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FORMS AND FUNCTIONS OF AGGRESSION IN ADULTS: VALIDATION OF A
MEASURE OF AGGRESSION TO ASSESS INTIMATE PARTNER AGGRESSION

by

MIKLÓS B. HALMOS

Under the Direction of Dominic J. Parrott, PhD

ABSTRACT

Intimate partner aggression (IPA) is a complex construct composed of the means and the motivations by which a person harms their intimate partner. Unfortunately, existing measures only assess forms of IPA perpetration while neglecting to measure the motivations for aggressing. The present study sought to address this by adapting and validating a measure of the forms and functions of adolescent aggression to assess IPA perpetration in adults. This new measure – the Forms and Functions of Intimate Partner Aggression (FFIPA) – comprises four higher-order latent factors (i.e., overt, relational, proactive, and reactive aggression). 140 heterosexual couples experiencing conflict completed the FFIPA. Analyses support the FFIPA's validity as a measure of the forms and functions of IPA perpetration. As the only instrument that parses the forms and functions of IPA perpetration, the FFIPA allows the examination of the unique motivations of an aggressive partner separately from the form of their behavior.

INDEX WORDS: Intimate Partner Aggression, Couples, Violence, Measurement, Validation

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MEASURE OF AGGRESSION TO ASSESS INTIMATE PARTNER AGGRESSION

by

MIKLÓS B. HALMOS

A Thesis Submitted in Partial Fulfillment of the Requirements for the Degree of

Master of Arts

in the College of Arts and Sciences

Georgia State University

2018

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2018

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MEASURE OF AGGRESSION TO ASSESS INTIMATE PARTNER AGGRESSION

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December 2018

DEDICATION

I wish to thank everyone who has supported my journey throughout my academic career up to this point. I would like to particularly thank Rebecca, Kati, Bret, Viktor, and David for their support and love. I would also like to thank Daisy, Mauja, Spike, Buffy, everyone in my extended family and friends, and countless others who have provided welcome distractions and lots of humor. Though this work was insular and lonely, completing this work was made all that much easier to bear thanks to all these individuals' presence in my life.

ACKNOWLEDGEMENTS

I would like to acknowledge the contributions of many individuals who, throughout my career to this point, have guided and shaped my journey. I would first and foremost like to thank Dr. Dominic “Dom” Parrott. His guidance, support, and foresight made this work possible. Furthermore, his excellent mentorship throughout my graduate career has shaped the critical thinker and person I am today. I would like to also thank Dr. Chris Henrich, Dr. Lee Barnum-Martin, Dr. Kevin Swartout, and Dr. Katherine Masyn for their advice and teachings as I continuously gain confidence and mastery of advanced statistical topics and approaches. I would like to also acknowledge Dr. Erin Tully for her insightful, constructive, and precise feedback during the development and finalization of this thesis project. However, none of my current accomplishments would be possible without the early opportunities for research and education I was afforded long before graduate school was on the horizon. I would like to thank Dr. Monica Marsee and Dr. Gary Dohanich for the amazing training opportunities I enjoyed as an undergraduate. Finally, I would not be in the current field of research if it was not for the support and guidance of Dr. Peter Giancola. Thank you all for everything you have done for me!

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1 INTRODUCTION

Intimate partner aggression (IPA) is a pervasive and global public health problem that includes physical, sexual, and emotional acts of aggression by a current or former intimate partner (Devries et al., 2013; Kiss, Schraiber, Hossain, Watts & Zimmerman, 2015). According to a national survey conducted by the CDC (2010), nearly half of all men and women in the United States have experienced an act of psychological aggression by an intimate partner, and 24.3% of women alongside 13.8% of men have experienced severe physical violence by an intimate partner. Clinical samples have reported even greater rates of IPA. A survey of outpatient services revealed that nearly 70% of couples undergoing treatment for any health condition have experienced some form of IPA (O'Leary & Murphy, 1992). IPA has particularly dangerous health consequences because it is largely hidden from the public eye, as it is not recognized and treated often (Jackman, 2002). Specifically, victims of IPA are more likely to report both chronic and acute mental and physical health conditions than non-victims (Black & Breiding, 2008; Coker et al., 2002).

Currently, a variety of IPA measures exist that capture a range of harmful behaviors including, but not limited to, physical, verbal, sexual, emotional, psychological (Thompson, Basile, Hertz, & Sitterle, 2006), legal/administrative (Hines, Douglas, & Berger, 2015), and economic (Weaver, Sanders, Campbell, & Schnabel, 2009) aggression. However, the wide nomological net cast by these various IPA measures highlights a fundamental lack of conceptual clarity among these instruments (Parrott & Giancola, 2007). This problem is not limited to measures of IPA. Myriad instruments exist that capture general and specific types of aggression outside of an intimate partner framework. Across these various measures, a range of behaviors (e.g. physical, sexual, verbal, relational, direct, indirect) are assessed without any clear

organization around a theoretical framework (Parrott & Giancola, 2007). Despite a large inventory of measures assessing both IPA and the subtypes of general aggression, no current IPA measure parsimoniously captures the range of these forms without focusing narrowly on a particular form of aggression. This weakness in IPA measurement is a significant limitation. Determining rates of IPA and the specific forms of aggression utilized within intimate relationships benefits not only basic research inquiries but also may inform intervention development.

The current study addresses these limitations by utilizing a well-validated conceptual framework – the Forms and Functions of Aggression Model (see Little, Jones, Henrich, & Hawley, 2003; Marsee et al., 2011) – to assess the forms and functions of IPA. Specifically, a measure derived from the Forms and Functions of Aggression Measure that assesses forms and functions of peer aggression in child and adolescent populations (Little et al., 2003) was adapted for use in an adult sample of romantic couples that is at high risk for IPA. Furthermore, the current study investigated possible gender differences in IPA perpetration. Indeed, research supports gender differences in both aggression perpetration and victimization; however, this relationship is specified in that gender differences in rates of aggression perpetration may vary depending on the circumstances and motivations surrounding acts of aggression (McDermott, 2015). Thus, examining potential gender differences in the form and motive of aggression utilized has the same potential for informing IPA intervention strategies as posited in the general aggression literature (e.g., McAdams, 2002). Interventions designed to address specific motives, while considering the form of the aggression, might work differently and might work *better* for different types of IPA perpetrators than current understanding allows. In fact, recent intervention review work has called for classifying perpetrators into useful, specific clinical typologies that

address the underlying motives for aggressive behavior (McGinn, Taylor, McColgan, & Lagdon, 2016). Furthermore, given the current investigation's use of romantic couples, it may provide further understanding on how separate individuals with potentially different motives and methods of perpetrating aggression interact together in an intimate relationship. This may further inform our understanding of the dyadic interactions between individuals comprising a relationship, and these potentially new insights may inform interventions (e.g., couples therapy).

1.1 Conceptualization of Aggression

Aggression is a multifaceted behavioral construct that has been defined broadly as the intent to harm (Berkowitz, 1993). The effort to understand human aggression has been led by scientific attempts to define, categorize, and measure this behavior in order to inform both research in understanding the motivation for the behavior and clinical interventions aimed at its prevention (Wilson, Mouilso, Calhoun, & Zeichner, 2015). Initially, researchers categorized aggressive behaviors simply by the shape that the behavior took in its expression, primarily positive (overt) or negative (covert/relational) (Rosenzweig, 1941). Shortly thereafter, verbal and physical aggression (Buss, 1961; see also Berkowitz, 1994; Buss & Perry, 1992) and direct/indirect (in victim's presence or absence) aggression (Feshbach, 1969; see also Baron & Richardson, 1994; Björkqvist, 1994) were also coined. Despite these numerous, related categorizations (direct, physical, verbal, relational, indirect, covert, overt, etc.) of aggression by form, a two-term categorization system (overt versus relational) has been popularly adopted that best captures these numerous, but related terms (Little et al., 2003). Overt (direct) aggression is generally defined as verbal and physical behaviors that are directed at victims (Coie & Dodge, 1998). Relational (indirect) aggression is generally defined as acts that attack the social standing and inclusion of the victim (Crick & Grotpeter, 1995).

In parallel, Geen (1968; see also Bandura, 1973; Dodge & Coie, 1987) further classified aggression into two broad categories based on intention of the perpetrator: premeditated (instrumental/cold), and impulsive (hostile/hot) behaviors. Despite this litany of terms (provocative, premeditated, offensive, retaliatory, instrumental, hostile, impulsive, defensive, etc.), current researchers have characterized these behaviors as reactive and proactive aggression, as these best capture these numerous, redundant terms (Little et al., 2003). Reactive aggression is generally defined as an angry, defensive response (Dollard, Doob, Miller, Mowrer, & Sears, 1939). Proactive aggression is generally defined as a deliberate, self-serving behavior (Bandura, 1973).

Given these distinct schools of thought and their various definitions of aggression, it's unsurprising that a large and diverse body of instruments were developed to capture these seemingly distinct forms (e.g., Aggression Questionnaire; BAQ; Buss & Perry, 1992; Self-Report of Aggression and Social Behavior Measure; Morales & Crick, 1998; the Direct and Indirect Aggression Scales; Björkqvist, Lagerspetz, & Kaukiainen, 1992) or functions (e.g., Modified Overt Aggression Scale; Kay, Wolkenfeld & Murrill, 1988; Instrument for Reactive and Proactive Aggression-Self-Report; Polman, Orobio de Castro, Thomaes, & van Aken, 2009; Reactive and Proactive Aggression Questionnaire; RPQ; Raine et al., 2006) of aggression.

This two-term classification system, by either the form of the aggressive behavior or its function per perpetration, has largely guided the field of aggression research in recent years. Researchers have remained in their respective camps (either form or function) despite calls for new categorization systems (Anderson & Huesmann, 2003; Parrott & Giancola, 2007) and the obvious overlap in motives for the behaviors and their natural complexity (Bushman & Anderson, 2001). In summary, the dichotomization of aggression into either form or function

has resulted in much research that has not considered the multiple forms and motives that may characterize any one act of aggression (Bushman & Anderson, 2001; Warburton & Anderson, 2001). As such, it is important to consider the interaction of the form and function of a behavior simultaneously.

1.1.1 Forms and Functions of Aggression Model; FFAM

Given this need for operational clarity among such numerous, but related types of aggression, researchers have called for comprehensive approaches to the study of aggression (Archer, 2001; Tremblay, 2000). Numerous groups have aimed to address this lack of consensus by developing more parsimonious models of aggression that aggregate all the various forms and functions (Little et al., 2003; Parrott & Giancola, 2007; Warburton & Anderson, 2001). Of these, the Forms and Functions of Aggression Model has been subjected to the most empirical scrutiny. As previously outlined, aggression has come to be popularly categorized by either the function (i.e., the “whys”) or the form (i.e., the “whats”) of behavior (Little et al., 2003, Marsee et al., 2011). The Forms and Functions of Aggression Model is an integrative, innovative model of aggressive behavior in that it combines both the forms and functions of aggression. This model defines the forms as overt (i.e. verbal and physical behaviors directed at victims) and relational aggression (i.e. acts intended to damage social standing; e.g., destruction of relationships, social exclusion/ostracism, gossip, etc.) and defines the functions as reactive (i.e. hostile behavior that occurs as an angry, defensive response to provocation) and proactive aggression (i.e. self-serving, deliberate behavior in anticipation of a reinforcing outcome). This model of aggression has guided the development of developmentally-based, multidimensional measures of aggression defined by the form (i.e., method of delivery) or function (i.e., purpose of the act) of the behaviors (Forms and Functions of Aggression Measure; FFAM; Little et al.,

2003; Peer-Conflict Scale; PCS; Marsee et al., 2011). This provides an important framework for both theory and intervention (Ostrov & Crick, 2007). By measuring the underlying, self-reported reason for the aggressive act, along with the form it took, researchers may be better able to understand aggression and develop individualized treatment programs for aggressive individuals with unique aggression profiles.

1.2 Aggression Between Intimate Partners

Aggression within an intimate relationship has been measured in myriad ways depending on the theoretical basis of specific measures with each approach claiming to capture a unique and independent type of aggressive behavior (Wilson et al., 2015). However, as similarly spotlighted in the aggression literature above, the measurement of aggression within intimate partners has not coalesced around any one model or framework. Rather, each conceptualization narrowly focuses on one, or perhaps a few, specific forms of aggression; thus, each is limited in scope given the myriad forms in which aggression can be expressed. Furthermore, few, if any, measures of IPA also capture the functions of aggression. This is likely due, in part, to the numerous and various aims and approaches of established measures.

Indeed, historically, measures of IPA have been defined by the form of IPA measured, namely physical and sexual aggression, and were written according to popular gender scripts, namely men as perpetrators and women as victims (e.g., Sexual Strategies Scale, Strang, Peterson, Hill, & Heiman, 2013; Women's Experience with Battering Scale, Smith, Earp, & DeVellis, 1995; Hurt/Insult/Threaten/Scream, Sherin, Sinacore, Li, Zitter, & Shakil, 1998). Lately, measures have emerged that provide more gender-blind, comprehensive delineations of forms of perpetration (e.g., Partner Victimization Scale, Hamby, 2016; Partner Violence Screen, Feldhaus et al., 1997; Multidimensional Emotional Abuse Scale, Murphy & Hoover, 1999) but

have continued to focus on the form of perpetrated behavior while still neglecting to determine the function.

