THE DEVELOPMENT AND EXAMINATION OF THE PSYCHOMETRIC PROPERTIES OF THE INTIMATE VIOLENCE RESPONSIBILITY SCALE (IVRS)

by

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(Under the Direction of Betsy Vonk)

ABSTRACT

The Intimate Violence Responsibility Scale (IVRS) is developed through a series of scale development processes. The IVRS is factor analyzed to determine the dimensions of the instrument. The confirmed four factors (minimization, denial, proximal blame, and distal blame) of the IVRS are supported by the theoretical background (CECEVIM batterer intervention model and ecological perspectives). Psychometric properties of the IVRS are reported. The relationship between cognition (attitudes) and violent behavior is assessed during scale validation.

INDEX WORDS: Scale Development, Psychometric Properties, Factor Analysis, Domestic Violence, Intimate Partner Violence, Responsibility, Attitudes, Cognition, Blame, Minimization, Denial

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TABLE OF CONTENTS

Page

LIST OF TABLES vii

LIST OF FIGURES ix

CHAPTER

1 INTRODUCTION 1

Statement of the Problem 5

Purpose of the Study 6

Significance of the Study 7

Research Questions and Hypotheses 9

Definition of Terms 14

Chapter Summary 17

2 LITERATURE REVIEW 19

Theories Related to Batterer Intervention 19

Cognition and Violent Behavior 29

Responsibility Cognition and Stopping Violence 32

Existing Instruments Measuring Responsibility Cognition 34

Four Constructs of Responsibility Cognition 38

Conceptual Framework 44

Conceptual Definition of the Four Constructs 49

Operational Definition of the Four Constructs 50

Research Questions 52
Hypotheses 53
Chapter Summary 53
3 METHODOLOGY 55
Research Design 55
Study Participants 55
Measures 61
Procedures 64
Chapter Summary 69
4 RESULTS 70
Refined Items from Expert Reviews 70
Item Analysis 75
Exploratory Factor Analysis 79
Reliability Analysis for the Four-Factor Solution 103
Test for Construct Validity 104
Chapter Summary 111
5 DISCUSSION AND CONCLUSION 113
Summary of Major Findings 113
Issues and Discussion 114
Implications for Practice 123
Implications for Future Research 125
Conclusion 128

REFERENCES 130

APPENDICES 153

A DEMOGRAPHIC INFORMATION 154

B THE MARLOWE-CROWNE SOCIAL DESRIABILITY SCALE (MCSDS).....161

C THE REVISED CONFLICT TACTICS SCALES (CTS2).....163

D THE INTIMATE VIOLENCE RESPONSIBILITY SCALE (IVRS) 169

E EXPERT REVIEW FORM.....173

F INTERITEM CORRELATION MATRIX 195

LIST OF TABLES

Page

Table 2.1: Brief Introduction of the Four Instruments 35

Table 2.2: Conceptual Definition of the Proposed Four Constructs 49

Table 2.3: Operational Definition of the Proposed Four Constructs 51

Table 3.1: Number of the Study Participants and Geographical Location 56

Table 3.2: Sampling Information and Number of Samples Used 58

Table 3.3: Demographic Variables of the Total Sample (N = 612) 59

Table 3.4: Example of Response Scale 64

Table 3.5: Framework: Ramirez-Hernandez's Model and Bronfenbrenner's Ecological Perspective 66

Table 4.1: Category, Number of Agreement, Percentage, and Content of the Revised 40 Items .72

Table 4.2: Items for the Four Subscales 74

Table 4.3: Descriptive Statistics for the IVRS Items with the Total Sample (N = 612) 76

Table 4.4: Distribution of the Responses in Item 6 78

Table 4.5: Internal Consistency Statistics from Item Reduction (N = 612) 79

Table 4.6: Demographic Variables of EFA Sample (n = 474) 80

Table 4.7: Descriptive Statistics for the IVRS Items with EFA Sample 82

Table 4.8: KMO and Bartlett's Test 83

Table 4.9: Initial Communality Matrix with 31 items 85

Table 4.10: Initial Eigenvalues and Percentage of Variance by Each Factor for Initial Example 87

Table 4.11: Communality Matrix for Four-Factor Solution with 31 items 89

Table 4.12: Promax's Pattern Matrix for Four-Factor Solution with 31 items (Kappa = 6) 92

Table 4.13: Promax's Structure Matrix for Four-Factor Solution with 31 items (Kappa = 6).....93

Table 4.14: Factor Correlation Matrix Using 31 Items (n = 474).....94

Table 4.15: List of Items Dropped from Analysis 95

Table 4.16: Eigenvalues and Percentage of Variance by Each Factor for Initial Example 97

Table 4.17: Communality Matrix with 23 items.....98

Table 4.18: Loaded Items and Rotated Pattern Matrix Using 23 Items.....99

Table 4.19: Loaded Items and Rotated Structure Matrix Using 23 Items 100

Table 4.20: Factor Correlation Matrix Using 23 Items (n = 474).....101

Table 4.21: Reliability Coefficient of the Subscales Obtained from EFA (N= 612).....103

Table 4.22: Correlations of Each Item with its Own Factor (in Bold Type) & with Other Factors (N = 612).....105

Table 4.23: Correlations between the IVRS and Physical Abuse (CTS2) (n = 451).....107

Table 4.24: Correlation between the IVRS and Psychological-verbal Abuse (CTS2) (n = 451) 108

Table 4.25: correlations between the IVRS and Negotiation (CTS2) (n = 437) 109

Table 4.26: Correlations between the IVRS and Demographic Variables (n = 474) 110

Table 4.27: Batterers Group and Jury Group Means, Standard Deviation, Standard Error Means, Effect Size, and Independent Samples T Test by Group 111

LIST OF FIGURES

Page

Figure 2.1: Ecological Perspectives of Batterers' world 20

Figure 2.2: The Realm of Violent People and the Role of Cognition.....32

Figure 2.3: Violence Transformation Process and Role of Responsibility Cognition.....46

Figure 2.4: Four Constructs of Responsibility.....47

Figure 2.5: The Conceptual Model for the Responsibility Cognition for the EFA 48

Figure 4.1: Scree Plot Using 31 Items 88

Figure 4.2: Scree Plot Using 23 Items 99

CHAPTER 1

INTRODUCTION

Violence perpetrated by intimate partners is a serious and epidemic problem across all populations, irrespective of social, economic, religious, or cultural backgrounds. According to the U.S. Department of Health and Human Services, nearly 5.3 million intimate violence victimizations occur each year among women ages 18 and older in the United States. Intimate partner abuse causes nearly 2 million injuries and 1,300 deaths each year (CDC, 2003). More than 1 million women and 371,000 men are stalked by intimate partners each year, and nearly 25% of women have been raped and/or physically assaulted by intimate partners at some point in their lives (Tjaden & Thoennes, 2000). Research estimates that 40% to 70% of female murder victims are killed by their husbands or boyfriends in an abusive relationship (Bailey et al., 1997), and intimate partner violence constitutes 20% of all nonfatal violence crime that women experience (Rennison, 2003). Gosselin (2003) confirmed that domestic violence is the leading cause of injury and death to women in the United States, causing more harm than vehicular accidents, muggings, and rape combined.

Although young women are disproportionately affected as victims of intimate partner violence, violence against male partners also occurs. Some studies show that violence against male partners is largely ignored (Cook, 1997; Hines & Malley-Morrison, 2001) as is gender-neutral violence in most cases (Straus, Gelles, & Steinmetz, 1980). Rapoza (2004) showed that whereas approval of a husband slapping a wife decreased from 20% in 1968 to 10% in 1994, approval of a wife slapping a husband remained at 22% during the same period. To be sure, both men and women experience intimate partner violence, but researchers and practitioners in

domestic violence arenas suggest that male battering occurs disproportionately to female battering. In fact, women are eight times more likely to be assaulted by the intimate (Greenfield et al., 1998). Gosselin (2003) also reported that men's violence against women accounts for approximately 85% percent of total domestic violence.

Dating violence problems in high school and college have been persistently documented. Levy (1990) reported that over 30% of high school students were faced with physical and sexual violence in their dating relationships. Bergman (1992) identified that 28% of high school students who participated in the study reported that they faced dating violence including sexual violence and verbal threats. Specifically, 15.7% of the females and 7.8% of males experienced dating violence, and the rates increased by 24.4% and 9.9%, respectively, when combining physical violence with sexual violence. Approximately a quarter of male and female students in the 8th and 9th grades have been victims of nonsexual dating violence, while eight percent of them have experienced sexual abuse such as nonconsensual sexual contact, completed or attempted rape, abusive sexual contact, or noncontact sexual abuse (Foshee et al., 1996). In the analysis of data from the 2003 Youth Risk Behavior Survey (YRBS), CDC reported that 8.9% of the students (8.9% of males and 8.8% of females) were physically victimized in their dating relationship during the 12 months preceding the survey (CDC, 2006). For college students, the rate of physical violence has reached 22%, which is comparable to the rate of physical violence in adult relationships (Gamache, 1998). Some studies showed more severe rates of violence in dating relationships. Billingham (1987) and Pedersen and Thomas (1992) found that 45% to 68% of college students initiated and/or sustained violence in dating relationships.

Considering the severity and prevalence of domestic violence toward males and females, complete understanding of the nature of intimate partner violence is crucial to preventing

violence perpetuated by intimate partners. What is the nature of this violence? Why does domestic violence occur? How can people stop violence against intimate partners? In the process of addressing these questions, many theories and perspectives on domestic violence have contributed to the prevention of and intervention against intimate partner violence. Various biological, psychological, family-dynamic, socioeconomic, religious, and cultural factors have provided insight into the origin and evolution of violence. Although most of the theories and perspectives explain the nature of domestic violence toward the intimate in some way, the utility of such theories and perspectives in practice is not always beneficial and appropriate for understanding the multidimensional characteristics of violence and its serious impact on victims. For example, the traditional theories of masochism propose that wife abuse originated from the intrapsychic personality characteristics of women (Gayford, 1975; Pleck, 1987; Snell, Rosenwald, & Robey, 1964), but this theoretical orientation is rarely applied today because it reflects a sexist bias and emphasizes victim blaming. Family-based theories such as family systems theory also have limited utility since they often place blame for violence on the family structure and family interaction rather than on an individual within the family (Gendreau & Ross, 1987; Neidig, 1985); therefore, intervention based on family-based theories mainly focuses on improving communication skills of family members. Family-based theories might contribute to understanding the dynamic of intimate partner violence; however, the major limitations of these theories are that they view violence as a functional cause in perpetuating unhealthy marital and family systems and that their analysis of intimate partner violence does not account for the larger political, economic, social, and cultural contexts (Bograd, 1984). Therefore, the intervention approach based on family-based theories is not usually recommended for working with domestic

violence perpetrators due to the likelihood of placing blame on the victims and minimizing the batterers' responsibility.

The analysis of intimate partner violence to expedite treatment and prevention requires a multidimensional framework that can account for the complex nature of this behavior. Family Violence Intervention Programs (FVIPs) adopt a multidimensional framework in an attempt to stop and prevent violence against the intimate, applying cognitive behavioral theories (Adams, 1988; Edleson, Miller, & Stone, 1983; Sonkin & Durphy, 1982; Sonkin, Martin, & Walker, 1985) and feminist perspectives (Chapman & Gates, 1978; Dobash & Dobash, 1979; Pence & Shepard, 1988; Russell, 1982; Walker, 1979, 1984; Wild, 1999) as their major theoretical and practical framework for explaining violence toward the intimate. The primary goals of FVIPs are to prevent further violence, to serve as an adjunct form of justice for an individual arrested for domestic violence (Bennett & Williams, 2001), and to hold batterers accountable for their violence toward their intimate partners.

There are several ways to ensure that batterers are held accountable and responsible for their violent behavior. Batterers may reduce or cease their abusiveness because of the costs to themselves or the strict external constraints inflicted by the justice system. However, external constraints have a limited impact on permanent transformation. Dobash, Dobash, Cavanagh, and Lewis (2000) stated that long-term changes can be made by strengthening internal controls, such as attitudes about the acceptability of using violence, notions of who is responsible for violence, empathy for the victim, and an awareness of the costs to others. Personal transformation requires recognition of responsibility for violent behavior (Dobash et al., 2000). Taking responsibility for violence means honest and deep involvement in the internal process of change, insight into how this behavioral problem seriously impacts the partner, family, and community, and the cessation

of such behavior immediately. Furthermore, the decision to cease violent behavior must be remade each and every day because there is no one-time solution for stopping violence; constant resolve not to be violent and continuous internal transformation are the keys to long-term change.

Therefore, holding batterers responsible is the most important goal in intervention for batterers who commit domestic violence. Batterer intervention programs help batterers recognize and identify how responsible they feel for their violent behavior and invite them to analyze what they assume, think, and believe. By participating in this process, batterers can replace their faulty beliefs and attitudes toward their violent behaviors with new ones that hold them accountable and responsible for their behavior in an intimate relationship.

Statement of the Problem

There is an extensive body of literature that demonstrates a strong association between behavior and cognitions (e.g., Bandura, 1973, 1977, 1986; Ellis, 1973; Mahoney, 1974, 1991). In batterers' intervention and prevention, batterers' cognitive process is targeted for prompting change in behavior. The intervention and prevention are intended to help batterers change violent behavior by modifying their thoughts, beliefs, and ideas about various contexts related to violence regarding intimate partners, situations, and cultures. If batterers believe that their violent behavior is wrong and harmful to the intimate, their children, and/or themselves, they are more likely to decide not to commit violence. If they believe that there is nothing wrong with their violent behavior, their abusive behavior may not change at all. They might pretend to have changed because of pressures and sanctions mandated as a result of their violence; however, their violent behavior will continue and might become more severe as the external constraints fade. Therefore, batterers need to change internally. Whether batterers can change internally or how they can go about this kind of change can be determined in part by verifying whether they think

that they are responsible for their violent behavior. Batterers need to accept the fact that they were abusive to their partner regardless of the situation. Instead of putting any responsibility for their violence on someone or something else, batterers must realize the severity and gravity of their emotional, verbal, and physical abuse. In addition, batterers must stop seeking support for their violence.

In spite of the importance of identifying and investigating attitudes toward (ir)responsibility for violence throughout interventions for people who commit violence against their partners, the research on domestic violence has focused more on measuring behavioral changes because the prevention and intervention programs are expected to ensure that perpetrators change their violent behavior. This approach is reasonable and acceptable. However, cognitive changes are the core of behavioral changes. If batterers truly accept responsibility for their violent behaviors, long-term transformation will begin. Therefore, it is crucial to understand the cognitive components associated with (ir)responsibility and how they lead to stopping violence against the intimate.

Although attitudes and beliefs about violence against the intimate have been accepted as pivotal for understanding why and how violence against the intimate happens, there are only a few instruments designed to measure the attitudes of (ir)responsibility for people's own violent behavior toward the intimate. In particular, there is no instrument that measures the multi-dimensional attitudes of cognition related to taking (ir)responsibility for violent behavior against the intimate, regardless of marital status, gender difference, and sexual orientation.

Purpose of the Study

The present study is designed to develop a standardized and self-report instrument named "Intimate Violence Responsibility Scale (IVRS)" that measures people's attitudes associated

with (ir)responsibility for violence toward the intimate partner, and to validate the dimensions of the IVRS.

Significance of the Study

This study is important and significant from several perspectives. The association between behavior and a cognition toward intimate partner violence has been documented in several studies (e.g., Anderson, Cooper, & Okamura, 1997; Jackson, Witte, and Petretic-Jackson, 2001; Kropp, Hart, Webster, & Eaves, 1995; Witte, Cavanah, & Jackson, 2001). Specifically, literature showed violent behavior was associated with the cognition related to (ir)responsibility such as blame, denial, minimization, and collusion (e.g., Bancroft, 2002; Dutton & Hemphill, 1992; Hamberger, 1997; Jackson et al., 2001; Kropp et al., 1995; Ramirez-Hernandez, 2000, 2005). Although the (ir)responsibility cognition is considered as an identifying risk factor for violent behavior, empirical research on their causal relationships has been explored in a handful of studies. A lack of reliable and valid instruments that measure a wide range of the attitudes related to (ir)responsibility were an obvious challenge in conducting research on this topic. Therefore, the development of the Intimate Violence Responsibility Scale (IVRS) can provide allied health professionals, including social workers, psychologists, physicians, nurses, forensic experts, and researchers with valuable information regarding the complex nature of the relationship between attitudes/cognition and behavior.

As an assessment tool, the utilization of the IVRS is beneficial not only to practitioners in batterer intervention programs but also law enforcement personnel. In order to ensure the safety of victims of violence, these professionals have to self-assess their own attitudinal biases on violence that are potentially harmful to victims of violence in professional and therapeutic relationships. Literature shows this harmful attitude toward victims is prevalent to professionals

who provide direct service to batterers and their victims. For example, victim blame has been consistently documented in communities of physicians (Garimella, Plichta, Houseman, & Garzon, 2000), mental health practitioners (Sandberg & Jackson, 1986), police and criminal justice officers (Rigakos, 1995). Professionals need to be aware of their attitudes/biases on violence in order to responsibly help batterers and their victims. Treatment may lose its value and effectiveness if practitioners are not empathic or if they hold therapeutically inappropriate attitudes toward victims of violence. Therefore, the IVRS can be used as a self-assessment tool for allied health professionals, law-enforcement officers, and batterers who get treatment as a primary beneficiary from batterer intervention programs.

The use of the IVRS with other instruments measuring violent behavior in intervention/prevention can provide pivotal information on how violent behavior change occurs through intervention in association with attitudes related to (ir)responsibility for violence. The IVRS can be used in the initial assessment before intervention/prevention is provided to batterers. The initial assessment measured by the IVRS provides professionals with the level of preexisting attitudes related to (ir)responsibility for violent behavior, which can be used as an indicator for behavioral factors including batterers' premature dropout, resistance to intervention, and recidivism. Allied health professionals can also use the IVRS in the course of treatment/intervention as a tool to monitor and evaluate changes of those attitudes to ensure therapeutically effective and proper treatment/intervention. Evaluation results from a pre and posttest study can strengthen intervention program structure and protocols. Discrepancies and weaknesses identified by the results of the evaluation can be used to modify treatment/intervention strategies for advancing effectiveness of the intervention and strengthening its structure and protocols.

Research Questions and Hypotheses

Research Questions

The purposes of the present study were to examine cognition related to people's (ir)responsibility for their violent behavior toward the intimate partner, to develop a standardized and self-report instrument named "Intimate Violence Responsibility Scale (IVRS)" that measures people's attitudes associated with (ir)responsibility, and to validate the proposed dimensions of the IVRS. The following research questions were developed for the present study:

1. Does the IVRS have an acceptable level of reliability (alpha coefficient) with the current sample?
2. Is the IVRS a valid measurement with the current sample?

Hypotheses

Hypothesis 1. Items within each construct will be moderate-positively correlated ($r > .5$), but will be correlated to a lesser degree across the other constructs ($r < .3$).

Rationale. Hypothesis 1 was established to support the evidence of convergent and discriminant validity in the present study. Convergent validity means that different measures of the same construct relate strongly to one another (Spector, 1992). Scale items in each subscale are expected to correlate significantly with one another within each construct. On the other hand, discriminant validity means that the measures of different constructs relate only moderately with one another (Spector, 1992). The researcher expects that scale items in each subscale should correlate only moderately with the other subscales. This is supported by the CECEVIM[1] intervention model (Ramirez-Hernandez, 2000, 2005) that is theoretical background for this study. According to Ramirez-Hernandez, the responsibility cognition consists of four different

[1] [1] CECEVIM (Centro de Capacitación para Erradicar la Violencia Intrafamiliar Masculine: Training Center to Erradícate Masculine Intrafamily Violence) is a model created by Ramirez-Hernandez Antonio. 474 Valencia Suite 150 San Francisco, CA 94103.

constructs (blame, denial, minimization, and collusion), which are also closely related to one another.

The correlation coefficient (known as the Pearson product-moment correlation coefficient or the Pearson correlation coefficient), ranging from .3 to .5, was used as the cut-off. According to Cohen (1988), it is accepted that value of ± .1 is a small effect, ± .3 is a medium effect, and ± .5 is a large effect. The researcher did not choose the correlation coefficient of .1 as the lower cut-off because the proposed four constructs were conceptually associated with one another as previously discussed. The cut-off scores of correlation coefficients (.3 and .5) were chosen based Cohen criteria (Cohen, 1988).

Hypothesis 2. There is a statistically significant, positive relationship between physical abuse as measured by the Revised Conflict Tactics Scales (CTS2) and irresponsible attitudes for violence toward the intimate as measured by the IVRS.

Rationale. The researcher developed this hypothesis to identify whether the present study follows the evidence established by previous studies on the relationship between responsibility cognition and violent behavior. This association was supported by the CECEVIM intervention model (Ramirez-Hernandez, 2000, 2005). Ramirez-Hernandez specifies that if batterers are responsible, they are not physically violent and vice versa. Several studies have provided evidence for a relationship between cognition and physical abuse (Aldarondo & Mederos, 2002; Craighead & Nemeroff, 2001; Finn, 1986, Gondolf, 1997, Mullender & Burton, 2001). In an analysis of violence against women in intimate relationships, Duffy and Momirov (1997) showed the connection between cognition related to (ir)responsibility and physical/sexual violence. They stated that it was not clear what batterers felt during their acts of physical and sexual violence, but afterward batterers blamed the victim for what they did and also minimized what they did

(Duffy & Momirov, 1997). In another study hypothesizing that beliefs about aggression predict physical aggression toward the intimate, Archer and Graham-Kevan (2003) found that these beliefs correlated with overall physical partner aggression.

Hypothesis 3. There is a statistically significant, positive relationship between psychological-verbal abuse as measured by the CTS2 and irresponsible attitudes for violence toward the intimate as measured by the IVRS.

Rationale. The association between the responsibility cognition and psychological-verbal violence was theoretically explained and supported by the CECEVIM intervention model (Ramirez-Hernandez, 2000, 2005). Ramirez-Hernandez specifies that if batterers are responsible, they are not verbally/emotionally violent and vice versa. Several empirical studies have addressed the role of cognition in psychological abuse (e.g., Aldarondo & Mederos, 2002; Craighead & Nemeroff, 2001; Gondolf, 1997, Gondolf, Heckert, & Kimmel, 2002; Mullender & Burton, 2001). For example, Gondolf, Heckert, & Kimmel (2002) found a significant relationship between cognition and non-physical violence in a multisite evaluation of batterer program participants (n = 840) with a longitudinal 15-month follow-up study. In the study, they found that nonphysical abuse was reduced after batterers attended a program with a curriculum focused on changing cognition and violent behaviors. In a study examining the connection between non-physical violence and blame attitudes, Dutton and Starzomski (1997) showed that a blame attitude was strongly correlated with emotional abuse (r = .60), isolation (r = .53) and male coercion (r = .50) (Dutton & Starzomski, 1997).

Hypothesis 4. There is no statistically significant relationship between irresponsible attitudes toward violence against the intimate as measured by the IVRS and the level of negotiation as measured by the CTS2.

Rationale. No study has been conducted to investigate the relationship between negotiation and attitudes related to responsibility for violence, including blame, denial, minimization, and collusion, within an intimate partner relationship. In theory, Ramirez-Hernandez (2000, 2005) did not specify any relationship between the responsibility cognition and negotiation between batterers and their victims. However, this relationship can be identified from the results of a study on the relationship between negotiation and violent behavior. Straus, Hamby, and Warren (2003) reported that CTS2 Negotiation scores had a low correlation with four other scales: Physical Assault, Psychological Aggression, Injury, and Sexual Coercion. In particular, negotiation scores did not significantly correlate with any of the violent behavior measures at the .01 level (two-tailed tests) in male samples: Physical Assault (r = -.05), Psychological Aggression (r = .22), Injury (r = .01), and Sexual Coercion (r = .03). From these results, correlations between the Negotiation scale and irresponsible attitudes are considered statistically insignificant, because many studies have already supported the strong correlations between violent behavior and attitudes related to (ir)responsibility (e.g., Archer & Graham-Kevan, 2003; Duffy & Momirov, 1997; Gondolf et al., 2002).

Hypothesis 5. There is no statistically significant relationship between attitudes toward violence against the intimate as measured by the IVRS and the demographic variables of age, gender, and existence of children.

Rationale. Official statistics from government (e.g., Bureau of Justice Statistics, 1995) and survey studies on intimate partner violence (e.g., Gelles, 1990; Hotaling & Sugarman, 1986; Straus & Gelles, 1990) have generally shown differential rates of violence based on social-demographic differences such as age, gender, race, and social status. The patterns show that men, younger people, poorer people, and blacks were more violent than others.

In spite of the general acceptance of these research results, various methodological limitations were found in early studies on demographic differences in violence and attitudes (e.g., Ball-Rokeach, 1973; Markowitz & Felson, 1998), and measurement and specification issues were also identified (e.g., Tedeschi & Felson, 1994). In addition, many studies on batterer characteristics were conducted using court-mandated perpetrator samples (see Gondolf, 1995, 1999); however, the present study used the general population (people on jury duty). The researcher expected that demographic variables (age, gender, and existence of children) would not significantly relate to cognitive factors related to responsibility for violence against the intimate, because irresponsible attitudes could be understood as natural human attitudes observed in people's daily life regardless of age, gender, and social-economic status. For example, Ptacek (1988) mentioned that blame is an unconscious defense mechanism protecting an individual from guilt or anxiety about an event. Malley-Morrison and Hines (2004) defined denial as a psychological mechanism that allows people to avoid thinking about painful realities, implying that irresponsible attitudes are common in human relationships.

Hypothesis 6. The reported levels of the attitudes of court-mandated perpetrators related to responsibility for violence toward the intimate partner as measured by the IVRS will be significantly greater than those of people on jury duty.

Rationale. This hypothesis was developed to support the evidence of criterion-related validity in the current study. Court-mandated perpetrators are expected to have committed more abusive behavior than the general population; Furthermore, court-mandated perpetrators are expected to have more irresponsible attitudes toward their violent behavior against the intimate than the general public.

This proposition about group differences is supported by a study focusing on explanations for demographic differences in violence and attitudes conducted by Markowitz (2001). He used *Structural Equation Modeling* techniques to examine data from the ex-offenders and a sample from the general population and found that people experiencing violence while growing up showed more favorable attitudes towards violence against spouses (Markowitz, 2001). Testing Hypothesis 6 can answer an important question about whether the proposed instrument (IVRS) can distinguish the general population from people with violent crime experience.

Definitions of Terms

Terms Used in the Study

Family violence intervention programs. Family Violence Intervention Programs (FVIPs) are treatment and intervention group programs that court-mandated batterers attend to stop committing violence and to change their attitude and behavior toward their partner and their attitude toward the act of battering. They are also called Batterer Intervention Programs (BIPs), batterer programs, batterer intervention, men's programs, men's groups, intervention groups, etc. These programs generally consist of weekly group education (18 to 52 weeks) for men arrested for assaulting their female partners. Although there are FVIPs for female batterers, FVIPs are usually group education programs for male batterers. Gondolf (2002) specified several unique features of FVIPs: (a) to help battered women and batterers deal with domestic violence issues, (b) to operate as fee-based programs in the context of specific communities in close corporation with the criminal justice system, (c) to educate batterers about their abusive behavior and alternatives to it, (d) to use group counseling principles but embrace the need for social and

community change, and (e) to work with various types of batterers (some are very dangerous and some are angry and confused), etc.

Violence. There are various definitions of violence in literature. Some definitions solely focus on physical acts and behavior. For example, after reviewing existing definitions of *violence*, Feld and Straus (1990) defined the term as "an act carried out with the intention or preconceived intention of causing physical pain or injury to another person" (p. 490). However, this definition excludes verbal, emotional, and psychological abuse and, therefore, has limited application. Marshall (1994, 1996, 1999) addressed the destructive effect of emotional abuse. According to O'Leary (1999), psychological abuse has as much impact as physical abuse in marriage and long-term relationships. O'Leary (1999) also addressed the importance of identifying a predictive role of psychological abuse in the intimate partner violence because psychological abuse usually precedes physical abuse. In the present study, the researcher used the broader definition of violence developed by Ramirez-Hernandez (2005): any invasion of somebody's space without permission or agreement with the intention of harming the person to control and dominate. He specified four categories of violence: physical, verbal, sexual, and emotional. The present study addressed violence committed by a spouse, ex-spouse, or current or former boyfriend or girlfriend, regardless of sexual orientation. Violence, abuse, intimate partner abuse, intimate partner violence, abusiveness, aggression, domestic violence, and domestic abuse are used interchangeably throughout the present study.

