rater's scores on the Rater Scoring Protocol were used to measure the frequency of indirect aggressive behavior, it is possible that decay in agreement between

the raters affected the overall reliability of the measurement of indirect aggression. Poor reliability associated with the measurement of variables in a study often contributes to Type II errors in statistical testing and is associated with low statistical power (as described above) (Keppel, 1991). In this study, decay of interrater agreement in this study is considered a significant limitation because it directly affects the reliability of measuring one of the main study variables—indirect aggressive behaviors between intimate partners. Future studies should achieve high interrater agreement across all intervals of the rating period to insure a more reliable measure of indirect aggressive behavior among couples.

Sixth, the use of a paper and pencil questionnaire to measure relationship satisfaction was also considered a limitation in this study. The desire of participants to represent themselves or their relationship in a positive manner may have influenced their self-report of answers on this measure. The potential impact of social desirability on self-report measures is considered a common limitation in quasi-experimental research designs; this study was no exception.

Finally, the unit of analysis used in this study is considered a limitation specific to research using coupled or marital partners. The investigation of psychological processes in coupled relationships presents the unique challenge of combining standardized pencil and paper measures of a construct asking for individual responses from each romantic partner with the direct observation of couples' behavior generating a data for the couple rather than the individual. In this study, couples' scores were generated for indirect aggression through the direct observation of couples' indirect aggressive behavior in each conflict resolution task, and individual partner scores were gathered on the Dyadic

Satisfaction subscale of the Dyadic Adjustment Scale (DAS, Spanier & Filsinger, 1983). To standardize the unit of analyses, the individual partner scores on the DAS subscale were summed to create a couple score for use in final statistical analyses. The creation of a couple score by summation of individual partner scores is considered one of three acceptable modifications to the DAS provided by Spanier and Filsinger (1983) as previously discussed in Chapter III. However, they authors also assert that any one of these modifications may affect the overall reliability of the measure and therefore must be considered a limitation to the study.

To summarize, several limitations may have contributed to the nonsignificant findings of this study. Issues of low power and a small sample size related to the probability of a Type II error in statistical tests combined with the questionable validity of conflict tasks and the moderate reliability of measures of indirect aggression (interrater agreement on the Rater Scoring Protocol) are perhaps the most serious of the limitations of this study which may have affected the findings. Future research aimed at investigating indirect aggression using direct observation methods may benefit from an analysis of these limitations and hopefully avoid unnecessary pitfalls in research design and execution.

Future Directions

Considering the limitations of the present study, future studies investigating the relationship between indirect aggression and relationship satisfaction would be well advised to attend to the following issues in designing a direct observation method of

study: 1) use larger samples of couples, 2) achieve good interrater agreement among raters over time and address any potential decay in ratings, and 3) incorporate real-life elements in direct observation methods that may allow couples an opportunity to authentically express indirect forms of aggressive behavior. It is also possible that future researchers may find more meaningful results if a longitudinal design is used to measure the effects of indirect aggression on relationship satisfaction across conflict tasks over time. However, the costs of this type of research design may be greater than the possible benefit of results yielded since it is entirely possible that a significant relationship does not exist between the quality of romantic relationship and the use of indirect aggression by intimate partners (as suggested by results of this study). If this is true, then future studies may add to the body of literature examining indirect aggression among intimate couples by investigating variables that are more state-dependent and less global in nature than one's overall perception of the quality of their relationship.

Affective variables such as depression, anger, anxiety, and irritability may be related to an individual's choice of indirect aggressive behavior in conflict resolution tasks. But, there are inherent difficulties in measuring affective variables in couples' research. These affective constructs may be difficult to operationalize as variables that could affect the use of indirect aggression. In addition, future researchers will have to contend with the possible confounds of extraneous contextual variables affecting the way individuals emotionally respond to conflict resolution tasks in a clinic setting. For example, couples' feelings related to an argument or another stressful situation preceding their participation in a study may affect the feelings expressed in the study itself. And while affective variables may be difficult to measure in research studies, it is likely that

the emotional state of romantic partners may act as an antecedent to indirect forms of aggressive behavior. Consequently, affective variables may be significant factors in the evaluation of the cost-benefit ratio associated with indirect aggression. An investigation of the relationship between emotions and indirect aggression in partnered relationships is sorely needed.