1.2.1 Forms and Functions of Aggression within IPA

Currently, no validated measures of IPA exist that measure the forms and functions of aggression concurrently. The three most commonly used measures of IPA (Bender, 2016) include the Conflict Tactics Scale (CTS; Straus, 1979), revised in 1996 (CTS-2; Straus, Hamby, Boney-McCoy, & Sugarman, 1996), Women's Experience With Battering (WEB; Smith et al., 1995), and the Composite Abuse Scale (CAS; Hegarty, Sheehan & Schonfeld, 1999). Each of these measures capture various forms of IPA yet none of these measures capture the function of these behaviors as reported by both the perpetrator and victim. The most commonly used of these self-report measures is the CTS-2 (Bender, 2016). This instrument consists of items measuring intimate partner aggressive behaviors including negotiation, psychological aggression, physical assault, injury, and sexual coercion. This scale has come to be viewed as an authoritative measure of aggression within an intimate partner context (Straus et al., 1996). However, it has come under criticism, particularly as it does not inquire about the motives for aggression (DeKeseredy & Schwartz, 1998). Thus, the CTS-2 cannot determine if the aggression was defensive (reactive) or who initiated it (proactive) (Madsen, Stith, Thomsen, & McCollum, 2012; Weiss, Duke, & Sullivan, 2014).

The lack of measures that capture IPA behaviors within a forms and functions model of aggression is a weakness that, if corrected, may benefit IPA-related research and intervention. The current study directly addresses this problem by applying the FFAM to the measurement of IPA. Specifically, this project's predominant goals were to confirm the factor structure and construct validity of the FFIPA in a sample of heterosexual couples (Hypothesis 1 and 2).

Extending this framework and measure of the forms and functions of aggression to IPA has the potential to expand the conceptualization and measurement of IPA in a novel direction that may further elucidate the nature of conflictual intimate relationships.

The FFAM has been validated in many samples including middle class adolescents (Little et al., 2003), ethnic minority adolescents (Williford & Boulton, 2013), high-risk adolescents (Lee, Penney, Odgers & Moretti, 2010), and socioeconomically diverse adolescents (Sijtsema et al., 2010) and has demonstrated strong construct validity and internal consistency (Fite, Stauffacher, Ostrov, & Colder, 2008; Little et al., 2003). The FFAM has also demonstrated strong concurrent validity, having been examined in association with adolescent temperamental reactivity and self-regulation (Dane & Marini, 2014), psychopathic traits including impulsivity and callous-unemotional traits (Orue, Calvete, & Gamez-Guadix, 2016), antisocial behavior (Little et al., 2003) and conduct problems (Fite, Stoppelbein, Gaertner, Greening, & Elledge, 2011). It has also demonstrated good predictive validity, accurately modeling the development of adolescent aggression (Ojanen & Kiefer, 2013; Sijtsema et al., 2010) and adult relational aggression (Schmidt & Jankowski, 2014). However, researchers have not yet validated the measure in an adult sample despite the fact that the items assess aggressive behaviors that likely generalize to adults. Thus, data which support its validity as a measure of the forms and functions of IPA would meaningfully connect current conceptualizations in the child and general aggression literature with the IPA literature. Understanding the type of aggressive behavior utilized and its motive in intimate partner violence has great potential for informing intervention strategies and will help current aggression literature inform research on IPA.

1.3 Gender Differences in IPA

Previous studies have produced mixed findings regarding gender differences in IPA.

Many researchers have found no significant gender differences in prevalence rates for males' and females' acts of IPA and understand that both males and females mutually perpetrate IPA (Straus, 2011). A recent literature review by Jose and O'Leary (2009) reported no significant gender differences in aggression perpetrated against a romantic partner with reported rates of male-on-female aggression from 36.3% to 58% and female-on-male aggression from 36.4% to 57%. Indeed, when risk markers for perpetrating physical IPA were examined, only three out of 60 established risk markers were differentiated by gender (Spencer, Cafferky, & Stith, 2016).

Conversely, many studies *have* found gender differences in IPA. A meta-analysis by Archer (2000) found that women were more likely to use physical aggression but men were more likely than women to inflict severe aggression resulting in injury. Furthermore, women commit significantly more IPA overall than men (Thornton, Graham-Kevan, & Archer, 2016). Contrariwise, Condon, Moreles-Vives, Ferrando, & Vigil-Colet (2006) and Madsen et al. (2012) have found that men perpetrate more physical and psychological aggression than women using the BAQ and CTS-2, respectively. However, Hines & Saudino (2003) found that women perpetrated significantly more psychological aggression only, and no gender differences were detected in reported rates of physical aggression on the CTS-2.

To explain these mixed findings in the literature, many possible factors have been posited. For example, the sample type and method of measurement in IPA studies may confound possible gender differences. Archer's (2013) meta-analysis found that gender differences may be best explained by the choice of survey, with surveys framed as crime or violence against women revealed more male perpetration whereas surveys framed as social or health surveys revealed greater female perpetration. Another meta-analysis by Archer (2000) found gender differences may be better explained by sampling differences between violent (e.g. battered

women shelters) and non-violent (e.g. college students) victims (see also Langhinrichsen-Rohling, Misra, Selwyn, & Rohling, 2012).

Additionally, other researchers have discussed the possible confounding effect of context in IPA (Johnson, Holmes, & Johnson, 2016). Ross and Babcock (2009) found IPA rates differ by gender dependent on the symmetry (uni- versus bi-directional) and severity of the aggression. More importantly, they found that the gender of the respondent may confound results, as women's reporting was more accurate than men's (Ross & Babcock, 2009). Most importantly, motive may be the strongest and most important predictor of IPA and may also differ by gender (Allen, Swan, & Raghavan, 2009; Barnett Lee, & Thelen, 1997; Ross & Babcock, 2009). It appears that whereas men and women may report similar rates of IPA considering all types of behavior, gender differences may reveal themselves once the meaning or function of the behavior is considered (Ross & Babcock, 2009). To the best of our knowledge, no studies have yet examined this important and interesting piece. The current project sought to clarify possible gender differences in IPA utilizing the FFAM (Hypothesis 6).

1.3.1 Gender Differences in the Forms and Functions Model of Aggression

The study of possible gender differences in IPA perpetration may be significantly advanced by the forms and functions framework (Vitaro, Brendgen & Barker, 2006). For example, women have been documented as more likely to use relational aggression than overt aggression (Björkqvist et al., 1992). Additionally, Kistner et al. (2010) found that men are more likely to use overt aggression than women, and women are more likely to use relational aggression than men. However, gender differences in the forms of aggression may be further complicated by potentially additional gender differences in the functions of aggression. To examine this, Little et al. (2003) employed the unique "pure" factor structure of the FFAM

(functions independent of forms) and reported that males reported greater aggression than females on all constructs; however, the difference was smallest for reactive aggression. Additionally, a secondary analysis of the sample examining adjustment correlates and multiple reporters found males self-reporting higher overt aggression use than women but no difference emerged in relational aggression (Little, Brauner, Jones, Nock, & Hawley, 2003). Interestingly, some years later, Marsee et al. (2011) reported that males utilize significantly higher proactive and reactive overt aggression than females but that females reported higher reactive relational aggression. As such, contradictory findings of gender differences in the form of IPA may be better understood when examined within a forms and functions of aggression framework. The current project sought to address this gap in the literature (Hypothesis 6).

1.4 Overview of the Study and Hypotheses

The breakdown of aggression and IPA to psychological, physical, verbal, direct, indirect, retaliatory, defensive, economic, sexual, coercive, emotional, psychological abuse, romantic, and social aggression does not reflect a predominant, theoretically grounded research strategy among scientists (Archer, 2001) and is not centered on the core forms and functions of aggression as defined by numerous contemporary researchers (Little et al., 2003; Marsee et al., 2011). This investigation posits that understanding IPA through the forms and functions model of aggression provides the best framework for defining and measuring the type of aggressive behavior utilized and understanding the perpetrator's motive. This framework also permits an innovative examination of possible gender differences in IPA. Application of this framework carries significant potential to enable researchers and other professionals to develop enhanced treatment and prevention methods that may be more effective at reducing IPA than current knowledge allows.

A modified version of Little et al.'s (2003) FFAM (Forms and Functions of Intimate Partner Aggression; FFIPA) was adapted to assess IPA in order to determine the subtypes of aggression utilized by aggressive couples. This study sought to (1) confirm the factor structure of the FFIPA (Hypotheses 1 & 2), (2) establish the construct validity of the FFIPA (Hypotheses 3-5), and (3) examine gender differences in perpetration rates as assessed by the FFIPA (Hypothesis 6). To support the construct validity of the FFIPA, Hypotheses 3, 4, and 5 posit correlations between constructs of the FFIPA and other established measures of aggression (e.g., RPQ: Hypothesis 3) and IPA (e.g., CTS-2: Hypothesis 4). These predictions were tested according to methods posited by Cronbach and Meehl (1955). Additionally, established risk factors for IPA perpetration were assessed and correlated with the FFIPA to demonstrate further construct validity (Hypothesis 5), including trait anger (Birkley & Eckhardt, 2015), relationship dissatisfaction (Ulloa & Hammett, 2015), problematic drinking (Leonard, 2005), hostility (Birkley & Eckhardt, 2015), and impulsivity (Leone, Crane, Parrott, & Eckhardt, 2016). Impulsivity has been conceptualized as five separate facets (Cyders & Smith, 2007) with literature supporting an association between IPA and three of these facets: negative and positive urgency (Leone et al., 2016), a composite negative and positive urgency factor (Derefinko, DeWall, Metze, Walsh, & Lynam, 2011), and lack of perseverance (Leone et al., 2016). These risk factors were chosen as they most closely map onto established models of IPA that show factors which instigate, impel, and disinhibit aggression (e.g., trait anger, deficits in emotion regulation, etc.) are strong predictors of IPA (Birkley & Eckhardt, 2015; 2018).

Hypothesis 1. The factor structure of the FFIPA will replicate the factor structure of the original FFAM.

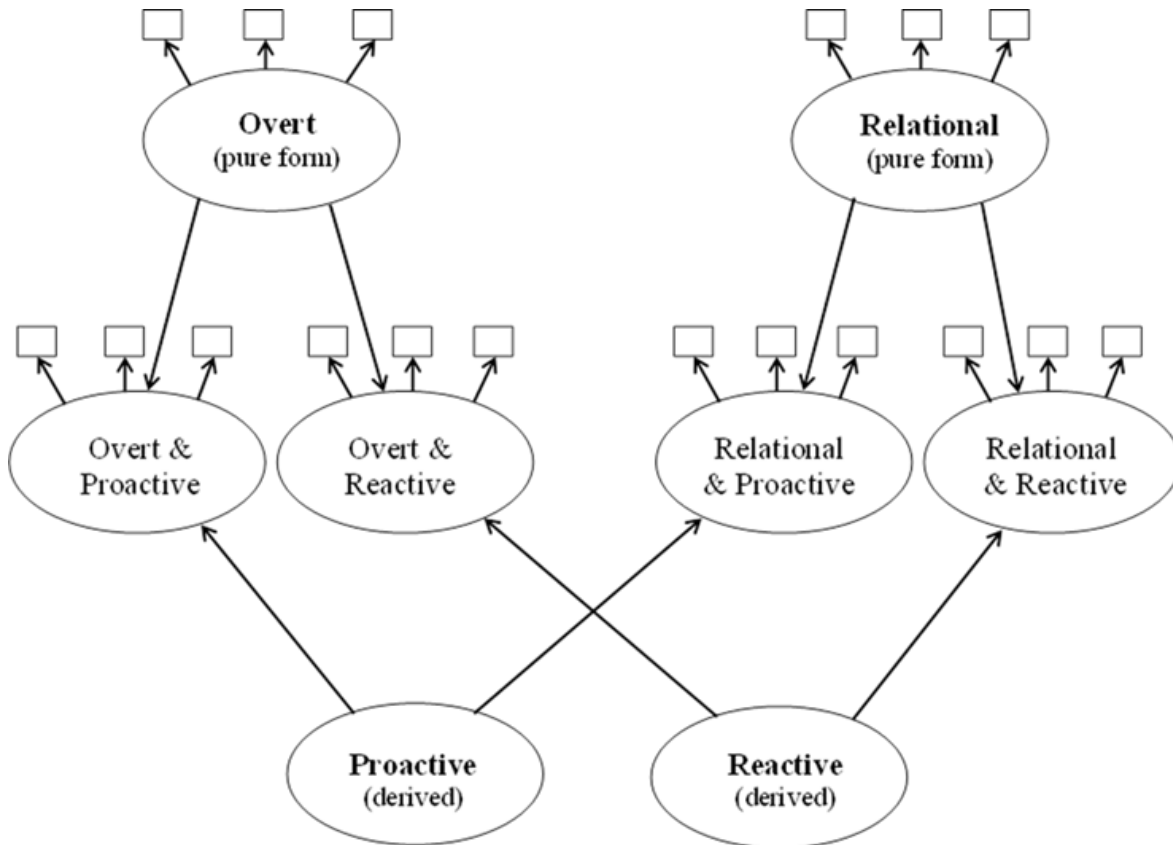


Figure 1. Hypothesis 1: Proposed factor structure of the FFIPA. Boxes denote parceled items.