(*Ir*)*responsibility*. Irresponsibility refers to an attitude in which people do not maintain ownership of their actions and decisions. According to Ramirez-Hernandez (2005), (ir)responsibility is conceptually defined as a composite of four different dimensions: minimization, denial, blame, and collusion. These four dimensions are conceptually and

operationally defined in Chapter 2. Responsibility is the opposite of irresponsibility. According to Ramirez-Hernandez (2005), if people take responsibility for their violent behavior, they do not minimize, deny, blame, and/or collude. *Responsibility* and *accountability* are used interchangeably in the present study because they reflect similar attitudes that are both implicit goals of FVIPs (Gondolf, 1999; Healey, Smith, & O'Sullivan, 1998; Mullender & Burton, 2001)

External constraints. External constraints (external attribution; Heider, 1958) refer to factors outside the individual that lead people to behave in certain ways (Aronson, Wilson, & Akert, 1997). External constraints can be understood as causes of behavior change. In the area of interpersonal violence prevention, external constraints include police arrests, probations, court-mandated intervention, fines, etc. Dobash et al. (2000) stressed the importance of constant vigilance, periodic displays of external authority, imposition of costs in the form of punishment, and feared forms of intervention in interpersonal violence prevention.

Internal controls. Internal controls (internal attribution; Heider, 1958) refer to factors within people that lead them to behave in certain ways, such as attitudes (Aronson, Wilson, & Akert, 1997). Internal controls are also understood as causes of behavioral change, but in contrast to external constraints, internal controls depend upon changes within the individual. These changes require serious reflections about one's self and the use of violence against others (Dobash et al., 2000). Internal controls are inevitably painful and difficult to achieve; however, behavior changed through internal controls is much more likely to be sustained over time. *Internal controls* is used interchangeably with *internal transformations* and *internal changes* in the present study.

Attitude. Attitude is defined as a way of feeling or thinking about someone or something that influences one's behavior (*Longman Dictionary of Contemporary English*, 1987). According

to Eagly and Chaiken (1993), attitude has an enduring evaluation – positive or negative – of people, objects, and ideas. Attitudes are enduring and evaluative because they often persist over time and consist of positive and negative reactions to people, objects, and ideas. In the present study, attitude change was believed to lead behavior change. Batterers' attitudes toward the intimate influence the way batterers behave when they are dealing with the intimate, especially when the attitude shows how batterers feel negatively and positively about the intimate.

Cognition. Cognition refers to the activity of knowing or the mental process through which knowledge is acquired, elaborated, stored, retrieved, and used to solve problems (Shaffer, 1989). According to Shaffer (1989), almost everything people do while awake involves some kind of cognitive activity, such as attending to objects and events, interpreting them, comparing them with past experiences, placing them into categories, and encoding them into memory. In the present study, batterers are thought to be violent because they cognitively interpret their role in violent behavior against the intimate as blameless or excusable. Cognition and its role in committing violence are further discussed in the section *Cognition and Violent Behavior* in Chapter 2.

Chapter Summary

This chapter provided background information for understanding the present study. It introduced the prevalent problem of intimate partner abuse, the role of cognitive factors related to (ir)responsibility in stopping violence, and the need to develop a psychometrically reliable and valid instrument to measure such cognitive factors. Significance of the study was described with regard to intervention, treatment, and research. Research questions and hypotheses were introduced. In addition, definitions of the terms used in the study were provided.

The next chapter includes three theoretical backgrounds of the study: ecological perspectives; feminist perspectives; and cognitive-behavioral theory. Next, the researcher will explain the relationship between cognition and behavior, the (ir)responsibility cognition, and the information on existing instruments. After discussing the need for multi-dimensional measurement for the (ir)responsibility cognition, the researcher will introduce four proposed dimensions: minimization, blame, denial, and collusion. Lastly, the researcher will describe conceptual framework, and conceptual/operational definition.

CHAPTER 2

LITERATURE REVIEW

Theories Related to Batterer Intervention

A variety of theories address the psychological and social origins of intimate partner violence. Each has a different assumption regarding the nature of violence and implies a particular intervention and treatment approach. As a framework for the present study, the researcher chose three of these theories: ecological perspectives, feminist perspectives, and social cognitive theory. These three theories are frequently used in Family Violence Intervention Programs (FVIPs) because they provide clinicians and practitioners with a critical and holistic standpoint from which to understand the multidimensional nature of violence and its treatment.

Ecological Perspectives and Batterer Intervention

Ecological perspectives have been frequently adopted to explain the nature of intimate violence and its intervention. According to Bronfenbrenner (1979), ecological perspectives direct attention to the interaction between human behavior and related individual and environmental determinants. Violence is actively influenced, transmitted, and reinforced throughout the entire social system, including the family, peer groups, work place, neighborhoods, media, and tradition. Bronfenbrenner (1979) explained the basic concept of the *ecological environment* as a concentric arrangement of interrelated systems.

As Figure 2.1 shows, smaller systems are located within a larger set of systems in the following order: microsystem, mesosystem, exosystem, and macrosystem. The microsystem includes a set of interactions and the meanings attached to them. A violent person and the intimate partner constitute an important microsystem. At the mesosystem level, some relatives

and friends might encourage or reinforce a batterer's abusive behavior against the intimate, or police might ignore or actively investigate incidents of violence.

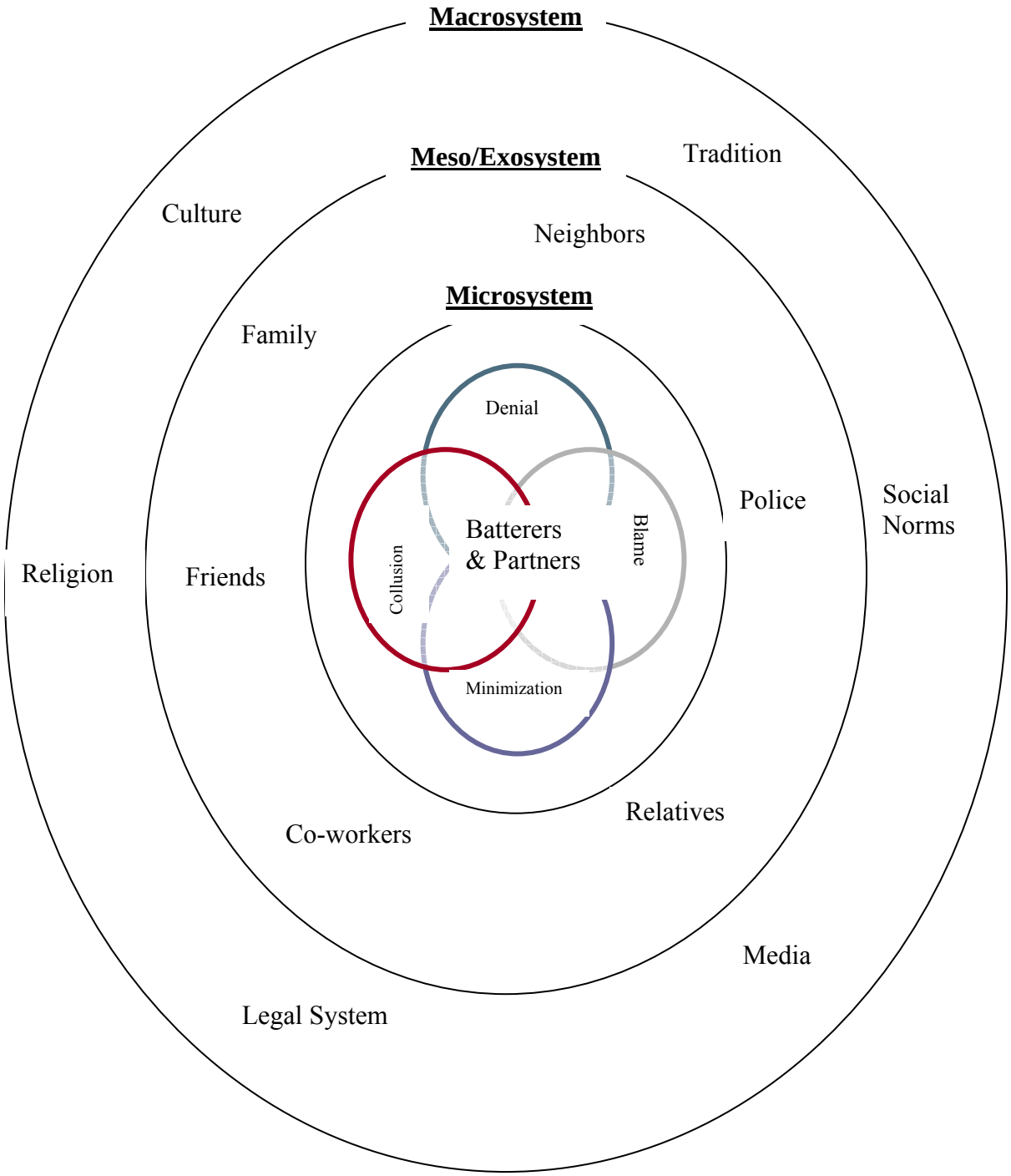

Figure 2.1. Ecological perspectives of batterers' world

The mesosystem of batterers consists of interrelations at home, at work, in the neighborhood, and throughout their social life. The exosystem includes those interactions in which others engage that eventually affect the man's attitude and behavior. Police and probation officers, prosecutors, judges, social workers, and battered women's advocates who work together to eliminate intimate violence create an exosystem that indirectly impacts violence-related issues. The macrosystem represents the larger cultural context in which the microsystm, mesosystem, and exosystem are located. At the macrosystem level, for example, violence can be explained in terms of the patriarchal ideology that perpetuates male dominance and supremacy over women.

A batterer and the intimate partner are posited at the center of the microsystem level in Figure 2.1. The four overlapping diagrams represent four different attitudes that a batterer uses when they commit violence toward their intimate partner: denial, blame, minimization, and collusion. They are mutually dependent and independent at the same time. The researcher calls the composite of these four dimensions the "responsibility attitude" and proposes that people commit violence because they are irresponsible in these four dimensions, which are described more thoroughly in the sections below.

Feminist Perspectives and Batterer Intervention

The feminist perspective provides a beneficial framework for understanding and explaining not only why men use violence against women but also how violence functions in society. The feminist perspective understands intimate partner violence as a deliberate and purposeful assault perpetrated in the social context of an unequal power balance within female-male relationships (Adams, 1990; Carden, 1994; Pence & Paymar, 1993). Feminists largely conceptualize domestic violence at the macro or sociopolitical level, theorizing that men and women are acculturated into roles of power and passivity, respectively (Carden, 1994). Men are

seen as having more access to resources and decision making, while women are devalued as secondary and inferior (Bograd, 1984). From this point of view, men resort to domestic violence as a mechanism for maintaining power, control, and privilege in a patriarchal society. The CECEVIM intervention model (Ramirez-Hernandez, 2000, 2005), as well as, well-known family violence intervention models such as the Duluth model (Pence, 2002), the Emerge model (Adams & Cayouette, 2002), and the Abusive Men Exploring New Direction (AMEND) model (Pettit & Smith, 2002) have also adopted the feminist perspective as one of their core values. Sexist oppression (Adams & Cayouette, 2002; Hooks, 1989; Walker, 1981), patriarchy (Pryke & Thomas, 1998; Seidler, 1999), and masculinity (Cowburn & Pengelly, 1999; Dominelli, 1999; Newburn & Stanko, 1994) are common components of the feminist perspective that family violence intervention models have adopted to explain male violence against the intimate.

Patriarchy. Patriarchy is defined as a socio-cultural norm by which women and younger males are held in a position of subordination by adult men in all social contexts (Pryke & Thomas, 1998). Traditionally, authority in the family system resides with men; family members are expected to obey the father. Seidler (1999) explained that this sense of entitlement authorizes men to expect their voice to be respected without question in the family; when the sense of authority is challenged by women or children, they have to be punished for their disobedience and insubordination (Seidler, 1999). According to Dobash & Dobash (1979), Pagelow (1984), and Yllo (1983), patriarchy leads to the subordination and oppression of women and facilitates the historical pattern of systematic violence. Most of the intervention models deal with issues of patriarchal ideology because violence against women is seen as one behavior on a continuum of behaviors that serve the purpose of maintaining the power and domination of a patriarchal society (Stordeur & Stille, 1989).

Masculinity. Masculinity is defined as an accepted way to be a man in a specific society (Gilmore, 1991). Cowbrun and Pengelly (1999) noted the following features of masculinity: "(a) aggressive, physical action; (b) a strong sense of competitiveness and preoccupation with the imagery of conflict; and (c) exaggerated hetero-sexual orientation, often articulated in terms of misogynistic and patriarchal attitudes toward women" (as cited by Fielding, 1994, p. 47). The feminist take on family violence suggests that men's violence against their intimate partners is rooted in their exploitative relations with women and children (Rush, 1980; Stanko, 1985) and in an aggressive masculinity that normalizes violent behavior (Dominelli, 1991).

Masculinity has been identified as a crucial issue in working with male perpetrators (Cowburn & Pengelly, 1999; Dominelli, 1999; Newburn & Stanko, 1994). Masculinity is an important topic that most of the men's programs address because it plays an important role in male self-identification. Most batterers manifest their maleness through indifference to domestic work, lack of involvement in child-rearing, and the use of violence and aggression to control others (Wild, 1999). These beliefs are challenged through intervention. For example, in the CECEVIM model, batterers learn about the "Real I," defined as the real identity, the genuine human being. Batterers participate in a self-critical process to discover who they truly are. During the discussion of the true meaning of maleness, a batterer could redefine masculinity in more nurturing directions and celebrate his maleness as a motivation for sharing, supporting, playing, nurturing, caring, fostering, and loving.

Sexist Oppression. Hooks (1989) stated that sexist oppression is a "form of domination we are most likely to encounter in an ongoing way in everyday life" (p. 21). One feminist political stance is that all violence is a reflection of unequal power relationships and that the most unequal of all occurs between men and women; thus, the fundamental cause of all violence

toward women is sexism. If profound socio-cultural changes, such as the elimination of sexism, are not made to our social structure and to our child-rearing patterns, violence in the family will not be eradicated (Walker, 1981).

Batterer intervention programs help batterers explore issues of sexism and its influence on domestic violence in society as well; after all, focusing on interpersonal characteristics alone minimizes or ignores sexist expectations and assumptions, which are centered on power and control (Stordeur & Stille, 1989). Elbow (1977) and Weitzman and Dreen (1982) also demonstrated that in American society not only aggressive men but also men in general feel a strong need to dominate and control. In the group process, behaviors of domination and control toward the intimate are confronted and challenged on both the individual and societal levels. Group facilitators and other group members critique and challenge a variety of practices associated with sexist oppression and male privilege reinforced by society. Because male batterers live in a patriarchal society, they are used to behaving in a violent manner without questioning the fact that they have learned to dehumanize and depersonalize the intimate. Batterer intervention programs require perpetrators to evaluate how their violent behavior was learned and influenced within a patriarchal/male-dominated society. Researchers specified that many batterers learned to be violent by watching or experiencing violence, a phenomenon called the intergenerational cycle of violence (Schulman, 1979; Walker, 1984). This issue is central to feminism and social learning theory.

Social Cognitive Theory and Batterer Intervention

Bandura's social learning theory, later amplified as social cognitive theory, contributed to a theoretical framework for understanding and explaining aggressive behavior. The theory proposes a psychological process to explain how behavior develops, how it is maintained, and

how it can be modified (Piotrowski, 2003). It postulates that violent people learn to be violent as children by witnessing or experiencing violence in their own families. People can learn how to satisfy their needs by observing the outcomes of events and behaviors. From these observations, people augment certain emotions, expectations, and the ability to behave advantageously in the future (Bandura, 1969). Domestic violence is not rooted in a psychopathological illness, but derives from social learning through modeling in the home, workplace, neighborhood, and community. From this point of view, violence is a natural type of human behavior. Through experience, children might come to believe that violence is a natural way to express their feelings and emotions whenever they face a troublesome or frustrating situation.

Family violence intervention models work on the assumption that battering is learned behavior. They stress the important role of familial learning and the intergenerational cycle of violence: batterers learn to be violent by watching other perpetrators or by becoming victims themselves (Adams & Cayouette, 2002; Walker, 1984). Therefore, "modeling" is one of the major tenets of social cognitive theory.

Modeling. Bandura (1969), in his book titled *Principles of Behavior Modification*, accentuated the importance of modeling or observational learning through the Bobo doll study. He asserted that vicarious observations of another's behavior and its consequences play a role in human learning as important as the role of direct experience. People can learn aggression through the modeling process: new and existing behaviors are acquired and modified through informal observation of the behaviors of influential models and of consequent rewards and/or punishments. Bandura (1973) explained that human behavior is socially transmitted either deliberately or fortuitously by the behavioral examples provided by influential models: "patterns

of behavior can be acquired through direct experience or by observing the behavior of others" (p. 43).

Modeling is frequently used in batterer intervention programs; abusive behavior can be relearned or unlearned if it was learned in the first place. Thus, batterer intervention works as an agent of change through modeling. According to Ramirez-Hernandez (2002), batterer groups act as change and healing agents by helping participants create relationships with each other; men experience a noncompetitive, violence-free, and intimate group culture, which is different from the traditional masculinity and social expectations they have experienced. One of the most crucial aspects of the CECEVIM intervention model is that facilitators do not teach, control, or dominate participants. The male participants are already used to controlling and dominating others; a group facilitator playing the role of authority might only model another kind of oppression. Group facilitators share what they have experienced and work on stopping their own violence, no differently from how the other men in the group work on ending their violent behavior. Modeling is optimized under such an equal and respectful atmosphere. It promotes the (re)learning of non-violent behavior.

Reinforcement. Alongside modeling, another way to learn behavior is through positive reinforcement (Bandura, 1977). Self-reinforcement operates at the highest level of psychological functioning: individuals regulate their own behavior by evaluating the consequences that they produce (Bandura, 1971). Through this process, people establish a certain criterion of conduct and regulate their own behavior in self-satisfying and self-critical ways (Bandura, 1973). Aggressive actions that are rewarded tend to be repeated, whereas those that are unrewarded or punished are generally eliminated.

Batterers usually view batterer intervention programs as a form of punishment because they are commonly mandated by the court. If batterers attend intervention programs only to satisfy a legal requirement, they are more likely to become aggressive again after they complete the program. Bancroft (2002) claimed that batterers cannot change unless they deal deeply with their sense of entitlement and attitude of superiority. Dobash et al. (2000) also mentioned that change resulting from a self-critical and self-motivated process is much more likely to last longer. Therefore, batterer intervention programs use a variety of exercises and techniques that challenge destructive belief systems and foster internal motivation to change aggressive behavior.

Self-Efficacy. Self-efficacy can be defined as beliefs about one's own ability to perform certain tasks successfully. An individual's organized self-appraisal propositions constitute a belief system about self (Vourlekis, 1999). Bandura (1977, 1986) claimed that self-efficacy has a powerful effect on the motivation to change human behavior. He emphasized that effective functioning requires that people develop competencies and skills and that they need a strong self-belief in their own efficacy to put those skills to good use. A high sense of efficacy leads people to mobilize a high level of effort in the face of obstacles and difficulties.

Bandura (1997) explained self-efficacy to be a complicated process of self-persuasion that integrates self-knowledge, personal beliefs about one's capabilities, and consequent behavior. According to Bandura, efficacy beliefs originate from four primary sources: a) enactive mastery experiences (direct experience from success and/or failures in performing takes); b) vicarious learning experiences (indirect experience by watching others' success and/or failures in performing tasks); c) verbal persuasion (when someone is persuaded with positive appraisal); and d) physiological and affective states (positive and negative states and emotional and physical reactions). Therefore, self-efficacy beliefs comprise a dynamic system that is developed though

the reciprocal interaction of individual knowledge, beliefs, affective and somatic reactions conveyed by cognition, and subsequent behavior.

In the developmental analysis of self-efficacy and aggression, Bandura (1997) specified that efficacy beliefs mediate the effects of attributions of behavior. He explained that children with a high sense of efficacy for aggressive behavior easily engaged in it without provocation. Judging themselves to be efficacious through aggression and believing they could get what they wanted through aggressive behavior, they readily employed aggression in peer interaction.

In batterer intervention programs, batterers are invited to believe that stopping aggressive behavior even in provocative situations will increase their self-efficacy. Behind this philosophy is the belief that batterers have the ability and desire to change their behaviors and attitudes toward those they abuse. They are the only people who decide whether to be aggressive because they own their emotions and body. By enhancing their sense of self-efficacy, batterers enable themselves to tolerate the reactions of others toward themselves and embrace any anxiety, fear, and/or frustration without feeling a loss of control. The self-efficacy nurtured by intervention programs helps batterers take ownership of their behavior and enhances their ability to control their own behavior, not their intimate partner, in the event of a conflict.

Mediating role of cognition. Thought generates meaning in all aspects of human functioning. Vourlekis (1999) postulated that mental processes such as selective attention, inference, and judgment influence one's impetus to act, shape the characteristics of one's actions, and color one's feelings about those actions afterwards. The mediating role of cognition in humans is pivotal because thought processes contribute to behavioral outcomes, including social competence and coping (Bandura, 1986). The mediating role of cognition is discussed more thoroughly below.

Cognition and Violent Behavior

Cognition was not always regarded as a legitimate focus of attention within the domain of behaviorism. Behavior-focused treatment was prevalent in the clinical and therapeutic settings of the 1950s and 1960s, and the emphasis on scientific methods and procedures required behavior therapists to focus on events that were directly observable and measurable (D'Zurilla & Nezu, 1982). Within this research environment, behaviors were seen as a function of external stimuli that were reliably associated with observable responses. A deliberate avoidance of such obscure concepts as thoughts and cognition was often justified.

Questions regarding the limitations of a strict conditioning model for understanding human behavior were raised in the 1960s. Bandura (1969), in his influential volume *Principles of Behavior Modification*, emphasized the role of internal or cognitive factors in the causation and maintenance of behavior. Apart from the tradition of radical behavioral approaches to understanding complex human behavior, social cognitive theorists and other behavior therapists began actively to seek and study the role of cognitive processes in human behavior. Bandura (1977, 1978) described the cognition process through which batterers decide to use violence to control their partners and/or children. He stressed the importance of the mediating role of cognition; accordingly, one of the goals of batterer intervention programs is to change batterers' cognition toward a full awareness of sexist beliefs and knowledge (Bandura, 1977, 1978).

The relationships between cognition and violent behavior have been identified by many researchers and practitioners (Aldarondo & Mederos, 2002; Craighead & Nemeroff, 2001; Finn, 1986; Gondolf, 1997; Mullender & Burton, 2001). Craighead and Nemeroff (2001) stressed that cognition causes behavioral changes. In an empirical study measuring batterers' recidivism, Ross and Fabiano (1985) found that the batterers in a cognitive training group showed a substantially

lower recidivism rate than batterers in a matched life-skills group and in a regular probation group (18.1% versus 47.5% and 69.5%, respectively). Aldarondo and Mederos (2002) specified that the batterers needed to examine all aspects of themselves critically because their beliefs, expectations, and attitudes might contribute to their violent behavior. Mullender and Burton (2001) reported that altering gender attitudes could positively affect the success rate of batterer intervention groups.

Ellis (1973) stressed the important role of cognitive restructuring in changing behavior. Cognitive restructuring is a process through which individuals are guided to evaluate thinking patterns and to correct the premises, assumptions, and attitudes related to those patterns (Meichenbaum, 1977). Dobash et al. (2000) explained:

> Cognitive restructuring seems to involve explicit and self-conscious reflections on thoughts and actions that have become so routinized that they cease to be the topic of reflection. Routinized behavior involves action requiring little thinking and less reflection so that the behavior can be changed by raising the level of explicit awareness thoughts and actions that have been submerged in the context of the natural, usual, ordinary, and insignificant. (p. 167)

The process of cognitive restructuring is based on the assumption that emotional arousal and its control are related to the way people think about what they perceive. Ellis (1973) assumed that (a) thought processes, including how people interpret some situations, are related to emotional response and its control and (b) self-instructions based on thoughts control behavior. Cognitive restructuring is one way to change behavior through self-instruction.

A first step in restructuring cognition is to help the individual identify his or her maladaptive (distorted) perceptions and thoughts. Next, the individual learns to modify these

thoughts and adopt new views and strategies that may be more facilitative and constructive (Kazdin, 2000). Craighead and Nemeroff (2001) argued that behaviors and emotions could be caused by cognitive processes and that people could learn to change. In order to solve violent behavior problems, batterers need to reevaluate their cognitive process and construct a new and alternative belief system that promotes non-violent behavior. The cognitive-restructuring or thought-switching (Aldarondo & Mederos, 2002) process enables batterers to change irrational beliefs to rational beliefs and thus improve their emotional and behavioral functions. For example, the emotional reaction that batterers have during a conflict depends on how they interpret what is going on in the situation. Before committing violence, batterers usually feel sad, shameful, disrespectful, and/or frustrated, and their body often experiences some obvious symptoms of distress: rise in temperature, shakiness, stiffness, rapid heartbeat, etc. These affective and somatic reactions are caused by some kind of disappointment: they dislike what they think and believe to be the case or their expectations are not met. However, their sense of authority rarely allows them to evaluate whether their beliefs and ideas could be wrong or whether their expectations are reasonable.

Figure 2.2 is a flow chart that represents one way of understanding the mediating role of cognition in violent behavior. The first box indicates the cultural and socio-political environment that contributes to a batterer's faulty, wrong, and incomplete beliefs. When a batterer's service request is not accepted, he or she experiences a negative emotional and physical reaction that leads ultimately to violent behavior. However, if batterers could modify their wrong or faulty beliefs, they might prevent their emotional turmoil. Therefore, a faulty, wrong, and incomplete belief system must be changed. In order to solve violent behavior problems, batterers need to reevaluate their existing mindset and construct an alternative belief system that is less destructive

and more productive.

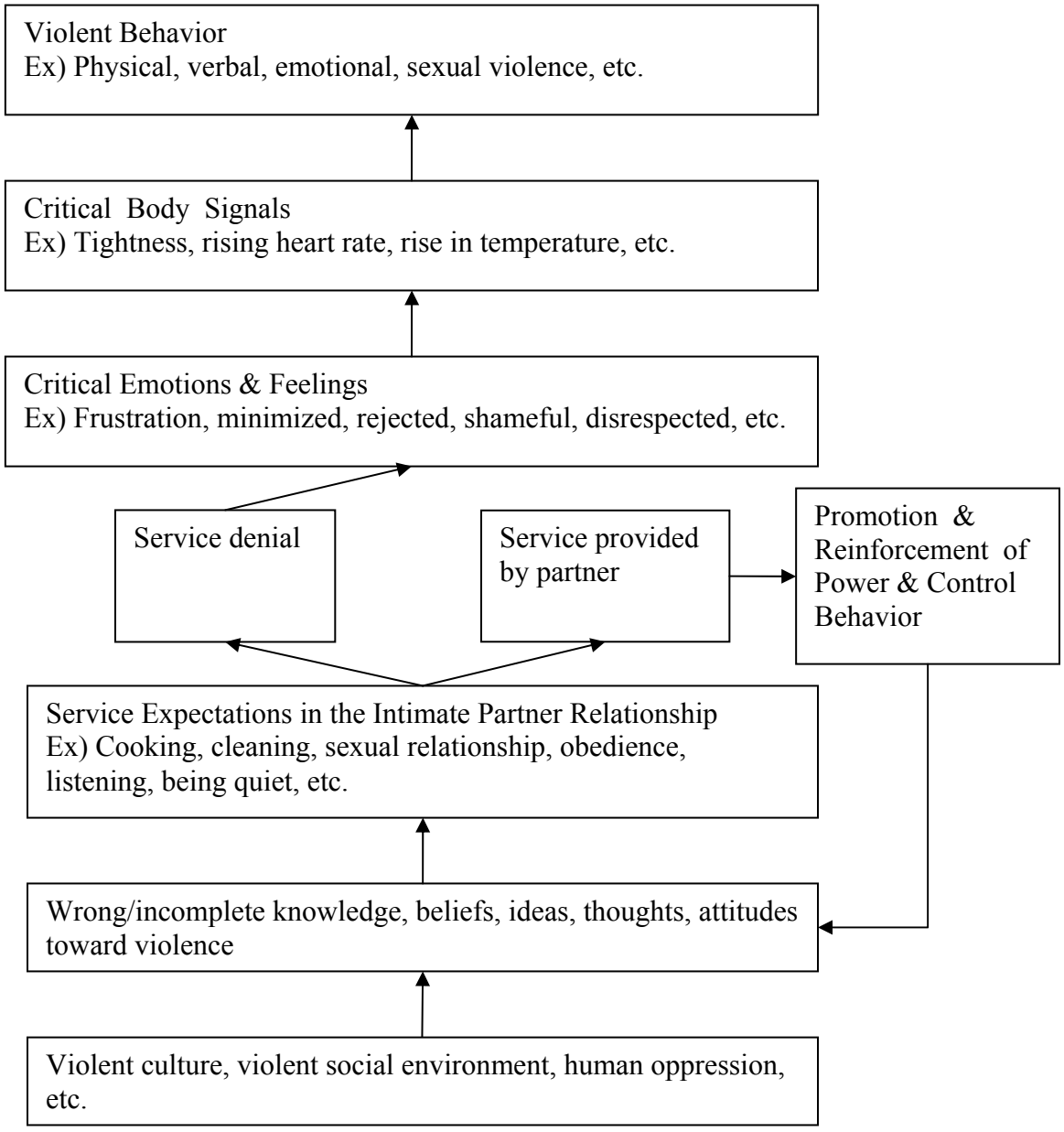

Figure 2.2. The realm of violent people and the role of cognition

Responsibility Cognition and Stopping Violence

Violence against the intimate is commonly justified by batterers. When batterers believe that their abusive behavior toward the intimate can be excused, they will most likely not stop being violent. Common excuses include the partners' behavior, stress on the job, drunkenness,

temper, anger, etc. Straus et al. (1980) found that 77% of Americans believe that it is normal to spank and slap a 12-year-old child. With respect to spousal abuse, this study showed that about one in four wives and one in three husbands believed that slapping one's partner was normal behavior. According to another study, many think that hitting a spouse or boyfriend/girlfriend is acceptable for certain purposes, such as discipline or to keep a partner in line (Simon et al., 2001). Several studies revealed battering women is facilitated by the sexist beliefs of a society (Chapman & Gates, 1978; Dobash & Dobash, 1979; Gondolf, 2000; Martin, 1976).