The use of conflict resolution tasks to directly observe the use of indirect aggression in this study presented certain limitations already discussed above, and future researchers might consider using real-life conflict scenarios derived from the couples' personal experience to create conditions favorable for couples to behave more authentically in a clinic laboratory setting. Furthermore, the use of complex puzzles or discussions of previous conflict situations experienced by the couple may reduce the artificial nature associated with a clinic setting. However, the use of simulated conflict tasks minimizes the risk of harm to participants in that it offers some protection from distress associated with participation in the experiment. The chance of creating or contributing to relationship distress is certainly a significant consideration in couples' research, but a risk that could be minimized through the careful selection of research participants as well as follow-up resources after couples' participation in this type of research.

For example, future research investigating indirect aggression among couples may benefit from using a clinical population of couples already engaged in couples' therapy. The risk of harm to participants would be minimized if the couple already possessed a resource to manage any distress associated with participation in the experiment.

However, results of studies using clinical populations may not generalize to typical couples or non-therapy-seeking couples.

In the present study, a discussion of results would be remiss not to mention another possible improvement for future research studies using direct observation methods to measure indirect aggression among couples: the addition of a self-report questionnaire. Because the current state of indirect aggression research is limited by few published measures of this behavior, a paper and pencil measure could be designed to measure each partner's perception of indirect aggression in their relationship as both the aggressor and the victim of such behavior. In addition, using self-report data along with behavioral observations may provide a multi-modal way to assess how indirect aggressive behaviors are used and experienced by romantic partners rather than simply measuring the frequency of this behavior using one method alone.

Ultimately, the results of the present study seemed to support the use of direct observation methods to measure indirect aggression in that this behavior was observed with moderate interrater agreement. However, researchers should take steps to ensure the maintenance of good interrater agreement. Future studies achieving greater interrater agreement using this protocol would improve the reliability of this instrument as a direct observation tool. While evidence of decay in interrater agreement limited the results of this study, this appeared to be an artifact of the present study and should not preclude the use of direct observation methods with rater scoring protocols in future studies of indirect aggression among intimate couples. Considering this was the first study designed to observe the frequency of indirect aggression among couples in conflict situations, future researchers could use the indirect aggression behavior items of the Rater Scoring Protocol

to further test its reliability and validity with larger samples of intimate partners and with higher standards for interrater agreement.

The Rater Scoring Protocol was created to measure the frequency of indirect aggressive behavior for both couples' and individual partners although only couples' scores were used in this study. Gender differences in the use of indirect aggression have been found in previous research studies (Bjorkqvist et al., 1992; Bjorkqvist et al., 1994; Bjorkqvist & Niemela, 1992; Eagly & Steffan, 1986), and future studies should examine potential gender differences in indirect aggression in partnered heterosexual relationships. If indirect aggression is part of a behavior exchange in dyadic relationships, then possible differences in the frequency of this behavior between men and women may be noteworthy. Couples' therapists may benefit from a greater understanding of how both men and women use of indirect aggression in their treatment of distressed couples. In addition, the body of research literature examining female aggression may be enhanced by data illustrating the ways and contexts in which women use indirect aggressive behavior within intimate relationships.

Other areas to be considered include investigating the use of indirect aggression among males. Future studies might benefit from a better understanding of the ways in which men use indirect aggressive behavior in intimate relationships. Specific population characteristics and the theoretical issues underlying the construct of indirect aggression may also be an area for future exploration.

Theoretical Issues in Future Studies

Future researchers interested in examining indirect aggressive behavior would be wise to consider the multiple theoretical issues associated with this construct. First, the dynamic nature of the construct itself suggests that to fully understand the nature of indirect aggression, the researcher may be required to first determine whether indirect aggression is to be examined as a behavior used instrumentally by humans or a form of communication used expressively between individuals. However, once this determination is made, the researcher may then need to explore the role of internal or private motivation and intent in the expression of indirect forms of aggression. Some of these issues may be ferreted out through the operationalization of indirect aggression.

For example, the definition of indirect aggression used in this study was derived from previous research literature suggesting that indirect aggression is comprised of three potentially separate components of the behavior aimed at inflicting harm to a target: 1) the intent to harm will not be recognized, 2) counteraggression will be less likely, and 3) if possible the aggressor will remain unidentified (Lagerspetz et al., 1988). It is questionable whether all nine items of the Rater Scoring Protocol used to measure indirect aggression in this study fully captured the three-part definition set forth by Lagerspetz and colleagues simply due to the nature of the population being observed in this study (romantic couples). In other words, the construct of indirect aggression is difficult to define because specific population characteristics may affect the expression of the behavior and these characteristics will ultimately vary across populations (e.g.; in a romantic relationship it is more difficult for the aggressor to remain unidentified than it is

for a platonic friend or coworker). Future researchers may wish to tailor definitions of this behavior to better related to the population characteristics they wish to examine.