Hypothesis 2. The correlations amongst the aggression constructs on the FFIPA will replicate the association amongst the constructs as originally demonstrated on the original FFAM in that the forms of aggression will significantly correlate with one another whereas the functions of aggression will not, respectively. *Hypothesis 3.* The functions of aggression subscales on the FFIPA will significantly and positively associate with a previously validated measure of the functions of aggression. *Hypothesis 3a.* Reactive aggression as measured by the FFIPA will significantly and positively associate with reactive, but not proactive, aggression on the Reactive-Proactive Questionnaire. *Hypothesis 3b.* Proactive aggression as measured by the FFIPA will significantly and positively associate with proactive, but not reactive, aggression on the Reactive-Proactive Questionnaire. *Hypothesis 4.* The overt and relational subscales of the

FFIPA will be positively associated with the physical assault and psychological aggression subscales of the CTS-2 as these subscales most closely reflect the forms of aggression as captured by the FFIPA. *Hypothesis 5.* Each aggression factor of the FFIPA will be positively associated with established predictors of aggression (i.e. trait anger, hostility, relationship dissatisfaction, facets of impulsivity, problematic drinking). Although there is little empirical basis in the literature for advancing differential hypotheses for the association between a given predictor and a given form or function of IPA, research does suggest that associations are present between IPA and each predictor (see above). These analyses will seek to bridge this lacunae in IPA literature. *Hypothesis 6.* Men will report higher levels of overt and proactive aggression than women, whereas women will report higher levels of reactive and relational aggression than men.

2 METHOD

This investigation utilized data collected as part of a larger, ongoing study that examines the effects of acute alcohol intoxication on IPA perpetration in heterosexual intimate partners. Although the focus of the current study does not examine effects of acute alcohol intoxication, couples were required to meet eligibility criteria for an alcohol administration study (see below). Measures pertinent to this current study were administered in a testing session that occurred on a day which preceded the alcohol administration protocol.

2.1 Participants

Participants were 140 heterosexual couples who had been in their current relationship for at least one month prior to participation (N = 280). Most participants self-identified as African American (51.8%) or Caucasian (36.9%), were 29 years old on average (range = 21 – 56), and had an average relationship length of 4.2 years (range = 3 months – 33.1 years). Participants

were compensated \$10 per hour. This study was approved by Georgia State University's Institutional Review Board.

2.2 Recruitment Procedures and Eligibility Criteria

Couples were recruited from a metropolitan U.S. city through advertisements placed in online/social media sites, community newspapers, and public transportation. Individual members of couples were initially screened separately by telephone. These criteria were then verified in a more comprehensive in-person laboratory assessment during an initial session. To be eligible, couples had to be dating for at least 1 month, be at least 21 years of age, and identify English as their native language. Couples were excluded if either partner reported serious head injuries, a condition in which consuming alcohol is medically contraindicated, or a desire to seek treatment for alcohol use. At least one partner was required to meet two additional eligibility criteria during the telephone screening. First, this individual had to report consumption of an average of at least five (for men) or four (for women) alcoholic beverages per occasion at least twice per month during the past year. Second, this individual had to be identified as perpetrating psychological or physical IPA toward their current partner via self- or partner-report on the CTS-2. This investigation included all participants completing the initial telephone screening assessment and first session of the study irrespective of their completion of the larger study.

2.3 Materials

2.3.1 Demographic form

This form (see Appendix G) obtains information such as age, self-identified sexual orientation, race, relationship status, years of education, and yearly family income.

2.3.2 *Forms and Functions of Aggression in Intimate Relationships (FFIPA)*

The original FFAM (Little et al., 2003) is a 36-item self-report measure that assesses the underlying functions or motives of aggressive behavior (proactive/reactive) and the observed behavioral forms of aggression (overt/relational). Items for proactive aggression capture aggressive behaviors that are deliberate and self-serving without prior provocation (e.g., “I often start fights to get what I want”). Items for reactive aggression capture retaliatory, angry responses to provocation (e.g., “If others make me mad or upset, I often hurt them”). Items for overt aggression capture direct/visible verbal or physical aggression (e.g., “I’m the kind of person who hits and kicks others”) and have demonstrated good reliability, $\alpha = .79$. Items for relational aggression describe indirect/socially manipulative forms of aggression (e.g., “I’m the kind of person who spreads rumors about others”) and have demonstrated good reliability, $\alpha = .62$. “Pure” overt and relational aggression (see *Figure 1* above) were assessed with items that measure the pure form variance only whereas proactive and reactive aggression were assessed in the context of the form and the function of the behavior and therefore capture two sources of variance. In the current study alpha reliabilities for the two observed pure subscales were as follows: $\alpha = .74$ for overt, and $\alpha = .67$ for relational.

The current study adapted the FFAM (see Appendix A) by changing item wordings to reflect aggressive behaviors directed at the participant’s partner (see Appendix H). For example, Item 4 on the FFAM, “I’m the kind of person who puts others down” was modified to “I’m the kind of person who puts my partner down” on the FFIPA. Participants are instructed to indicate on a 4-point scale how well each item applies to them. Responses may range from 1 (*Not at all true*) to 4 (*Completely true*).

2.3.3 *Revised Conflict Tactics Scale – 2 (CTS-2)*

The revised CTS (Straus et al., 1996; see Appendix I) is a 78-item self-report instrument that measures a range of behaviors that occur during disagreements within intimate relationships. These behaviors are captured in items comprising five separate subscales including physical assault (e.g., “My partner threw something at me that could hurt”), psychological aggression (e.g., “I destroyed something belonging to my partner”), injury (e.g., “My partner had a broken bone from a fight with me”), sexual coercion (e.g., “My partner used force (like hitting, holding down, or using a weapon) to make me have oral or anal sex”), and negotiation (e.g., “My partner showed respect for my feelings about an issue”) with alpha reliabilities ranging from .79 to .95 (Straus et al., 1996). Participants are instructed to indicate on a 7-point scale how many times they have engaged in these behaviors over the past year and how many times their partner has engaged in these behaviors, providing both perpetration and victimization item pairs for each behavior (e.g., “I pushed or shoved my partner/My partner pushed or shoved me”). Responses may range from 0 (*never in the last year*) to 6 (*more than 20 times in the last year*), and the frequency of each aggression subscale is calculated by adding the midpoints of the score range for each item to form a total score. For example, if a participant indicates a response of “3–5” times in the past year, a score of “4” would be assigned. This method of scoring the CTS-2 permits examination of the frequency of different aggressive acts. This study utilized participants’ self-reported frequency of IPA perpetration from the physical and psychological subscales in order to allow direct comparisons with other self-reported perpetration measures of aggression discussed in this proposal. In the current study, the CTS-2 demonstrated strong reliability both overall ($\alpha = .90$) and for the two subscales utilized in this investigation ($\alpha = .89$,

psychological aggression; $\alpha = .91$, physical assault). The CTS-2 has demonstrated good construct validity (Straus et al., 1996) and test-retest reliability (Vega & O’Leary, 2007).

2.3.4 The Buss-Perry Aggression Questionnaire (BAQ)

The BAQ (Buss & Perry, 1992; see Appendix J) is a self-report questionnaire for measuring dispositional aggression. This 29 item questionnaire contains four subscales: Anger (seven items, e.g., “When frustrated, I let my irritation show”), Physical Aggression (nine items, e.g., “I have become so mad that I have broken things”), Verbal Aggression (five items, e.g., “I tell my friends openly when I disagree with them”), and Hostility (eight items, e.g., “I am suspicious of overly friendly strangers”). Participants rate items on a 1 (*extremely uncharacteristic of me*) to 5 (*extremely characteristic of me*) scale, with higher scores reflecting increased propensity for aggression. The Cronbach’s alpha for the total score has historically been strong ($\alpha = .89$) (Buss & Perry, 1992) with an alpha of .77 for the hostility subscale. In the current study, the alpha for the total score was .89 with an alpha of .82 for the hostility subscale. Historically, the BAQ has been found to be psychometrically sound demonstrating good test-retest reliability, construct validity, and concurrent validity (e.g., Bernstein & Gesn, 1997; Harris, 1997).

2.3.5 The Reactive–Proactive Questionnaire (RPQ)

The RPQ (Raine et al., 2006; see Appendix K) is a self-report instrument which measures reactive and proactive aggression. The RPQ consists of 23 items: 11 items which measure reactive aggression (e.g., “How often have you...Reacted angrily when provoked by others?”), and 12 items which measure proactive aggression (e.g., “How often have you...Used force to obtain money or things from others?”). Participants rate items on a 3-point scale [0 (*never*), 1 (*sometimes*), or 2 (*often*)], with higher scores indicating greater frequency of reactive and

proactive aggression. The internal reliability coefficients of the RPQ's total score, reactive subscale, and proactive subscale are 0.90, 0.81, and 0.84, respectively (Raine et al., 2006). In the current study, the Cronbach's alpha of the total score was .91 with an alpha of .87 for the reactive subscale and an alpha of .86 for the proactive subscale. The RPQ has demonstrated good test-retest reliability (e.g., Tuvblad, Dhamija, Bernstein, Raine, & Liu, 2016) and good convergent and criterion validity (Colins, 2016).

2.3.6 *The Investment Model Scale (IMS)*

The IMS (Rusbult, Martz, & Agnew, 1998; see Appendix L) is a 40-item self-report instrument that measures relationship commitment level and both facet- and global-levels of three bases of dependence: relationship satisfaction, quality of alternatives, and investment size. Participants rate items on a 0 (*Do Not Agree at All*) to 8 (*Completely Agree*) scale, with higher scores indicative of healthier and happier relationships. This investigation utilized one factor and its respective scale involved in the development and maintenance of romantic relationships: global satisfaction level (five items, e.g., "I feel satisfied with our relationship", $\alpha = .79$), with lower scores reflecting more relationship dissatisfaction. The IMS has demonstrated good construct validity, reliability, and predictive validity (e.g., Rodrigues & Lopes, 2013; Rusbult et al., 1998).

2.3.7 *The Trait Anger Scale (TAS)*

The TAS (Spielberger, 1988; see Appendix M) is a 10-item, self-report, Likert-type (1 = *almost never* to 4 = *almost always*) scale on which participants report how angry they generally feel. Higher scores indicate the tendency to experience anger more frequently, with greater intensity, and for longer periods of time. Sample items include "I am quick tempered" and "When I get mad, I say nasty things". Internal consistency reliabilities range from .81 to .91

with highest reliabilities for college students (Spielberger, 1988). Additionally, the TAS discriminates high- from low-anger groups (Lopez & Thurman, 1986; Spielberger, 1988). The measure demonstrated strong reliability in the current study ($\alpha = .87$) and has had its construct, convergent, and discriminant validity well supported (e.g., Deffenbacher, 1996).

2.3.8 The UPPS-P (UPPS-P)

The UPPS-P (Lynam, Smith, Whiteside, & Cyders, 2006; Whiteside & Lynam, 2001; see Appendix N) is a 59-item self-report measure of five impulsivity-related traits. Participants rate items on a 1 (*strongly disagree*) to 5 (*strongly agree*) scale, with higher scores indicating greater impulsive tendencies. These five traits include: *positive urgency*, or the tendency to act rashly in response to positive affect (14 items, e.g., “When I get really happy about something, I tend to do things that can have bad consequences”); *negative urgency*, or the tendency to act rashly in response to negative affect (12 items, e.g., “I have trouble resisting my cravings (for food, cigarettes, etc.)”); *lack of premeditation*, or the tendency to reflect on outcomes of an action before execution (11 items, e.g., “My thinking is usually careful and purposeful”); *lack of perseverance*, or the tendency to lose focus through a task (10 items, e.g., “Unfinished tasks really bother me”); and *sensation seeking* or the tendency to pursue arousing, new, or dangerous things (12 items, e.g., “I quite enjoy taking risks”). These subscales have historically demonstrated good psychometric properties ($\alpha = .82 - .95$ (Lynam et al., 2006)), strong incremental validity (Lynam, Miller, Miller, Bornovalova, & Lejuez, 2011), and good concurrent and construct validity (Cyders, 2013). This study utilized three of these subscales: negative urgency, positive urgency, and lack of perseverance which collectively demonstrated good reliabilities ($\alpha = .82 - .87$).

2.3.9 *The Alcohol Use Disorder Identification Test (AUDIT)*

The AUDIT (Babor, Biddle-Higgins, Saunders, & Monteiro, 2001; see Appendix O) is a 10-item Likert-type scale that assesses hazardous and harmful patterns of alcohol consumption. Participants rate items on a 0 to 4 scale, with higher scores indicative of greater problematic drinking. Sample items include “How often during the past year have you failed to do what was normally expected of you because of drinking,” and “How often do you have a drink containing alcohol.” The AUDIT has demonstrated a high internal consistency across a range of samples (Babor et al., 2001) with an alpha of .80 in the current sample. It has demonstrated strong convergent validity (O’Hare & Sherrer, 1999), and predictive validity (Thomas, Degenhardt, Alati, & Kinner, 2014).