The acceptance of intimate partner violence is considered one of the major attitudes that needs to be challenged and changed to promote non-violent behavior. Well-known batterer intervention models such as the Emerge, AMEND, and Duluth try to change batterers' attitudes and faulty beliefs using exercises based on feminist perspectives and cognitive-behavioral modification theory. Although there are diverse attitudes that relate to batterers' abusive behavior, helping them feel responsible for violence is one of the most important goals of the intervention. These models are based on the idea that each individual act of violence results from a decision that batterers make to act against their partner and children; in other words, batterers bear sole responsibility for their violent behavior, and they are the only people who can change the way they act.

Batterers may reduce or cease their abusiveness to avoid the costs to themselves or the strict external constraints inflicted by the justice system. However, external constraints have a limited impact on permanent or long-term transformation. Dobash et al. (2000) stated that long-term changes can be made by increasing internal controls, such as attitudes about the acceptability of using violence, notions of who is responsible for violence, an increase in empathy for the victim, and an awareness of the costs to others. Many outcome studies have

shown that reduction or cessation of physical violence during an intervention program may have little practical significance for victims and their children. During and/or after the intervention period, victims may continue to experience verbal, emotional, psychological, and other types of non-physical violence (Edleson, 1996; Hamberger & Hastings, 1988; MacLeod, 1987; Star, 1983). Adams and Cayouette (2002) explained that if batterers are not internally motivated to modify their faulty beliefs and change their violent behavior, they may simply tolerate critical situations due to external constraints and pressures. In a study that examined attitudinal acceptance of intimate partner violence and violent behavior through a national telephone survey of 5,238 adults, Simon et al. (2001) highlighted the need to challenge attitudes. They also specified the importance of reducing interpersonal violence acceptance on the community level as well as on the individual level.

Therefore, responsibility or 'being responsible' is a key component of most intervention programs for individuals who have been abusive in their intimate relationships. The decision to cease violent behavior needs to be remade each and every day, and the responsibility for violent behavior needs to be maintained.

Existing Instruments Measuring Responsibility Cognition

A search through related literature provided a limited number of scales that measured a construct similar to *responsibility*. Table 2.1 below briefly introduces the four instruments that include cognitive factors related to (ir)responsibility for violence toward intimates.

The Domestic Violence Blame Scale (DVBC; Petretic-Jackson, Sandberg, & Jackson, 1994), a 23-item Likert-type scale, was developed to measure personal attitudes about domestic violence and opinions about spousal abuse in a therapeutic context. The results indicated that the attribution of blame in domestic violence was divided into four distinct dimensions; offender

blame (the violence is caused by the batterers' deviant behavior and personality problems), victim blame (the violence is provoked by the victims), societal blame (prevailing social values encourage or maintain the violence), and situational blame (geographic and family contextual variables influence the violence).

Table 2.1

Brief Introduction of the Four Instruments

Title	Author	Number of Items	Constructs	Relationship
DVBS (Domestic Violence Blame Scale, 1994)	Petretic-Jackson, Sandberg, & Jackson	23	4 Constructs (Offender blame, Victim blame, Societal blame, Situational blame)	Spousal abuse(Physical assaults)
IBWB (Inventory of Beliefs about Wife Beating, 1987)	Saunders, Lynch, Grayson, & Linz	41	5 Constructs (Wife beating justification, Wives gain from beating, Help should be given, Offender punishment, and Offender responsibility	Spousal abuse
VAS (Violence Attitudes Scale, 1999)	Jackson, Brown, Davis, & Pitman	38	5 Constructs (Perpetrator consequences, Family and societal values, Perpetrator characteristics, Ethnicity, and Victim blame)	Interpersonal violence (Physical assaults)
No Title* (2007)	Scott & Straus	20	3 Constructs (Denial, Minimization of relationship, and Partner blame)	Dating violence

Note. *This 20-item scale is part of the PRP (Personal and Relationships Profile; Straus, Hamby, Boney-McCoy & Sugarman, 1999).

However, there are at least two limitations in using the DVBC in research: (a) it restricts the definition of domestic violence to physical assault; and (b) it is only applicable to spousal abuse.

The Inventory of Beliefs about Wife Beating (IBWB; Saunders, Lynch, Grayson, & Linz, 1987) is a 41 question instrument designed to identify what people think about spousal abuse. The scale developers stated that five subscales (wife beating justification, wives gain from beating, help should be given, offender punishment, and offender responsibility) were constructed. However, there were several limitations in this study: (a) the IBWB could only be utilized for violence assessment in a conjugal relationship; (b) three of its subscales were at the low end of acceptable reliability (alpha coefficients of .67, .61, and .62 for factors 4, 6, and 8, respectively); and (c) the authors acknowledged that there could be other attitude dimensions that were not reflected in these scales.

The Violence Attitudes Scale (VAS; Jackson et al., 1999) was developed to yield substantive information regarding a respondent's blame distribution pattern for violence. The 38-item VAS included five factors: perpetrator consequences, family and societal values, perpetrator characteristics, ethnicity, and victim blame. Although the multidimensional nature of blame for violent crime was assessed in the VAS, the scale was developed based on a definition of violence limited to physical assault between two or more people. The absence of non-physical forms of violence from this definition limited its ability to examine responsibility attitudes toward violent behavior. In addition, the items of the VAS asked for the respondents' objective opinions rather than their attitudes toward their own behavior: "Whenever a person is frustrated, that person will act violently," "An angry person will be a violent person," and so on. The objective wording of these items might have discouraged respondents from giving more personal answers.

Scott and Straus (2007), in collaboration with two experienced batterer counselors, developed a set of instruments to measure partner blame, denial, and minimization using data collected from 139 college dating partners. Through a series of exploratory factor analyses of the 20 denial, minimization, and blame items initially developed, they identified six items for partner blaming, three items for denial, and four items for minimization of relationship difficulty. Although internal consistency of the partner blaming scale was good ($\alpha = .90$), the other two scales had relatively poor internal consistency ($\alpha = .43$ for minimization and $\alpha = .32$ for denial). Consequently, more items need to be included and verified again through a series of reliability and validity-construction procedures.

The four different scales found that blame was a common attitude that batterers had in the abusive relationship with a partner. They also showed a connection between family and/or societal values and (ir)responsibility cognition. However, these scales had limited utility for practitioners of intimate partner violence prevention and intervention. For example, DVBS and VAS were developed based on physical assault. DVBS and IBWB measured only spousal abuse, and Scott and Straus's measurement was developed to explore dating relationships. However, battering occurs not only in marriage but also in dating, same-sex, and interpersonal relationships. The scope of battering is also very wide and comprehensive, including physical, sexual, verbal, and emotional violence. In addition, it is questionable that the identified dimensions of each scale were developed to fully reflect the full range of cognitions related to (ir)responsibility for violence against the intimate. Practitioners and researchers need an instrument that includes all the core attitudinal dimensions based on physical and non-physical violence toward the intimate within marital, dating, and same-sex relationships.

Four Constructs of Responsibility Cognition

Multiple dimensions have been introduced to explain core attitudes related to (ir)responsibility cognition. However, few empirical studies have identified and confirmed constructs of (ir)responsibility cognition related to violent behavior toward the intimate. Although several constructs such as denial, minimization, and blame can be conceptually identified, empirical validation of them was difficult because they were interrelated and complex. For example, Scott and Straus (in press) suggested that the simplicity of the terms could belie considerable complexity in definition and that denial, minimization, and blame represent at least two constructs of behavioral enactment. However, researchers and practitioners working for prevention and intervention of intimate violence recognize and demand the needs for examining the nature of (ir)responsibility cognition due to its strong association with violent behavior.

In the Power and Control Wheel (violence wheel), one of the well-known visual explanations of the nature of violence developed by the Duluth Domestic Abuse Intervention Project (Pence & Paymar, 1993), "minimizing, denying, and blaming" is one of eight components that explain the relationship between violent behavior and the nature of power and control. The Power and Control Wheel defined this component as "making light of the abuse and not taking her concerns about it seriously; saying the abuse didn't happen; shifting responsibility for abusive behavior; saying she caused it" (p. 3). The Equality Wheel (nonviolence wheel), which is the opposite of the Power and Control Wheel, demonstrates that batterers can be nonviolent when they accept responsibility for self, acknowledge past use of violence, admit wrongdoing, and communicate openly and truthfully (Pence & Paymar 1993).

Responsibility for violence toward one's intimate partner was further explored by Bancroft (2002) who introduced nine steps to stop committing violence. He explained that as

batterers move beyond denial, minimization, blame, and collusion, they can begin to accept responsibility.

> [He must] "admit fully to his history of psychological, sexual, and physical abusiveness toward any current or past partners whom he has abused. . . . Denial and minimizing need to stop, including discrediting your memory of what happened" (p. 339); "[He] should stop whining about, or blaming you for, problems that are the results of his abuse, such as your loss of desire to be sexual with him" (p. 341).

In addition, Kivel (2002) and Adams and Cayouette (2002) also mentioned that abusers often deny, minimize, or blame others for their violent behavior. Most batterer intervention models (e.g., AMEND, Emerge, Duluth, and CECEVIM) directly challenge the batterers' notions of responsibility or belief systems when the batterers attempt to justify their behavior, minimize and deny its effects, and blame their intimate partner for the violence.

Many terms have been used to indicate the possible constructs of (ir)responsibility cognition: denial, minimization, blame, justification, honesty, acknowledgement, collusion etc. The researcher found that denial, minimization, blame, and collusion were most representative. In the present study, the researcher used the framework of the CECEVIM model (Ramirez-Hernandez, 2000, 2005), which proposes four different aspects of (ir)responsibility cognition: denial, minimization, blame, and collusion.

Denial

Denial is conceptually defined as batterers' attempt to eliminate the reality of any participation in their violent act (Ramirez-Hernandez, 2000, 2005). Malley-Morrison and Hines (2004) explained that denial is a psychological mechanism that allows people to avoid thinking about painful realities. They specified that in family violence situations, people use the denial

mechanism to avoid unpleasant realities such as beating, burning, strangling, stabbing, and other ways of torturing family members. Ptacek (1988) explained that "denial is an extremely powerful defense mechanism that can effectively protect people from guilt or anxiety about an event. . . .In some instances, it could even operate at an unconscious level rather than simply being a euphemism for lying" (pp. 135-137).

Many researchers and practitioners have found that people attempt to deny their abusive behavior in various ways (Adams & McCormick, 1982; Adams & Penn, 1981; Bancroft, 2002; Dutton & Hemphill, 1992; Edleson & Tolman, 1992; Hamberger, 1997; Kivel, 2002; Wachter & Boyd, 1982). Batterers who deny responsibility were believed to be more likely to be re-offending (e.g., Kropp et al., 1995). Court-mandated batterers who showed significant denial of their violence appeared to have increased risk for premature termination (Daly & Pelowski, 2000) and were resistant to treatment and disruptive behaviors during treatment sessions (Henning & Holdford, 2006). In studies on sexual offenders, several types of denial have been proposed (Salter, 1988); measurements have been constructed (Schneider & Wright, 2001); and treatment success has been evaluated by examining reductions in denial (O'Donohue & Letourneau, 1993). Schneider and Wright (2001) developed a measurement tool (FoSOD: Facets of Sexual Offender Denial) for reconceptualizing the role of denial in child molesters. They exemplified the types of denial measured by the FoSOD as follows: (a) Denial of Sexual Offense, (b) Denial of Extent, (c) Denial of Intent, (d) Denial Due to Perceived Victim Desire, (e) Denial of Planning, and (f) Denial of Risk of Relapse.

In some studies, minimization has been considered part of denial. Salter (1988) summarized the types of denial utilized by child sex offenders: (a) Admission with Justification (b) Physical Denial with or without Family Denial, (c) Psychological Denial, (d) Minimization of

Extent of Behavior, (e) Denial of Seriousness of Behavior and Need for Treatment, (f) Denial of Responsibility for Behavior, and (g) Full Admission with Responsibility and Guilt. This summary suggests that denial can be considered a spectrum of attitudes rather than a simple mixture of minimization and denial. According to Scott and Straus (in press), denial occurs on a continuum ranging from absolute denial of partaking in violent behavior against the intimate to complete admission of violent behavior and its consequences. They also described that denial and minimization are located on the same continuum, with denial representing a particularly severe type of minimization.

Minimization

Minimization is conceptually defined as the batterers' attempt to make less of violence (Ramirez-Hernandez, 2000, 2005). Individuals who commit violence toward their partner often minimize the frequency, severity, and negative consequences of the violent behavior (Adams & Penn, 1981; Dutton, 1986; Saunders, 1982). Batterers' aggressive behavior and its consequences are diminished or portrayed as something less than what they really were (Goldstein, Glick, & Gibbs, 1998). Edleson and Tolman (1992) gave several concrete examples of minimization of abusive behavior or the effects of their behavior: "I only slapped her once" (when he actually punched her repeatedly); "She only had a slight bruise" (when her jaw was broken); "I just lightly grabbed her wrist, but she bruises easily" (p. 31). Some studies have shown that individuals with prior experience of violence in intimate relationships are more likely to minimize the extent of their abusive behavior (Ehrensaft & Vivian, 1999).

Among the very limited number of instruments related to attitudes about intimate violence, minimization was included in the Spousal Assault Risk Assessment scale (SARA), developed to screen for risk factors in individuals suspected of or being treated for spousal

assault (Kropp, Hart, Webster, & Eaves, 1995). Out of 20 risk factors in the SARA scale, the authors used one item to account for the attitude of minimization or denial, "Extreme minimization or denial of spousal assault history"; however, this item did not differentiate the two different constructs of minimization and denial. Moreover, the authors only used one item to measure denial or minimization, terms that can be defined broadly and arbitrarily when there are no fixed and explicit guidelines. It is crucial to develop multiple items of minimization and denial to capture the multi-faceted nature of the two attitudes described in the literature. In addition, a rigorous psychometric test is also recommended to examine differentiation of the concepts of minimization and denial.

Blame

Blame is conceptually defined as the batterers' attempt to place responsibility for violence on something or somebody other than themselves (Ramirez-Hernandez, 2005). Blame is an unconscious defense mechanism that can protect an individual from guilt or anxiety about an event (Ptacek, 1988). Batterers often give an excuse to diminish their responsibility for the violent behavior, such as projecting faults onto victims (victim-blaming), contextualizing violent incidents in allegedly abnormal circumstances, or referring to stress and/or alcohol (Hearn, 1998). Miles (2002) identified that people rarely take responsibility for their destructive behavior, but blame family members, alcohol use, substance abuse, job stress, tempers, Satan, and their victims. Edleson and Tolman (1992) also claimed that people often blame a partner, alcohol, drug use, or job stress for their violence: for example, "she goaded me into it. . . . She pushed my buttons; she knows exactly how to get me worked up" (p. 31).

Various forms of blaming behavior are closely linked to several systems defined by the ecological perspective. As described in the section of *Ecological Perspectives and Batterer*

Intervention in Chapter 2, a set of systems including microsystem, mesosystem, exosystem and macrosystem surrounds batterers and their victim(s). Batterers try to blame the microsystem, mesosystem, and/or exosystem (all of which contain those who interact with batterers) and the macrosystem (which contains situations, religions, cultures, media, etc. by which batterers have been influenced. Brodsky (1976) explored the multidimensional aspects of blame in a study about rape. The study showed that rape blame was distributed across not only the perpetrator dimension but also societal, situational, and victim dimensions. The multidimensional nature of blame was also identified in several studies about violence against women and children (e.g., the Jackson Incest Blame Scale [JIBS; Jackson & Ferguson, 1983], the Attribution of Rape Blame Scale [ARBS; Resick & Jackson, 1981], and the Domestic Violence Blame Scale [DVBS; Petretic-Jackson et al., 1994]). These scales were developed to compare the level of blame for the crimes of rape, incest, and spousal abuse in several dimensions: victim, perpetrator, situation, and society.

Collusion

Collusion is conceptually defined as the batterers' attempt to get and give support for violent behavior (Ramirez-Hernandez, 2000, 2005). People support each other's violent behavior in a variety of ways: laughing, smiling, and joking about sexist ideas and gender-based oppression. Ramirez-Hernandez (2005) stressed that it is important to take violence seriously because most of the time, people have been encouraged to be violent by their family, friends, community, media, etc. Group facilitators need to challenge batterers not to collude in the group. Batterers often exploit collusion to deny, blame, and/or minimize the impact of their abusive behavior on their victims and to avoid taking responsibility for their violence (Dominelli, 1999). According to the Domestic Violence Intervention Standards of the Domestic Violence

Coordinating Council at Delaware (2001), one of the principal duties of batterer intervention group facilitators is to identify and eliminate collusion of batterers for group growth. In the state of Florida, certified Batterer's Intervention Programs (F.S. 741.30) have to disallow collusion and victim blaming by batterers and others (Florida Department of Correction, 2001). Pence and Paymar (1993) also stressed the importance of maintaining an atmosphere that challenges rather than colludes when batterers try to deny and minimize the extent and effects of their violence and controlling behavior.

Collusion has not been explored as frequently as the other three constructs described above. No empirical studies were found in the literature that included collusion as one of the study variables. Collusion is a relatively complicated term that the CECEVIM intervention model (Ramirez-Hernandez, 2000, 2005) introduced as one of the major attitudes of (ir)responsibility. Ramirez-Hernandez (2000) suggested that whenever batterers blame, minimize, and/or deny their violence, they also collude. Collusion was included in this study because it is believed to be a crucial component in understanding the multidimensional aspects of (ir)responsibility cognition.

Conceptual Framework

The four cognitive constructs described above comprise the backbone of the present study. As such, this study investigated constructs of (ir)responsibility cognition believed to be antecedent to violence in the intimate partner relationship. The IVRS was developed from a conceptual framework based on Ramirez-Hernandez's CECEVIM intervention model, which is a culture-specific batterer intervention program for immigrant Latino men.

The CECEVIM intervention model was theoretically based on three important perspectives:[2] feminist, social ecology, and social learning theory. These three theoretical perspectives that support and explain the CECEVIM intervention model are discussed in detail in the *Theories Related to Batterer Intervention* section above.

The CECEVIM intervention model was designed to help people with violent behavior problems who want to end their violence toward the intimate. The major goals of this program are to create intimate, cooperative, and nurturing relationships, as well as to stop violence (Ramirez-Hernandez, 2002). Figure 2.3 shows how batterers change their violent behavior through the CECEVIM intervention model. When male batterers came to the intervention group, they do not know how their ideas and beliefs are abusive to their intimate partner. They have beliefs and attitudes that legitimize male dominance; traditional attitudes toward women; rigid, masculine sex-role stereotypes; familial patriarchal beliefs; nonegalitarian expectations of marriage; and other aspects related to patriarchal ideology. During the intervention sessions, batterers experience a series of educational curricula based on feminist theory, cognitive behavioral modification, and ecological perspectives. They learn about intimacy, types of violence, power and control, impact of violence, alternatives to violence, etc. A series of group activities invite batterers to identify and recognize the issues of gender-based oppression, patriarchy, masculinity, culture and violence, and irresponsible attitudes. The role of responsibility cognition as a core indicator of behavior change is also described in Figure 2.3. Responsibility works as an antecedent to violence, and successful transformation from violence to non-violence can be identified by assessing this indicator.

[2] Ramirez-Hernandez specifies that CECEVIM has three main theoretical bases: feminist gender analysis, ecology (environment), and ancient native spiritual concepts. The researcher included cognitive-behavioral modification because the program includes several cognitive-behavioral modification techniques and skills in the curriculum.

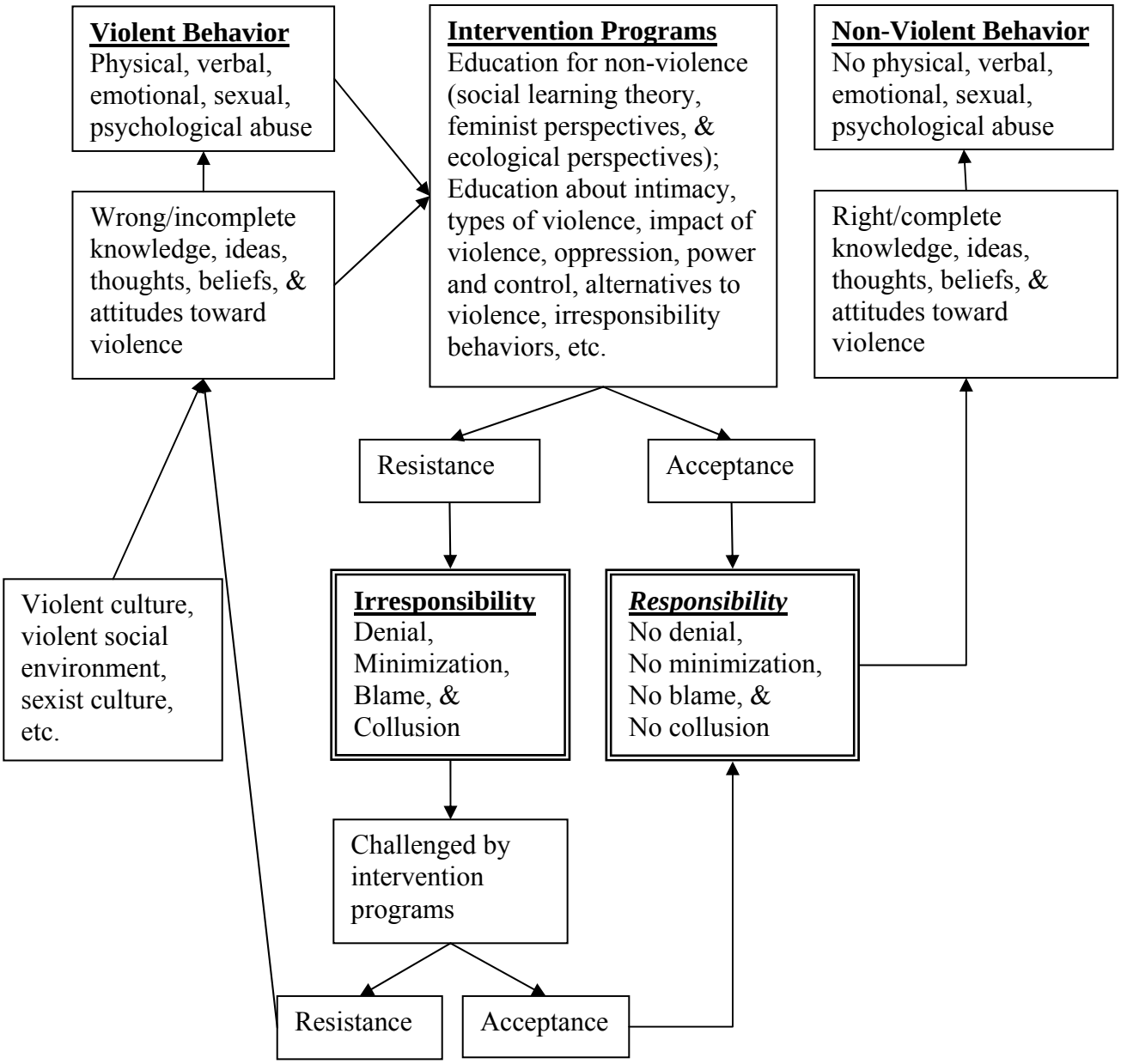

Figure 2.3. Violence transformation process and role of responsibility cognition

The CECEVIM intervention model (Ramirez-Hernandez, 2000, 2005) conceptually defined the (ir)responsibility attitude as consisting of four different constructs: minimization, denial, blame, and collusion. Ramirez-Hernandez (2000, 2005) stressed that batterers have to accept that they have a problem with violence in order to end violence: "it is necessary to be self critical and honest to start to change our behaviors and attitudes. . . . Discarding these

irresponsible attitudes is fundamental to promote our change" (p. 19). The four constructs of the (ir)responsibility factor appear in Figure 2.4.

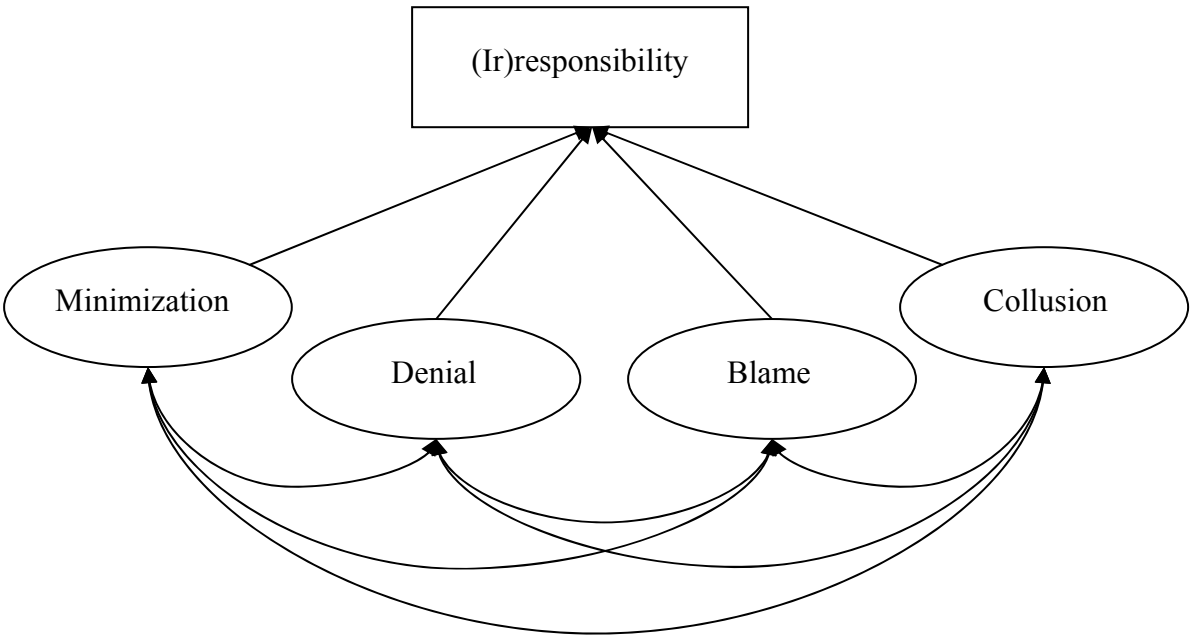

Figure 2.4. Four constructs of responsibility

(Ir)responsibility is rectangular to indicate that it is a representative construct (factor). The other four sub-constructs, including minimization, denial, blame, and collusion, are oval-shaped to indicate that they are sub-constructs of responsibility. Figure 2.4 also shows that these four different constructs correlate with one another and have a unidirectional relationship with (ir)responsibility cognition. In more detail, the conceptual measurement model of the cognition related to (ir)responsibility for violent behavior was developed. Psychometric theory suggests that the relationships among the scale items are logically connected to the relationships of the scale items to their latent variables. If the scale items have a strong relationship to each other, they will have a strong relationship to their latent variables (DeVellis, 1991). Figure 2.5 depicts the conceptual measurement model for the IVRS.

This conceptual model describes one higher order factor ["(Ir)responsibility" in an oval shape], four primary factors ("Minimization, Denial, Blame, and Collusion" in each oval shape), scale items ("A through T" in each rectangle box), and measurement errors ("eA through eT").