Second, the use of the term indirect “aggression” also represents a theoretical consideration when designing a study examining this behavior. The current study discussed contemporary definitions of aggressive behavior as encompassing both the destructive and the constructive elements of human behavior (Nadelson, Notman, Miller, and Zilbach, 1982) and this study operationalized indirect aggression as behavior that is aimed at inflicting harm to the target. However, the definition of “harm to the target” was not articulated in this study. It is often assumed that harm is defined as negative however harm in a romantic relationship may be constructive to the relational unit but destructive to an individual partner and vice versa. Future researchers may wish to thoroughly examine the nature of aggressive behavior within the context of the population to be studied, as contextual variables may significantly affect the observation, perception, and interpretation of indirect aggression.

Finally, the use of indirect aggression among intimate couples presented a unique theoretical issue that should be attended to in future studies with this population; the observation of indirect aggression as a specific behavior versus a pattern of communication between romantic partners. Couples in this study used indirect aggression as part of a chain of behaviors linked together to reach a projected end (task completion). Each behavior in this chain was analyzed and the behaviors that were determined to be indirectly aggressive were counted in frequency scores. However, theoretically speaking, these behavior chains might also have represented a style or pattern of communication commonly used by couples to resolve conflict that may or may

not have constituted harm to the target by the couples' own definition. For instance, one partner may routinely choose to ignore the other when that partner is engaged in verbal insults under his/her breath about the other partner. This pattern of behavior may also be a pattern of communication between partners that precludes an open dialogue of differences in opinion, but does not necessarily constitute intent to harm. Future research would certainly benefit from a multimodal design that would allow couples to comment on these patterns of behaviors as a chain of behavior intended to harm or a communication pattern with some other purpose.

To summarize, a thorough review of the theoretical issues surrounding the construct of indirect aggression should be included in any future study. The present study attempted to review the issues specific to the design and population used, as well as highlight theoretical considerations that may be specific to future studies. A careful analysis of the limitations of this study may also benefit future researchers seeking to better understand the relationship between indirect aggressive behavior and perceived relationship satisfaction among intimate partners. The direct observation method used to measure indirect aggression in this study holds some promise for future studies if greater interrater agreement using rater-scoring protocols can be achieved. In the end, it is recommended that future research should: design multimodal methodologies for investigating the use of indirect aggression in romantic relationships, examine affective variables associated with indirect aggression, and consider using a clinical population of couples already reporting marital distress related to aggressive behavior to explore the possible relationship between indirect and direct forms of aggression.

Conclusions

The use of indirect aggressive behavior among couples was not significantly related to low levels of relationship satisfaction as predicted in this study. The frequency of indirect aggression among couples did not significantly differ by the type of conflict task or the order in which these tasks were presented to the couples sampled in this study. Overall, the sample size, the validity of the conflict tasks, and the interrater agreement decay in reliably observing indirect aggression may have affected the findings of the study. Nonetheless, the present study is significant in two ways.

First, this study created a protocol for the measurement of indirect aggression through direct observation of behavior (Rater Scoring Protocol) and this protocol showed good internal consistency reliability with this research sample. Considering that the study of indirect aggression is limited by relatively few published measures, this scoring protocol could be further tested to become an effective instrument in future research. In addition, the behavioral items on the Rater Scoring Protocol could be incorporated into a general measure of indirect aggression with adult populations, and the direct observation of these behaviors in the present study may provide construct validity in further instrument development. More research is needed using observational measures of indirect aggression.

Second, in the present study the frequency of indirect aggressive behavior was associated with low levels of relationship satisfaction among couples, although this relationship was not statistically significant. And while the lack of a significant relationship between these variables must be emphasized, the direction of this

relationship is similar to that found by Linder et al. (2002) in their study of indirect aggression and relationship satisfaction among intimate partners. Considering, the study conducted by Linder and colleagues represents the sum of research literature investigating these variables to date; the direction of the relationship between these variables found in the present study seems noteworthy for future examinations of indirect aggression and relationship satisfaction among intimate couples.

Overall, the study of indirect aggressive behavior remains in its infancy when compared to the enormous body of literature examining direct forms of aggression. However, indirect forms of aggression are no less harmful to both the aggressor and the target of the aggression than direct physical aggression and therefore warrant continued investigation into the psychological processes and behavioral mechanisms involved in the use of this behavior across and within different populations. Hopefully, the findings of this study will help clinicians and researchers alike to better understand the role of indirect aggression in partnered relationships and the need for further investigation into this dynamic construct.