2.4 Procedure

Upon arrival to Session 1, each member of the couple was separated into private testing rooms. After providing informed consent, participants completed a battery of questionnaires on paper and on a computer using MediaLab version 2014 software (Jarvis, 2014). The measures pertinent to this proposal were administered to participants as part of this larger battery that included other measures not pertinent to this proposal. For example, some of these measures directly assessed eligibility criteria to determine the couple’s eligibility to complete Session 2 (which included the alcohol administration protocol). Following completion of the battery, participants’ eligibility for the larger session was determined. Eligible participants were scheduled for Session 2 on a subsequent day, whereas ineligible participants were debriefed, presented with psychoeducational material pertaining to alcohol use and conflict in intimate relationships, compensated for their time, and discharged.

3 RESULTS

3.1 Analytic Plan

Given that data were collected from both members of each couple, the data may not exhibit independence as required by null-hypothesis statistical testing (Kenny, Kashy, & Cook, 2006). In order to account for this possible dyadic influence, the factor structure of the FFIPA was first established (Hypothesis 1) accounting for possible non-independence of the data. Afterwards, all analyses related to Hypotheses 2-6 were computed using Structural Equation Modeling (SEM) within the variance structure established for Hypothesis 1. Mean, standard deviation, and range for all study variables are reported in Appendix B.

3.2 Hypothesis 1

In order to validate the factor structure of the FFIPA, a confirmatory factor analysis (CFA) was conducted in Mplus (v.7.2) (Muthén & Muthén, 2004) according to Little et al.'s (2003) design. The reported final model was constructed using maximum likelihood estimation with robust standard errors (MLR) utilizing standard SEM (Kline, 2016). Analyses included the preliminary step of parceling items within subscales by averaging together the lowest and highest loading pairs of items, and so forth, in each of the six subscales in order to build three parcels per subscale. This process minimized issues with multicollinearity and reduced the likelihood of Type I and II error (Little, Cunningham, Shahar, & Widaman, 2002) while increasing statistical power by reducing the number of associations to be estimated. After computing initial models, parcel loadings were examined to confirm that each parcel had captured a roughly equivalent portion of the variance. Weak loading parcels within subscales were reconstructed as appropriate. Missing data were handled using Full Information Maximum Likelihood (FIML),

which is a widely accepted technique for dealing with missing data (Arbuckle, 1996; Enders, 2001; Raykov, 2005).

The reported model is a final model constructed after a number of adjustments were made to gain the best model fit while maintaining theoretical considerations and the factor structure of the original FFAM. Initially, in order to account for the possible non-independence of observations (as couples constitute clusters), a multilevel model was constructed consisting of a two-level nested model (i.e. between and within dyads). This initial model did not converge due to statistical limitations resultant from the sample size relative to the complexity of the factor structure across two levels. Therefore, a complex type of analysis (appropriate for complex survey data) was utilized to compute the CFA (Wu & Kwok, 2012). This type of analysis computes standard errors and a chi-square test of model fit that take into account the non-independence of observations as may be found in cluster analysis (Muthén & Muthén, 2012). A number of a priori restrictions were instituted in order to compute a model comparable to Little et al.'s (2003) design and to facilitate model convergence according to theory. Latent variables with observed indicators had their scales (variances and residual variances) fixed to 1.0. Correlations between latent variables representing the forms and functions of aggression were fixed at 0. The two forms of aggression were allowed to freely correlate. Initially, the two functions of aggression were also allowed to freely correlate. However, initial models found a negligible covariance between the two functions. In an effort to improve model fit, this path was restricted to 0 in the reported final model. Second order latent factors had their respective loadings on their first order latent factors equated. Additionally, after computing initial models, starting values were assigned to parameters in order to free computational resources and aid model convergence. These start values were confirmed in the Tech1 output option of Mplus

(Muthén & Muthén, 2012). Furthermore, the default number of iterations Mplus utilizes to converge models was increased from 100 iterations to 10,000 iterations after initial failed attempts to converge the final model. This allowed the software sufficient computational latitude to converge the final model. After computing the final model, loadings and residuals were examined and were found to be uniformly significant, suggesting the model was appropriate for the data. Lastly, examining the modification indices indicated that no further modifications to the model would improve the fit while maintaining the proposed factor structure. Therefore, the reported final model best approximated the data.

The factor structure of the FFIPA was confirmed and mirrors the established factor structure of the original measure, consistent with Hypothesis 1 (see Appendix F). Model parameters are depicted in Appendix C. Model fit was evaluated using recommended Standardized Root Mean Square Residuals (SRMR) (Hu & Bentler, 1999) and the Comparative Fit Index (CFI) (Bentler, 1990). The combination of these indices has been found to provide appropriate balance between Type I and II error rates (Hu & Bentler, 1999) as they are sensitive to misspecified factor covariances and misspecified factor loadings, respectively. A $SRMR \leq .08$ and a $CFI \geq .95$ is considered a good model fit. In addition, the Tucker-Lewis Index (TLI) (Tucker & Lewis, 1973) was examined as it carries the inherent advantages of SEM and allows direct comparison and replication of Little et al.'s (2003) methodology. Model fit values of .90 or greater are considered acceptable for this index. Additionally, Root Mean Square Error of Approximation (RMSEA) (Steiger & Lind, 1980) was evaluated for which values $\leq .08$ are acceptable. It should be noted that the thresholds for these model fit indices' are not stringent cut-offs and should be examined in relation to the sample size, complexity of the model, and

relative loadings/types of factors and indicators (Marsh, Hau, & Wen, 2004; Marsh, Hau, & Grayson, 2005).

Altogether, the model demonstrated adequate fit. Though a significant chi-square test was found ($\chi^2 = 313.62$, $df = 130$, $p < 0.01$), the model produced a RMSEA = .071, 90% CI [.061, .081]. Additionally, the model had a SRMR = .084, a CFI = .88, and a TLI = .85.

3.3 Hypothesis 2

In the factor structure of the original FFAM, reactive and proactive aggression are uncorrelated, whereas overt and relational aggression are significantly correlated. In order to examine and confirm the correspondent correlations on the FFIPA, the bivariate correlations between the latent factors were noted from the Tech4 output option of Mplus (Muthén & Muthén, 2012) after the final factor structure of the measure had been established. Consistent with Hypothesis 2, the factor structure of the FFIPA replicates that of the FFAM. With the pure forms and pure functions of aggression restricted from correlating and reactive restricted from correlating with proactive aggression, overt aggression significantly and positively correlated with relational aggression, $r = .83$, $p < .01$.

3.4 Hypothesis 3a

In order to test the hypothesis that reactive IPA as measured by the FFIPA is positively associated with reactive, but not proactive, aggression as measured by the RPQ, path loadings between the constructs were examined after the final factor structure of the FFIPA had been established. The model consisted of the FFIPA construct predicting the RPQ constructs. In support of Hypothesis 3a, reactive IPA from the FFIPA was significantly and positively associated with reactive aggression from the RPQ, $\beta = .60$, $p < .01$ as well as with proactive aggression from the RPQ, $\beta = .37$, $p = .017$. Consistent with Hypothesis 3a, the effect size for

the association between FFIPA Reactive Aggression and RPQ Reactive Aggression was larger than the association between FFIPA Reactive Aggression and RPQ Proactive Aggression. This was despite a slope difference test that did not detect a significant difference between the two regression paths, $t(276) = 1.16, p = 0.25$, using established procedures given the slope, standard error, and sample size of each line (Cohen, Cohen, West, & Aiken, 2003; Dawson & Richter, 2006).

3.5 Hypothesis 3b

In order to test the hypothesis that proactive IPA as measured by the FFIPA is positively associated with proactive, but not reactive, aggression as measured by the RPQ, path loadings between the constructs were examined after the final factor structure of the FFIPA has been established. The model consisted of the FFIPA construct predicting the RPQ constructs. In support of Hypothesis 3b, proactive IPA from the FFIPA was positively associated with proactive aggression from the RPQ, $\beta = .38, p = .052$ as well as with reactive aggression from the RPQ, $\beta = .15, p = .122$. Consistent with Hypothesis 3b, the effect size for the association between FFIPA Proactive Aggression and RPQ Proactive Aggression was larger than the association between FFIPA Proactive Aggression and RPQ Reactive Aggression. This was despite a slope difference test that did not detect a significant difference between the regression paths, $t(276) = 1.03, p = 0.31$, using established procedures given the slope, standard error, and sample size of each line (Cohen et al., 2003; Dawson & Richter, 2006).

3.6 Hypothesis 4

In order to determine if the latent overt and relational aggression factors of the FFIPA are positively associated with the physical assault and psychological aggression subscales of the CTS-2, path loadings between these constructs were examined after the final factor structure of

the FFIPA had been established. The model consisted of the FFIPA constructs predicting the CTS-2 constructs. Hypothesis 4 was partially supported (see Appendix D). The physical assault and psychological aggression subscales were allowed to co-vary as were the overt and relational aggression factors and each of these covariances were significant. Of the four path loadings, only the association between psychological aggression from the CTS-2 and overt aggression from the FFIPA was found to be significant, $\beta = .63, p < .01$.

3.7 Hypothesis 5

In order to test the hypothesis that each pure, latent construct on the FFIPA will positively associate with the established IPA risk factors of trait anger, hostility, relationship dissatisfaction, impulsivity (negative/positive urgency, lack of perseverance), and problematic drinking, path loadings between the constructs (with the FFIPA constructs predicting the risk factors) were examined after the final factor structure of the FFIPA had been established. Overall, findings depict mixed results that partially support Hypothesis 5 (see Appendix E). Trait anger was significantly and positively associated with overt aggression, $\beta = .49, p < .01$, and reactive aggression, $\beta = .35, p = .012$. Relationship dissatisfaction was significantly and positively associated with proactive aggression, $\beta = .23, p = .006$, and negatively with relational aggression, $\beta = -.37, p = .038$. Examining the facets of impulsivity, negative urgency was significantly and positively associated with overt, $\beta = .43, p = .001$, and reactive aggression, $\beta = .31, p = .013$. Conversely, positive urgency was significantly and positively associated with relational aggression, $\beta = .37, p = .011$. Lastly, lack of perseverance was significantly and positively associated with reactive aggression, $\beta = .28, p = .031$. Hostility and problematic drinking did not evidence any significant associations with any form or function of aggression.

3.8 Hypothesis 6

In order to test the hypothesis that men will report higher levels of overt and proactive aggression than women and that women will report higher levels of reactive and relational aggression than men, the path loading of each pure, latent construct on the FFIPA was examined as it associated with a categorical gender factor once the factor structure of the FFIPA had been established. Significant gender differences were only found for overt aggression, $\beta = -.39$, $p = .036$. Contrary to Hypothesis 6, this finding indicated that men ($M = 6.79$, $SD = 1.49$) reported the use of significantly less overt aggression than women ($M = 7.52$, $SD = 2.17$).

4 DISCUSSION

The primary aim of the current study was to establish the validity of an adapted measure of the forms and functions of IPA in a sample of conflict-prone couples. In addition, this study sought to improve our understanding of the subtypes of aggression utilized by aggressive couples. The present study is the first to validate a self-report questionnaire which simultaneously assesses the forms and functions of IPA (FFIPA) in aggressive adult couples. Results support the measure's validity and factor structure for measuring the forms and functions of IPA in conflict-prone couples. The primary strength of the FFIPA is its novel integration of both the forms and functions of IPA together in a parsimonious framework.

4.1 Factor Structure

The Forms and Functions of Aggression Model (FFAM) is an empirically validated model of aggressive behavior that combines both the forms (i.e. overt, relational) and functions (i.e. reactive, proactive) of aggression. Consistent with Hypothesis 1, the factor structure of the FFIPA replicated the well-established factor structure of the FFAM. Model fit indices suggest this measure is an adequate assessment of the forms and functions of intimate partner aggression

in couples with a one-year history of IPA. An expectant pattern of associations between factors was found with each factor loading significantly onto its indicators as originally demonstrated by the FFAM. This demonstrates that the aggression constructs measured by the FFIPA replicate the associations between the constructs as postulated and originally demonstrated by the FFAM. However, one pattern of associations among the factor loadings warrants discussion. Though the pattern of parcel loadings onto factors was fairly equal across the forms and functions of aggression, the second-order, latent factor of pure reactive aggression had relatively weak, albeit significant, equated loadings on its latent factor indicators of overt reactive and relational reactive aggression (see Appendix F). This association was not found in the original FFAM. This suggests that the unique variance attributable to reactive aggression in the model was smaller than that attributable to proactive aggression and suggests that this instrument does not capture the unique construct of reactive aggression as well as it does proactive aggression.

Furthermore, analysis of the associations among the FFIPA factors revealed a similar pattern as the original FFAM, as posited by Hypothesis 2. Mirroring the small correlation found in the original FFAM and in an effort to improve model fit, proactive and reactive aggression were restricted from correlating in the reported final model. This was deemed appropriate as in initial models their covariance was negligible and did not account for a significant amount of variance in the model. This finding further builds evidence for this vital distinction between the motivations for aggression. The pattern of correlation between overt and relational aggression also mirror the findings of the original FFAM in that these two forms were significantly correlated. As borne out by results for Hypothesis 5, findings support a distinction between these two forms of IPA, as trait anger, relationship dissatisfaction, and positive/negative urgency significantly and uniquely correlated with one form or the other.