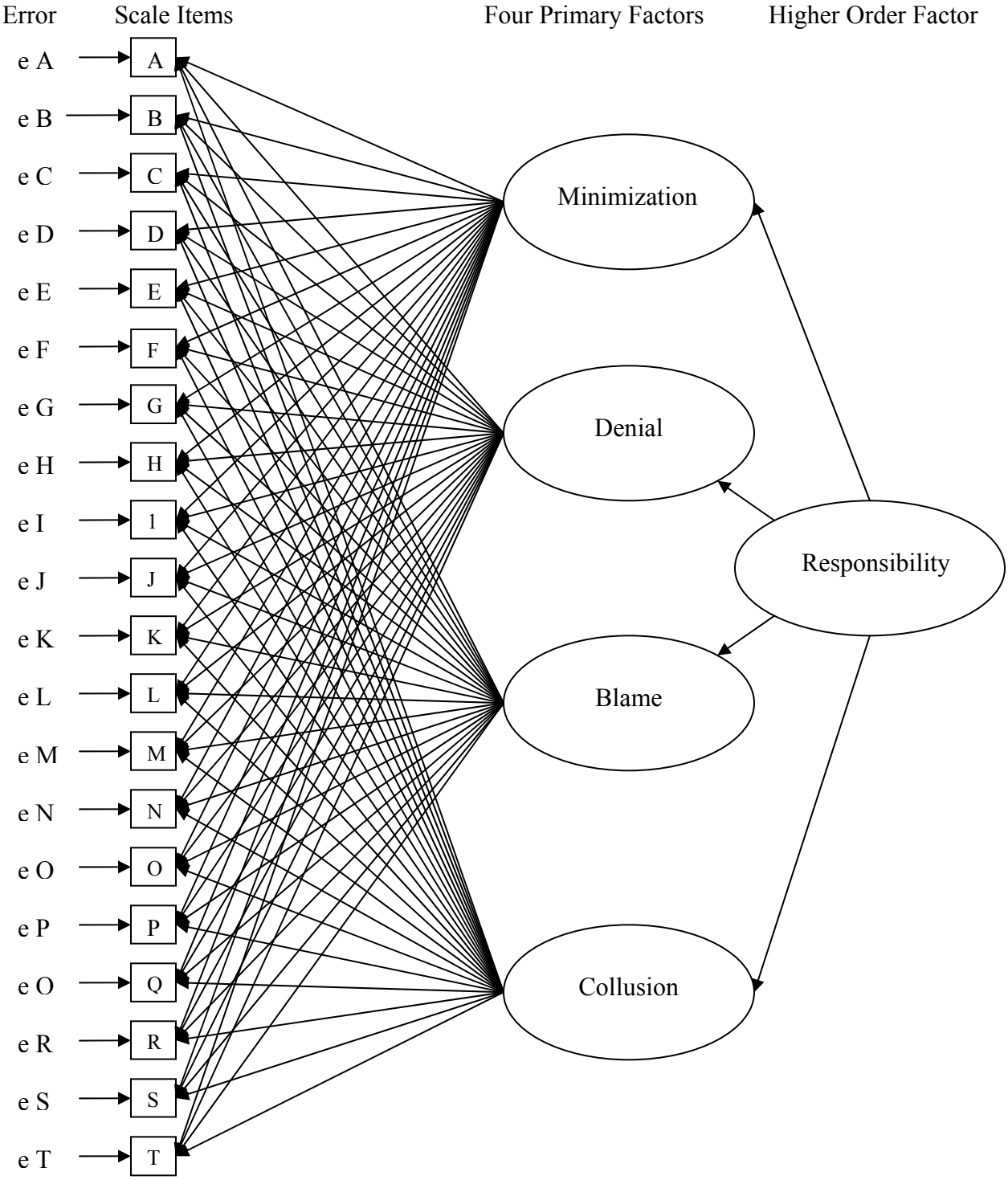

Figure 2.5. The conceptual model for the responsibility cognition for the EFA.

This conceptual model shows how many factors are sufficient to capture the information contained and represented by scale items and how the primary factors were related to the higher order factor. As an example of the conceptual measurement model of the present study, the researcher included only 20 items to represent the relationship between the scale items and factors (latent variables). The four primary factors were proposed to have significant associations with particular scale items: minimization with items A through E; denial with items F through J; blame with items K through O; and collusion with items P through T. All of the items are associated in some degrees with all four primary factors.

Conceptual Definition of the Four Constructs

As described in the previous sections, the proposed four constructs were conceptually developed by the four (ir)responsible attitudes (i.e., blame, denial, minimization, and collusion) of the CECEVIM model (Ramirez-Hernandez, 2000, 2005) and a set of systems of the ecological perspectives (Bronfenbrenner, 1979). The conceptual definition of the four constructs of the (ir)responsibility cognition is described in Table 2.2

Table 2.2

Conceptual Definition of the Proposed Four Constructs

Construct	Conceptual Definition
Blame	The blame construct is developed to incorporate Ramirez-Hernandez (2000)'s blame attitude and microsystem, meso/exosystem, and macrosystem of Bronfenbrenner (1979)'s ecological perspectives. It ascribes one's abusive behavior to someone or something such as a partner, a family member, alcohol use, substance abuse, job stress, temper, religion, and cultures.

Table 2.2 continued

Conceptual Definition of the Proposed Four Constructs

Construct	Conceptual Definition
Denial	The denial construct is developed to incorporate Ramirez-Hernandez (2000)'s denial attitude and microsystem of Bronfenbrenner (1979)'s ecological perspectives. It is designed to measure lying about one's participation in the abusive behavior, denial of abusiveness, and acceptance of abusiveness.
Minimization	The minimization construct is developed to incorporate Ramirez-Hernandez (2000)'s denial attitude and microsystem of Bronfenbrenner (1979)'s ecological perspectives. It is designed to measure the level of accepting frequency, severity, and negative consequences of one's abusive behavior.
Collusion	The collusion scale is designed and developed to incorporate Ramirez-Hernandez (2000)' collusion construct and microsystem, meso/exosystem, and macrosystem of Bronfenbrenner (1979)'s ecological perspectives. It is designed to measure getting support from a family, friends, neighbors, cultures, religion, legal system, and society.

Operational Definition of the Four Constructs

It is crucial to establish the operational definition of each construct to provide supporting evidence of face and content validity prior to the administration of the survey to the study subjects. According to Gable and Wolf (1993), this process requires to examine the adequacy of the operational definition of each construct domain based on its conceptual definition.

Two steps were used to create operational definitions for each construct domain. The first step included defining the theoretical concept of each domain, as previously described. 40 items were developed based on the literature review, four (ir)responsible attitudes of the CECEVIM model (Ramirez-Hernandez, 2000), and ecological perspectives (Bronfenbrenner, 1979). Table

2.3 shows the four proposed constructs, system categories of the ecological perspectives, and scale items. A sum of the scale items for each construct serves as an operational definition so that the researcher could make empirical observations of the construct in the real world.

Table 2.3

Operational Definition of the Proposed Four Constructs

Construct	Ecological Perspectives	Operational Definition (Scale Items)
Blame (17 items)	Micro system (11 items)	I do not blame my partner for what I have done in the incident.
		The incident occurred because my partner misbehaved.
		My partner was responsible for my behavior in the incident.
		My partner pushed my buttons in the incident.
		The incident occurred because my partner was out of control.
		The incident occurred because my partner did not listen to me.
		I was not responsible for my actions because it was provoked by my partner
		My partner deserved to be hurt.
		I could change my behaviors if only my partner would change first.
		The incident occurred because my partner tried to control me.
		If my partner tried harder to please me, the incident would not occur.
	Macro system (6 items)	Media was responsible for my behaviors in the incident.
		My culture was responsible for my behaviors in the incident.
		The incident occurred because I was under stress.
		The incident occurred because I was under the weather (e.g., depression, mood, etc).
		My religion was responsible for my behaviors in the incident.
		The incident occurred because I was under the influence (e.g., alcohol, drugs, etc.).
Denial (4 items)	Micro system (4 items)	I have no problem being violent.
		My behaviors were not abusive at all.
		I accept that I was violent in the incident.
		I accepted the consequences of my behaviors.

Table 2.3 continued

Operational Definition of the Proposed Four Constructs

Construct	Ecological Perspectives	Operational Definition (Scale Items)
Minimization (11 items)	Micro system (11 items)	It was not a big deal—we just argued. I don't want to exaggerate—we just had a relationship problem. My abusiveness was really small and trivial in the incident. We had a few conflicts but nothing serious. It was not something serious—it was an accident. My behavior in the incident did not affect my partner seriously. The incident was nothing serious. It was just a communication problem, not something serious. It was just friendly fights—we never got mad over it. After the incident, I regretted what I had done to my partner. I admit that I was abusive; however, it did not hurt my partner too much.
Collusion (8 items)	Micro system (5 items)	My family would understand why I was abusive in the incident. My friends would say "it's none of my business." People close to me would support my behaviors in the incident. My friends would just laugh about the incident. My friends would say nothing about the incident—it's about my family.
	Macro system (3 items)	I believe that my neighbor would overlook or ignore the incident. People would shush me up about the incident. If the police listen to the whole story, they will support me.

Research Questions

Research Question 1: Does the IVRS have an acceptable level of reliability (alpha coefficient) with the current sample?

Research Question 2: Is the IVRS a valid measurement with the current sample?

Hypotheses

Hypothesis 1: Items within each construct will be moderate-positively correlated ($r > .5$), but will be correlated to a lesser degree across the other constructs ($r < .3$).

Hypothesis 2: There is a statistically significant, positive relationship between physical abuse as measured by the Revised Conflict Tactics Scales (CTS2) and irresponsible attitudes for violence toward the intimate as measured by the IVRS.

Hypothesis 3: There is a statistically significant, positive relationship between psychological-verbal abuse as measured by the CTS2 and irresponsible attitudes for violence toward the intimate as measured by the IVRS.

Hypothesis 4: There is no statistically significant relationship between irresponsible attitudes toward violence against the intimate as measured by the IVRS and the level of negotiation as measured by the CTS2.

Hypothesis 5: There is no statistically significant relationship between attitudes toward violence against the intimate as measured by the IVRS and the demographic variables of age, gender, and existence of children.

Hypothesis 6: The reported levels of the attitudes of court-mandated perpetrators related to responsibility for violence toward the intimate partner as measured by the IVRS will be significantly greater than those of people on jury duty.

Chapter Summary

The theoretical background and the conceptual framework for the study were introduced in this chapter. Ecological perspectives, feminist theory, and social cognitive theory were adopted for the theoretical background. The importance of the cognition related to (ir)responsibility for stopping committing violence were explained. The researcher introduced

the CECEVIM Intervention model (Ramirez-Hernandez, 2000, 2005) to explain four constructs of the (ir)responsibility cognition. Conceptual framework, conceptual and operational definitions of the four constructs were introduced. Finally, research questions and hypotheses were specified.

In the next chapter, the researcher will introduce methodology, including research design, study participants, measures, and procedures. A series of item construction procedures, including development of survey items and instrument format will be described in the next chapter.

CHAPTER 3

METHODOLOGY

Research Design

A cross-sectional survey research design was used for this study. The researcher chose to use a survey research design for several reasons: to make a large sample feasible, to analyze multiple variables simultaneously, to obtain stable consistent measurement, to maintain a relatively low expense, to obtain quick results, and to guarantee anonymity (Rubin & Babbie, 2001).

The scale construction process used to validate the Intimate Partner Responsibility Scale (IVRS) consisted of three stages: the substantive stage, the structural stage, and the external stage. In the substantive stage, the researcher developed and verified scale items. In the structural stage, two major surveys and exploratory factor analysis were conducted. In the external stage, the researcher conducted a series of correlational analyses and *t* tests to support evidence of validity. These three components of construct validation were crucial for establishing strong validation (Benson, 1998; Loevinger, 1957; Messick, 1995). The three stages of this study are described in more detail in the procedure section below.

Study Participants

Data from two groups were used in the present study. The first group of participants included 628 adults who were 18 or older and had experienced or were maintaining a marital, dating, or cohabiting relationship with a partner at the time the survey was conducted. The sample in this study was composed of volunteers from a large pool of people who were serving on jury duty at a local county court in metro Atlanta, Georgia. The researcher chose this

sampling method because the larger pool of people from which the sample was selected were randomly selected by the court, representing diverse socio-economic and ethnic backgrounds. The other group of participants included 146 court-mandated batterers who were enrolled in five local programs among the 143 certified family violence intervention programs in Georgia. Court-mandated batterers were recruited for the present study because their responses were expected to reveal different patterns and characteristics from those of the general public. Data collected from the general population and court-mandated batterers were used to identify differences and similarities in cognition regarding violent behavior toward an intimate partner. Table 3.1 outlines the number of study participants and geographical areas of data collection.

Table 3.1

Number of the Study Participants and Geographical Location

Sample Type	Area of Data Collection	Number of Participants
People on Jury Duty	Fulton County	628
People in Batterer Intervention Programs	Dekalb County	73
	Gwinnett County	20
	Jackson County	16
	Fulton County	21
	Rockdale County	16
Total		774

The researcher reviewed several guidelines for choosing an appropriate sample size for the present study. A larger sample size is generally preferable to a smaller sample in factor analysis (Boomsma, 1985; Gorsuch, 1983; Issac & Michael, 1995; Mulaik, 1972) because large

sample statistics usually decrease sampling errors and increase the power of a statistical test. MacCullum, Widaman, Zhang, and Hong (1999) state that the necessary sample size for factor analysis can be determined based on communalities of selected variables and the level of overdetermination of factors. They also noted that there is no universal consensus regarding the determination of sample sizes in factor analysis and that considerable divergence of opinion regarding optimal sample size prevails. For example, several researchers recommended that the minimum required sample size for factor analysis is at least 100 (Kline, 1979), 200 (Guilford, 1954), 250 (Cattell, 1978), or 500 (Comrey & Lee, 1992). The minimum ratio of sample sizes to the number of variables being analyzed has also been considered a guideline for establishing sample sizes. As a rule of thumb for the minimum sample size in factor analysis, the ratio of sample sizes to the number of variables should be between 3:1 and 6:1 (Cattell, 1978), at least 5:1 (Gorsuch, 1983), or around 10:1 (Croker & Algina, 1986). The researcher chose to follow Croker and Algina's recommendation because it was relatively conservative.

Among the 628 data sets collected from the participants on jury duty, 154 data sets (24%) were incomplete, so the researcher used 474 data sets for factor analysis. Among the 146 data sets collected from the court-mandated batterers, 8 data sets (6%) were incomplete. The researcher used the 138 remaining data sets from the batterer group for additional analyses in validation. Table 3.2 presents detailed sample information and the number of completed questionnaires used for data analysis.

The researcher obtained more incomplete data sets in the jury group (24%) than in the batterer group (6%) due to several possible reasons. First, the researcher provided a gift card ($10.00) for each study participant in the batterer group but not in the jury group because of financial reasons. This token of appreciation might have encouraged participants in the batterer

group to complete the survey. Second, during the survey of the jury group, people were called for jury duty and left the jury assembly room, preventing several jurors from completing the survey. In comparison, the study participants in the batterer groups were not disrupted. Lastly, the size of the jury group and the batterer group was significantly different. Each batterer group in the survey usually consisted of approximately ten people; however, each jury group in the survey usually consisted of approximately 300 people, hindering effective communication and control of the study participants in general.

Table 3.2

Sampling Information and Number of Samples Used

Sample Type	Number of Participants		People Sampled
	Complete Response	Incomplete Response	
People on Jury Duty	474	154	628
People in Family Violence Intervention Program	138	8	146
Total	612	162	774

Six hundred twelve complete data sets were used in the present study. Table 3.3 displays the demographic characteristics of the total sample ($N = 612$): age, gender, race, marital status, religion, education, and sampling location. Young adults, 40 years of age or younger, comprised 63.9% of the sample ($M = 37.3$). There were more males (54.9%) than females (43.1%). Approximately 56.0% of the participants were White, followed by Black (36.3%) and Latino (2.0%). Almost half of the study participants were married (47.9%, $n = 293$). Around a quarter of the study participants were single and lived alone ($n = 148$). The percentage of the study participants living together, including ‘married’ and ‘single (living together),’ was 64%. The

majority of the study participants were Protestant (53.9%, *n* = 330). Over 70% of the study participants were educated at the colleges or graduate level. Over three-fourths of the study participants were people on jury duty (77.5%, *n* = 474), while one-fourth were people from the four Family Violence Intervention Programs.

Table 3.3

Demographic Variables of the Total Sample (*N = 612*)

Variable	Category	*N*	%
Age	Less than 21 years	31	5.1
	21 – 30 years	189	30.9
	31 – 40 years	171	27.9
	41 – 50 years	119	19.4
	51 – 60 years	70	11.4
	More than 60 years	25	4.1
	Missing	7	1.1
Gender	Male	348	56.9
	Female	264	43.1
Ethnicity	American Indian	6	1.0
	Asian	11	1.8
	Black	222	36.3
	Latino	12	2.0
	Mixed	13	2.0
	White	343	56.0
	Other	4	.7
	Missing	1	.2

Table 3.3 continued

Demographic Variables of the Total Sample (*N = 612*)

Variable	Category	*n*	%
Marital Status	Single (living apart)	148	24.2
	Unmarried (living together)	98	16.1
	Married	293	48.2
	Separated	15	2.5
	Divorced	37	6.1
	Other	17	2.8
	Missing	4	.7
Religion	Protestant	330	53.9
	Catholic	79	12.9
	Buddhism	4	.7
	Moslem	1	.2
	Hindu	4	.7
	Jewish	20	3.3
	None	96	15.7
	Other	56	9.2
	Missing	22	3.6
Education	Less than high school	48	7.5
	High school graduate	125	20.4
	Some college (Associate degree)	128	20.9
	College graduate	186	30.4
	Graduate school	125	20.5
	Missing	2	.3
Sampling location	People on jury duty	474	77.5
	People in the FVIP	138	22.5

Measures

Demographic Information

The researcher developed a 24-item questionnaire to obtain general information on study participants (Demographic Information, see *Appendix A*). The questionnaire included history of alcohol and substance abuse, experience of physical, verbal, and sexual abuse, as well as general demographic questions such as age, gender, race, income, employment, religion, education, and marital status. A cover letter accompanied the demographic information questionnaire.

Marlowe-Crowne Social Desirability Scale - Short Form

The Marlowe-Crowne Social Desirability Scale (MCSDS, see *Appendix B*) is a 33-item instrument that is widely used to assess and control for response bias in self-report research. The MCSDS consists of (a) desirable but uncommon behaviors (e.g., admitting mistakes) or (b) undesirable but common behaviors (e.g., gossiping). Alpha coefficients range from .73 to .88 and the test-retest correlation is .88 over 1 month (Crowne & Marlowe, 1964). Convergent and discriminant validity have been evidenced in a series of studies (Crowne, 1979, Millham & Jacobson, 1978, Strickland, 1977). In the present study the 13-item alternative version of the Marlowe-Crowne Social Desirability – Short Form was used (Reynolds, 1982). The short version of the MCSDS had an acceptable level of internal consistency reliability ranging from .62 to .76 (Ballard, 1992; Loo & Thorpe, 2000; Reynolds, 1982; Zook & Sipps, 1985). This scale had also acceptable-to-good level of psychometric properties (Reynolds, 1982).

Revised Conflict Tactics Scales

The Revised Conflict Tactics Scales (CTS2; Straus, Hamby, Boney-McCoy, & Sugarman, 1996; see *Appendix C*) was used to measure physical abuse, psychological abuse, and negotiation. The CTS2, originally developed by Straus (1979), is a widely used measure of interpersonal

violence in marital or cohabitational relationships with the evidence of convergent and discriminant validity. The CTS2 consists of 78 items that measure conflict resolution events such as reasoning/negotiation, psychological aggression, physical assault, sexual coercion, and a consequence (physical injury). Preliminary evidence pertaining to construct validity for the CTS2 was reported (Straus et al., 1996).

In the present study, three subscales (physical assault, psychological aggression, and negotiation) were used. The 12-item Physical Assault scale measures the level of physical violence, and the eight-item Psychological Aggression scale measures the level of non-physical violence. The two subscales of the CTS2 were used to assess the correlations between the behaviors (physical and psychological-verbal violence) and the (ir)responsibility cognition. The six-item Negotiation scale assesses communication tactics between batterers and their partners. The Negotiation scale was used to evaluate the associations between the communication tactics and the (ir)responsibility cognition. Alpha coefficients indicated an internal consistency reliability that is more than acceptable: the Physical Assault scale (r = .86), the Psychological Aggression scale (r = .79), and the Negotiation scale (r = .86).

Intimate Violence Responsibility Scale

The Intimate Violence Responsibility Scale (IVRS, see *Appendix D*) is a 32-item Likert scale that was theorized to consist of four constructs: denial, minimization, blame, and collusion . The four attitude dimensions of responsibility for violence toward partners are quantified by giving the subjects a 5-point scale for each item: *strongly disagree*, *disagree*, *neutral*, *agree*, and *strongly agree*. This scale was developed as during the course of this dissertation study and thus there were no psychometric information available.

The proposed instrument, IVRS (Intimate Violence Responsibility Scale), consisted of two parts: instructions and item statements. The instructions section of the instrument described (a) the purpose of the questionnaires, (b) the definition of the terms *events* and *partner*, and (c) how to respond to the items. The study items were listed randomly; however, there were always two items from the same construct listed sequentially. In addition, the researcher did not allow any group of two items to follow a group from the same construct. The researcher included four negatively worded items in the instrument, all of them under the denial construct. According to the literature, negatively worded items have lower loadings on a given factor than positively worded items (Hinkin 1995), and reversed-scored items can reduce the validity of scale items (Schriesheim & Hill, 1981). However, the researcher decided to use five negatively worded items because of the nature of the denial and minimization construct. Denying and minimizing usually entails a negative expression about a particular behavior or circumstance. The researcher included the following three items in the denial construct: "I don't have a problem with being aggressive," "I really didn't do anything," and "There was nothing wrong about what I did." The researcher also included two negatively worded items in the minimization construct: "It was not serious" and "What I did wasn't the big a deal."

The Likert scaling format was adopted in this instrument because respondents could easily indicate "position on an affective continuum ranging from very positive to very negative toward an attitudinal object" (Mueller, 1986, p. 8). It is recommended using 5- or 6-point scales because they are most reliable and appropriate (McKelvie, 1978). The researcher used the following 5-point Likert-type scale format: (a) *strongly disagree*, (b) *disagree*, (c) *neutral*, (d) *agree*, and (e) *strongly agree* as shown in Table 3.4

Table 3.4

Example of Response Scale

	Strongly Disagree	Disagree	Neutral	Agree	Strongly agree
My partner caused me to act that way.	□	□	□	□	□

Procedures

Validation refers to the process of obtaining evidence to support the types of inferences that are to be drawn from test scores (Cronbach, 1971). Validation is considered the most critical step in test development and a continual process by which test scores take on meaning (Benson, 1998). Validity has been conventionally divided into three or four distinct and alternative forms, such as content validity, criterion-related validity, and construct validity (APA, 1954, 1966). Unlike the conventional classification of validity, Loevinger (1957) and Nunnally (1978) introduced three components of construct validation, including a substantive component, a structural component, and an external component. It is also argued that validity is a unitary concept (AERA, APA, & NCME, 1999; Messick, 1995). He claimed that the conventional view was "fragmented and incomplete, especially because it failed to take into account both evidence of the valued implications of score meaning as a basis for action and the social consequences of score use" (p. 741). He proposed that conventional types of validity such as content validity, criterion-related validity, etc. cannot stand alone; rather, these so-called validity types are complementary forms of evidence integrated into an overall judgment of construct validity (Messick, 1995).

The present study established the reliability and construct validity evidence for IVRS through three phases of scale development. The three phases were guided by a series of construct

validation procedures: the substantive stage, the structural stage, and the external stage, which were considered essential for establishing strong validation evidence by Benson (1998), Loevinger (1957), and Messick (1995). According to Benson (1998), researchers delineate constructs based on theory and empirical evidence in the substantive stage, investigate how observed variables covary among themselves in a given statistical test in the structural stage, and probe the manner in which the construct interacts with other constructs that are hypothetically similar or dissimilar in the external stage. In phase one in the present study, the substantive stage, the researcher developed and verified items. In phase two, the structural stage, two major surveys and a series of statistical tests were conducted. In phase three, the external stage, the researcher conducted a series of statistical procedures to measure validity. Each of these phases is described in further detail below.

The Substantative Stage

Phase one consisted of (a) item development by the researcher and (b) item review by a panel of experts. Item development included the generation of an item pool from specialized books, research articles, established scales, and manuals regarding the issues of domestic violence. The researcher developed 65 items to cover batterers' irresponsible attitudes proposed by Ramirez-Hernandez (2005), the founder of the CECEVIM intervention model for Latino immigrants in San Francisco, California. He specified four different irresponsible attitudes (i.e., blame, denial, minimization, and collusion) and explained that discarding these irresponsible attitudes was fundamental in changing violent behaviors. The scale items generated also reflect the idea of an ecological environment as an arrangement of four concentric systems: microsystem, mesosystem, exosystem, and macrosystem (Bronfenbrenner, 1979). The four systems, described in more detail in Chapter 2, represent environments in which batterers reside.

The researcher grouped mesosystem and exosystem together because they are difficult to differentiate in a practical manner. Table 3.5 below describes the framework of the item development done in this study.

Table 3.5

Framework: Ramirez-Hernandez's Model and Bronfenbrenner's Ecological Perspective

Variable to Measure	Possible Construct	Possible Subcategory
Responsibility	Construct 1: Blame	Microsystem Macrosystem
	Construct 2: Denial	Microsystem
	Construct 3: Minimization	Microsystem
	Construct 4: Collusion	Microsystem Meso(exo)system Macrosystem

After developing items, the researcher recruited a panel of professionals to review them. The professionals included three different expert groups: five batterer-intervention-group facilitators in Georgia certified Family Violence Intervention Programs (FVIPs), four victim advocates in local domestic violence shelters and advocacy agencies in Georgia, and six locally and nationally known scholars in the field of domestic violence prevention. The conference manual and resource book of the 12th Annual Statewide Family Violence Conference 2005 hosted by the Georgia Commission on Family Violence were used to find contact information on FVIPs and victim advocate agencies. The researcher contacted local FVIPs and victim advocate

agencies in metro Atlanta to request their participation in the study via telephone and email. In order to recruit scholars, the researcher established a list of scholars who had published multiple articles related to domestic violence between October 2001 and September 2005 in three major journals (*Violence and Victims*, *Journal of Family Violence*, and *Journal of Interpersonal Violence*). The researcher completed a list of 80 scholars and emailed them to ascertain whether they would be interested in participating in the present study. Six scholars accepted the invitation to participate.

The researcher mailed the professionals a study packet including cover letter, IVRS questionnaire, demographic information questionnaire, and self-addressed pre-paid envelope. FVIPs facilitators, victim advocates, and scholars were asked to make comments in the open spaces provided under the each item and to mark, change, and modify items. A set of post-it notes and two colored pens were provided to encourage the professionals to make comments. The professionals indicated whether they believed the items were addressing blame, denial, minimization, or collusion and whether there were any other crucial missing items that should have be included. They also evaluated the scale items in terms of readability, clarity, and length. It took on average about 30 minutes to fill out the questionnaires. The professionals received two colored pens and a gift card ($20.00 value) as a token of gratitude.

The Structural Stage

During phase two, a major survey was conducted with the study sample including people on jury duty and perpetrators at five local batterer intervention programs in metro Atlanta, Georgia. The researcher contacted the jury division at eight local county courts near metro Atlanta to request permission to collect data from people on jury duty. After telephone contact with the court, the researcher sent a study packet including a survey request letter and a set of

sample questionnaires to the Chief Judge of the eight county courts near metro Atlanta. Only the Fulton County court allowed the researcher to conduct the survey. Before conducting the survey, the researcher met with the clerk of the jury division several times and discussed the details of survey implementation to eliminate possible barriers to data collection and facilitate survey administration. The study packet contained a cover letter, a consent form, a demographics form, the IVRS, and other established instruments for measuring conflict tactics and physical/non-physical violence (The Revised Conflict Tactics Scales [CTS2]) and social desirability (Marlowe-Crowne Social Desirability Scale [MCSDS]). The IVRS and CTS2 are violence-related measures, so to keep the participants from being sensitized to the general issue of violence and to minimize the reactive effect of personal beliefs or expectation, the two measures were labeled Relationship Beliefs Scale and Human Relationship Scale, respectively. Before administering the actual survey, the researcher presented a two-minute Power Point demonstration to inform potential respondents in the jury assembly room about the nature of the study including its purpose, the length of the questionnaires, the benefits of participation, and the assurance of anonymity. Respondents were free to withdraw their participation at any time should they become uncomfortable with any aspect of the study. After finishing the survey, participants put the questionnaire back into the envelope and placed it into one of the six boxes located in the assembly room. Surveys were conducted on Feburary 27, 28, and 29, 2006, and the researcher collected 628 data sets. Of the total 628 data sets from people on jury duty, 474 data sets were completed.

Local Family Violence Intervention Programs (FVIP) in metro Atlanta, Georgia were contacted by phone to determine whether they wanted to participate in the study. The researcher also visited program facilitators of available Family Violence Intervention Programs and asked

them to conduct surveys with their program participants on behalf of the researcher. Five Georgia-certified family violence intervention programs agreed to participate in the study. All participants were informed of the study's intent and were provided an opportunity to have questions answered and to decide whether they wanted to participate. The researcher was available by telephone to answer participants' questions. Anonymity was maintained because the study participants were not asked to give their names and all data collected from the participants were analyzed at the aggregate level. Study participants in the FVIPs received a gift card valued at $10.00 and facilitators in the FVIPs who administered the survey and collected data received a gift card valued at $50.00. Of the total 146 data sets from court-mandated batterers, 138 data sets were complete.