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APPENDIXES

APPENDIX A

TABLES 1 & 2

Table 1

Correlation Matrix of Indirect Aggression Scores and Relationship Satisfaction Scores.

| Variable | 1 | 2 | 3 | 4 |
|-----------------|------|-------|------|-------|
| 1. IAHigh | 1.00 | .78** | -.21 | -.17 |
| 2. IALow | | 1.00 | -.16 | -.17 |
| 3. DASsubscale1 | | | 1.00 | .97** |
| 4. DASsubscale2 | | | | 1.00 |

Note. N = 29. ** p . < .01. IAHigh = Couples' frequency scores for indirect aggression in the high conflict task; IALow = Couples' frequency scores for indirect aggression in the low conflict task; DASsubscale1 = Couples' scores on the subscale Dyadic Satisfaction after the high conflict task; DASsubscale2 = Couples' scores on the subscale Dyadic Satisfaction after the low conflict task.

Table 2

Means and Standard Deviations of Couples' Indirect Aggression Scores by Order of Task and Type of Task.

| Task | Low Conflict | High Conflict |
|-------------------|---|--|
| Order High-Low | <i>M</i> = 52.44 <i>SD</i> = 5.94 N = 29 | <i>M</i> = 53.38 <i>SD</i> = 5.49 N = 29 |
| Order Low-High | <i>M</i> = 56.08 <i>SD</i> = 11.66 N = 29 | <i>M</i> = 54.77 <i>SD</i> = 7.47 N = 29 |

Note. N=29. Order High-Low = High conflict task first, low conflict task next. Order Low-High = Low conflict task first, high conflict task next.

APPENDIX B

SUPPLEMENTAL FORMS

Dyadic Adjustment Scale
(Spanier & Filsinger, 1983)

Please place an "X" in the column next to the item that best describes how YOU feel about the issues listed below.

| | Always agree | Almost always agree | Occasionally disagree | Frequently disagree | Almost always disagree | Always disagree |
|---|-----------------|---------------------------|--------------------------|------------------------|------------------------------|--------------------|
| Handling finances | _____ | _____ | _____ | _____ | _____ | _____ |
| Matters of recreation | _____ | _____ | _____ | _____ | _____ | _____ |
| Religious matters | _____ | _____ | _____ | _____ | _____ | _____ |
| Demonstration of Affection | _____ | _____ | _____ | _____ | _____ | _____ |
| Friends | _____ | _____ | _____ | _____ | _____ | _____ |
| Sex relations | _____ | _____ | _____ | _____ | _____ | _____ |
| Conventionality | _____ | _____ | _____ | _____ | _____ | _____ |
| Philosophy of life | _____ | _____ | _____ | _____ | _____ | _____ |
| Ways of dealing with parents/in-laws | _____ | _____ | _____ | _____ | _____ | _____ |
| Aims, goals, and things you believe are important | _____ | _____ | _____ | _____ | _____ | _____ |
| Amount of time spent together | _____ | _____ | _____ | _____ | _____ | _____ |
| Making major decisions | _____ | _____ | _____ | _____ | _____ | _____ |
| Household tasks | _____ | _____ | _____ | _____ | _____ | _____ |
| Leisure-time interests/activities | _____ | _____ | _____ | _____ | _____ | _____ |
| Career decisions | _____ | _____ | _____ | _____ | _____ | _____ |

Please place an “X” in the column next to the item that best describes HOW OFTEN you have experienced the issues listed below. **(Dyadic Satisfaction)**

| | All the time | Most of the time | More often than not | Occasionally | Rarely | Never |
|---|-----------------|---------------------|------------------------|---------------------|-----------------|-------|
| How often do you discuss or have you considered divorce, separation, or terminating your relationship? | _____ | _____ | _____ | _____ | _____ | _____ |
| How often do you or your mate leave the house after a fight? | _____ | _____ | _____ | _____ | _____ | _____ |
| In general, how often do you think that things between you and your partner are going well? | _____ | _____ | _____ | _____ | _____ | _____ |
| Do you confide in your mate? | _____ | _____ | _____ | _____ | _____ | _____ |
| Do you ever regret that you are involved with your mate? | _____ | _____ | _____ | _____ | _____ | _____ |
| How often do you and your partner quarrel or argue? | _____ | _____ | _____ | _____ | _____ | _____ |
| How often do you and your mate “get on each other’s nerves” or annoy / bother each other? | _____ | _____ | _____ | _____ | _____ | _____ |
| Do you kiss your partner? (Dyadic Satisfaction) | Every day | Almost every day | Occasionally | Rarely | Never | |
| | _____ | _____ | _____ | _____ | _____ | |
| Do you and your partner engage in outside interests together? | All of them | Most of them | Some of them | Very few of them | None of them | |
| | _____ | _____ | _____ | _____ | _____ | |