Taken altogether, these findings support the validity of the first self-report questionnaire to simultaneously assess the forms and functions of IPA perpetration. Determining the specific forms of aggression, and the motivations for aggression, utilized within intimate relationships benefits not only etiological and theoretical development but has potential for informing IPA intervention strategies as posited in the general aggression literature (e.g., McAdams, 2002). Indeed, given the FFIPA's ability to assess the forms and functions of IPA, its use in future research may yield new data that informs intervention programming for IPA (e.g., couples therapy, anger management therapy). It should also be stressed that the FFAM has never been validated outside of adolescent populations. Thus, the present findings support its applicability to adult populations, specifically adults in conflict-prone heterosexual relationships. Given its very similar pattern of findings with the FFAM, the FFIPA builds further support for how the forms and functions of aggression associate with one another, and how this pattern of results emerges in IPA.

4.2 Convergent Validity

In addition to establishing the factor structure and pattern of associations between the constructs on the FFIPA, the present study also aimed to demonstrate the convergent validity of the FFIPA with another related aggression measure, the RPQ. Findings were generally in support of Hypothesis 3. Consistent with Hypothesis 3a, results indicate a stronger positive association between FFIPA reactive IPA and RPQ reactive, relative to RPA proactive, aggression. Contrary to this prediction, however, both associations were significant. Similarly, and consistent with Hypothesis 3b, a stronger positive association was observed between FFIPA proactive IPA and RPQ proactive, relative to reactive, aggression. Contrary to this prediction, neither of these associations were statistically significant. Collectively, the observed pattern of

effect sizes support Hypothesis 3. In both sets of results, findings support a stronger association between complementary, relative to non-complementary, aggression constructs.

Relatedly, in order to establish convergent validity, similar IPA constructs from the CTS-2 (as the currently predominant measure of IPA) and the FFIPA were compared to one another in Hypothesis 4. The pattern of associations between physical and psychological aggression from the CTS-2 and overt and relational aggression from the FFIPA was not fully consistent with Hypothesis 4. Though all four of the associations were positive, only the association between psychological aggression and overt aggression was significant. It may be that allowing the two constructs on the FFIPA and the two CTS-2 constructs to co-vary caused the associations between the measures to lose significance (as both covariances captured significant variance available in the model). If the constructs on each measure had not been allowed to co-vary a larger proportion of the variance in the model would have been available for the associations between the measures, possibly revealing significant associations. Additionally, the comparisons between the measures did not allow for comparison of conceptually identical constructs. This may partly explain the lack of significant results. For example, though all physical IPA (e.g., as measured by the CTS-2 physical assault subscale) may be defined as overt, not all overt IPA (e.g., as measured by the FFIPA overt subscale) is physical in form. These comparisons between constructs were selected as these pairings allowed constructs to most closely mirror one another, but these constructs were not completely equivalent in the exact behaviors they each capture.

The present study also aimed to demonstrate that risk factors for IPA were correlated with the constructs of the FFIPA. Taken altogether, the pattern of associations between the risk factors for IPA and the constructs on the FFIPA were positive overall and significant in some cases. Though differential hypotheses were not advanced as part of Hypothesis 5 for the

associations between the various risk factors and the unique forms/functions of IPA, the pattern of results provide the first insight into how well established risk factors for IPA associate with these parsed forms and functions of IPA. It is interesting that some risk factors uniquely associated with *one form of aggression* rather than the other (e.g., trait anger), other predictors uniquely associated with *one function of aggression* rather than the other (e.g., lack of perseverance), and other predictors did not associate at a significant level with any form or function of aggression (i.e., hostility, problematic drinking).

Examining the specific results (see Appendix E), a pattern emerged in that factors associated with negative affect regulation (i.e. trait anger, negative urgency) correlated with overt and reactive aggression significantly and positively. This is supported by literature (Marsee & Frick, 2007) that found in adolescents that those who have poor negative affect regulation and exhibit increased levels of anger, especially in response to perceived provocation, are more likely to lash out at the perceived source of the threat (i.e. at the victim, thereby demonstrating reactive, overt aggression) than those who exhibit less anger and better emotion regulation. One finding that was completely opposite to established literature was the positive association between relationship dissatisfaction and proactive aggression. Our results indicated that couples who are satisfied in their relationships are more likely to perpetrate proactive aggression than couples who are dissatisfied in their relationships. At first glance, this finding appears contrary to established literature and the common understanding of relationship satisfaction's inhibitory effect on IPA. Nonetheless, it may be that individuals who are satisfied and comfortable in their relationship feel empowered to take purposeful, self-serving actions at the cost of harming their partner, knowing that the relationship is satisfactory "enough" to survive the aggressive act. Additionally, two facets of impulsivity also offered novel findings:

positive urgency was significantly and positively associated with reactive aggression and lack of perseverance was positively and significantly associated with relational aggression. Though literature does not support either of these associations, both findings were in the direction expected, encouraging further study. Lastly and unexpectedly, both problematic drinking and hostility did not correlate significantly with any type of aggression. This may be due to a ceiling effect related to our at-risk sample, in which at least one member of each couple evidenced a one-year history of heavy drinking and perpetration of psychological or physical IPA toward their current partner. In fact, on average, participants met criteria (mean AUDIT score = 7.48) for follow-up for clinical levels of problematic drinking. Therefore, given that the types of aggression were not able to differentiate with the already elevated levels of problematic drinking and hostility, we would expect these patterns to emerge more clearly when re-evaluated with a non-high risk sample. Taken altogether, these results open a new and exciting area of study demanding further work that examines the unique correlates of these newly quantified types of IPA. Based on these findings, our understanding of IPA can advance further now that we can parse this complex and multidetermined behavior into its unique forms and functions.

4.3 Gender Differences

Finally, validation of this novel measure allowed the evaluation of potential gender differences in the types of IPA perpetrated. Based on limited observed gender differences in prior research, it was expected that men would report higher levels of overt and proactive aggression than women, whereas women would report higher levels of reactive and relational aggression than men. However, contrary to Hypothesis 6, analysis of gender differences on the FFIPA only indicated that women were using significantly more overt aggression than men. This finding is contrary to what would be suggested by the limited literature on gender

differences in the forms/functions of aggression. Little et al. (2003) found that males reported higher levels of perpetration than females in every type of aggression (including overt aggression), and this was further supported by Kistner et al. (2010). Conversely to this established pattern of findings, our findings depict women perpetrating more overt aggression. It was hoped by the authors that examining the unique functions of aggressive behavior would further elucidate this pattern, but no significant findings emerged when examining the functions. Nonetheless, this result provides support for emerging research which suggests that women may not be subject to the same normative constraints against IPA as men (Felson, Savolainen, Hughes, & Ellonen, 2015). Therefore, given our conflict-prone sample and elevated levels of provocation shared by all, women may have been provoked enough to report overt IPA towards men. However, this level of provocation, while enough for women, may not have been enough for men to overcome their social constraint against aggressing towards women (Felson et al., 2015) and subsequently they did not report perpetrating as much overt IPA. Additionally, given that women tend to be more accurate reporters of their own perpetration than men (Ross & Babcock, 2009), women may have also reported more accurate perpetration in our sample, accurately reporting their use of overt aggression against their male partners whereas men may have underreported their overt perpetration against their female partners. Future research on gender differences in IPA would do well to examine the degree and types of inhibitors/impellers for aggressing unique to each gender and each gender's motivations/inhibitions for reporting. This would be more informative for understanding gender differences in perpetration rather than simply examining the likelihood of aggressing or total perpetration levels, as suggested by Felson et al. (2015).

4.4 Implications for Theories on Intimate Partner Aggression

Validation of this novel measure of IPA perpetration carries significant potential for future research on IPA perpetration. The FFIPA will allow researchers to independently examine the unique functions of IPA irrespective of the form of behavior used for delivery and to re-examine and build upon many of the mixed findings in the literature. By combining existent findings from the general aggression literature on the forms/functions of aggression, new understandings of IPA may be fostered. For example, this new measure may aid researchers and clinicians alike in their endeavors to impose typologies on IPA. In the last few decades researchers have focused on developing valid and informative typologies of aggressive intimate partners. While many classification systems have emerged (see Holtzworth-Munroe & Stuart, 1994 for review), a few popular typologies are examined here for how they may be informed by use of the FFIPA. Holtzworth-Munroe & Stuart (1994) developed a three category typology that categorized batterers on the setting and function of their aggression. Utilizing the FFIPA, this typology may now be better informed by understanding how the proactive/reactive motivation for aggressing informs IPA. Alternatively, feminist gender theory as applied to IPA has explored how traditional gender roles give rise to patriarchal terrorism or men's use of violence to keep women subordinate (see Sugarman & Frankel, 1996 for review). This typology may use the FFIPA to re-evaluate men's use of IPA as a proactive function, coupled with the forms they may use to control their partners. Later, Johnson (2001) developed a typology that chiefly aimed to categorize and understand the gender symmetry/asymmetry present in IPA perpetration and victimization. Utilizing gender difference findings from the FFIPA, researchers utilizing Johnson's typology may be able to better characterize how women and men interact, depending on motivation or the form of behavior they choose. In conclusion, utilizing the FFIPA,

researchers may be able better classify individuals into these typologies and these efforts may lead to refinements in our understanding of how different types of perpetrators interact in their relationships.

4.5 Limitations

The FFIPA captures many types of behaviors that may be categorized as aggressive in their intentions from hitting to social exclusion of partners. However, the FFIPA is not exhaustive in its examination of every form and potential motivation for aggressing. For example, the FFIPA does not capture behaviors of a legal or financial nature, though this may be readily present for intimate partners in conflict (Hines et al., 2015; Weaver et al., 2009). Consideration should also be given to other potential functions not captured by the current two-function taxonomic system. For example, an individual may aggress proactively not with the sole motive to hurt their partner, but also for a preemptive, defensive reason. For instance, an individual may notify law enforcement of their partner's future plans to aggress against them with the hopes of having their partner removed not only for their sake of safety and also to legally hurt their partner. This example illustrates how an aggressive behavior may be self-serving for multiple reasons (defensive/reactive to past or currently perceived threat *and* proactive with the intention to harm). Relatedly, not all applicable measures for comparison were included in the present study. Comparing the FFIPA with other, more closely related measures of IPA than just the CTS-2, such as the Self-Report Measure of Dating Victimization and Aggression (with its romantic relational aggression subscale) (Lindbeater et al. 2008; Linder et al. 2002), may further build validity for this new measure and its constructs. Another consideration of the current investigation's methodology is the likely inclusion of individuals in the sample who perpetrated very little or very low grade aggression that the FFIPA may be

insensitive to capturing. Many item wordings on the FFIPA operationalize the behavior as occurring “often” which in turn may decrease responding rates in those individuals who may perpetrate the behavior but do not recall it occurring often, per say. This may be of particular note to future work utilizing this measure in low-risk, low-conflict couples. Lastly, future work administering the FFIPA to couples would do well to estimate the model utilizing a multi-level framework. We were not able to use this modeling due to statistical limitations resultant from our sample size and model complexity. This approach would allow the assessment of measurement invariance between the individual and dyad, men and women, etc., further strengthening the validity and potential utility of this new instrument.

4.6 Clinical Implications

Understanding motivations for IPA and efforts developing clinical interventions aimed at its prevention have driven the advancement of the IPA field (Wilson et al., 2015). In fact, recent intervention review work has specifically called for classifying perpetrators into useful, specific clinical typologies that address the underlying motives for aggressive behavior (McGinn et al., 2016). Findings from the current study suggest in-roads into possible treatment areas for perpetrators who utilize different types of aggression for different reasons. For example, findings indicate a significant positive association between trait anger and reactive and overt aggression. If borne out in future research, it may be that individuals who perpetrate aggression through reactive and overt channels may uniquely benefit from anger management training. Such an approach would be consistent with IPA prevention programming which focuses on anger management training (Del Vecchio & O’Leary, 2004). Furthermore, insights gathered from this study may help researchers understand unique risks for IPA in certain types of psychopathologies and with unique aggression typologies. These findings may provide greater

understanding of how the interactions between a couple's uses of aggression may interplay in the escalation of conflict (functions/forms discrepancy/congruency). For example, the FFIPA's application to clinical settings may involve its administration to couples in conflict, thereby aiding clinicians in placing these individuals in existent IPA categories based on empirically supported typologies. Interventions appropriate for these typologies may then be instituted. Future research would do well to examine these typologies, their association with the FFIPA, and their numerous applications for clinical intervention and prevention.