The External Stage

The External Stage involves data analysis, which is reported in detail in Chapter 4. In the External Stage coefficient alphas for reliability and interscale correlations of the IVRS were reported. The correlations between the IVRS and the CTS and other variables were computed for supporting evidence on convergent, discriminant, and creiterion-related validity.

Chapter Summary

Chapter 3 of this document described the design of the study, the sampling procedure, the data collection procedure, and the information for used instruments. Theory-driven item generation and its validation process were specified for supporting evidence for face validity and content validity.

In the following chapter, descriptive, preliminary, and inferential statistical results of the various data analyses will be presented.

CHAPTER 4

RESULTS

This chapter describes the results of a series of statistical analyses, including descriptive analysis for item refinement, preliminary analysis, reliability analysis, exploratory factor analysis, and *t* tests that were conducted using SPSS PC V 15.0. Item analysis was conducted to investigate the characteristics, effectiveness, and appropriate standard of scale items. During the item analysis process, item 6 was eliminated out of the proposed 32 items. The researcher used DeCarlo's (1997) *normtest macro* to screen the data sets for normality and outliers. Reliability analysis was conducted to answer Research Question 1: Does the IVRS have an acceptable level of reliability (alpha coefficient) with the current sample? Exploratory factor analysis (EFA) was conducted to address Research Question 2: Is the IVRS a valid measurement with the current sample? EFA was administered to find the best factor solution to reflect the underlying theoretical constructs identified during the item development stage. A series of *t* tests were conducted to support the evidence of validity of the IVRS. The results of the analyses revealed evidence of convergent and discriminant validity of the IVRS. Evidence of criterion-related validity was also reported.

Refined Items from Expert Reviews

The researcher generated an initial pool of 65 items that reflected the four responsibility attitudes of the Ramirez-Hernandez intervention model (i.e., blame, denial, minimization, and collusion) and the ecological perspective described in the Procedures section above. Most of the items developed were derived from related literature and existing instruments that purported to

measure batterers' responsibility. The researcher also composed several items based on his own experience as a group facilitator at a local batterer intervention program in Georgia.

The initial pool of 65 items was reviewed by 15 experts. To streamline the review process, the researcher created *the expert review form* for content validity (see *Appendix E*). This form was designed to ask the judges (a) to assign each item to the construct domain it best fit, (b) to suggest alternative classifications for each item, (c) to give any comments on the scale item in terms of readability, clarity, and length, etc., and (d) to suggest any rewordings for each item. A cover letter and demographic information form accompanied the expert review form . The researcher chose items that over 70% of the judges assigned to one of the four construct domains. Table 4.1 shows the four categories and the agreement percentage for the 40 items selected from the initial 65 items. The final pool of 40 items consisted of 17 blame items, 4 denial items, 11 minimization items, and 8 collusion items. The items are listed first by category and then by agreement level: 100% agreement (15 out of 15), 93% agreement (14 out of 15), 86% agreement (13 out of 15), 79% agreement (12 out of 15) , and 72% agreement (11 out of 15).

In the expert reviews, several important issues were identified. A few of the reviewers recommended not using specialized terms such as *victim*, *batterer*, *violence*, *incident*, and *women's advocates*. Another issue was the experts' confusion with overlapping among the four proposed constructs. Several reviewers suggested that some items could be categorized under two or three of the proposed constructs. For example, two reviewers believed that the item "my partner pushed my buttons in the incident" could fall under the blame and denial constructs simultaneously. The number of items for the denial construct created another problem. In contrast to the other three constructs, the researcher obtained only four items for the denial construct.

Table 4.1

Category, Number of Agreement, Percentage, and Content of the Revised 40 Items

Category	Number of Agreement (%)	Content
Blame	15 (100%)	I do not blame my partner for what I have done in the incident. The incident occurred because my partner misbehaved. My partner was responsible for my behavior in the incident. My partner pushed my buttons in the incident. The incident occurred because my partner was out of control. The incident occurred because my partner did not listen to me. Media was responsible for my behaviors in the incident.
	14 (93%)	If my partner tried harder to please me, the incident would not occur. The incident occurred because my partner tried to control me. My religion was responsible for my behaviors in the incident. The incident occurred because I was under the influence (e.g., alcohol, drugs, etc.).
	13 (86%)	The incident occurred because I was under stress. I could change my behaviors if only my partner would change first. I was not responsible for my actions because it was provoked by my partner My culture was responsible for my behaviors in the incident.
	12 (79%)	My partner deserved to be hurt.
	11 (72%)	The incident occurred because I was under the weather (e.g., depression, mood, etc).
Denial	12 (79%)	I have no problem being violent. My behaviors were not abusive at all.
	11 (72%)	I accept that I was violent in the incident. I accepted the consequences of my behaviors.

Table 4.1 continued

Category, Number of Agreement, Percentage, and Contents of the 40 Items Revised

Category	Number of Agreement (%)	Contents
Minimization	15 (100%)	It was not a big deal—we just argued. I don't want to exaggerate—we just had a relationship problem. My abusiveness was really small and trivial in the incident. We had a few conflicts but nothing serious. It was not something serious—it was an accident. My behavior in the incident did not affect my partner seriously. The incident was nothing serious.
	14 (93%)	It was just a communication problem, not something serious.
	13 (86%)	It was just friendly fights—we never got mad over it.
	12 (79%)	After the incident, I regretted what I had done to my partner. I admit that I was abusive; however, it did not hurt my partner too much.
Collusion	15 (100%)	People close to me would support my behaviors in the incident. My friends would say "it's none of my business."
	14 (93%)	People would shush me up about the incident. My friends would just laugh about the incident. I believe that my neighbor would overlook or ignore the incident.
	13 (86%)	My family would understand why I was abusive in the incident. My friends would say nothing about the incident—it's about my family. If the police listen to the whole story, they will support me.

To prevent this number from decreasing further (below a minimal number of two) during the subsequent item reduction process, the researcher created four more items so that the pool would

be large enough for the reliability and validity tests. Some items were reworded by the reviewers. To incorporate this feedback, the researcher reexamined these items and added and/or revised them. For example, although an item (My friends would say "it's none of my business.") was unanimously agreed as a collusion construct, two reviewers reworded this items in different ways. The researcher reflected their feedback rewording this item to "My friend would say that it is none of their business." After examining the 40 items, the researcher finally generated 32 items across the four constructs. Table 4.2 shows the 32 final items developed by the item refinement process that established the evidence of content validity.

Table 4.2

Items for the Four Subscales

Subscale	Items
Blame	My partner caused me to act that way.
	It happened because my partner "pushed my buttons."
	It was really my partner's fault.
	If my partner listened to me, it wouldn't happen.
	It happened because I looked at violent movies/TV.
	It happened because of something and/or someone at work.
	My religious beliefs led me to act that way.
	It is part of my culture to treat my partner that way.
	It happened because I was under the weather (e.g., sick, depression, bad mood, etc.).
	It happened because of other problems I have (e.g., anger, drinking/drugs, finances etc).
Denial	What I did was aggressive to my partner.
	I was aggressive during the event.
	I don't have a problem with being aggressive.
	I really didn't do anything.
	I hurt my partner during the event.
	I regret being aggressive to my partner.
	What I did was harmful to my partner.
	There was nothing wrong about what I did

Table 4.2 continued

Items for the Four Subscales

Subscale	Items
Minimization	It was just a communication problem. It was just an argument. My aggression was really small. It was not serious. It was just a small problem. What I did wasn't that big a deal.
Collusion	My family would understand why I did it. People close to me would support what I did. People in my culture would all do the same thing. My neighbor would ignore what happened. My friends do more than I did. My friends would say it's none of their business. If the police or a judge ever heard the whole story, they would agree with me. Society supports what I did.

Item Analysis

The total sample ($N = 612$) was used to conduct item analysis. In item analysis, the 32 IVRS items developed through the item refinement process were used. The researcher checked the overall distribution of variables by investigating means, standard deviation, skewness, and kurtosis to check non-normality. An interitem correlation matrix was computed (see *Appendix F*). Over 60% of the interitem correlations were statistically significant at the .05 level (2-tailed). The analysis results were described in Table 4.3. Skewness and kurtosis values greater than |2.0| can be considered significant departures from normality. Item 21 and 31 had relatively high positive kurtosis values, 4.545 and 6.576, respectively, indicating that they might be leptokurtic (highly picked).

Table 4.3

Descriptive Statistics for the IVRS Items with the Total Sample (*N = 612*)

Item	*M*	*SD*	Skewness		Kurtosis	
			Statistic	Std. error	Statistic	Std. error
Item 1	2.85	1.290	.014	.099	-1.185	.198
Item 2	3.07	1.249	-.259	.099	-1.088	.197
Item 3	2.85	1.185	-.057	.099	-.908	.197
Item 4	2.99	1.220	-.068	.099	-.940	.197
Item 5	2.36	1.171	.421	.099	-.888	.197
Item 6	2.27	1.321	.654	.099	-.839	.197
Item 7	3.31	1.378	-.179	.099	-1.213	.198
Item 8	3.25	1.362	-.099	.099	-1.203	.197
Item 9	3.33	1.247	-.460	.099	-.835	.197
Item 10	3.24	1.208	-.491	.099	-.768	.198
Item 11	2.55	1.162	.164	.099	-.948	.197
Item 12	2.91	1.191	-.057	.099	-.902	.198
Item 13	2.65	1.127	.292	.099	-.554	.197
Item 14	2.87	1.176	.052	.099	-.924	.198
Item 15	3.42	1.261	-.509	.099	-.786	.197
Item 16	2.81	1.102	.194	.099	-.657	.197
Item 17	3.12	1.158	-.333	.099	-.723	.197
Item 18	3.15	1.210	-.318	.099	-.894	.197
Item 19	2.95	1.017	-.049	.099	-.011	.198
Item 20	2.97	1.068	-.167	.099	-.636	.197
Item 21	1.42	.666	1.858	.099	4.545	.197
Item 22	1.63	.872	1.383	.099	1.299	.197
Item 23	3.71	1.336	-.547	.099	-1.112	.198
Item 24	2.60	1.212	.446	.099	-.609	.198
Item 25	3.02	1.237	-.307	.099	-1.001	.197

Table 4.3 continued

Descriptive Statistics for Questionnaire Items with the Total Sample (*N = 612*)

Item	*M*	*SD*	Skewness		Kurtosis	
			Statistic	Std. error	Statistic	Std. error
Item 26	3.00	1.196	-.204	.099	-.914	.197
Item 27	3.18	1.140	-.224	.099	-.427	.197
Item 28	2.79	1.109	-.046	.099	-.566	.197
Item 29	1.90	.998	.810	.099	-.088	.197
Item 30	1.97	1.020	.681	.099	-.452	.198
Item 31	3.36	1.391	.730	.099	6.576	.197
Item 32	2.72	1.200	.195	.099	-.925	.198

However, their skewness values were less than |2.0|, and the kurtosis values were less than |7.0|, both of which are cut-off values (West, Finch, & Curran, 1995). According to this guideline, all items were within accepted normal distribution parameters.

Item analyses were conducted for the 32 items on the scale in order to confirm reliability evidence, and answer the first research question: Does the IVRS have an acceptable level of reliability (alpha coefficient) with the current sample? Internal consistency indicates the extent to which individual items on a scale uncover a common and underlying construct (Spector, 1992). According to DeVellis (1991), if items on a scale are highly connected to one another, the items have a strong relationship to their latent variables. Item analyses were conducted to eliminate items and increase reliability of the IVRS and its subscales. The coefficient alpha (Cronbach, 1951) for the total scale score was calculated before and after eliminating problematic items in the scale, as computed by SPSS PC V 15.0.

As a rule of thumb in selecting scale items, it is recommended that an item should correlate with the total score above .20 and that any item with a lower correlation should be discarded (Streiner, 2003). Therefore, the researcher considered further investigating any item that had corrected item-total correlations less than .20. The results showed that four items (item5, 6, 21, and 22) had corrected item-total correlations less than .20. The researcher conducted a series of reliability tests excluding item 21, 22, and 5, respectively. When the three items were removed from the scale, the total coefficient alpha increased from .8775 to .8831, which was only a slight improvement. Another candidate for the exclusion was item 6: "It happened because of other problems I have (e.g., anger, drinking/drugs, finances, etc.)". Among the four items, item 6 had the lowest corrected item-total correlation (-.1491). This item elicited a limited response since it specified issues such as anger, drinking/drugs, and finances. Moreover, responses to item 6 were skewed to the left (63% answered *strongly disagree* or *disagree*), which could have been influenced by social desirability. Table 4.4 showed the distribution of the responses in item 6. Therefore, the researcher only deleted Item 6.

Table 4.4

Distribution of the Responses in Item 6

	Strongly disagree	Disagree	Neutral	Agree	Strongly agree
Item 6	245 (40%)	138 (23%)	88 (14%)	98 (16%)	41 (7%)

After deleting this item, the internal consistency estimate (coefficient alpha) of the total scale changed from .8673 to .8775 as shown in Table 4.5.

Table 4.5

Internal Consistency Statistics from Item Reduction (*N = 612*)

Construct	Number of Items	Coefficient Alpha
Total items	31 (32)	.88 (.87)

Note. (*x*) is coefficient alpha before the elimination of the four items.

Exploratory Factor Analysis

Preliminary Analysis

The researcher conducted a series of preliminary analyses including descriptive analysis, the normality test, the Kaiser-Meyer-Olkin (KMO) test, and the Bartlett test of sphericity. The researcher used only 31 items out of the proposed 32 items, because item 6 was eliminated during the item analysis procedure. In the preliminary analyses, sample characteristics were described and outliers of the data sets were investigated. Next, factor analysis was conducted. Factor analysis required several stages: factor extraction, factor rotation, and factor interpretation.

Descriptive analyses. In order to conduct EFA, the researcher used the jury group sample (n = 474) from the total sample (N = 612). The self-selected jury group sample was chosen for the study because they were drawn from a larger sample that was randomly selected by the court, so that they represented wide public opinion on the survey questions. Table 4.6 describes the demographic characteristics of this jury sample. The jury group participants consisted of 474 adults: 52.7% males (n = 250) and 47.3% females (n = 224). The average age of participants from the jury group was 38.21 years (SD = 12.7). Young adults, 40 years of age or younger, comprised about 62.7% of the sample. Approximately 59.5% of the participants were White (n = 282), followed by Blacks (33.8%, n = 160).

Table 4.6

Demographic Variables of EFA Sample (*n = 474*)

Variable	Category	*n*	%
Age	Less than 21 years	20	4.2
	21 – 30 years	133	28.1
	31 – 40 years	144	30.4
	41 – 50 years	84	17.7
	51 – 60 years	63	13.3
	More than 60 years	24	5.1
	Missing	6	1.2
Gender	Male	250	52.7
	Female	224	47.3
Race	American Indian	3	.6
	Asian	9	1.9
	Black	160	33.8
	Latino	6	1.3
	Mixed	10	2.1
	White	282	59.5
	Other	4	.8
Religion	Protestant	260	54.9
	Catholic	62	13.1
	Buddhism	2	.4
	Moslem	1	.2
	Hindu	2	.4
	Jewish	19	4.0
	None	72	15.2
	Other	39	8.2
	Missing	3	.6

Table 4.6 continued

Demographic Variables of EFA Sample (*n = 474*)

Variable	Category	*n*	%
Marital Status	Single (living apart)	120	25.3
	Unmarried (living together)	66	13.9
	Married	238	50.2
	Separated	6	1.3
	Divorced	25	5.3
	Other	15	3.2
	Missing	4	.8
Education	Less than high school	18	3.8
	High school graduate	79	16.7
	Some college (Associate degree)	90	19.0
	College graduate	172	36.3
	Graduate school	114	24.1
	Missing	1	.2

Over half of the study participants were married (50.2%, *n* = 238), and 25% were single (*n* = 120). The percentage of individuals living with another, including 'married' and 'single (living together),' was over 64%. The majority of the study participants were Protestant (54.9%, *n* = 260). Almost 60% of the study participants (*n* = 286) had graduated from colleges or graduate schools. Table 4.7 shows the descriptive statistics of the IVRS items, including means, standard deviations, skewness, and kurtosis. Skewness and kurtosis were identified to examine deviations from normality and the spread of distributions over the data sets, respectively. According to the guidelines described in Chapter 3, the skewness and kurtosis of all scale items can be considered normally distributed (Fabrigar, Wegener, MacCallum, & Strahan, 1999).

Table 4.7

Descriptive Statistics for the IVRS Items with EFA Sample (*n = 474*)

Item	*M*	*SD*	Skewness		Kurtosis	
			Statistic	Std. error	Statistic	Std. error
Item 1	2.78	1.233	.026	.112	-1.167	.224
Item 2	3.01	1.190	-.293	.112	-1.073	.224
Item 3	2.92	1.126	-.146	.112	-.774	.224
Item 4	3.07	1.130	-.173	.112	-.719	.224
Item 5	2.44	1.143	.301	.112	-.944	.224
Item 7	3.56	1.254	-.374	.112	-1.054	.224
Item 8	3.51	1.256	-.254	.112	-1.183	.224
Item 9	3.42	1.167	-.586	.112	-.540	.224
Item 10	3.37	1.114	-.645	.112	-.324	.224
Item 11	2.65	1.123	.048	.112	-.887	.224
Item 12	3.05	1.142	-.172	.112	-.769	.224
Item 13	2.65	1.035	.264	.112	-.350	.224
Item 14	2.88	1.091	.078	.112	-.762	.224
Item 15	3.55	1.178	-.662	.112	-.450	.224
Item 16	2.96	.994	.154	.112	-.523	.224
Item 17	3.27	1.061	-.455	.112	-.413	.224
Item 18	3.32	1.092	-.429	.112	-.537	.224
Item 19	3.06	.910	-.033	.112	.558	.224
Item 20	3.07	1.019	-.245	.112	-.494	.224
Item 21	1.43	.683	1.895	.112	4.814	.224
Item 22	1.67	.884	1.255	.112	.833	.224
Item 23	3.91	1.214	-.686	.112	-.924	.224
Item 24	2.75	1.183	.367	.112	-.603	.224
Item 25	3.18	1.167	-.503	.112	-.615	.224
Item 26	3.16	1.100	-.365	.112	-.584	.224
Item 27	3.22	1.067	-.279	.112	-.051	.224
Item 28	2.96	1.030	-.197	.112	-.150	.224
Item 29	2.00	1.005	.595	.112	-.474	.224
Item 30	2.10	1.044	.504	.112	-.630	.224
Item 31	3.53	1.182	-.273	.112	-1.023	.224
Item 32	2.88	1.139	.069	.112	-.828	.224

Normality test. Normtest (DeCarlo, 1997) results showed five outliers (case numbers 258, 257, 270, 431, and 137) screened by Mahalanobis distances with *F* values were larger than the critical *F* values both at the .05 and .01 significance level, $F(31, 433) = 66.07$, $p < .05$, and $F(31, 433) = 70.73$, $p < .01$. According to the critical *F* values at both .05 and .01 levels, the five cases had significantly large *F* values of 117.53, 96.13, 92.66, 91.51, and 88.43, respectively. However, because there was no significant difference between the analysis with the five outliers and the analysis without the five outliers regarding communalities, identification of factors, factor structures, and loading patterns of items, the researcher kept the five outliers in the data set.

Factorability of the matrix. The Kaiser-Meyer-Olkin Measure of Sampling Adequacy (KMO) statistic was used to determine how amenable the matrix of the initial 31 items was to factoring. Table 4.8 shows that the Kaiser-Meyer-Olkin Measure for the data was .803, suggesting that there was sufficient variability in the data to conduct factor analysis according to Kaiser's (1974) guidelines. The Bartlett test of sphericity was statistically significant, presenting that the variables were not completely uncorrelated with each other.

Table 4.8

KMO and Bartlett's Test

Kaiser-Meyer-Olkin Measure of Sampling Adequacy		.803
Bartlett's Test of Sphericity	Approx. chi-square	5268.041
	df	465
	Sig.	.000

Extraction

Extraction refers to the process by which factors are determined from a larger set of variables. Among the several types of factor extraction techniques, principal components analysis and common factor analysis are commonly used to reduce a larger number of overlapping variables to a smaller set of factors (Stevens, 1992). According to Guadagnoli and Velicer (1988), the solutions derived from common factor analysis differ little from those generated from principal components analysis. The two analyses usually result in similar outputs, so the choice between the two methods depends on the nature of the study. One crucial difference is how variance is used in each technique. In principal components analysis, all sources of variance, including unique, shared, and error variance, are analyzed for each observed variable. In common factor analysis, only shared (common) variance is analyzed, excluding both unique and error variance because each variable can be influenced by something other than the factor, including random error, lack of reliability of the variable, or something specific about the item (item wording, distribution, susceptibility to response sets, etc.). Another difference is that common factor analysis is usually used to identify the underlying constructs in a set of variables while principal component analysis is used to reduce the number of variables.

In the present study, the researcher used common factor analysis to include only common variances and exclude unique and error variances because each variable could be determined in part by something other than the factor (uniqueness of the variable or unique factor associated with the variable). In addition, the major purpose of the study was to investigate the number and identity of the latent constructs (factors) theoretically supported by the four sub-constructs (denial, blame, minimization, and collusion) of responsibility attitudes of the CECEVIM intervention model. With regard to the factor extraction method, Gorsuch (1983) recommended

using common factor analysis if communalities were low (< .70). The initial results of the study showed that over 95% of the scale items (29 out of 31) had communality scores, less than .70, as shown in Table 4.9. Therefore, the researcher employed common factor analysis, also known as principal axis factoring.

Table 4.9

Initial Communality Matrix with 31 Items

Item	Initial	Extraction	Item	Initial	Extraction
1	.540	.551	18	.515	.616
2	.515	.496	19	.242	.235
3	.560	.553	20	.224	.227
4	.538	.502	21	.362	.442
5	.181	.123	22	.403	.602
7	.712	.855	23	.304	.260
8	.701	.702	24	.336	.355
9	.441	.540	25	.555	.602
10	.475	.535	26	.607	.713
11	.329	.364	27	.505	.564
12	.278	.372	28	.528	.602
13	.542	.613	29	.474	.633
14	.430	.476	30	.519	.621
15	.246	.237	31	.341	.317
16	.350	.396	32	.492	.500
17	.399	.408			

Note. Extraction method: Principal Axis Factoring.

Number of Factors

The eigenvalue-greater-than-one is a common criterion for deciding how many components or factors to retain (Fabrigar et al., 1999). According to the eigenvalue-greater-than-

one rule, an eight-factor solution was identified, accounting for 61.2% of the total variance as shown in Table 4.10. However, the quality of this criterion was questioned. Zwick and Velicer (1986) found that this rule retained too many factors. Reise, Waller, and Comrey (2000) found no psychometrically justifiable reason to support overextraction on this rule, although it was generally understood to retain too many factors rather than too few. In addition, the eigenvalue-greater-than-one rule can be highly influenced by the number of variables in factor analysis but not the reliability of a factor (Cliff, 1988). Due to the limitation of the eigenvalue-greater-than-one rule discussed above, the researcher considered using an eigenvalue, a scree plot, and theoretical background to identify the number of factors.

A scree plot is commonly utilized to determine the number of factors to retain (Cattell, 1966). Figure 4.1 indicated several bending points on the curve, which allowed a few different interpretations. The scree plot generally supported retaining four, five, or eight factors because the curve tailed off at several points after four factors. The five-factor solution was not retained because the pattern matrix showed a confusing factor structure. Specifically, the minimization factor was divided into two, and one of them included only two items that were not sufficient to fully represent a factor. The eight-factor solution was not chosen because of the complicated factor structure. In the eight factor solution, minimization and denial items were mixed within one factor, and four factors consisted of only two items, which was not enough to fully represent factors. The four-factor solution was more appropriate than the five and eight-factor solutions due to the clearer and simpler factor structure. The scree plot showed the eigenvalues began a linear decline commencing with the fifth factor. In addition, items loaded on the four factors were theoretically supported by the CECEVIM intervention model and the ecological perspectives. The researcher restricted the number of factors extracted to four.

Table 4.10

Initial Eigenvalues and Percentage of Variance by Each Factor for Initial Example

Factor	Initial Eigenvalues			Extraction Sums of Squared Loadings		
	Total	% of Variance	Cumulative %	Total	% of Variance	Cumulative %
1	5.744	18.531	18.531	5.262	16.974	16.974
2	3.437	11.086	29.616	2.990	9.646	26.620
3	2.526	8.147	37.763	2.065	6.661	33.281
4	2.237	7.217	44.980	1.785	5.756	39.037
5	1.486	4.792	49.772	1.021	3.295	42.332
6	1.293	4.172	53.945	.804	2.592	44.924
7	1.127	3.636	57.581	.552	1.780	46.703
8	1.109	3.576	61.157	.534	1.723	48.426
9	.977	3.152	64.309			
10	.879	2.836	67.144			
11	.828	2.670	69.814			
12	.797	2.569	72.384			
13	.751	2.421	74.805			
14	.730	2.353	77.158			
15	.681	2.195	79.354			
16	.667	2.151	81.505			
17	.648	2.089	83.594			
18	.547	1.765	85.359			
19	.518	1.672	87.031			
20	.449	1.447	88.478			
21	.447	1.443	89.921			
22	.422	1.361	91.282			
23	.396	1.279	92.560			
24	.373	1.202	93.762			
25	.351	1.132	94.894			
26	.318	1.027	95.922			
27	.307	.990	96.911			
28	.295	.951	97.863			
29	.255	.821	98.684			
30	.247	.796	99.480			
31	.161	.520	100.000			

Note. Extraction method: Principal Axis Factoring.

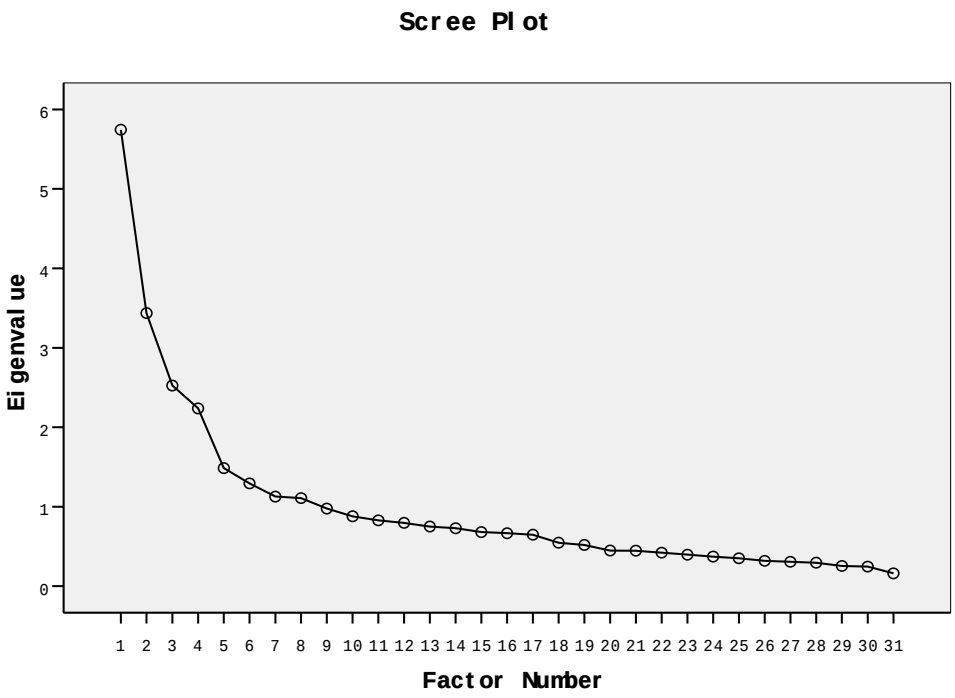

Figure 4.1 Scree plot using 31 items

Communalities

Communalities refer to the proportion of variance in a given variable accounted for by factors (Agresti & Finlay, 1997). They allow researchers to investigate how each variable reflects the source of variability (Williams, 1992). Table 4.11 lists communalities of each item. Item 5, 15, 19, and 20 had low communalities (<.20), indicating that the proportion of common variance present in these variables was relatively small. Item 5 had a particularly low communality value (.072).