Please place an “X” in the column next to the item that best describes HOW OFTEN you would say the following events occur between you and your partner.

| | | | | | | |
|--------------------------------------|-------|-------|-------|-------|-------|-------|
| Have a stimulating exchange of ideas | _____ | _____ | _____ | _____ | _____ | _____ |
| Laugh together | _____ | _____ | _____ | _____ | _____ | _____ |
| Calmly discuss something | _____ | _____ | _____ | _____ | _____ | _____ |
| Work together on a project | _____ | _____ | _____ | _____ | _____ | _____ |

The following items are things about which couples sometimes agree and sometimes disagree. Indicate if either item below caused differences of opinions or were problems in your relationship during the past few weeks. (yes or no)

| | | |
|-------|-------|-------------------------|
| Yes | No | |
| _____ | _____ | Being too tired for sex |
| _____ | _____ | Not showing love |

Imagine that the dots on the following line represent different degrees of happiness in your relationship. The middle point, “happy”, represents the degree of happiness of most relationships. Please circle the dot, which best describes the degree of happiness, all things considered, of *your* relationship. **(Dyadic Satisfaction)**

| | | | | | | |
|-----------------------------|--------------------------|----------------------------|-------|---------------|--------------------|---------|
| Extremely <i>Unhappy</i> | Fairly <i>Unhappy</i> | A little <i>Unhappy</i> | Happy | Very Happy | Extremely Happy | Perfect |
|-----------------------------|--------------------------|----------------------------|-------|---------------|--------------------|---------|

Which of the following statements best describes how you feel about the future of your relationship? **(Dyadic Satisfaction)**

_____ I want desperately for my relationship to succeed, and *would go to almost any length to see that it does.*

_____ I want very much for my relationship to succeed, and *will do all I can* to see that it does.

_____ I want very much for my relationship to succeed, and *will do my fair share* to see that it does.

_____ It would be nice if my relationship succeeded, *but I can't do much more than I am doing* now to keep the relationship going.

_____ It would be nice if my relationship succeeded, *but I refuse to do anymore than I am doing* now to keep the relationship going.

_____ My relationship can never succeed, and *there is no more that I can do* to keep the relationship going.

DEMOGRAPHIC INFORMATION

Please answer the following questions. Please do not put your name on this form.

Age: _____

Sex: Male _____ Female _____

Number of years together with your partner: _____

Are you married? _____ If yes, please indicated how many
years: _____

Number of children: _____

Your ethnicity / culture:

Occupation:

Average yearly income: *please circle one*

0 – 5,000

5,000 – 10,000

10,000 – 15,000

15,000 – 30,000

30,000 – 50,000

50,000 +

Number of years completed in school: (or highest degree attained)

Religious affiliation (if any):

SCORING PROTOCOL

Using the Likert Scale below, please rate how frequent each behavior (#1-11) occurs in each segment labeled “Segment A-E” (formerly segment 1-5) with one rating for the couple (if the behavior occurs at all), and another rating for the partner who engages in the behavior (male or female). Use a separate protocol sheet for each conflict task (high and low).

1----- 2 ----- 3 ----- 4 ----- 5
 not at all a little somewhat moderately extremely

- 1. body gestures OR body movements** made in response to verbal or nonverbal language of other partner (eg; body position to create distance from an individual such as, turning one’s back to the other, crossed arms, etc). **If just the face is used then code under #2**

Couple: Segment A_____ Segment B_____ Segment C_____ Segment D_____ Segment E_____

Male: Segment A_____ Segment B_____ Segment C_____ Segment D_____ Segment E_____

Female: Segment A_____ Segment B_____ Segment C_____ Segment D_____ Segment E_____

- 2. facial gestures:** eye glances, glares, rolling eyes, frowns, etc.