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APPENDICES

Appendix A: Table 1

Table 1. Modification of the Forms and Functions of Aggression Measure (FFAM) into the Forms and Functions of Intimate Partner Aggression (FFIPA)

FFAM	FFIPA
<u>“Pure” Overt Aggression Subscale (Dispositional)</u>	
1. I’m the kind of person who often fights with others.	I’m the kind of person who often fights with my partner.
2. I’m the kind of person who hits, kicks, or punches others.	I’m the kind of person who hits, kicks, or punches my partner.
3. I’m the kind of person who says mean things to others.	I’m the kind of person who says mean things to my partner.
4. I’m the kind of person who puts others down.	I’m the kind of person who puts my partner down.
5. I’m the kind of person who threatens others.	I’m the kind of person who threatens my partner.
6. I’m the kind of person who takes things from others.	I’m the kind of person who takes things from my partner.
<u>Reactive Overt Aggression Subscale (Situational)</u>	
7. When I’m hurt by someone, I often fight back.	When I’m hurt by my partner, I often fight back.
8. When I’m threatened by someone, I often threaten back.	When I’m threatened by my partner, I often threaten back.
9. When I’m hurt by others, I often get back at them by saying mean things to them.	When I’m hurt by my partner, I often get back at him/her by saying mean things to him/her.
10. If others make me upset or hurt me, I often put them down.	If my partner makes me upset or hurts me, I often put him/her down.
11. If others have angered me, I often hit, kick, or punch them.	If my partner has angered me, I often hit, kick, or punch him/her.
12. If others make me mad or upset, I often hurt them.	If my partner makes me mad or upset, I often hurt him/her.
<u>Proactive Overt Aggression Subscale (Situational)</u>	
13. I often start fights to get what I want.	I often start fights with my partner to get what I want.
14. I often threaten others to get what I want.	I often threaten my partner to get what I want.

- | | | |
|-----|--|--|
| 15. | I often hit, kick, or punch others to get what I want. | I often hit, kick, or punch my partner to get what I want. |
| 16. | To get what I want, I often put others down. | To get what I want, I often put my partner down. |
| 17. | To get what I want, I often say mean things to others. | To get what I want, I often say mean things to my partner. |
| 18. | To get what I want, I often hurt others. | To get what I want, I often hurt my partner. |

“Pure” Relational Aggression Subscale (Dispositional)

- | | | |
|-----|--|--|
| 19. | I’m the kind of person who tells my friends to stop liking someone. | I’m the kind of person who tells my friends to stop liking my partner. |
| 20. | I’m the kind of person who tells others I won’t be their friend anymore. | I’m the kind of person who tells my partner I won’t be in a relationship with him/her anymore. |
| 21. | I’m the kind of person who keeps others from being in my group of friends. | I’m the kind of person who keeps my partner from being with my group of friends. |
| 22. | I’m the kind of person who says mean things about others. | I’m the kind of person who says mean things about my partner. |
| 23. | I’m the kind of person who ignores others or stops talking to them. | I’m the kind of person who ignores my partner or stops talking to him/her. |
| 24. | I’m the kind of person who gossips or spreads rumors. | I’m the kind of person who gossips or spreads rumors about my partner. |

Reactive Relational Aggression Subscale (Situational)

- | | | |
|-----|---|--|
| 25. | If others upset or hurt me, I often tell my friends to stop liking them. | If my partner upsets or hurts me, I often tell my friends to stop liking him/her. |
| 26. | If others have threatened me, I often say mean things about them. | If my partner has threatened me, I often say mean things about him/her. |
| 27. | If others have hurt me, I often keep them from being in my group of friends. | If my partner has hurt me, I often keep him/her from being with my group of friends. |
| 28. | When I am angry at others, I often tell them I won’t be their friend anymore. | When I am angry at my partner, I often tell him/her I won’t be in a relationship with him/her anymore. |
| 29. | When I am upset with others, I often ignore or stop talking to them. | When I am upset with my partner, I often ignore or stop talking to him/her. |
| 30. | When I am mad at others, I often gossip or spread rumors about them. | When I am mad at my partner, I often gossip or spread rumors about him/her. |

Proactive Relational Aggression Subscale (Situational)

- | | | |
|-----|--|---|
| 31. | I often tell my friends to stop liking someone to get what I want. | I often tell my friends to stop liking my partner to get what I want. |
|-----|--|---|

- | | |
|--|--|
| 32. I often say mean things about others to my friends to get what I want. | I often say mean things about my partner to my friends to get what I want. |
| 33. I often keep others from being in my group of friends to get what I want. | I often keep my partner from being with my group of friends to get what I want. |
| 34. To get what I want, I often tell others I won't be their friend anymore. | To get what I want, I often tell my partner I won't be in a relationship with him/her anymore. |
| 35. To get what I want, I often ignore or stop talking to others. | To get what I want, I often ignore or stop talking to my partner. |
| 36. To get what I want, I often gossip or spread rumors about others. | To get what I want, I often gossip or spread rumors about my partner. |
-

Appendix B: Table 2*Table 2. Means, standard deviations, and ranges for study variables (N = 280).*

Correlates	<i>M</i>	<i>SD</i>	<i>Range</i>
RPQ proactive mean item score	0.096	0.212	0 - 2
RPQ reactive mean item score	0.453	0.371	0 - 2
CTS-2 physical assault total score	2.561	7.571	0 - 72
CTS-2 psychological aggression total score	12.393	16.265	0 - 48
Relationship satisfaction mean item score	6.663	1.420	0 - 8
Impulsivity: Negative urgency mean item score	1.963	0.617	1 - 4
Positive urgency mean item score	1.600	0.562	1 - 4
Lack of perseverance mean item score	1.667	0.463	1 - 4
Trait anger mean item score	1.621	0.547	1 - 4
Problematic drinking total score	7.475	4.731	0 - 28
Hostility mean item score	1.937	0.762	1 - 5

Appendix C: Table 3*Table 3. FFIPA factor analysis parameters (N = 280).*

		Estimate	SE	Ratio	p	β
Overt	BY					
Parcel 1		0.26	0.03	8.56	0.00	0.67
Parcel 2		0.23	0.03	7.70	0.00	0.75
Parcel 3		0.36	0.05	7.71	0.00	0.86
Relational	BY					
Parcel 4		0.33	0.05	6.55	0.00	0.73
Parcel 5		0.28	0.06	4.35	0.00	0.71
Parcel 6		0.28	0.03	11.25	0.00	0.70
Overt Proactive	BY					
Parcel 7		0.07	0.02	3.03	0.00	0.64
Parcel 8		0.06	0.03	2.45	0.01	0.91
Parcel 9		0.07	0.03	2.57	0.01	0.98
Overt Reactive	BY					
Parcel 10		0.23	0.04	6.64	0.00	0.81
Parcel 11		0.34	0.05	6.94	0.00	0.93
Parcel 12		0.22	0.03	7.42	0.00	0.79
Relational Proactive	BY					
Parcel 13		0.06	0.03	2.20	0.03	0.90
Parcel 14		0.06	0.03	2.22	0.03	0.80
Parcel 15		0.06	0.02	3.38	0.00	0.61
Relational Reactive	BY					
Parcel 16		0.13	0.04	3.38	0.00	0.87
Parcel 17		0.11	0.03	3.76	0.00	0.68
Parcel 18		0.11	0.03	3.86	0.00	0.62
Proactive	BY					
Overt Proactive _{=c}		2.10	0.56	3.75	0.00	0.78
Relational Proactive _{=c}		2.10	0.56	3.75	0.00	0.62
Reactive	BY					
Overt Reactive _{=d}		0.64	0.29	2.19	0.03	0.36
Relational Reactive _{=d}		0.64	0.29	2.19	0.03	0.23
Overt	BY					
Overt Proactive _{=a}		1.36	0.28	4.87	0.00	0.50
Overt Reactive _{=a}		1.36	0.28	4.87	0.00	0.75
Relational	BY					
Relational Reactive _{=b}		2.50	0.68	3.65	0.00	0.90
Relational Proactive _{=b}		2.50	0.68	3.65	0.00	0.73
Proactive	WITH					
Reactive [^]		0.00	*	*	*	0.00
Overt [^]		0.00	*	*	*	0.00
Relational [^]		0.00	*	*	*	0.00
Overt Reactive [^]		0.00	*	*	*	0.00
Relational Reactive [^]		0.00	*	*	*	0.00

Reactive	WITH					
Overt [^]		0.00	*	*	*	0.00
Relational [^]		0.00	*	*	*	0.00
Overt Proactive [^]		0.00	*	*	*	0.00
Relational Proactive [^]		0.00	*	*	*	0.00
Overt	WITH					
Relational		0.83	0.07	11.93	0.00	0.83
Variations						
Overt [^]		1.00	*	*	*	1.00
Relational [^]		1.00	*	*	*	1.00
Proactive [^]		1.00	*	*	*	1.00
Reactive [^]		1.00	*	*	*	1.00
Residual Variations						
Parcel 1		0.08	0.01	7.40	0.00	0.55
Parcel 2		0.04	0.01	2.91	0.00	0.43
Parcel 3		0.05	0.01	3.49	0.00	0.26
Parcel 4		0.10	0.02	5.02	0.00	0.47
Parcel 5		0.07	0.02	4.32	0.00	0.49
Parcel 6		0.09	0.02	4.75	0.00	0.51
Parcel 7		0.05	0.01	4.24	0.00	0.59
Parcel 8		0.01	0.00	1.68	0.09	0.18
Parcel 9		0.00	0.00	0.78	0.43	0.05
Parcel 10		0.09	0.02	5.34	0.00	0.35
Parcel 11		0.06	0.02	3.46	0.00	0.14
Parcel 12		0.09	0.01	6.54	0.00	0.37
Parcel 13		0.01	0.01	1.76	0.08	0.19
Parcel 14		0.02	0.01	2.32	0.02	0.36
Parcel 15		0.06	0.02	3.48	0.00	0.63
Parcel 16		0.04	0.01	3.98	0.00	0.25
Parcel 17		0.11	0.02	5.91	0.00	0.54
Parcel 18		0.15	0.02	7.33	0.00	0.61
Overt Proactive [^]		1.00	*	*	*	0.14
Overt Reactive [^]		1.00	*	*	*	0.31
Relational Proactive [^]		1.00	*	*	*	0.09
Relational Reactive [^]		1.00	*	*	*	0.13

Note. Estimate = unstandardized beta; SE = standard error; Ratio = estimate/SE; β = standardized beta; * = undefined; ^ = fixed; =_x = equated factor loading.

Appendix D: Table 4*Table 4. Unique associations of CTS-2 variables with FFIPA constructs (N = 280).*

CTS-2 variables	Overt	Relational
Psychological aggression	0.628*	0.098
Physical assault	0.182	0.371

Note. The table values are standardized regression estimates, estimated simultaneously. * = $p \leq .05$.

Appendix E: Table 5*Table 5. Unique associations of correlates of aggression with FFIPA constructs (N = 280).*

Correlates	Forms of aggression		Functions of aggression	
	Relational	Overt	Reactive	Proactive
Trait anger	0.123	0.489*	0.349*	-0.012
Problematic Drinking	0.240	0.149	-0.200	0.039
Hostility	0.209	0.273	0.139	-0.136
Relationship Satisfaction	-0.373*	-0.187	0.064	0.229*
Impulsivity: Negative Urgency	0.110	0.431*	0.308*	-0.043
Positive Urgency	0.374*	0.031	0.128	0.083
Lack of Perseverance	-0.049	0.139	0.275*	-0.045

Note. The table values are standardized regression estimates, estimated separately. The two forms of aggression are independent of the two functions of aggression. * = $p \leq .05$.

Appendix F: Figure 2

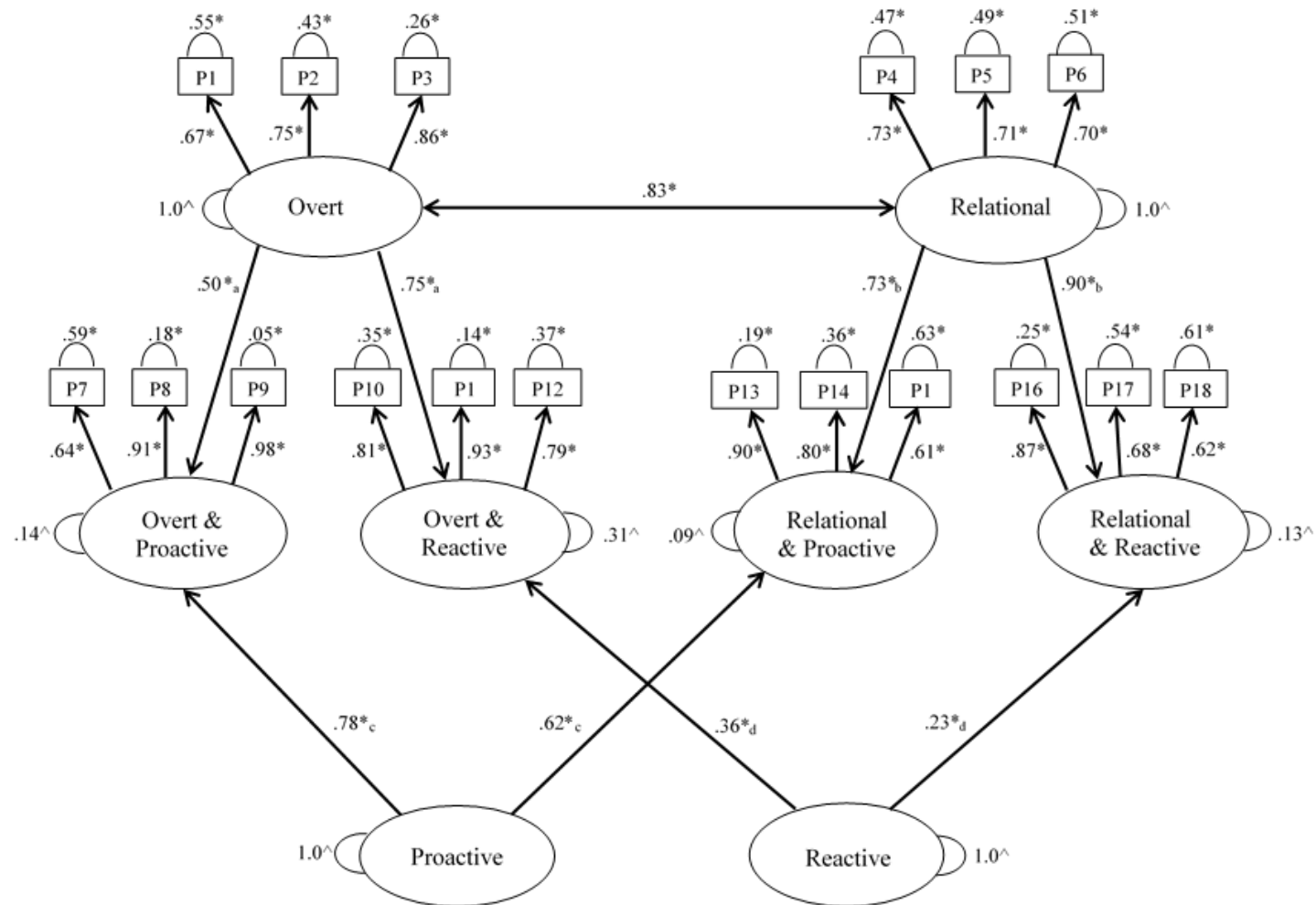


Figure 2. Path model of the FFIPA factor structure.