Table 4.11

Communalities Matrix for Four-Factor Solution with 31 Items

Item	Initial	Extraction
1. My partner caused me to act that way.	.540	.550
2. It happened because my partner pushed my buttons.	.515	.508
3. My family would understand why I did it.	.560	.474
4. People close to me would support what I did.	.538	.437
5. It happened because I was under the weather (e.g., sick, depression, bad mood, etc.).	.181	.072
7. What I did was aggressive to my partner.	.712	.528
8. I was aggressive during the event.	.701	.497
9. It was just a communication problem.	.441	.210
10. It was just an argument.	.475	.353
11. People in my culture would all do the same thing.	.329	.257
12. My neighbor would ignore what happened.	.278	.200
13. It was really my partner's fault.	.542	.543
14. If my partner listened to me, it wouldn't happen.	.430	.361
15. I don't have a problem with being aggressive.	.246	.175
16. I really didn't do anything.	.350	.228
17. My aggression was really small.	.399	.315
18. It was not serious.	.515	.502
19. My friends do more than I did.	.242	.179
20. My friends would say it is none of their business.	.224	.182
21. It happened because I looked at violent movies/TV.	.362	.394
22. It happened because of something and/or someone at work.	.403	.379
23. I hurt my partner during the event.	.304	.206
24. I regret being aggressive to my partner.	.336	.340
25. It was just a small problem.	.555	.576
26. What I did wasn't that big a deal.	.607	.582
27. If the police or a judge ever heard the whole story, they would agree with me.	.505	.385
28. Society supports what I did.	.528	.430
29. My religious beliefs led me to act that way.	.474	.457
30. It is part of my culture to treat my partner that way.	.519	.573
31. What I did was harmful to my partner.	.341	.319
32. There was nothing wrong about what I did.	.492	.457

Note. Extraction method: Principal Axis Factoring. Item 6 was eliminated during the item analysis process.

Factor Rotation

There are several methods of orthogonal rotation (e.g., varimax, quartimax, and equamax) and oblique rotation (e.g., direct oblimin and promax). These methods differ in how they rotate the factors. In this study, oblique rotation was used because of the theoretical assumption that constructs of responsibility attitudes were correlated. There are several compelling reasons for considering oblique rotations: (a) they are more realistic in dealing with psychological phenomena because psychological variables are likely to be correlated (Loo, 1979); (b) they usually satisfy the simple structure criterion more than orthogonal rotations (Reise et al., 2000); and (c) factors can be easily replicated in oblique rotations (Dielman, Cattell, & Wagner, 1972; Gorsuch, 1970).

To find out the most appropriate rotation method in the present study, several oblique rotation techniques were conducted on the 31 items. The researcher investigated and compared several sets of tests with two types of oblique rotation: the promax method (Hendrickson & White, 1964) and the direct oblimin method (Jennrich & Sampson, 1966). The direct oblimin rotation in SPSS PC V 15.0 has a default parameter of *Delta* = 0, whereas the promax-rotation has a default parameter of $k = 3$. The researcher conducted a series of rotation solutions with different parameters to find the optimal simple structure of the factors.

The promax (kappa = 6) method produced the clearest factor loadings in this study. Factor loadings are an indicator of the substantive importance of a given variable to a given factor. Typically, researchers consider a loading of an absolute value of more than .3 to be meaningful. However, the significance of a factor loading depends on sample size because small loadings can be considered statistically meaningful in a very large sample. Stevens (1992) recommended that for a sample size of 50 a loading of .722 could be considered significant, for

100 the loading should be greater than .512, for 200 it should be greater than .364, for 300 it should be greater than .298, for 600 it should be greater than .21, and for 1,000 it should be greater than .162. For interpretative purposes, the researcher used the conservative cut-off of .40 (i.e., loadings greater than .40 indicate substantive values). Item loadings on each factor were summarized in the pattern matrix (Table 4.12) and the structure matrix (Table 4.13).

The pattern/structure matrix basically reports the simple correlation between each variable and each principal component (Harris, 2001). When an orthogonal rotation is conducted, the two matrices are the same; however, for oblique rotation the factor matrices are split into two matrices. The pattern matrix is usually used by researchers due to its simplicity; nevertheless, values in the pattern matrix can be sometimes suppressed because of the relationship between the factors (Field, 2005). Graham, Guthrie, and Thompson (2003) recommend reporting both matrices. Consequently, the researcher included the structural matrix as well as the pattern matrix to double-check the results. The pattern matrix showed that there were eight factor loadings below the cut-off of .40 (Items 5, 12, 15, 16, 19, 27, 28, and 32). The structure matrix showed somewhat different factor loadings compared to the pattern matrix: four-factor loadings below the cut-off of .40 (Item 5 and 9) and three double loadings between .444 and .543 (Item 27, 28, and 32). In contrast to the pattern matrix, the structure matrix showed that Item 12 (.424) and Item 19 (.404) were above the cut-off of .40 and that item 9 (.351) was below the cut-off of .40.

A correlation matrix of the factors is shown in Table 4.14. This matrix contains the correlation coefficients among factors. All of the factors were interrelated to some degree (between .151 and .247); however, the correlation between Factor 1 and Factor 2 (r = .462) was higher than that of other factor combinations.

Table 4.12

Promax's Pattern Matrix for Four-Factor Solution with 31 Items (*Kappa = 6*)

Item	Factor			
	1	2	3	4
25. It was just a small problem.	**.855**	-.296	-.257	.029
18. It was not serious.	**.745**	-.145	.106	-.076
26. What I did wasn't that big a deal.	**.729**	.025	.061	.023
10. It was just an argument.	**.548**	.070	-.319	-.070
17. My aggression was really small.	**.506**	.074	.092	-.054
20. My friends would say it's none of their business.	**.464**	-.097	-.059	.038
9. It was just a communication problem.	**.417**	.023	-.291	-.046
12. My neighbor would ignore what happened.	.398	.122	-.084	-.054
15. I don't have a problem with being aggressive	.384	-.022	.133	-.030
27. If the police or a judge ever heard the whole story, they would agree with me.	.382	.230	.199	.042
19. My friends do more than I did.	.340	.128	.052	-.032
28. Society supports what I did.	.333	.214	.243	.178
16. I really didn't do anything.	.316	.006	.228	.112
13. It was really my partner's fault.	-.174	**.784**	-.035	.083
1. My partner caused me to act that way.	-.048	**.775**	-.183	-.149
3. My family would understand why I did it.	.004	**.673**	.099	-.041
2. It happened because my partner "pushed my buttons".	.100	**.641**	-.331	-.152
4. People close to me would support what I did.	-.057	**.618**	.222	-.001
14. If my partner listened to me, it wouldn't happen.	-.057	**.604**	-.205	.070
11. People in my culture would all do the same thing.	.122	**.422**	-.087	.085
7. What I did was aggressive to my partner.	.010	-.143	**.733**	-.003
8. I was aggressive during the event.	.052	-.174	**.712**	-.064
31. What I did was harmful to my partner.	.028	.008	**.575**	-.132
24. I regret being aggressive to my partner.	-.275	.134	**.567**	.033
23. I hurt my partner during the event.	.128	-.089	**.434**	-.173
32. There was nothing wrong about what I did.	.299	.160	.357	.184
5. It happened because I was under the weather (e.g., sick, depression, bad mood, etc.).	.055	.123	-.237	.098
30. It is part of my culture to treat my partner that way.	.011	.061	.076	**.716**
29. My religious beliefs led me to act that way.	-.037	.029	.061	**.659**
21. It happened because I looked at violent movies/TV.	-.046	-.138	-.295	**.636**
22. It happened because of something and/or someone at work.	-.028	-.022	-.352	**.603**

Note. Extraction method: Principal Axis Factoring. Rotation method: Promax with Kaiser Normalization.

Table 4.13

Promax's Structure Matrix for Four-Factor Solution with 31 Items (*Kappa = 6*)

Item	Factor			
	1	2	3	4
26. What I did wasn't that big a deal.	**.759**	.376	.239	.196
18. It was not serious.	**.686**	.199	.237	.074
25. It was just a small problem.	**.665**	.067	-.097	.079
17. My aggression was really small.	**.550**	.310	.207	.091
27. If the police or a judge ever heard the whole story, they would agree with me.	**.543**	**.446**	.332	.222
28. Society supports what I did.	**.526**	**.444**	.396	.355
10. It was just an argument.	**.492**	.260	-.199	-.018
12. My neighbor would ignore what happened.	**.424**	.281	.013	.035
20. My friends would say it's none of their business.	**.414**	.117	.043	.099
19. My friends do more than I did.	**.404**	.286	.142	.080
15. I don't have a problem with being aggressive.	.399	.170	.212	.079
16. I really didn't do anything.	.395	.212	.329	.236
9. It was just a communication problem.	.351	.162	-.202	-.025
13. It was really my partner's fault.	.198	**.717**	.064	.211
1. My partner caused me to act that way.	.237	**.692**	-.113	-.033
3. My family would understand why I did it.	.330	**.681**	.192	.134
4. People close to me would support what I did.	.280	**.625**	.302	.179
2. It happened because my partner "pushed my buttons".	.288	**.603**	-.248	-.071
14. If my partner listened to me, it wouldn't happen.	.189	**.562**	-.110	.141
11. People in my culture would all do the same thing.	.315	**.485**	.026	.183
7. What I did was aggressive to my partner.	.113	-.028	**.713**	.148
8. I was aggressive during the event.	.123	-.057	**.682**	.084
31. What I did was harmful to my partner.	.137	.079	**.550**	.018
24. I regret being aggressive to my partner.	-.075	.099	**.531**	.144
32. There was nothing wrong about what I did.	**.495**	.393	**.496**	.371
23. I hurt my partner during the event.	.151	-.003	**.407**	-.058
5. It happened because I was under the weather (e.g., sick, depression, bad mood, etc.).	.078	.134	-.182	.078
30. It is part of my culture to treat my partner that way.	.206	.236	.264	**.750**
29. My religious beliefs led me to act that way.	.129	.168	.220	**.673**
21. It happened because I looked at violent movies/TV.	-.044	-.062	-.169	**.524**
22. It happened because of something and/or someone at work.	.007	.045	-.213	**.506**

Note. Extraction method: Principal Axis Factoring. Rotation method: Promax with Kaiser Normalization.

Table 4.14

Factor Correlation Matrix Using 31 Items (*n = 474*)

Factor	1	2	3	4
1	1.000	.462	.231	.210
2	.462	1.000	.151	.222
3	.231	.151	1.000	.247
4	.210	.222	.247	1.000

Note. Extraction method: Principal Axis Factoring. Rotation method: Promax with Kaiser Normalization.

Factor Interpretation

The researcher identified several problematic items that were inappropriate for factor interpretation. Three criteria were used to support the elimination of these problematic items: (a) percent of variance explained (Bernstein, 1988; Straub, 1989); (b) single loading on a factor (Harman, 1976; Sethi & King, 1991); and (c) interpretability (Kachigan, 1982; Lederer & Sethi, 1992). Item 5, 12, 15, 16, 19, 27, 28, and 32 were candidates for elimination since they are not larger than .40 as shown in the pattern matrix (see Table 4.12). According to the cut-off .40, item 5, 9, 15, and 16 were candidates for elimination as shown in the structure matrix (see Table 4.13). Table 4.13 also showed that item 27, 28, and 32 had cofusing cross-loadings. Item 27 showed an association with Factor 1 (.543) and Factor 2 (.446). Item 28 showed an association with Factor 1 (.526) and Factor 2 (.444). Item 32 was also associated with two factors: Factor 1 (.495) and Factor 3 (.496).

The researcher eliminated Item 5 [“It happened because I was under the weather (e.g., sick, depression, bad mood, etc.)”] because it did not load on any factors and had low communalities (.072). Furthermore, this item did not apply to all of the respondents. Item 12, 15,

and 19 were also eliminated because of low factor loading values (.398, .384, and .340, respectively) and low communalities (.200, .175, and .179, respectively). Item 12 and 19 were originally developed to reflect the collusion construct. However, they showed relatively low association with Factor 1, which was interpreted as minimization. Item 15 also showed low association with Factor 1, even though it was originally developed to reflect the denial construct. Item 16 was eliminated because of low association with Factor 1 (.316) and low communalities (.228). Although the communalities of Item 27, 28, and 32 were not very low (.385, .430, and .457, respectively), the three items were eliminated because they cross-loaded among the three other constructs. To keep items that clearly differentiated one construct from another, the researcher deleted these three items. Table 4.15 showed the eight items dropped from analysis.

Table 4.15

List of Items Dropped from Analysis

Item Number	Construct	Content
5	Blame	It happened because I was under the weather (e.g., sick, depression, bad mood, etc.).
12	Collusion	My neighbor would ignore what happened.
15	Denial	I don't have a problem with being aggressive
16	Denial	I really didn't do anything.
19	Collusion	My friends do more than I did.
27	Collusion	If the police or a judge ever heard the whole story, they would agree with me.
28	Collusion	Society supports what I did.
32	Denial	There was nothing wrong about what I did.

After the eight items (Item 5, 12, 15, 16, 19, 27, 28, and 32) were eliminated, the researcher once again performed common factor analysis with promax (kappa = 6) using the 23 items that were obtained from the elimination process in the EFA. Communalities, Kaiser's use of eigenvalues, Cattell's scree test, the variance accounted for by each factor, and the theoretical interpretability of the factors were considered for obtaining an optimal factor solution. A four-factor solution based on 23 items was identified to be more meaningful than the initial four-factor solution with all 31 original items. The total variance (51.52%) accounted for by the revised four-factor solution with 23 items was larger than the total variance (44.98%) of the four-factor solution with all 31 original items. Table 4.16 showed the total variance accounted for by the four-factor solution with these 23 items. The eigenvalues, percent of variance for each factor, and cumulative variance were also displayed in Table 4.16.

Communalities were higher, in general, compared to the initial four-factor solution with the 31 original items as shown in Table 4.11 and 4.17. Examination of the scree plot more clearly improved the fit of the four-factor model to the empirical data because the line began to clearly drop and level off at the fifth factor as shown in Figure 4.2. In addition, the analysis with the reduced 23-item set produced a clearer representation of factor structure and loading patterns. Table 4.18 demonstrated that the pattern matrix presented the four factors and factor loadings for the 23 items in the EFA. The structure matrix in Table 4.19 also confirmed the factor loadings presented at the pattern matrix; the two matrices were almost identical to each other, with the exception of Item 20, which was not larger than the .40 cut-off. The factor correlation matrix in Table 4.20 showed that each factor had little or minimum correlations with other factors, but factor 1 and 2 were interrelated to a moderate degree (.311).

Table 4.16

Eigenvalues and Percentage of Variance by Each Factor for Initial Example

Factor	Initial Eigenvalues			Extraction Sums of Squared Loadings			Rotation
	Total	% of Variance	Cumulative %	Total	% of Variance	Cumulative %	Total
1	4.200	18.263	18.263	3.653	15.881	15.881	3.244
2	3.038	13.210	31.472	2.502	10.877	26.758	2.814
3	2.438	10.601	42.074	1.905	8.282	35.040	2.478
4	2.173	9.449	51.523	1.630	7.085	42.125	1.724
5	1.313	5.710	57.233				
6	.999	4.344	61.577				
7	.889	3.866	65.443				
8	.851	3.699	69.142				
9	.826	3.592	72.734				
10	.764	3.323	76.057				
11	.708	3.076	79.133				
12	.670	2.914	82.047				
13	.619	2.692	84.739				
14	.551	2.396	87.135				
15	.449	1.950	89.085				
16	.429	1.864	90.949				
17	.396	1.723	92.672				
18	.366	1.592	94.264				
19	.310	1.348	95.612				
20	.307	1.334	96.946				
21	.277	1.205	98.151				
22	.261	1.134	99.285				
23	.164	.715	100.000				

Note. Extraction method: Principal Axis Factoring.

Table 4.17

Communalities Matrix with 23 Items

Item	Initial	Extraction
1. My partner caused me to act that way.	.531	.556
2. It happened because my partner “pushed my buttons”.	.500	.498
3. My family would understand why I did it.	.532	.492
4. People close to me would support what I did.	.519	.457
7. What I did was aggressive to my partner.	.707	.611
8. I was aggressive during the event.	.697	.576
9. It was just a communication problem.	.429	.227
10. It was just an argument.	.460	.368
11. People in my culture would all do the same thing.	.267	.246
13. It was really my partner’s fault.	.517	.549
14. If my partner listened to me, it wouldn't happen.	.410	.370
17. My aggression was really small.	.373	.307
18. It was not serious.	.469	.463
20. My friends would say it’s none of their business.	.194	.155
21. It happened because I looked at violent movies/TV.	.359	.389
22. It happened because of something and/or someone at work.	.375	.365
23. I hurt my partner during the event.	.262	.221
24. I regret being aggressive to my partner.	.296	.301
25. It was just a small problem.	.549	.639
26. What I did wasn’t that big a deal.	.536	.550
29. My religious beliefs led me to act that way.	.461	.454
30. It is part of my culture to treat my partner that way.	.509	.584
31. What I did was harmful to my partner.	.317	.310

Note. Extraction method: Principal Axis Factoring.

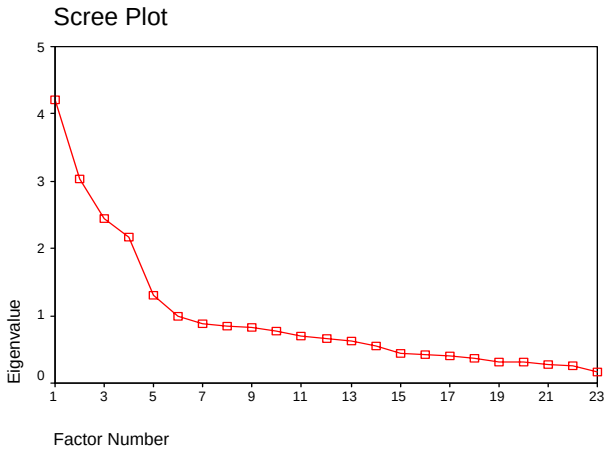

Figure 4.2. Scree plot using 23 items

Table 4.18

Loaded Items and Rotated Pattern Matrix Using 23 Items

Item	Factor			
	1	2	3	4
13. It was really my partner's fault.	**.758**	-.137	-.026	.093
1. My partner caused me to act that way.	**.732**	-.018	-.154	-.133
3. My family would understand why I did it.	**.668**	.025	.175	.008
4. People close to me would support what I did.	**.614**	-.016	.275	.041
2. It happened because my partner "pushed my buttons."	**.602**	.109	-.275	-.138
14. If my partner listened to me, it wouldn't happen.	**.583**	-.018	-.167	.074
11. People in my culture would all do the same thing.	**.429**	.111	-.025	.112
25. It was just a small problem.	-.215	**.834**	-.116	.051
26.What I did wasn't that big a deal.	.110	**.673**	.162	.048
18. It was not serious.	-.034	**.650**	.214	-.024
10. It was just an argument.	.116	**.536**	-.182	-.044
17. My aggression was really small.	.150	**.453**	.178	-.008
9. It was just a communication problem.	.052	**.431**	-.170	-.023
20. My friends would say it's none of their business.	-.042	**.400**	.002	.054
7. What I did was aggressive to my partner.	-.086	.018	**.771**	.055
8. I was aggressive during the event.	-.120	.050	**.750**	-.004

Table 4.18 continued

Loaded Items and Rotated Pattern Matrix Using 23 Items

Item	Factor			
	1	2	3	4
31. What I did was harmful to my partner.	.039	.020	**.554**	-.096
24. I regret being aggressive to my partner.	.132	-.265	**.487**	.036
23. I hurt my partner during the event.	-.055	.113	**.442**	-.147
30. It is part of my culture to treat my partner that way.	.121	.053	.145	**.713**
29. My religious beliefs led me to act that way.	.079	.017	.121	**.640**
21. It happened because I looked at violent movies/TV.	-.114	.003	-.241	**.594**
22. It happened because of something and/or someone at work.	-.006	.027	-.282	**.559**

Note. Extraction Method: Principal Axis Factoring. Rotation Method: Promax with Kaiser Normalization.

Table 4.19

Loaded Items and Rotated Structure Matrix Using 23 Items

Item	Factor			
	1	2	3	4
13. It was really my partner's fault.	**.723**	.100	-.015	.149
1. My partner caused me to act that way.	**.715**	.203	-.159	-.088
3. My family would understand why I did it.	**.678**	.238	.183	.076
2. It happened because my partner "pushed my buttons."	**.623**	.285	-.278	-.112
4. People close to me would support what I did.	**.615**	.184	.283	.114
14. If my partner listened to me, it wouldn't happen.	**.582**	.160	-.155	.106
11. People in my culture would all do the same thing.	**.472**	.245	-.008	.146
25. It was just a small problem.	.047	**.764**	-.087	.038
26.What I did wasn't that big a deal.	.324	**.713**	.188	.082
18. It was not serious.	.168	**.646**	.232	.002
10. It was just an argument.	.278	**.566**	-.167	-.042
17. My aggression was really small.	.292	**.506**	.193	.027

Table 4.19 continued

Loaded Items and Rotated Structure Matrix Using 23 Items

Item	Factor			
	1	2	3	4
9. It was just a communication problem.	.182	**.442**	-.157	-.026
20. My friends would say it's none of their business.	.087	.388	.019	.058
7. What I did was aggressive to my partner.	-.069	.017	**.776**	.115
8. I was aggressive during the event.	-.098	.036	**.750**	.051
31. What I did was harmful to my partner.	.043	.048	**.547**	-.045
24. I regret being aggressive to my partner.	.057	-.208	**.483**	.084
23. I hurt my partner during the event.	-.028	.107	**.432**	-.112
30. It is part of my culture to treat my partner that way.	.196	.107	.209	**.736**
29. My religious beliefs led me to act that way.	.136	.056	.178	**.657**
21. It happened because I looked at violent movies/TV.	-.068	-.030	-.191	**.565**
22. It happened because of something and/or someone at work.	.044	.026	-.233	**.535**

Note. Extraction Method: Principal Axis Factoring. Rotation Method: Promax with Kaiser Normalization.

Table 4.20

Factor Correlation Matrix Using 23 Items (*n = 474*)

Factor	1	2	3	4
1	1.000	.311	.009	.079
2	.311	1.000	.032	.017
3	.009	.032	1.000	.086
4	.079	.017	.086	1.000

Note. Extraction method: Principal Axis Factoring. Rotation method: Promax with Kaiser Normalization.

Name of Factors

Proximal blame. Factor 1 was named *proximal blame*. It accounted for 18.26% of the variance, and item loading values varied between .429 and .758. Among the seven items, four items (13, 1, 2, and 14) were originally developed for the *blame* construct. Specifically, these four items were composed based on the ecological perspective of the micro system. The micro system represents people who had direct relationships with batterers and their victims, such as partners, family members, and friends. The remaining three items (3, 4, and 11) were originally developed for the *collusion* construct; however, they were verified as part of the *proximal blame* construct through the common factor analysis. All of these seven items had primary loadings on Factor 1: *proximal blame.*

Minimization. Factor 2 was named *minimization*. It accounted for 13.21% of the variance, and item loading values varied between .400 and .834. Among the seven items, six items (25, 26, 18, 10, 17, and 9) were originally developed for the *minimization* construct as determined through the item development process and content-validity stage. The remaining item (20) was originally developed for the *collusion* construct; however, it was verified as the *minimization* construct during the common factor analysis. All of these seven items had primary loadings on Factor 2: *minimization*.

Denial. Factor 3 was named *denial*. It accounted for 10.60% of the variance, and item loading values varied between .442 and .771. All of the five items (7, 8, 31, 24, and 23) were originally developed for the *denial* construct as determined through the item development process and content validity stage. The *denial* construct was named because all of the five items were described as "accepting his/her own violent behavior" or "not deny his/her own violent behavior." All of these five items had primary loadings on Factor 3: *denial*.

Distal blame. Factor 4 was named *distal blame*. It accounted for 9.45% of the variance, and item loading values varied between .559 and .713. Factor 4 included four items (30, 29, 21, and 22) that were originally developed for the *blame* construct. These four items were composed based on the ecological perspective of the meso/macrosystem, which refers to such phenomena as culture, religion, and media encompassing the client system. All of these four items had primary loadings on Factor 4: *distal blame*.

Reliability Analysis for the Four-Factor Solution

Internal consistency reliability coefficients for the four factors derived by EFA were analyzed by SPSS PC V 15.0. The researcher used the total sample of participants ($N = 612$) for reliability analysis. The coefficient alpha ranged from .72 to .82. The overall value of the internal consistency for all 23 items was .83. According to Nunnally (1978), the reliability coefficient of each subscale in scale development should be above the minimum level of .70. The alpha coefficients for the four factors (i.e., the four subscales of the IVRS) and a sum of the four factors derived from EFA were all higher than .70, an acceptable level as shown in Table 4.21. These results answered the first research quetsion: Does the IVRS have an acceptable level of reliability (alpha coefficient) with the current sample?

Table 4.21

Reliability Coefficient of the Subscales Obtained from EFA (*N = 612*)

Construct	Number of items	Alpha Coefficient
Minimization	7 items: 25, 26, 18, 10, 17, 9, 20	.81
Denial	5 items: 7, 8, 31, 24, 23	.79
Proximal Blame	7 items: 13, 1, 3, 4, 2, 14, 11	.82
Distal blame	4 items: 30, 29, 21, 22	.72
Total items	23 items	.83

Test for Construct Validity

This section presents evidence for construct validity of the IVRS. Prior to the analyses, preliminary analyses were conducted. After the preliminary analyses, interscale correlations and others using three measures of the CTS2 and demographic variables were investigated to find evidence for convergent and discriminant validity. Criterion-related validity was examined by investigating whether the jury group was more responsible than the court-mandated batterer groups.

Preliminary Analyses

Prior to examining the evidence for validity, the researcher conducted a preliminary analysis to rule out the possibility of confounding influence due to extraneous factors such as social desirability while responding to the scale items. The researcher used the Reynolds Short Form of *Marlowe-Crowne Social Desirability Scale* (MCSDS; Reynolds, 1982) for this purpose. High scores indicate high social desirability, and low scores indicate low social desirability. If a low correlation was identified between scores on the MCSDS and the IVRS, the researcher could conclude that the scores on the IVRS were not baised in a socially desirable manner. A p value of less than .05 was required for significance. The correlation coefficient was not statistically significant, $r = .044$, p (one-tail) =.141. Therefore, the possibility of unwanted extraneous influence from social desirability was ruled out.

Interscale Correlation

Hypothesis 1 states that "Items within each construct will be moderate-positively correlated ($r > .5$), but will be correlated to a lesser degree across the other constructs ($r < .3$)." The results of interscale correlation generally supported Hypothesis 1 and provided evidence for convergent and discriminant validity.

Table 4.22

Correlations of Each Item with its Own Factor (*in Bold Type*) *& with Other Factors* (*N = 612*)

Item	Factor			
	Proximal Blame	Minimi-zation	Denial	Distal Blame
It was really my partner's fault.	**.64**	.25	.08	.17
My partner caused me to act that way.	**.62**	.21	-.11	-.01
My family would understand why I did it.	**.59**	.29	.20	.14
People close to me would support what I did.	**.54**	.25	.28	.12
It happened because my partner "pushed my buttons."	**.54**	.26	-.18	-.03
If my partner listened to me, it wouldn't happen.	**.53**	.26	-.05	.12
People in my culture would all do the same thing.	**.43**	.30	.12	.21
It was just a small problem.	.17	**.65**	.12	.15
What I did wasn't that big a deal.	.36	**.66**	.32	.17
It was not serious.	.23	**.63**	.35	.10
It was just an argument.	.34	**.59**	.04	.08
My aggression was really small.	.34	**.52**	.32	.11
It was just a communication problem.	.22	**.43**	-.01	.06
My friends would say it's none of their business.	.12	**.37**	.03	.12
What I did was aggressive to my partner.	.01	.18	**.70**	.13
I was aggressive during the event.	-.04	.21	**.66**	.10
What I did was harmful to my partner.	.08	.19	**.52**	.03
I regret being aggressive to my partner.	.10	.03	**.47**	.13
I hurt my partner during the event.	.07	.27	**.51**	-.01
It is part of my culture to treat my partner that way.	.18	.19	.21	**.57**
My religious beliefs led me to act that way.	.13	.15	.20	**.57**
It happened because I looked at violent movies/TV.	.00	.03	-.09	**.50**
It happened because of something and/or someone at work.	.07	.08	-.08	**.45**

Table 4.22 shows the correlation of each item with its own scale and with the other scales. All of the items in the denial construct correlated larger than .5, but correlated with the other constructs less than .3, except for Item 24 (r = .47). Items in the proximal blame and macro blame constructs supported the hypothesis except for Item 11 (r = .43) for proximal blame and Item 22 (r = .45) for distal blame. Items in the minimization construct generally supported the hypothesis except for six items (Item 9, 10, 17, 18, 20, and 26). However, the six items ranged between .32 and .47, showing borderline correlations between .3 and .5. In general, each item was more highly correlated with its own scale than with the others. Evidence for convergent and discriminant validity was supported.

Correlations between IVRS and Physical Abuse Measure

Hypothesis 2 states that "there is a statistically significant, positive relationship between physical abuse as measured by the CTS2 and irresponsible attitudes for violence toward the intimate as measured by the IVRS." The results of the correlational analyses presented in Table 4.23 showed that the minimization scale (r = -.117), the denial scale (r = -.159), and the total IVRS (r = -.130) were significantly related to the physical abuse scale of the CTS2 ($p < .001$). According to Cohen's (1988, 1992) criteria, each of the three scales had a small effect, explaining about 1% of the total variance. Moreover, the total IVRS and its two subscales had negative correlations with physical abuse as measured by the CTS2, which is the opposite of Hypothesis 2. The correlations of proximal blame and distal blame scales with the physical abuse scale tended to be lower and insignificant. Therefore, evidence for convergent validity was not supported by testing Hypothesis 2.