Couple: Segment A_____ Segment B_____ Segment C_____ Segment D_____ Segment E_____

Male: Segment A_____ Segment B_____ Segment C_____ Segment D_____ Segment E_____

Female: Segment A_____ Segment B_____ Segment C_____ Segment D_____ Segment E_____

- 3. ignoring or withdrawal behaviors:** disregarding obvious input from partner or confederate (eg; not answering questions, leaving the room without being asked); or ignoring an individual nonverbally (eg; silent treatment); disengaging from the interaction, or withholding information or cooperation; using objects in room to ignore or withdraw.

Couple: Segment A_____ Segment B_____ Segment C_____ Segment D_____ Segment E_____

Male: Segment A_____ Segment B_____ Segment C_____ Segment D_____ Segment E_____

Female: Segment A_____ Segment B_____ Segment C_____ Segment D_____ Segment E_____

- 4. verbal interruptions:** intentionally cutting off a person’s conversation to assert a different position or to make point.

Couple: Segment A_____ Segment B_____ Segment C_____ Segment D_____ Segment E_____

Male: Segment A_____ Segment B_____ Segment C_____ Segment D_____ Segment E_____

Female: Segment A_____ Segment B_____ Segment C_____ Segment D_____ Segment E_____

- 5. sighing/groaning behavior** (or other intentional utterances / sounds).
If the context is unclear, pay attention to number of times used to determine intent.

Couple: Segment A_____ Segment B_____ Segment C_____ Segment D_____ Segment E_____

Male: Segment A_____ Segment B_____ Segment C_____ Segment D_____ Segment E_____

Female: Segment A_____ Segment B_____ Segment C_____ Segment D_____ Segment E_____

- 6. using the “outsider” position** to create a dyad when more than two people are present: statements made regarding the partner as a “third person” (eg; “he/she or my wife/husband doesn’t understand these thing”, etc) OR using interference such as children to create a dyad.
Consider length of time spent focused on dyad to avoid rating simple multitasking behaviors.

Couple: Segment A_____ Segment B_____ Segment C_____ Segment D_____ Segment E_____

Male: Segment A_____ Segment B_____ Segment C_____ Segment D_____ Segment E_____

Female: Segment A_____ Segment B_____ Segment C_____ Segment D_____ Segment E_____

7. **verbal statements** intended to degrade, discredit, harm, or undermine an individual that are **expressed indirectly**. Verbal statements expressed with direct intent to harm would be coded as #11. Indirectly expressed statements may include: verbal jabs, whispers, asides-under the breath OR statements made about the individual while they are out of the room OR references to past behavior that are presented in an inflammatory / derogatory manner such as to reveal a secret (eg; “he filed bankruptcy before I met him”) OR when tone of voice is used to disguise the intent to harm, degrade, discredit, or undermine the other person.

Couple: Segment A_____ Segment B_____ Segment C_____ Segment D_____ Segment E_____

Male: Segment A_____ Segment B_____ Segment C_____ Segment D_____ Segment E_____

Female: Segment A_____ Segment B_____ Segment C_____ Segment D_____ Segment E_____

8. **Any use of humor (joking behavior or laughter)** that is intended to degrade, discredit, or harm the other: statements made about a partner that are not part of a shared joke (typically followed by laughter) OR statements **not expressed directly** to the individual such as, indirect statements made about a partner (eg; verbal jabs, whispers, asides-under the breath) OR statements made about the individual while they are out of the room OR references about the other that are presented in a derogatory manner such as to reveal a secret (eg; she’s a shower stall singer”).

Include nonverbal humor/laughter when intent to harm is clear

Couple: Segment A_____ Segment B_____ Segment C_____ Segment D_____ Segment E_____

Male: Segment A_____ Segment B_____ Segment C_____ Segment D_____ Segment E_____

Female: Segment A_____ Segment B_____ Segment C_____ Segment D_____ Segment E_____

9. **attempts to join with confederate:** verbal or nonverbal gestures intended to align with the confederate to *resolve conflict situation* (eg; flirting, gestures to bribe or collude with, or gestures aimed at “making good” or “saving face” with the confederate that discredit or degrade the other partner.

Couple: Segment A_____ Segment B_____ Segment C_____ Segment D_____ Segment E_____

Male: Segment A_____ Segment B_____ Segment C_____ Segment D_____ Segment E_____

Female: Segment A_____ Segment B_____ Segment C_____ Segment D_____ Segment E_____

10. **direct physical acts** of aggression (eg; throwing or slamming objects; physically hitting or harming an individual, etc.)