Note. Confirmatory factor analysis diagram with standardized estimates of the FFIPA (mean structure not shown). Significant estimates, $p \leq .05$, are noted with an *. Estimates fixed at 1.0 in the unstandardized model are noted with a ^. Equated factor loadings in the unstandardized model are noted with an _x.

Appendix G: Demographics Form

Subject # _____

Demographics Form

Age: _____

Years of Education including kindergarten: _____

Marital Status (please check one)

- Single (never married)
- Married
- Not married but living with intimate partner
- Divorced
- Widowed
- Separated

Length of intimate relationship: _____ months _____ years

How do you describe your ethnicity?

- Hispanic or Latino
- Non-Hispanic or Non-Latino

How do you describe your race?

- American Indian or Alaska Native

Appendix H: Forms and Functions of Intimate Partner Aggression

FFIPA

Instructions: Below is a list of some things partners do while they are arguing. Please indicate how each the statement applies to you on a scale from “1” (Not At All True) to “4” (Completely True).

	Not At All True		Completely True	
1. I'm the kind of person who often fights with my partner.	1	2	3	4
2. I'm the kind of person who hits, kicks, or punches my partner.	1	2	3	4
3. I'm the kind of person who says mean things to my partner.	1	2	3	4
4. I'm the kind of person who puts my partner down.	1	2	3	4
5. I'm the kind of person who threatens my partner.	1	2	3	4
6. I'm the kind of person who takes things from my partner.	1	2	3	4
7. When I'm hurt by my partner, I often fight back.	1	2	3	4
8. When I'm threatened by my partner, I often threaten back.	1	2	3	4
9. When I'm hurt by my partner, I often get back at him/her by saying mean things to him/her.	1	2	3	4
10. If my partner makes me upset or hurts me, I often put him/her down.	1	2	3	4
11. If my partner has angered me, I often hit, kick or punch him/her.	1	2	3	4
12. If my partner makes me mad or upset, I often hurt him/her.	1	2	3	4
13. I often start fights with my partner to get what I want.	1	2	3	4
14. I often threaten my partner to get what I want.	1	2	3	4
15. I often hit, kick, or punch my partner to get what I want.	1	2	3	4
16. To get what I want, I often put my partner down.	1	2	3	4
17. To get what I want, I often say mean things to my partner.	1	2	3	4
18. To get what I want, I often hurt my partner.	1	2	3	4
19. I'm the kind of person who tells my friends to stop liking my partner.	1	2	3	4
20. I'm the kind of person who tells my partner I won't be in a relationship with him/her anymore.	1	2	3	4
21. I'm the kind of person who keeps my partner from being with my group of friends.	1	2	3	4
22. I'm the kind of person who says mean things about my partner.	1	2	3	4
23. I'm the kind of person who ignores my partner or stops talking to him/her.	1	2	3	4
24. I'm the kind of person who gossips or spreads rumors about my partner.	1	2	3	4

- | | | | | |
|---|---|---|---|---|
| 25. If my partner upsets or hurts me, I often tell my friends to stop liking him/her. | 1 | 2 | 3 | 4 |
| 26. If my partner has threatened me, I often say mean things about him/her. | 1 | 2 | 3 | 4 |
| 27. If my partner has hurt me, I often keep him/her from being with my group of friends. | 1 | 2 | 3 | 4 |
| 28. When I am angry at my partner, I often tell him/her I won't be in a relationship with him/her anymore. | 1 | 2 | 3 | 4 |
| 29. When I am upset with my partner, I often ignore or stop talking to him/her. | 1 | 2 | 3 | 4 |
| 30. When I am mad at my partner, I often gossip or spread rumors about him/her. | 1 | 2 | 3 | 4 |
| 31. I often tell my friends to stop liking my partner to get what I want. | 1 | 2 | 3 | 4 |
| 32. I often say mean things about my partner to my friends to get what I want. | 1 | 2 | 3 | 4 |
| 33. I often keep my partner from being with my group of friends to get what I want. | 1 | 2 | 3 | 4 |
| 34. To get what I want, I often tell my partner I won't be in a relationship with him/her anymore. | 1 | 2 | 3 | 4 |
| 35. To get what I want, I often ignore or stop talking to my partner. | 1 | 2 | 3 | 4 |
| 36. To get what I want, I often gossip or spread rumors about my partner. | 1 | 2 | 3 | 4 |

Appendix I: Revised Conflict Tactics Scale - 2

CTS 2

Have you been in an intimate relationship in the past year? **YES** **NO**

If NO: Please skip to the next questionnaire

If YES: Below is a list of some things partners do while they are arguing. Please indicate how often each happened.

How many times **in the past year:**

0 = Never in the past year 1 = Once in the past year 2 = Twice in the past year
3 = 3-5 times in the past year 4 = 6-10 times in the past year 5 = 11-20 times in the past year
6 = More than 20 times in the past year

1.	I showed my partner I cared even though we disagreed	0	1	2	3	4	5	6
2.	My partner showed care for me even though we disagreed	0	1	2	3	4	5	6
3.	I explained my side of a disagreement to my partner	0	1	2	3	4	5	6
4.	My partner explained his/her side of a disagreement to me	0	1	2	3	4	5	6
5.	I insulted or swore at my partner	0	1	2	3	4	5	6
6.	My partner insulted or swore at me	0	1	2	3	4	5	6
7.	I threw something at my partner that could hurt	0	1	2	3	4	5	6
8.	My partner threw something at me that could hurt	0	1	2	3	4	5	6
9.	I twisted my partner's arm or hair	0	1	2	3	4	5	6
10.	My partner twisted my arm or hair	0	1	2	3	4	5	6
11.	I had a sprain, bruise, or small cut because of a fight with my partner	0	1	2	3	4	5	6
12.	My partner had a sprain, bruise, or small cut because of a fight with me	0	1	2	3	4	5	6
13.	I showed respect for my partner's feelings about an issue	0	1	2	3	4	5	6
14.	My partner showed respect for my feelings about an issue	0	1	2	3	4	5	6
15.	I made my partner have sex without a condom	0	1	2	3	4	5	6
16.	My partner made me have sex without a condom	0	1	2	3	4	5	6
17.	I pushed or shoved my partner	0	1	2	3	4	5	6
18.	My partner pushed or shoved me	0	1	2	3	4	5	6
19.	I used force (like hitting, holding down, or using a weapon) to make my partner have oral or anal sex	0	1	2	3	4	5	6
20.	My partner used force (like hitting, holding down, or using a weapon) to make me have oral or anal sex	0	1	2	3	4	5	6
21.	I used a knife or gun on my partner	0	1	2	3	4	5	6
22.	My partner used a knife or gun on me	0	1	2	3	4	5	6
23.	I passed out from being hit on the head by my partner in a fight	0	1	2	3	4	5	6
24.	My partner passed out from being hit on the head in a fight with me	0	1	2	3	4	5	6
25.	I called my partner fat or ugly	0	1	2	3	4	5	6
26.	My partner called me fat or ugly	0	1	2	3	4	5	6
27.	I punched or hit my partner with something that could hurt	0	1	2	3	4	5	6
28.	My partner punched or hit me with something that could hurt	0	1	2	3	4	5	6
29.	I destroyed something belonging to my partner	0	1	2	3	4	5	6
30.	My partner destroyed something belonging to me	0	1	2	3	4	5	6
31.	I went to a doctor because of a fight with my partner	0	1	2	3	4	5	6
32.	My partner went to a doctor because of a fight with me	0	1	2	3	4	5	6

33.	I choked my partner	0	1	2	3	4	5	6
34.	My partner choked me	0	1	2	3	4	5	6
35.	I shouted or yelled at my partner	0	1	2	3	4	5	6
36.	My partner shouted or yelled at me	0	1	2	3	4	5	6
37.	I slammed my partner against a wall	0	1	2	3	4	5	6
38.	My partner slammed me against a wall	0	1	2	3	4	5	6
39.	I said I was sure we could work out a problem	0	1	2	3	4	5	6
40.	My partner was sure we could work it out	0	1	2	3	4	5	6
41.	I needed to see a doctor because of a fight with my partner, but I didn't	0	1	2	3	4	5	6
42.	My partner needed to see a doctor because of a fight with me, but didn't	0	1	2	3	4	5	6
43.	I beat up my partner	0	1	2	3	4	5	6
44.	My partner beat me up	0	1	2	3	4	5	6
45.	I grabbed my partner	0	1	2	3	4	5	6
46.	My partner grabbed me	0	1	2	3	4	5	6
47.	I used force (like hitting, holding down, or using a weapon) to make my partner have sex	0	1	2	3	4	5	6
48.	My partner used force (like hitting, holding down, or using a weapon) to make me have sex	0	1	2	3	4	5	6
49.	I stomped out of the room or house or yard during a disagreement	0	1	2	3	4	5	6
50.	My partner stomped out of the room or house or yard during a disagreement	0	1	2	3	4	5	6
51.	I insisted on sex when my partner did not want to (but did not use physical force)	0	1	2	3	4	5	6
52.	My partner insisted on sex when I did not want to (but did not use physical force)	0	1	2	3	4	5	6
53.	I slapped my partner	0	1	2	3	4	5	6
54.	My partner slapped me	0	1	2	3	4	5	6
55.	I had a broken bone from a fight with my partner	0	1	2	3	4	5	6
56.	My partner had a broken bone from a fight with me	0	1	2	3	4	5	6
57.	I used threats to make my partner have oral or anal sex	0	1	2	3	4	5	6
58.	My partner used threats to make me have oral or anal sex	0	1	2	3	4	5	6
59.	I suggested a compromise to a disagreement	0	1	2	3	4	5	6
60.	My partner suggested a compromise to a disagreement	0	1	2	3	4	5	6
61.	I burned or scalded my partner on purpose	0	1	2	3	4	5	6
62.	My partner burned or scalded me on purpose	0	1	2	3	4	5	6
63.	I insisted my partner have oral or anal sex (but did not use physical force)	0	1	2	3	4	5	6
64.	My partner insisted I have oral or anal sex (but did not use physical force)	0	1	2	3	4	5	6
65.	I accused my partner of being a lousy lover	0	1	2	3	4	5	6
66.	My partner accused me of being a lousy lover	0	1	2	3	4	5	6
67.	I did something to spite my partner	0	1	2	3	4	5	6
68.	My partner did something to spite me	0	1	2	3	4	5	6
69.	I threatened to hit or throw something at my partner	0	1	2	3	4	5	6
70.	My partner threatened to hit or throw something at me	0	1	2	3	4	5	6
71.	I felt physical pain that still hurt the next day because of a fight with my partner	0	1	2	3	4	5	6
72.	My partner still felt physical pain the next day because of a fight we had	0	1	2	3	4	5	6

73.	I kicked my partner	0	1	2	3	4	5	6
74.	My partner kicked me	0	1	2	3	4	5	6
75.	I used threats to make my partner have sex	0	1	2	3	4	5	6
76.	My partner used threats to make me have sex	0	1	2	3	4	5	6
77.	I agreed to try a solution to a disagreement my partner suggested	0	1	2	3	4	5	6
78.	My partner agreed to try a solution to a disagreement that I suggested	0	1	2	3	4	5	6

Appendix J: Buss-Perry Aggression Questionnaire

BAQ

Instructions: For each of the following below, please circle a number that best indicates how the statement applies to you.