Table 4.23

Correlations between the IVRS and Physical Abuse (*CTS2*) (*n = 451*)

Measure	CTS2 – physical abuse
IVRS – minimization	-.117*
IVRS – denial	-.159*
IVRS – proximal blame	.013
IVRS – distal blame	-.039
IVRS – total	-.130*

Note. Actual sample sizes vary due to missing data (incomplete responses).

*Correlation is significant at the .01 level (1-tailed).

Correlations between IVRS and Psychological-Verbal Abuse Measure

Hypothesis 3 states that "there is a statistically significant, positive relationship between psychological-verbal abuse as measured by the CTS2 and irresponsible attitudes for violence toward the intimate as measured by the IVRS." The results of the correlational analyses presented in Table 4.24 showed mixed results with small effects based on Cohen's (1988, 1992) criteria. Hypothesis 3 was supported because there was a significant positive correlation (r = .146, $p < .001$) between the *proximal blame* scale and the psychological-verbal abuse scale as measured by the CTS2. However, the correlation between two other subscales (minimization and denial) and the psychological-verbal scale did not support the hypothesis. For example, the psychological-verbal abuse scale was negatively correlated to the *minimization* scale (r = -.110, $p < .001$) and the *denial* scale (r = -.206, $p < .001$). The correlations of the distal blame scale and total IVRS with the psychological-verbal abuse scale tended to be lower and statistically

insignificant. Therefore, Hypothesis 3 was partly supported, and evidence for convergent validity of the IVRS was partly confirmed.

Table 4.24

Correlations between the IVRS and Psychological-verbal Abuse (*CTS2*) (*n = 451*)

Measure	CTS2 – psychological-verbal abuse
IVRS – Minimization	-.110*
IVRS – denial	-.206*
IVRS – proximal blame	.146*
IVRS – distal blame	-.046
IVRS – total	-.075

Note. Actual sample sizes vary due to missing data (incomplete responses).

*Correlation is significant at the .01 level (1-tailed).

Correlations between IVRS and Negotiation Measure

Hypothesis 4 states that "there is no statistically significant relationship between irresponsible attitudes toward violence against the intimate as measured by the IVRS and the level of negotiation as measured by CTS2." The results of the correlational analyses presented in Table 4.25 showed that no scales of the IVRS were statistically significant in relation to the negotiation scale of CTS2. Hypothesis 4 was supported, and evidence for discriminant validity of the IVRS was confirmed.

Correlations between IVRS and Demographic Variables

Hypothesis 5 states that "there is no statistically significant relationship between attitudes toward violence against the intimate as measured by the IVRS and the demographic variables of age, gender, and existence of children."

Table 4.25

Correlations between the IVRS and Negotiation (*CTS2*) (*n = 437*)

Measures	CTS2 – negotiation
IVRS – minimization	.070
IVRS – denial	-.038
IVRS – proximal blame	.024
IVRS – distal blame	-.074
IVRS – total	.013

Note. Actual sample sizes vary due to missing data (incomplete responses).

*Correlation is significant at the .01 level (2-tailed).

The researcher chose three demographic variables: (a) age, (b) gender, and (c) existence of children (Question 1 - Do you have any children?; Question 2 - How many children do you have?). In the correlation analyses for the age and Question 2 variables, the Pearson product-moment correlation coefficient was used because both of the variables were continuous. For the gender variable and Question 1 variable, the point-biserial correlation coefficient was used because one variable was continuous and the other one was dichotomous (Howell, 1992). The results of the correlational analyses presented in Table 4.26 showed that no scales of the IVRS were statistically significant in relation to the demographic variables (age variable and the two questions about children) except for the gender variable. The gender of the batterers was significantly related to the level of irresponsible attitudes measured by the minimization (r = -.145, $p < .01$) and proximal blame (r = 126, $p < .01$) scales. However, correlation coefficients of -.145 (for the minimization scale) and .126 (for the proximal blame) were interpreted as small based on Cohen's creitera (1988). The gender issue will be discussed in more detail in Chapter 5.

Hypothesis 5 was partly supported, and evidence for discriminant validity of the IVRS was also partly confirmed.

Table 4.26

Correlations between the IVRS and Demographic Variables (*n = 474*)

Measure	Age	Gender	Do you have any children?	How many children do you have?
IVRS – minimization	.029 (.538)	-.145 (.002*)	-.014 (.768)	-.038 (.411)
IVRS – denial	.046 (.319)	.030 (.511)	.004 (.932)	.028 (.543)
IVRS – proximal blame	-.043 (.351)	.126 (.006*)	.034 (.465)	-.011 (.807)
IVRS – distal blame	.072 (.120)	.011 (.811)	.010 (.823)	-.012 (.792)
IVRS – total	.030 (.522)	.012 (.792)	.016 (.726)	-.017 (.720)

Note. *p*-values are included in the parentheses
*Correlation is significant at the .01 level (2-tailed).

Difference between Jury Group and Batterer Groups

Hypothesis 6 states that "The reported levels of the attitudes of court-mandated perpetrators related to responsibility for violence toward the intimate partner as measured by the IVRS will be significantly greater than those of people on jury duty."An independent-samples *t* test was conducted to evaluate Hypothesis 6. As displayed in Table 4.27, all of the *t* tests for the total IVRS and its subscales were statistically significant except for the proximal blame scale [$t(df = 183.839) = .83$, $p = .41$]. The effect size in mean difference between the court-mandated batterers (representing the characteriscs of batterers) and people on jury duty (representing the characteristics of the general public) was medium through large, ranging from .31 to .54, according to Cohen's criteria (1988). With the exception of the proximal blame scale,

Hypothesis 6 was supported. In general, evidence for criterion-related validity of the IVRS was confirmed.

Table 4.27

Batterers Group and Jury Group Means, Standard Deviation, Standard Error Means, Effect Size, and Independent Samples T Tests by Group

	Jury Group (n = 473)			Batterers Group (n = 138)			Group Comparison			
Variables	*M*	*SD*	*SE*	*M*	*SD*	*SE*	*T* test	*df*	*p*	*r*
Minimization	22.78	5.02	.23	18.56	6.72	.57	6.85	183.84	.00*	.45
Denial	17.23	4.26	.19	12.73	5.55	.47	8.80	186.47	.00*	.54
Proximal Blame	19.94	5.48	.25	19.42	6.77	.58	.83	192.32	.41	.06
Distal blame	7.19	2.66	.12	5.97	2.44	.21	5.07	240.19	.00*	.31
IVRS Total	67.15	9.93	.46	56.68	15.89	1.35	7.34	169.32	.00*	.49

Note. Equal variances not assumed in the independent-samples *t* test. *SE* = standard error mean; *r* = Perason's correlation coefficient (effect size).

*$p < .01$ (1-tailed).

Chapter Summary

Chapter 4 described the results of a series of data analyses conducted in the study. These analyses included: (a) descriptive analyses to select the refined items evaluated by a panel of experts in the area of intimate partner violence; (b) item analyses to check the overall distribution of variables and to confirm reliability evidence; (c) preliminary analyses including descriptive analysis, normality tests, the Kaiser-Meyer-Olkin (KMO) test, and Bartlett test of sphericity; (d)

factor analyses to refine the instrument; (e) internal consistency reliability analyses for the items refined through factor analysis; and (f) a series of correlation analyses and *t* tests to test hypotheses and to investigate evidence for convergent, discriminant, and criterion validity. Chapter 5 will describe summaries of results, discussions on identified issues and unexpected findings, implications for practice and future research.

CHAPTER 5

DISCUSSION AND CONCULSION

Two research questions and six hypotheses for validating the Intimate Violence Responsibility Scale (IVRS) were investigated in Chapter 3 and Chapter 4. In the sections below, the researcher summarizes the major findings and discusses unexpected results, theoretical and practical implications, as well as suggestions for further research.

Summary of Major Findings

The findings of the reliability analyses supported that the internal consistency of the four subscales of the 23-item IVRS had an acceptable-to-good coefficient alpha ranging from .72 to .82. The internal consistency for all 23 items was .83, suggesting that the scale scores are reasonably reliable for respondents in the study. Six hypotheses were proposed to support evidence for convergent, discriminant, and criterion validity.

Evidence for convergent validity was established by testing Hypothesis 1, 2, and 3. Hypothesis 1 was generally supported because the items within each construct were correlated with their own construct higher than .5. Hypothesis 2 and 3 were not supported, because the level of (ir)responsible attitudes measured by the IVRS were not positively correlated with the level of physical and psychological-verbal violence measured by the CTS2, introducing a scoring order issue for the minimization and denial constructs.

Evidence for discriminant validity was established by testing Hypothesis 1, 4, and 5. Hypothesis 1 was generally supported because the items within each construct were correlated to a lesser degree ($r < .3$) than the items in the other constructs. Hypothesis 4 was fully supported because (ir)responsible attitudes toward violence against the intimate partner were not

significantly correlated with the level of negotiation. Hypothesis 5 was partly supported. In Hypothesis 5, (ir)responsible attitudes of the IVRS were hypothesized not to correlate with demographic variables such as age, gender, and the number of children. With the exception of the gender variable, the other demographic variables were not significantly correlated with (ir)responsible attitudes of the IVRS. A Gender-related issue is discussed in the sections below.

Criterion validity was tested by investigating Hypothesis 6. In Hypothesis 6, the levels of the attitudes of court-mandated batterers related to irresponsibility (minimization, denial, proximal blame, and distal blame) for their violent behavior against the intimate partner were expected to be greater than those of people on jury duty. The hypothesis was not supported. With the exception of the proximal blame subscale, all of the three subscales and the total IVRS were statistically significant; however, the direction was opposite to the hypothesis, suggesting that the general pulic are less responsible for their violent behavior than court-mandated batterers. Issues concerning the group differences are discussed in the following sections.

Issues and Discussion

Construct Determination

Differences between the proposed constructs and the confirmed constructs. It was proposed that the original 32-item IVRS would be grouped into four different constructs: *minimization*, *denial*, *blame*, and *collusion*, all of which were theoretically established by the CECEVIM intervention model (Ramirez-Hernandez, 2000, 2005) and the ecological perspectives (Bronfenbrenner, 1979). However, the results from a series of validation procedures showed that two out of the four proposed constructs of the original 32-item IVRS were different from the four confirmed constructs (*minimization*, *denial*, *proximal blame*, and *distal blame*) of the final 23-item IVRS. Specifically, the minimization and denial constructs were confirmed as

were proposed. However, the collusion construct was deleted and the blame construct was further divided into two new constructs: *proximal blame* and *distal blame*. These two branches of the blame construct can be theoretically explained by systems concepts of the ecological perspectives. As such, the blame construct was divided into *proximal blame*, reflecting micro system, and *distal blame*, reflecting meso/exo and macro systems. The multidimensional attributes of the blame construct were also supported by the literature. Petretic-Jackson, Sandberg, and Jackson (1994) developed the Domestic Violence Blame Scale (DVBS) to assess multidimensional blame attribution on domestic violence. They found that the blame construct consists of four distinct sub-constructs: offender blame, victim blame, social blame, and situational blame. In the present study, offender blame and victim blame of the DVBS were grouped together as proximal blame, while social blame and situational blame of the DVBS were identified as distal blame.

Item loadings of the collusion factor. The proposed collusion construct was not verified as a single factor through the validation process. In the 31-item IVRS[3], eight items of the collusion construct were unexpectedly loaded on the proximal blame and minimization constructs. The eight collusion items showed unclear factor loading patterns, which affected the decision about how many factors could be retained during the factor retention process. In particular, four of five collusion items had low factor loadings (less than .40) on the minimization factor and three collusion items were loaded on the proximal blame factor. In the final 23-item IVRS, three items (Item 3 – "My family would understand why I did it"; Item 4 – "People close to me would support what I did"; and Item 11 – "People in my culture would all do the same thing") were loaded on the proximal blame construct, and one item (Item 20 – "My friends would say it's none of their business") was loaded on the minimization construct.

[3] One item was deleted from the original 32-item IVRS during the item analysis.

These unexpected findings can be explained theoretically. The eight collusion items were originally developed based on the CECEVIM intervention model (Ramirez-Hernandez, 2000, 2005). According to Ramirez-Hernandez (2000, 2005), c*ollusion* is an attitude that can be overlapping and multidimensional in nature. Ramirez-Hernandez (2000, 2005) claimed that *collusion*

> means to get and give support for violent acts and people who are abusive. When you laugh about someone being violent, you are supporting their violence. When you tell someone that your partner deserves to be abused, you are colluding. When you accept cultural assumptions about women needing to be abused, you are colluding. If you come to class and do not pay attention, you are colluding. If you do not take your violence seriously, you are colluding. (p. 20)

The collusion construct was, in theory, strongly associated with the three other proposed constructs (Ramirez-Hernandez, 2000, 2005). Ramirez-Hernandez explained that when people blame, deny, and minimize their violence, they also collude. Dominelli (1999) also supported the close association between collusion and other proposed constructs. Batterers often exploit collusion to deny, blame, and/or minimize the impact of their abusive behavior on their victims in order to avoid taking responsibility for their violence (Dominelli, 1999). This theoretical overlapping was observed during the scale reduction process.

In contrast to minimization, blame, and denial, the literature rarely identified the quality of collusion in domestic violence prevention. Most of the empirical studies on violence and accountability/responsibility usually focused on batterers' blame, denial, and minimization (e.g., Henning & Holdford, 2006; Jackson, Witte, & Petretic-Jackson, 2001; Scott & Straus, 2006). However, collusion was one of the most unique and salient constructs proposed and advocated

by the CECEVIM intervention model (Ramirez-Hernandez, 2000, 2005) upon which the present study was designed. Although items within the collusion construct failed to load on a single factor as expected by the study, the factor loading of the original collusion items on the proximal blame and minimization constructs were fully explained and supported by the CECEVIM intervention model.

Gender Difference

Hypothesis 5 was supported except for the gender variable. As shown in Table 4.26, the results of the correlational analyses indicated that the gender variable was negatively correlated with the minimization scale (r = -.145, p < .01), but positively correlated with the proximal blame scale (r = .126, p < .01). These results suggest that males minimized their violent behavior more than females and females blamed their partner for their violent behavior more than males. Interestingly, the gender variable was not associated with the other two scales (distal blame and denial). These particular results provoked further thought about why the correlation scores were small and the direction of the two subscales (minimization and proximal blame) was opposite based on the gender variable.

One plausible explanation for higher level of female blame is based on motivations of female aggression. Some studies (e.g., Hamberger & Potente, 1994; Henning et al., 2005; Saunder, 1995) specified that one of the primary motivations for female aggression is self-defense in intimate partner relationships. If the motivation of female violence is self-defense against abusive intimate partners (usually male partners), the blaming attitudes of females have to be understood in a different way. The so-called cognitive distortion (attributions of blaming) should be interpreted as a sign of female victimization, which necessitates ensuring victims' safety in the abusive relationships. In this sense, the higher scores of the proximal blame scale of

female offenders can be associated with the higher level of female victimization in abusive relationships. The self-defense nature of female violence against male partners and attributions of blame should be assessed and evaluated altogether during the entire process of intervention and treatment to ensure victims' rights and safety.

In theory, the CECEVIM's intervention model does not explain the gender difference in relation to the four constructs of (ir)responsibility. In addition to the lack of theoretical explanation, empirical research on the gender variable with multidimensional attributes of (ir)responsibility has seldom been conducted. Moreover, the limited number of literature has produced mixed results. For example, with college-student samples, two empirical studies (Bryant & Spencer, 2003; Scott & Straus, 2007) reported that male students were more likely to engage in blaming the victims than female students. In addition, Bryant and Spencer (2003) reported that males were more likely to deny than females, while Scott and Straus (2007) found no difference in minimization. In contrast, in a study with a clinical sample (1,267 males and 159 females), Henning, et al. (2005) reported that although both male and female offenders engaged in significant minimization, denial, and blame in general, women were more likely to blame their intimate partners for a recent violent incident. Because of a lack of theory and inconsistent findings in a small number of empirical studies on gender and cognition of responsibility, it is an obvious challenge to have a thorough gender-based understanding of patterns, styles, and effects of responsibility-related cognitive distortions. Interpretation of the gender-based differences in attitudes toward one's own violent behaviors is also problematic. Therefore, the results of the present study will contribute to a small, but growing body of literature that addresses how differently women and men perceive, evaluate, and take responsibility for violence in relationships.

The different directions and the low effect size of the correlation coefficients between the male and female respondents might be explained by examining the characteristics of sample used in the present study. The current research used community samples (people on jury duty) to represent the opinion of the general public. Clinical samples (e.g., court-mandated perpetrators) and community samples may exibit different patterns. Henning and Holdford (2006) found that violence rates between females and males were roughly equal in community samples. This result may be a reason for the small effect size of the correlation coefficients between the IVRS scores and gender. In addition, the community sample of the present study represented all types of living arrangements including marital, dating, and cohabiting relationships. The different relationship status could bring different dynamics between women and men in conflict situations. As Scott and Straus (2007) pointed out, it could be possible that it is common to have a low-level aggression in dating relationships compared to marital relationships. In the present study, over 50% of the study participants were not married (single – living apart, 24%; unmarried – living together, 16%; Divorced, 6%; Separated, 3%, others, 3%) at the point of surveys; this relationship status could confound correlation results between the IVRS scores and the gender variable.

Scoring Rules

Scoring rules were revisited and re-evaluated to explain the illogical results of Hypothesis 2 and 3. It was hypothesized that the physical abuse and psychological-verbal abuse measures of the CTS2 (The Revised Conflict Tactics Scales; Straus, Hamby, Boney-McCoy, & Sugarman, 1996) would have positive correlations with the total IVRS and its four subscales: the minimization scale, the denial scale, the proximal blame scale, and the distal blame scale. However, the analysis results showed negative correlations or no correlations between the IVRS

and the CTS2 with small effect size (see Table 4.23 and 4.24). The scoring rule of the IVRS was designed based on the common agreement that if people are irresponsible for their violence, they are more physically, verbally, and psychologically violent than those who are responsible. According to this theory, the researcher proposed that high scores on the total IVRS and its four subscales indicate high irresponsibility for violent behaviors toward the intimate partner. In other words, if someone was abusive, his or her IVRS scores would be higher. However, the results of correlational analyses showed that the minimization and denial scales had negative correlations with the physical abuse and psychological-verbal abuse scales of the CTS2, implying that more abusive people are less minimizing and denying.

These illogical and unexpected findings necessitate reevaluation of the scoring order scheme established by the researcher during the initial scale development stage. The logic behind the original scoring strategy was explained by the so-called "humanitarian perspective" that the researcher adopted while developing the scale items. The humanitarian perspective could be understood as a sympathetic, self-critical, self-reflective, and humble acknowledgement of a person's abusive behavior toward another. Researchers and practitioners have consistently emphasized the importance of this perspective in batterer intervention programs (e.g., Bancroft, 2002; Ramirez-Hernandez, 2005). Ramirez-Hernandez (2005) specified that "It is necessary to be self critical and honest to start to change our behaviors and attitudes. . . Discarding these irresponsible attitudes is fundamental to promote our change." (p.19) Along the same line, Gondolf (2000) specified that people stopped committing violence when they had increased self-awareness and empathy toward their partner. Leversque, Gelles, and Velicer (2000) connected this concept to "readiness to change." They specified victim blame was an important dimension to assess batterers' readiness to change. In the study to increase the efficacy of batterer treatment,

they found that men in the advanced stages of readiness to change engaged in less partner blame than those at earlier stages of the intervention (Levesque et al., 2000).

According to the humanitarian perspective, more responsible people would choose to *disagree* or *strongly disagree* on items reflecting minimizing, denying, blaming, and colluding. For example, someone who is responsible for his or her violent behavior would choose *strongly disagree* on items reflecting *minimization* (i.e., it was not serious), *denial* (i.e., I really didn't do anything), *blame* (i.e., my partner caused me to act that way), and *collusion* (i.e., my family would support what I did.). The assumption was that a responsible person would deeply understand the severity and impact of his or her abusive behavior on the victim and try to accept the consequences of that abusive behavior. Such a person would be honest, self-analytical, self-critical, and sympathetic about what he or she had done.

However, the study participants (general public) seemed to accept these items in a different way. They seemed to respond to the IVRS items objectively and literally, not sympathetically and self-critically. For example, respondents might choose to *strongly agree* on IVRS items (e.g., it was just an argument; it was not serious; it was just a small problem, etc.) not because they were not violent people, but because they were not self-critical, self-evaluative, or sympathetic. This may help to explain the unexpected findings. Participants in this study were people on jury duty. They filled out self-administered questionnaires while they were waiting in the room with other people who were also filling out the survey right next to each other. There was no education to increase their awareness about their own violence prior to the survey, as in most clinical settings. In clinical settings (such as batterer intervention programs) batterers have serious and intense moments of self-reflection and evaluation on their behavior regarding the incident that had put them into jail, court, and/or intervention. Intervention programs help

batterers become involved in this critical process by providing education, challenging irresponsible attitudes and behavior, and sharing ways to be intimate to their partners. In this sense, batterers in intervention programs are more likely to be self-critical and reflective.

This group difference may help explain the results of Hypothesis 6 (see Table 4.27). The *t* test results showed that the community group (represented by people on jury duty) was less responsible for their aggressive behavior toward their intimate partners than the court-mandated batterers. Considering the statistical power (with medium to high effect size ranging from .31 to .54) of differentiating the two groups (general public and batterers), the results supported the previous discussion that batterers in clinical settings may be more aware of their behavior than the general public.

In addition, systematic errors could have occurred during the administration of the survey. The proposed instrument consisted of the instruction page and the main scale items (see *Appendix D*). It was very important that the instructions were followed in order that participants answered the survey items accurately. Respondents in the present study were asked to describe their violent behavior toward intimate partners in the underlined space on the instruction page. However, almost 70% of the study participants did not indicate what the violent incident was. Some of the participants specified that there was no violent incident but then went on to answer the IVRS items. Several respondents wrote down their partner's violent behaviors instead of describing their own violent behaviors against the partner. The researcher had to assume that survey participants read but simply disregarded writing the incident. However, serious systematic errors could have occurred if they consistently overlooked the instructions due to their layout and/or design. In addition, the description of the violent incident showed different levels of severity and magnitude ranging from emotional/psychological disturbance (e.g., "upset,"

"frustration," "demanding my ways," etc.) to verbal violence ("yelling," "arguing," "crying," etc.) and physical violence ("grabbing," "hitting," "throwing things," "slapping," "chocking," etc.). Some people described their violence briefly (e.g., "disagree," "being short," etc.) or specifically (e.g., "After walking behind her, I became very mad and pushed her to the floor. She got up, started swinging her fist at me and I grabbed and restrained her." etc.). The correlation results would vary according to what kinds of violence occurred and how specifically the participants remembered the situation when they answered the survey. It is clearly challenging to accurately measure cognitive distortions such as cognition and attitudes related to responsibility for violent behavior. Although several possible explanations were provided with regard to the coding order issue, all of them need to be investigated in further studies. In addition, consideration of reversing the scoring order of the IVRS subscales (minimization, denial, and distal blame) should be further explored through theoretical and practical discussions with a panel of professionals specializing in intimate partner violence prevention and intervention.

Implications for Practice

It is always a challenge to answer the question of how to help batterers become more responsible for changing their violent behavior. The fact that most batterers maintain some level of irresponsible attitudes (e.g., blame, minimization, and denial) presents a challenge to practitioners who work with batterers. The development of the Intimate Violence Responsibility Scale (IVRS) may provide a host of allied health professionals including, social workers, psychologists, physicians, nurses, forensic experts, and researchers with valuable information regarding the complex nature of the relationships between cognition and behavior.

Further development and use of the IVRS as an assessment tool may help to underscore one of the core modalities used in batterer intervention programs; cognitive-behavioral

modification. Cognitive-behavioral modification in batterer intervention helps individuals function better (usually behavior change is the outcome) by modifying what they think and believe, and how they interpret experience in current conflict situations. As explained in *violence transformation process* in chapter 2, batterers can change violent behavior and cognitions (incorrect/incomplete knowledge, ideas, thoughts, beliefs, and attitudes toward intimate partners and violence) through intervention programs. Based on the results of the IVRS assessment, allied health professionals in the area of intimate partner violence intervention can improve intervention/prevention strategies that include cognitive-behavioral techniques designed to challenge, modify, and change inappropriate attitudes of denial, minimization, blame, and collusion. A set of irresponsible attitudes about batterers' violence toward the intimate partner has to be thoroughly assessed prior to undertaking intervention with batterers because these attitudes affect the entire period of the intervention/treatment. For example, those who deny their violence appear to be more resistant to treatment (Henning & Holdford, 2006) and to be prematurely terminated (Daly & Pelowski, 2000). Levesque et al. (2000) found that men in treatment who accept blame are more likely to use strategies to end violence than those who don't accept blame. With further development, the IVRS may be used as a barometer to measure batterers' readiness to change in treatment and intervention.

Allied health professionals may also receive benefit from assessing their own attitudes on violence. It is important for them to fully understand their personal attitudes/beliefs on violence because they are people who supervise, treat, and help batterers and victims. There is a plethora of studies on negative attitudes of allied health professionals toward victims of violence. These studies show that lay persons and professionals hold similar negative attitudes toward victims. For example, in a study for assessing beliefs about victims of violence and the physician's role,

Garimella, Plichta, Houseman, and Garzon (2000) found that 30% of the professionals (emergency medicine, obstetrics-gynecology, psychiatry, and family practice) held victim-blame attitudes toward victims of violence. Victim blame among law enforcement personnel and therapist-perpetrator collusion have been repeatedly documented. As much as denial, minimization, blame, and collusion prevent batterers from fully engaging in treatment, these irresponsible attitudes can prevent allied health professionals from providing effective intervention/prevention program. Therefore, with further development, the IVRS may be used as a tool for self-evaluation on attitudes/beliefs on violence.

In addition, further developmet of the IVRS may allow the instrument to be used for measuring outcomes in practice settings. The IVRS has potential to provide information on the variability among four different attitudes of responsibility, the level of responsibility, and its change throughout the intervention period. Allied health professionals may include the IVRS in their evaluations of alleged perpetrators with other established scales that measure different attitudinal areas and /or violent behavior. The utilization of the IVRS with different measures may contribute to finding relationships among cognitions related to (ir)responsibility and violent behavior. Knowledge concerning a relationship and/or association between cognition and behavior may eventually contribute to designing, modifying, and strengthening the educational and training programs.

Implications for Future Research

The results of the present study address several areas of need with regard to further research. First, from the conceptual and theoretical perspective, this study was designed to develop an instrument that measures the (ir)responsibility cognition related to violent behavior toward the intimate partner, which was conceptualized by the Ramirez-Hernandez's CECEVIM

intervention model. The responsibility cognition was hypothesized to have a positive correlation with violent behavior in the study; however, mixed findings were observed and several complex issues regarding the relationships between cognition and behavior were observed. The correlations between the (ir)responsibility cognition (measured by the IVRS) and the physical/psychological-verbal violence (measured by the CTS2) ranged between .039 and .206, which is relatively low. The denial and minimization constructs were negatively correlated with violent behaviors, which was opposite to the results of the proposed relationships. The gender variable was also correlated with the (ir)responsibility cognition, which raises questions about how male and female batterers will be different in terms of perceiving and holding the (ir)responsibility cognition in intimate partner relationships. These complex findings, along with the results of the factor analyses conducted, provide a strong impetus for further investigation on cognition and behavior in general, as well as, further development of the instrument itself..

Future studies could be designed to determine how the factors might be replicated in other populations of respondents. Specialized groups such as batterers, males, females, youths, and a larger sample of the general public may produce important information on similarities and differences of factor structure for the (ir)responsibility cognition. It would be worth conducting factor replication studies within homogenous groups in association with partner relationship variables. The factor structure could also be investigated among professionals including physicians, mental health practitioners, police and criminal justice officers, as well as paraprofessional and volunteer workers who staff community intervention programs for batterers and victims. In future studies, several modifications on the instruction page should be considered to decrease the possibility of survey administration-related errors. The current lengthy instructions should be more concise and much simpler to attract the interest of the participants.

The mode of scale administration also should be changed in future studies. A researcher or a team of investigators may consider using a brief introduction to emphasize the importance of following the survey instructions before answering. In this way, the researcher may obtain substantially different study results when respondents thoroughly follow the survey instructions.

Another challenging area of research will involve further investigation of the unexpected findings of the collusion construct, which was not included in the final four constructs that emerged from the current data analyses. The discrepancy between the empirical evidence and the theory needs to be tested to determine whether the four irresponsible attitudes theorized by the CECEVIM intervention model (Ramirez-Hernandez, 2000, 2005) can be confirmed or not. A different set of collusion items needs to be developed and validated to see whether the four-factor solution identified in the present study will be confirmed again. New findings might help consolidate the limited understanding of the collusion construct. To meet this research need, a more theory-driven, profound, rigorous, and systematic scale development procedure and a series of factor analysis validations (exploratory factor analysis and confirmatory factor analysis) should be implemented.