Couple: Segment A_____ Segment B_____ Segment C_____ Segment D_____ Segment E_____

Male: Segment A_____ Segment B_____ Segment C_____ Segment D_____ Segment E_____

Female: Segment A_____ Segment B_____ Segment C_____ Segment D_____ Segment E_____

11. **direct verbal acts of aggression:** statements made specifically toward one partner (eg; name-calling, direct commands such as, “shut-up”, accusations, etc)

Couple: Segment A_____ Segment B_____ Segment C_____ Segment D_____ Segment E_____

Male: Segment A_____ Segment B_____ Segment C_____ Segment D_____ Segment E_____

Female: Segment A_____ Segment B_____ Segment C_____ Segment D_____ Segment E_____

HIGH CONFLICT TASK:

- Imagine that you need to obtain a loan.
- Choose an item(s) for the loan from the list provided—including how long you will need for repayment (eg; 24 months– 60 months, etc).
- Complete the loan application provided. Please complete the form *together* using your own information and the credit history as outlined below. You do not need to use your real names however your application will be shredded before you leave today.
- Discuss the credit history information (applicable to your income) with your partner. Be sure to imagine how you obtained this history (you may need to make up answers).
- Once you have completed the application, please consult with the research team member who will act as the loan officer responsible for approving your loan.
- You may add any information you feel relevant to your case either directly to the loan officer or on the application.

| |
|-----------------|
| Credit History: |
|-----------------|

If income = \$10,000 or less = \$3,000 credit card debt with history of late payments.

If income = \$10,000 – 20,000 = \$4,000 credit card debt with history of late payments.

If your combined annual income = \$ 20,000 - \$30,000

Then you have \$6,000 credit card debt with a history of late payments.

If your combined annual income = \$30,000 – \$55,000

Then you have \$10,000 credit card debt with a history of late payments and two collection agency notices.

If your combined annual income = \$55,000 or more

Then you have \$10,000 credit card debt with a history of a default on a student loan in 2001.

To complete this task, you and your partner *together* will need to receive approval of your loan from the research member. You will be awarded a sum of money (in addition to the \$20 for your participation) only if your loan is approved. You will not know the additional amount of money until the task is complete.

LOW CONFLICT TASK:

- Imagine you are planning a vacation.
- Review the brochures provided and decide where you and your partner would like to go.
- Be sure to discuss time off from work or school, the approximate times you would like to travel, and any childcare issues (if applicable to you).
- It is important that you and your partner *both select and decide* on your travel destination.
- Once you have decided on a destination, present you plans to the travel agent (research team member).

TIME-LIMITED SEGMENTS OF CONFLICT TASKS

High Conflict Task

Segment One: couple interacts with each other = rate all 10 behaviors

Segment Two: couple interacts with loan officer (confederate) = rate all 10 behaviors

Segment Three: one partner interacts with loan officer = rate all 10 behaviors

Segment Four: one partner interacts with loan officer = rate all 10 behaviors

Segment Five: couple interacts with loan officer = rate all 10 behaviors

Low Conflict Task

Segment One: couple interacts with each other = rate all 10 behaviors

Segment Two: couple interacts with travel agent (confederate) = rate all 10 behaviors

Segment Three: one partner interacts with travel agent = rate all 10 behaviors

Segment Four: one partner interacts with travel agent = rate all 10 behaviors

Segment Five: couple interacts with travel agent = rate all 10 behaviors

Informed Consent Form

For participation in a research investigation
Conducted under the auspices of Oklahoma State University

This study is part of a formal dissertation research proposal aimed at investigating the role of relationship satisfaction and the use of behavioral strategies in conflict resolution among intimate couples. The principal investigator is Lauren L. Warner, as advised by Dr. Marie L. Miville.

(Print name) _____, voluntarily consent to participate in this study, which will include: 1) the administration of two questionnaires, 2) my participation in two videotaped interaction tasks involving myself, my partner, and a member of the research team, followed by 3) an informal discussion of my thoughts and feelings about the tasks. I voluntarily agree to be videotaped with the understanding that my identity will not be associated with these tapes at any time during this research project. I have been informed that only members of the research team will view these tapes, and all tapes will be destroyed at completion of the research project.

The purpose of this study is to examine the relationship between satisfaction in an intimate relationship and the observed use of behavior strategies to resolve a relationship conflict task. You will be asked to complete a demographic survey and a pencil and paper questionnaire. You will then be asked to read a simulated scenario involving your partner and a research team member. Once you understand the scenario, you will be asked to complete the task imagining yourself in the scenario as best as you can. This process will be repeated exactly as described above using a second scenario. Both scenarios will be videotaped for the sole purpose of data analysis. **It is very important that you imagine yourself in the scenario and complete the task as you would if you encountered the situation at home.** After you complete both videotaped scenarios, you will be asked to briefly describe your experience of the tasks. Total participation time should not exceed two hours.