Answer according to the following scale:

- 1 - Extremely uncharacteristic of me
- 2 -
- 3 - Moderately characteristic of me
- 4 -
- 5- Extremely characteristic of me

- | | | | | | | |
|-----|--|---|---|---|---|---|
| 1. | Once in a while I can't control the urge to strike another person. | 1 | 2 | 3 | 4 | 5 |
| 2. | I tell my friends openly when I disagree with them. | 1 | 2 | 3 | 4 | 5 |
| 3. | I flare up quickly but get over it quickly. | 1 | 2 | 3 | 4 | 5 |
| 4. | I am sometimes eaten up with jealousy. | 1 | 2 | 3 | 4 | 5 |
| 5. | Given enough provocation, I may hit another person. | 1 | 2 | 3 | 4 | 5 |
| 6. | I often find myself disagreeing with people. | 1 | 2 | 3 | 4 | 5 |
| 7. | When frustrated, I let my irritation show. | 1 | 2 | 3 | 4 | 5 |
| 8. | At times I feel I have gotten a raw deal out of life. | 1 | 2 | 3 | 4 | 5 |
| 9. | If someone hits me, I hit back. | 1 | 2 | 3 | 4 | 5 |
| 10. | When people annoy me, I may tell them what I think of them. | 1 | 2 | 3 | 4 | 5 |
| 11. | I sometimes feel like a powder keg ready to explode. | 1 | 2 | 3 | 4 | 5 |
| 12. | Other people always seem to get the breaks. | 1 | 2 | 3 | 4 | 5 |
| 13. | I get into fights a little more than the average person. | 1 | 2 | 3 | 4 | 5 |
| 14. | I can't help getting into arguments when people disagree with me. | 1 | 2 | 3 | 4 | 5 |
| 15. | I am an even-tempered person. | 1 | 2 | 3 | 4 | 5 |
| 16. | I wonder why sometimes I feel so bitter about things. | 1 | 2 | 3 | 4 | 5 |
| 17. | If I have to resort to violence to protect my rights, I will. | 1 | 2 | 3 | 4 | 5 |
| 18. | My friends say that I'm somewhat argumentative. | 1 | 2 | 3 | 4 | 5 |
| 19. | Some of my friends think I'm a hothead. | 1 | 2 | 3 | 4 | 5 |
| 20. | I know that "friends" talk about me behind my back. | 1 | 2 | 3 | 4 | 5 |
| 21. | There are people who pushed me so far that we came to blows. | 1 | 2 | 3 | 4 | 5 |
| 22. | Sometimes I fly off the handle for no good reason. | 1 | 2 | 3 | 4 | 5 |
| 23. | I am suspicious of overly friendly strangers. | 1 | 2 | 3 | 4 | 5 |
| 24. | I can think of no good reason for ever hitting a person. | 1 | 2 | 3 | 4 | 5 |
| 25. | I have trouble controlling my temper. | 1 | 2 | 3 | 4 | 5 |
| 26. | I sometimes feel that people are laughing at me behind my back. | 1 | 2 | 3 | 4 | 5 |
| 27. | I have threatened people I know. | 1 | 2 | 3 | 4 | 5 |
| 28. | When people are especially nice, I wonder what they want. | 1 | 2 | 3 | 4 | 5 |
| 29. | I have become so mad that I have broken things. | 1 | 2 | 3 | 4 | 5 |

Appendix K: Reactive-Proactive Aggression Questionnaire

RPQ

Instructions: There are times when most of us feel angry, or have done things we should not have done. Don't spend a lot of time thinking about the items—just give your first response. Make sure you answer all the items.

Mark your answers on the answer sheet using the following scale:

0	1	2
Never	Sometimes	Often

How often have you...

1.	Yelled at others when they have annoyed you?	0	1	2
2.	Had fights with others to show who was on top?	0	1	2
3.	Reacted angrily when provoked by others?	0	1	2
4.	Taken things from other people?	0	1	2
5.	Got angry when frustrated?	0	1	2
6.	Vandalized something for fun?	0	1	2
7.	Had temper tantrums?	0	1	2
8.	Damaged things because you felt mad?	0	1	2
9.	Hurt others to impress people?	0	1	2
10.	Hurt others to get ahead?	0	1	2
11.	Become angry or mad when you don't get your way?	0	1	2
12.	Used physical force to get others to do what you want?	0	1	2
13.	Got angry or mad when you lost a game?	0	1	2
14.	Got angry when others threatened you?	0	1	2
15.	Used force to obtain money or things from others?	0	1	2
16.	Felt better after hitting or yelling at someone?	0	1	2
17.	Threatened and bullied someone?	0	1	2
18.	Made obscene phone calls for fun?	0	1	2
19.	Hit others to defend yourself?	0	1	2
20.	Got others to gang up on someone else?	0	1	2
21.	Carried a weapon to use in a fight?	0	1	2
22.	Got angry or mad or hit others when teased?	0	1	2
23.	Yelled at others so they would do things for you?	0	1	2

Appendix L: Investment Model Scale

IMS

The following questions pertain to you AND your current romantic relationship partner.

Using the scale below as a guide, write a number beside each statement to indicate how much you agree with it.

0	1	2	3	4	5	6	7	8
Do Not Agree				Agree				Agree
At All				Somewhat				Completely

Satisfaction With My Dating Relationship

- _____ I feel satisfied with our relationship.
- _____ My relationship is much better than others' relationships.
- _____ My relationship is close to ideal.
- _____ Our relationship makes me very happy.
- _____ Our relationship does a good job of fulfilling my needs for intimacy, companionship, etc.

Commitment to My Dating Relationship

- _____ I want our relationship to last a very long time.
- _____ I am committed to maintaining my relationship with my partner.
- _____ I would not feel very upset if our relationship were to end in the near future.
- _____ It is likely that I will date someone other than my partner within the next year.
- _____ I feel very attached to our relationship -- very strongly linked to my partner.
- _____ I want our relationship to last forever.
- _____ I am oriented toward the long-term future of my relationship (for example, I imagine being with my partner several years from now).

Appendix M: Trait Anger Scale

TAS

Directions: A number of statements that people use to describe themselves are given below. Read each statement and then circle the number which indicates how you generally feel.

How I generally feel

	Not at all	Somewhat	Moderately	Very Much
1. I am quick tempered.	1	2	3	4
2. I have a fiery temper.	1	2	3	4
3. I am a hotheaded person.	1	2	3	4
4. I get angry when I am slowed down by others' mistakes.	1	2	3	4
5. I feel annoyed when I am not given recognition for doing good work.	1	2	3	4
6. I fly off the handle.	1	2	3	4
7. When I get mad, I say nasty things.	1	2	3	4
8. It makes me furious when I am criticized in front of others.	1	2	3	4
9. When I get frustrated, I feel like hitting someone.	1	2	3	4
10. I feel infuriated when I do a good job and get a poor evaluation.	1	2	3	4

Appendix N: UPPS-P

UPPS-P

Below are a number of statements that describe ways in which people act and think. For each statement, please indicate how much you agree or disagree with the statement. If you **Agree Strongly** circle **1**, if you **Agree Somewhat** circle **2**, if you **Disagree somewhat** circle **3**, and if you **Disagree Strongly** circle **4**. Be sure to indicate your agreement or disagreement for every statement below. Also, there are questions on the following pages.

	Agree Strongly	Agree Some	Disagree Some	Disagree Strongly
1. I have a reserved and cautious attitude toward life.	1	2	3	4
2. I have trouble controlling my impulses.	1	2	3	4
3. I generally seek new and exciting experiences and sensations.	1	2	3	4
4. I generally like to see things through to the end.	1	2	3	4
5. When I am very happy, I can't seem to stop myself from doing things that can have bad consequences.	1	2	3	4
6. My thinking is usually careful and purposeful.	1	2	3	4
7. I have trouble resisting my cravings (for food, cigarettes, etc.).	1	2	3	4
8. I'll try anything once.	1	2	3	4
9. I tend to give up easily.	1	2	3	4
10. When I am in great mood, I tend to get into situations that could cause me problems.	1	2	3	4
11. I am not one of those people who blurt out things without thinking.	1	2	3	4
12. I often get involved in things I later wish I could get out of.	1	2	3	4
13. I like sports and games in which you have to choose your next move very quickly.	1	2	3	4
14. Unfinished tasks really bother me.	1	2	3	4
15. When I am very happy, I tend to do things that may cause problems in my life.	1	2	3	4

16.	I like to stop and think things over before I do them.	1	2	3	4
17.	When I feel bad, I will often do things I later regret in order to make myself feel better now.	1	2	3	4
18.	I would enjoy water skiing.	1	2	3	4
19.	Once I get going on something I hate to stop.	1	2	3	4
20.	I tend to lose control when I am in a great mood.	1	2	3	4
21.	I don't like to start a project until I know exactly how to proceed.	1	2	3	4
22.	Sometimes when I feel bad, I can't seem to stop what I am doing even though it is making me feel worse.	1	2	3	4
23.	I quite enjoy taking risks.	1	2	3	4
24.	I concentrate easily.	1	2	3	4
25.	When I am really ecstatic, I tend to get out of control.	1	2	3	4
26.	I would enjoy parachute jumping.	1	2	3	4
27.	I finish what I start.	1	2	3	4
28.	I tend to value and follow a rational, "sensible" approach to things.	1	2	3	4
29.	When I am upset I often act without thinking.	1	2	3	4
30.	Others would say I make bad choices when I am extremely happy about something.	1	2	3	4
31.	I welcome new and exciting experiences and sensations, even if they are a little frightening and unconventional.	1	2	3	4
32.	I am able to pace myself so as to get things done on time.	1	2	3	4
33.	I usually make up my mind through careful reasoning.	1	2	3	4
34.	When I feel rejected, I will often say things that I later regret.	1	2	3	4
35.	Others are shocked or worried about the things I do when I am feeling very excited.	1	2	3	4
36.	I would like to learn to fly an airplane.	1	2	3	4
37.	I am a person who always gets the job done.	1	2	3	4

- | | | | | | |
|-----|---|---|---|---|---|
| 38. | I am a cautious person. | 1 | 2 | 3 | 4 |
| 39. | It is hard for me to resist acting on my feelings. | 1 | 2 | 3 | 4 |
| 40. | When I get really happy about something, I tend to do things that can have bad consequences. | 1 | 2 | 3 | 4 |
| 41. | I sometimes like doing things that are a bit frightening. | 1 | 2 | 3 | 4 |
| 42. | I almost always finish projects that I start. | 1 | 2 | 3 | 4 |
| 43. | Before I get into a new situation I like to find out what to expect from it. | 1 | 2 | 3 | 4 |
| 44. | I often make matters worse because I act without thinking when I am upset. | 1 | 2 | 3 | 4 |
| 45. | When overjoyed, I feel like I can't stop myself from going overboard. | 1 | 2 | 3 | 4 |
| 46. | I would enjoy the sensation of skiing very fast down a high mountain slope. | 1 | 2 | 3 | 4 |
| 47. | Sometimes there are so many little things to be done that I just ignore them all. | 1 | 2 | 3 | 4 |
| 48. | I usually think carefully before doing anything. | 1 | 2 | 3 | 4 |
| 49. | Before making up my mind, I consider all the advantages and disadvantages. | 1 | 2 | 3 | 4 |
| 50. | When I am really excited, I tend not to think of the consequences of my actions. | 1 | 2 | 3 | 4 |
| 51. | In the heat of an argument, I will often say things that I later regret. | 1 | 2 | 3 | 4 |
| 52. | I would like to go scuba diving. | 1 | 2 | 3 | 4 |
| 53. | I tend to act without thinking when I am really excited. | 1 | 2 | 3 | 4 |
| 54. | I always keep my feelings under control. | 1 | 2 | 3 | 4 |
| 55. | When I am really happy, I often find myself in situations that I normally wouldn't be comfortable with. | 1 | 2 | 3 | 4 |
| 56. | I would enjoy fast driving. | 1 | 2 | 3 | 4 |
| 57. | When I am very happy, I feel like it is ok to give in to cravings or overindulge. | 1 | 2 | 3 | 4 |

- | | | | | |
|---|---|---|---|---|
| 58. Sometimes I do impulsive things that I later regret. | 1 | 2 | 3 | 4 |
| 59. I am surprised at the things I do while in a great mood. | 1 | 2 | 3 | 4 |

Appendix O: AUDIT**AUDIT**

Circle a response that best applies to you for each question.

1. How often do you have a drink containing alcohol?	Never	Monthly or less	2-4 times a month	2-3 times a week	4 or more times a week
2. How many drinks containing alcohol do you have on a typical day when you are drinking?	1 or 2	3 or 4	5 or 6	7 to 9	10 or more
3. How often do you have 6 or more drinks on one occasion?	Never	Less than monthly	Monthly	Weekly	Daily or almost daily
4. How often during the last year have you found that you were not able to stop drinking once you had started?	Never	Less than monthly	Monthly	Weekly	Daily or almost daily
5. How often during the last year have you failed to do what was normally expected of you because of drinking?	Never	Less than monthly	Monthly	Weekly	Daily or almost daily
6. How often during the last year have you needed a first drink in the morning to get yourself going after a heavy drinking session?	Never	Less than monthly	Monthly	Weekly	Daily or almost daily
7. How often during the last year have you had a feeling of guilt or remorse during drinking?	Never	Less than monthly	Monthly	Weekly	Daily or almost daily
8. How often during the last year have you been unable to remember what happened the night before because of your drinking?	Never	Less than monthly	Monthly	Weekly	Daily or almost daily
9. Have you or someone else been injured because of your drinking?	No		Yes, but not in the last year		Yes, during the last year
10. Has a relative, friend, doctor, or other health care worker been concerned about your drinking or suggested you cut down?	No		Yes, but not in the last year		Yes, during the last year