This consent form, the survey questionnaires, and the videotape will be stored separately. No research materials will be associated with my name in any way, and there is no identifying information required on either of the questionnaires. Adverse reactions to survey items are not anticipated. However, if I become uncomfortable while thinking about the situations presented in this study, and feel that I need counseling, I have been provided with a list of local counseling referrals. Potential benefits to the greater community include an increased understanding of the nuances of interpersonal conflict as related to relationship satisfaction between intimate partners.

Participation is voluntary and there is no penalty for refusal to participate. I will be compensated with \$25.00 for my time after I fully complete the requirements as outlined above. I am free to withdraw my consent and participation in this study at any time, without penalty or negative consequence.

For answers to pertinent questions about the rights of research participants, I may contact: Lauren L. Warner at (405) 624-1785 or Dr. Marie L. Miville at (405) 744-9453. I may also contact Sharon Bacher, IRB Executive Secretary, 415 Whitehurst, Oklahoma State University, Stillwater, OK 74078, (405) 744-5700

I have read and fully understand this consent form, and I voluntarily give my consent to participate.

Signed: _____ Date: _____

APPENDIX C

IRB APPROVAL FORM

Oklahoma State University
Institutional Review Board

Protocol Expires: 4/24/2004

Date: Friday, April 25, 2003

IRB Application No ED03114

Proposal Title: THE ROLE OF RELATIONSHIP SATISFACTION IN THE USE OF INDIRECT
AGGRESSIVE BEHAVIOR AMONG INTIMATE COUPLES

Principal
Investigator(s):

Lauren Warner
227 S. Dryden
Stillwater, OK 74074

Marie L. Miville
401 Willard Hall
Stillwater, OK 74078

Reviewed and
Processed as: Expedited

Approval Status Recommended by Reviewer(s): Approved

Dear PI :

Your IRB application referenced above has been approved for one calendar year. Please make note of the expiration date indicated above. It is the judgment of the reviewers that the rights and welfare of individuals who may be asked to participate in this study will be respected, and that the research will be conducted in a manner consistent with the IRB requirements as outlined in section 45 CFR 46.

As Principal Investigator, it is your responsibility to do the following:

1. Conduct this study exactly as it has been approved. Any modifications to the research protocol must be submitted with the appropriate signatures for IRB approval.
2. Submit a request for continuation if the study extends beyond the approval period of one calendar year. This continuation must receive IRB review and approval before the research can continue.
3. Report any adverse events to the IRB Chair promptly. Adverse events are those which are unanticipated and impact the subjects during the course of this research; and
4. Notify the IRB office in writing when your research project is complete.

Please note that approved projects are subject to monitoring by the IRB. If you have questions about the IRB procedures or need any assistance from the Board, please contact Sharon Bacher, the Executive Secretary to the IRB, in 415 Whitehurst (phone: 405-744-5700, sbacher@okstate.edu).

Sincerely,



Carol Olson, Chair
Institutional Review Board

VITA

Lauren Lane Warner

Candidate for the Degree of

Doctor of Philosophy

Dissertation: THE ROLE OF RELATIONSHIP SATISFACTION AND THE USE OF
INDIRECT AGGRESSIVE BEHAVIOR AMONG INTIMATE COUPLES

Major Field: Counseling Psychology

Biographical

Education: Graduated from San Marcos High School, San Marcos, California in May 1985; received Bachelor of Arts degree in Sociology and Dramatic Arts (double major) from the University of California Santa Barbara, Santa Barbara, California in June 1991; received Master of Arts degree in Counseling from the University of North Dakota, Grand Forks, North Dakota in August 1999.

Completed the requirements for the Doctor of Philosophy degree with a major in Counseling Psychology at Oklahoma State University in December, 2004.

Experience: Employed as a Post-Doctoral Fellow in HIV Mental Health Services at Harbor-UCLA Medical Center from 2004-2005; employed as a Doctoral Intern with the VA Long Beach Healthcare Services from August 2003-August 2004; employed as a Doctoral practicum counselor by Oklahoma State University, Stillwater, Oklahoma from 2000-03; employed as a Master's Practicum counselor, research assistant, and student academic advisor by the University of North Dakota, Grand Forks, North Dakota from 1996-99; began work in counseling-related fields in 1991.

Professional Memberships: American Psychological Association, Association for the Advancement of Behavior Therapy, American Pain Society.