Validation requires a cumulative and ongoing process, which can be achieved through repetitive studies on these responsibility constructs. Generalizing the results of the present study across populations, settings, and other aspects should be done cautiously. As the researcher has already discussed, the nature of the present study was more exploratory and theory-generating. In order to further examine the measurement structure of the IVRS and determine the extent to which a four-factor model adequately accounts for the co-variation among the scale items, a Confirmatory Factor Analysis (CFA) needs to be conducted on the IVRS items in a future study. This line of inquiry on factor validation can be more formally and empirically supported by

CFA. It consolidates our understanding of the complex relationships between the sub-dimensions of the (ir)responsibility cognition and violent behavior toward the intimate partner.

Conclusion

Although there were several limitations that provoked further discussions of the IVRS utilization, the study results generally supported the research questions and hypotheses presented in the current study. The IVRS and its four subscales had an acceptable level of internal consistency ranging from .72 to .83, above the minimum level of .70 recommended by Nunally (1978). The statistical procedure of factor analyses indicated the four-factor solution for the IVRS, which was theoretically explained by the CECEVIM intervention model and ecological perspective. Evidence for construct validity was found to be mixed through a series of validation processes and statistical analyses. They only partially supported evidence of convergent, discriminant, and criterion-related validity. Unexpected findings identified by testing Hypothesis 2, 3, and 6 raised an important discussion about scoring order and construct verification.

This study has provided a preliminary analysis of the IVRS, which with further development may be used as an assessment and evaluation tool in clinical and educational settings where intervention and prevention programs for batterers are provided. The utilization of the IVRS may be extended eventually, based on the practitioners' clinical and research needs in the area of intervention and prevention of domestic violence. The IVRS could be an important tool to connect attitude/cognition constructs to behavior constructs in interpersonal violence. With more work on development, the IVRS may be used in several studies including (a) assessing how much (ir)responsibility batterers take, (b) specifying what kinds of (ir)responsible attitudes batterers have, and (c) predicting violent behavior by evaluating (ir)responsibility attitudes.

There is little doubt that the ultimate long-term goal of a great variety of Family Violence Intervention Programs (FVIP) is to end violence in the family and in society. Developing prevention and intervention programs to hold batterers responsible for their violent behavior must also be our primary goal because everyone deserves to be safe at home and in society. Batterers must be held responsible for stopping their violence toward their intimates. Achieving this goal can be facilitated by assessing whether or not batterers are responsible for their behavior. Development of a reliable and valid measurement such as the IVRS potentially can contribute to movement toward the end of domestic violence in society.

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APPENDICES

Appendix A

DEMOGRAPHIC INFORMATION

Cover letter

Dear Participants,

This study titled "Development of the Relationship Beliefs Scale" is being conducted by Sung Hyun Yun, a doctoral student of the School of Social Work at the University of Georgia (678-908-1784), under the direction of Dr. Betsy Vonk, School of Social Work, University of Georgia (706-542-5444).

Please be advised that your participation is entirely voluntary.

The reason for the study is to develop an instrument that measures beliefs and attitudes of people involved in intimate partner relationships. The study will investigate attitudes and beliefs that affect responsible relationship toward an intimate partner.

You will not benefit directly from this research. However, you will receive two good quality pens as tokens of gratitude. Your participation may help researchers increase understanding of how people view themselves and their partners when there are conflicts in their relationships.

If you take part in this study, you will be asked to give information about the following topics:
1) Demographic information: age, gender, race, marital status, familial relationship, income, education, religion, and occupation.
2) General medical/mental health information: alcohol/substance use and emotional/psychological problems.
3) Experience on conflict tactics in intimate relationships.
4) Perceptions of social desirability.
5) Perceptions of responsibility toward intimate partners.

It is possible that some of the questions may be difficult for you to answer. You don't have to answer any questions you don't want to. **Your responses will be anonymous** because there is no way for me to know who completed which questionnaire. Please do not include any identifying information, like your name or address, with your response.

The researcher will answer any further questions about the research now or during the course of the project, and can be reached by telephone at: 678-908-1784 or via email: yshhsy70@uga.edu

It will take about 15 minutes to fill out the survey. Would you kindly take about 15 minutes of your time right now to complete this questionnaire?

Sincerely,

Sung Hyun Yun, LMSW, Ph.D. Candidate
The University of Georgia
School of Social Work

Demographic Information

==========

1. Age: _____

2. Your gender: □ Male □ Female

3. Are you and your partner currently living together?
   □ Yes □ No

4. How long did you/have you been living with your current or most recent partner? _____ years

5. What is/was your marital status while in this current/most recent relationships?
   a. Single (living apart)
   □ Unmarried (living together)
   □ Married
   □ Separated
   □ Divorced
   □ Cohabitation
   □ Other _____

6. Do you have any children?
   □ Yes □ No
   If yes, how many children (under the age 18) do you have? _____
   how many children (under the age 18) are living with you at your home? _____

7. How many years of school did you complete? _____

8. What category best describes your ethnic/racial group?
   □ American Indian
   □ Asian
   □ Black
   □ Latino
   □ Mixed (Specific: _____)
   □ White
   □ Other: _____

9. What is your employment status?
   - □ Owner (Self-employed)
   - □ Employed (Full-time)
   - □ Employed (Part-time)
   - □ Unemployed
   - □ Homemaker
   - □ Other: _____

10. What is your religious preference?
   - □ Protestant
   - □ Catholic
   - □ Buddhism
   - □ Moslem
   - □ Hindu
   - □ Jewish
   - □ None
   - □ Other: _____

11. What is your yearly income?
   - □ $0 – 4,999
   - □ $5,000 – 9,999
   - □ $10,000 – 24,999
   - □ $25,000 – 39,999
   - □ $40,000 – 54,999
   - □ $55,000 – 69,999
   - □ $70,000 – over
   - □ Prefer not to answer

11-1. What is your (and spouse's) yearly household income?
   - □ $0 – 4,999
   - □ $5,000 – 9,999
   - □ $10,000 – 24,999
   - □ $25,000 – 39,999
   - □ $40,000 – 54,999
   - □ $55,000 – 69,999
   - □ $70,000 – over
   - □ Prefer not to answer

12. Do you drink alcoholic beverages?

   □ Yes □ No

   If yes, answer the following questions (If no, please go to item 13).

   12-1. Do you feel that alcohol contributes to relationship problems with your partner?
      - □ Never
      - □ Seldom
      - □ Occasionally
      - □ Often
      - □ Very often

12-2. Do you believe that you have an alcohol problem?

- □ No problem
- □ Slight problem
- □ Serious problem

12-3. How many drinks of the following alcoholic beverages do you consume each day or each week on average?

□	Beer: ____ a day	or	□	Beer: ___ a week	**or**	□	Beer: ___ a month
□	Wine: ____ a day	or	□	Wine: ___ a week	**or**	□	Wine: ___ a month
□	Hard liquor:___ a day	or	□	Hard liquor:___ a week	**or**	□	Hard liquor:___ a month

13. Have you consumed non-prescribed or "recreational" drugs within the last year?

□ Yes □ No

If yes, answer the following questions (If no, please go to item 14).

13-1. Do you feel that drugs contribute to relationship problems with your partner?

- □ Never
- □ Seldom
- □ Occasionally
- □ Often
- □ Very often

13-2. Do you believe that you have a drug problem?

- □ No problem
- □ Slight problem
- □ Serious problem

14. Do you have any emotional, psychological or psychiatric problems (e.g., depression, bipolar, etc.)?

□ Yes □ No

If yes, please specify:_____

15. Have you even been arrested?

□ Yes □ No

If yes, please check all that apply:

- □ As a juvenile, non-violent
- □ As a juvenile, violent
- □ Adult, non-violent charge
- □ Adult, violent charge
- □ Other (Specify: _____)

16. Have you ever been charged for assaulting your partner, past partner, children, or people around you?
    - □ Yes □ No

17. Have you ever received treatment for violent behavior toward family members or people around you?
    - □ Yes □ No

18. Are you currently participating in a Family Violence Intervention Program (Batterer Intervention Program)?
    - □ Yes □ No

    If yes, please estimate the number of group sessions you have attended.
    - □ Intake
    - □ 1 – 5 classes
    - □ 6 – 10 classes
    - □ 11 – 15 classes
    - □ 16 – 20 classes
    - □ Over 21 classes

19. As a child, did you ever see any physical violence committed between adults in your family?
    - □ Yes □ No

    If yes, what kinds of things did you see (check all that apply)?
    - □ Hitting
    - □ Pushing
    - □ Kicking
    - □ Slapping
    - □ Grabbling
    - □ Chocking
    - □ Property damage
    - □ Use of weapon
    - □ Other

      _____

20. As a child, did you ever see any verbal-emotional violence committed between adults in your family?

- Yes
- No

If yes, what kinds of things did you see?

- yelling
- call names
- swearing
- threatening
- insulting
- blaming/inducing guilt
- isolation
- Other

_____

21. As a child, did you ever see any sexual abuse committed between adults in your family?

- Yes
- No

Appendix B

The Marlowe-Crowne Social Desirability Scale (MCSDS)

MCSDS

==========

Listed below are a number of statements concerning personal attitudes and traits. Read each item and decide how it pertains to you.

Please respond either TRUE (T) or FALSE (F) to each item. Indicate your response by circling the appropriate letter next to the item. Be sure to **answer all items**.

	True	False
1. It is sometimes hard for me to go on with my work if I am not encouraged.	T	F
2. I sometimes feel resentful when I don't get my way.	T	F
3. On a few occasions, I have given up doing something because I thought too little of my ability.	T	F
4. There have been times when I felt like rebelling against people in authority even though I knew they were right.	T	F
5. No matter who I'm talking to, I'm always a good listener.	T	F
6. There have been occasions when I took advantage of someone.	T	F
7. I'm always willing to admit it when I make a mistake.	T	F
8. I sometimes try to get even rather than forgive and forget.	T	F
9. I am always courteous, even to people who are disagreeable.	T	F
10. I have never been irked when people expressed ideas very different from my own.	T	F
11. There have been times when I was quite jealous of the good fortune of others.	T	F
12. I am sometimes irritated by people who ask favors of me.	T	F
13. I have never deliberately said something that hurts someone's feelings.	T	F

Appendix C

THE REVISED CONFLICT TACTICS SCALES (CTS2)

CTS2

Relationship Behaviors

No matter how well a couple gets along, there are times when they disagree, get annoyed with the other person, want different things from each other, or just have spats or fights because they are in a bad mood, are tired, or for some other reason. Couples also have many different ways of trying to settle their differences. This is a list of things that might happen when you have differences. Please **circle how many times you did each of these things in the past year, and how many times your partner did them in the past year.** If you or your partner did not do one of these things in the past year, but it happened before that, circle "7."

How often did this happen?

1 = Once in the past year	5 = 11 – 20 times in the past year
2 = Twice in the past year	6 = More than 20 times in the past year
3 = 3 – 5 times in the past year	7 = Not in the past year, but it did happen before
4 = 6 – 10 times in the past year	0 = This has never happened

	Once	Twice	3-5 times	6-10 times	11-20 times	More than 20 times	Not in the past year, but it happened before	Never
1. I showed my partner I cared even though we disagreed.	1	2	3	4	5	6	7	0
2. *My partner* showed care for me even though we disagreed.	1	2	3	4	5	6	7	0
3. I explained my side of a disagreement to my partner.	1	2	3	4	5	6	7	0
4. *My partner* explained his or her side of a disagreement to me.	1	2	3	4	5	6	7	0
5. I insulted or swore at my partner.	1	2	3	4	5	6	7	0
6. *My partner* insulted or swore at me.	1	2	3	4	5	6	7	0
7. I threw something at my partner that could hurt.	1	2	3	4	5	6	7	0
8. *My partner* threw something at me that could hurt.	1	2	3	4	5	6	7	0
9. I twisted my partner's arm or hair.	1	2	3	4	5	6	7	0
10. *My partner* twisted my arm or hair.	1	2	3	4	5	6	7	0
11. I had a sprain, bruise, or small cut because of a fight with my partner.	1	2	3	4	5	6	7	0
12. *My partner* had a sprain, bruise, or small but because of a fight with me.	1	2	3	4	5	6	7	0

	Once	Twice	3-5 times	6-10 times	11-20 times	More than 20 times	Not in the past year, but it happened before	Never
13. I showed respect for my partner's feelings about an issue.	1	2	3	4	5	6	7	0
14. *My partner* showed respect for my feelings about an issue.	1	2	3	4	5	6	7	0
15. I made my partner have sex without a condom.	1	2	3	4	5	6	7	0
16. *My partner* made me have sex without a condom.	1	2	3	4	5	6	7	0
17. I pushed or shoved my partner.	1	2	3	4	5	6	7	0
18. *My partner* pushed or shoved me.	1	2	3	4	5	6	7	0
19. I used force (like hitting, holding down, or using a weapon) to make my partner have oral or anal sex.	1	2	3	4	5	6	7	0
20. *My partner* used force to make me have oral or anal sex.	1	2	3	4	5	6	7	0
21. I used a knife or gun on my partner.	1	2	3	4	5	6	7	0
22. *My partner* used a knife or gun on me.	1	2	3	4	5	6	7	0
23. I passed out from being hit on the head by my partner in a fight.	1	2	3	4	5	6	7	0
24. *My partner* passed out from being hit on the bead by me in a fight.	1	2	3	4	5	6	7	0
25. I called my partner fat or ugly.	1	2	3	4	5	6	7	0
26. *My partner* called me fat or ugly.	1	2	3	4	5	6	7	0
27. I punched or hit my partner with something that could hurt.	1	2	3	4	5	6	7	0
28. *My partner* punched or hit me with something that could hurt.	1	2	3	4	5	6	7	0
29. I destroyed something belonging to my partner.	1	2	3	4	5	6	7	0
30. *My partner* destroyed something that belonged to me.	1	2	3	4	5	6	7	0
31. I went to a doctor because of a fight with my partner.	1	2	3	4	5	6	7	0
32. *My partner* went to a doctor because of a fight with me.	1	2	3	4	5	6	7	0
33. I choked my partner.	1	2	3	4	5	6	7	0
34. *My partner* choked me.	1	2	3	4	5	6	7	0

	Once	Twice	3-5 times	6-10 times	11-20 times	More than 20 times	Not in the past year, but it happened before	Never
35. I shouted or yelled at my partner.	1	2	3	4	5	6	7	0
36. *My partner* shouted or yelled at me.	1	2	3	4	5	6	7	0
37. I slammed my partner against a wall.	1	2	3	4	5	6	7	0
38. *My partner* slammed me against a wall.	1	2	3	4	5	6	7	0
39. I said I was sure we could work out a problem.	1	2	3	4	5	6	7	0
40. *My partner* was sure we could work it out.	1	2	3	4	5	6	7	0
41. I needed to see a doctor because of a fight with my partner, but I didn't	1	2	3	4	5	6	7	0
42. *My partner* needed to see a doctor because of a fight with me, but didn't.	1	2	3	4	5	6	7	0
43. I beat up my partner.	1	2	3	4	5	6	7	0
44. *My partner* beat me up.	1	2	3	4	5	6	7	0
45. I grabbed my partner.	1	2	3	4	5	6	7	0
46. *My partner* grabbed me.	1	2	3	4	5	6	7	0
47. I used force (like hitting, holding down, or using a weapon) to make my partner have sex.	1	2	3	4	5	6	7	0
48. *My partner* used force to make me have sex.	1	2	3	4	5	6	7	0
49. I stomped out of the room or house or yard during a disagreement.	1	2	3	4	5	6	7	0
50. *My partner* stomped out of the room or house or yard during a disagreement.	1	2	3	4	5	6	7	0
51. I insisted on sex when my partner didn't want to (but didn't use physical force).	1	2	3	4	5	6	7	0
52. *My partner* insisted that I have sex when I didn't want to (but did not use physical force).	1	2	3	4	5	6	7	0
53. I slapped my partner.	1	2	3	4	5	6	7	0
54. *My partner* slapped me.	1	2	3	4	5	6	7	0

	Once	Twice	3-5 times	6-10 times	11-20 times	More than 20 times	Not in the past year, but it happened before	Never
55. I had a broken bone from a fight with my partner.	1	2	3	4	5	6	7	0
56. *My partner* had a broken bone from a fight with me.	1	2	3	4	5	6	7	0
57. I used threats to make my partner have oral or anal sex.	1	2	3	4	5	6	7	0
58. *My partner* used threats to make me have oral or anal sex.	1	2	3	4	5	6	7	0
59. I suggested a compromise to a disagreement.	1	2	3	4	5	6	7	0
60. *My partner* suggested a compromise to a disagreement.	1	2	3	4	5	6	7	0
61. I burned or scalded my partner on purpose.	1	2	3	4	5	6	7	0
62. *My partner* burned or scalded me on purpose.	1	2	3	4	5	6	7	0
63. I insisted my partner have oral or anal sex (but did not use physical force).	1	2	3	4	5	6	7	0
64. *My partner* insisted I have oral or anal sex (but did not use physical force).	1	2	3	4	5	6	7	0
65. I accused my partner of being a lousy lover.	1	2	3	4	5	6	7	0
66. *My partner* accused me of being a lousy lover.	1	2	3	4	5	6	7	0
67. I did something to spite my partner.	1	2	3	4	5	6	7	0
68. *My partner* did something to spite me.	1	2	3	4	5	6	7	0
69. I threatened to hit or throw something at my partner.	1	2	3	4	5	6	7	0
70. *My partner* threatened to hit or throw something at me.	1	2	3	4	5	6	7	0
71. I felt physical pain that still hurt the next day because of a fight with my partner.	1	2	3	4	5	6	7	0
72. *My partner* still felt physical pain the next day because of a fight we had.	1	2	3	4	5	6	7	0
73. I kicked my partner.	1	2	3	4	5	6	7	0
74. *My partner* kicked me.	1	2	3	4	5	6	7	0

	Once	Twice	3-5 times	6-10 times	11-20 times	More than 20 times	Not in the past year, but it happened before	Never
75. I used threats to make my partner have sex.	1	2	3	4	5	6	7	0
76. *My partner* used threats to make me have sex.	1	2	3	4	5	6	7	0
77. I agreed to try a solution to a disagreement my partner suggested.	1	2	3	4	5	6	7	0
78. *My partner* agreed to try a solution I suggested.	1	2	3	4	5	6	7	0

Appendix D

THE INTIMATE VIOLENCE RESPONSIBILITY SCALE (IVRS)

IVRS

==========

INSTRUCTIONS:

We are interested in how you perceive **events that occur within your intimate relationships.** "Events" refer to physical, verbal, and / or emotional aggression toward your intimate partner. For example, you may consider "events" as ignoring, controlling, teasing, arguing, yelling, fighting, restraining, pushing, slapping, hitting, and sexually harassing, etc. "Partner" refers to your spouse, boy(girl) friend, or a person who has a romantic and /or sexual relationship with you.

In order to complete the survey please follow the instruction below:

1. Think of events you have engaged in during your current or past relationships (within the most recent one year period). Among the events choose the most serious event in which aggression took place with your partner.

2. Think of what you did to your partner.

3. Describe your behavior in the conflict in a few words (**remember, your answer will be kept confidential**):

   _____

4. For each statement, choose the response that best reflects how strongly you agree or disagree with the statement. Place an "×" in the box to indicate your choice.
   For example,

	Strongly Disagree	Disagree	Neutral	Agree	Strongly agree	
Q. I like tomatoes.	☐	☐	☐	☐	☐	╳

5. Please answer every question even though some may sound similar. If you find that some statements do not adequately reflect your own opinion, choose the one that is closest to the way you think.

Remember the statements are related to **what you did in the event**, not what your partner did. Keeping that event in mind, answer the following questions.

	Strongly disagree	Disagree	Neutral	Agree	Strongly agree
1. My partner caused me to act that way.	☐	☐	☐	☐	☐
2. It happened because my partner "pushed my buttons".	☐	☐	☐	☐	☐
3. My family would understand why I did it.	☐	☐	☐	☐	☐
4. People close to me would support what I did.	☐	☐	☐	☐	☐
5. It happened because I was under the weather (e.g., sick, depression, bad mood, etc.).	☐	☐	☐	☐	☐
6. It happened because of other problems I have (e.g., anger, drinking/drugs, finances, etc).	☐	☐	☐	☐	☐
7. What I did was aggressive to my partner.	☐	☐	☐	☐	☐
8. I was aggressive during the event.	☐	☐	☐	☐	☐
9. It was just a communication problem.	☐	☐	☐	☐	☐
10. It was just an argument.	☐	☐	☐	☐	☐

	Strongly disagree	disagree	neutral	agree	Strongly agree
11. People in my culture would all do the same thing.	☐	☐	☐	☐	☐
12. My neighbor would ignore what happened.	☐	☐	☐	☐	☐
13. It was really my partner's fault.	☐	☐	☐	☐	☐
14. If my partner listened to me, it wouldn't happen.	☐	☐	☐	☐	☐
15. I don't have a problem with being aggressive.	☐	☐	☐	☐	☐
16. I really didn't do anything.	☐	☐	☐	☐	☐
17. My aggression was really small.	☐	☐	☐	☐	☐
18. It was not serious.	☐	☐	☐	☐	☐
19. My friends do more than I did.	☐	☐	☐	☐	☐
20. My friends would say it's none of their business.	☐	☐	☐	☐	☐

	Strongly disagree	disagree	neutral	agree	Strongly agree
21. It happened because I looked at violent movies/TV.	☐	☐	☐	☐	☐
21. It happened because of something and/or someone at work.	☐	☐	☐	☐	☐
23. I hurt my partner during the event.	☐	☐	☐	☐	☐
24. I regret being aggressive to my partner.	☐	☐	☐	☐	☐
25. It was just a small problem.	☐	☐	☐	☐	☐
26. What I did wasn't that big a deal.	☐	☐	☐	☐	☐
27. If the police or a judge ever heard the whole story, they would agree with me.	☐	☐	☐	☐	☐
28. Society supports what I did.	☐	☐	☐	☐	☐
29. My religious beliefs led me to act that way.	☐	☐	☐	☐	☐
30. It is part of my culture to treat my partner that way.	☐	☐	☐	☐	☐

	Strongly disagree	disagree	neutral	agree	Strongly agree
31. What I did was harmful to my partner.	☐	☐	☐	☐	☐
32. There was nothing wrong about what I did.	☐	☐	☐	☐	☐
33. I did really listen to what my partner said.	☐	☐	☐	☐	☐
34. I told my partner how hurt, sad, and/or scared I really felt.	☐	☐	☐	☐	☐
35. I shared with my partner what I really needed.	☐	☐	☐	☐	☐
36. I kept the agreements that my partner and I made.	☐	☐	☐	☐	☐
37. I was intimate to my partner during the event.	☐	☐	☐	☐	☐
38. My partner and I are equal.	☐	☐	☐	☐	☐
39. I tried to control what my partner thought, said, felt, and/or did during the event.	☐	☐	☐	☐	☐
40. I felt I was in charge during the event.	☐	☐	☐	☐	☐

Appendix E

EXPERT REVIEW FORM

Cover letter

The title of the present study is "Development of the Relationship Beliefs Scale." The purpose of the investigation is to develop a standardized, self-report instrument that measures people's attitudes related to responsibility toward their partner. This study is conducted by Sung Hyun Yun, a doctoral student of the School of Social Work at the University of Georgia (678-908-1784), under the direction of Dr. Betsy Vonk, School of Social Work, University of Georgia (706-542-5444). Your participation is voluntary. You can stop taking part without giving any reason, and without penalty. You can ask to have all of the information about me returned to you, removed from the research records, or destroyed.

You have been selected because you are an expert as a FVIP facilitator, victim advocate, and/or scholar in the prevention of intimate violence. Your professional knowledge and experience will be tremendously beneficial to me as I develop a scale that could be used in the prevention and intervention of violence against intimate partners.

It will take about 30 minutes to fill out the survey. You will not benefit directly from this research. However, you will get two good quality pens and a gift card as tokens of gratitude. This research study will not cause any harm to you. Any information collected about you will be kept confidential and the information I share will not be released in any individually identifiable form. You are free to withdraw your participation at any time or skip questions should you become uncomfortable.

You will be asked to give information about the following topics:
1) Your demographic information: age, gender, race, and occupation.
2) Your professional feedback on the 65 items of the IVRS.

You are asked to indicate whether you believe each scale item addresses Denial (No Denial), Blame (No Blame), Minimization (No Minimization), or Collusion (No Collusion). The conceptual definition and examples of the four domains are described below:

Possible Domain	Conceptual Definition and Examples of the Domain of Interest
Denial (No Denial)	Denial is perpetrator's attempt to **eliminate the reality of any participation** in his/her violent act. Ex) I did not hit my partner; I did not touch my partner; I did not do anything to my partner, I admit that I was abusive, etc.
Blame (No Blame)	Blame is perpetrator's attempt to **place responsibility for violence on somebody or something** other than himself/herself. Ex) My partner pushes my buttons, I was drunk and I did not know what happened; I don't blame my partner for my behavior, etc.
Minimization (No Minimization)	Minimization is perpetrator's attempt to **make less of violence**. Ex) It was only a slap; It was not a big deal; I barely touched her, etc.
Collusion (No Collusion)	Collusion is perpetrator's attempt to **get and give support for violent behavior**. Ex) When a batterer smiles while talking about his violence; When a batterer goes to his friends to get support for his/her violence

Please follow this.

Part I

Qa. Please read carefully each scale item and choose one (ir)responsible attitude among the four options: Denial (No Denial), Blame (No Blame), Minimization (No Minimization), and Collusion (No Collusion).

Qb. If you would like to suggest alternative wording please do so immediately to the right of the item.

Qc. And then give us your comments and feedback with regard to readability, clarity, and length, etc.

Part II

If you think that there are other crucial items that should be included, please write them in the blank provided at the end of the questionnaire.

There are no wrong or right answers. You are also allowed to mark, change, and modify scale items to demonstrate one of the four domains as you choose. A set of post-it notes and a colored pen are provided for you to make comments.

When you complete this questionnaire please put it into the self-addressed / pre-paid envelope that is provided in the study packet, seal it, and **mail it back to the researcher by January 23rd**.

The researcher will answer any further questions about the research, now or during the course of the project, and can be reached by telephone at: 678-908-1784 or via yshhsy70@uga.edu.

Thanks you so much for your participation.

Sincerely,

Sung Hyun Yun, LMSW, Ph.D. Candidate
The University of Georgia, Athens
School of Social Work
Tucker Hall
Athens, GA 30602

Demographic Information

==========

1. Age: _____

2. Your gender: □ Male □ Female

3. What category best describes your ethnic group?
   - □ American Indian
   - □ Asian
   - □ Black
   - □ Hispanic
   - □ White
   - □ Other: _____

3. What is your occupation? (please choose only one)
   a. FVIPs facilitator/staff
   b. Victim Advocate
   c. Scholar
   d. Other: _____

Q1. I do not blame my partner for what I have done in the incident.

Qa. What does Q1 represent? Check **only one** among the 4 options. □ Denial or No Denial □ Blame or No Blame □ Minimization or No Minimization □ Collusion or No Collusion

Qb. If you would like to suggest alternative wording please do so immediately to the right of the item.

Qc. Any comments on this scale item in terms of readability, clarity, and length, etc.?

Q2. The incident occurred because my partner misbehaved.

Qa. What does Q2 represent? Check **only one** among the 4 options. □ Denial or No Denial □ Blame or No Blame □ Minimization or No Minimization □ Collusion or No Collusion

Qb. If you would like to suggest alternative wording please do so immediately to the right of the item.

Qc. Any comments on this scale item in terms of readability, clarity, and length?

Q3. My behavior was unacceptable.

Qa. What does Q3 represent? Check **only one** among the 4 options. □ Denial or No Denial □ Blame or No Blame □ Minimization or No Minimization □ Collusion or No Collusion

Qb. If you would like to suggest alternative wording please do so immediately to the right of the item.

Qc. Any comments on this scale item in terms of readability, clarity, and length?

Q4. It was just a communication problem, not something serious.

Qa. What does Q4 represent? Check **only one** among the 4 options. □ Denial or No Denial □ Blame or No Blame □ Minimization or No Minimization □ Collusion or No Collusion

Qb. If you would like to suggest alternative wording please do so immediately to the right of the item.

Qc. Any comments on this scale item in terms of readability, clarity, and length?

Q5. Due to the incident, my partner became nice to me.

Qa. What does Q5 represent? Check **only one** among the 4 options. □ Denial or No Denial □ Blame or No Blame □ Minimization or No Minimization □ Collusion or No Collusion

Qb. If you would like to suggest alternative wording please do so immediately to the right of the item.

Qc. Any comments on this scale item in terms of readability, clarity, and length?

Q6. Due to the incident, my partner reduced controlling behaviors.

Qa. What does Q6 represent? Check **only one** among the 4 options. □ Denial or No Denial □ Blame or No Blame □ Minimization or No Minimization □ Collusion or No Collusion

Qb. If you would like to suggest alternative wording please do so immediately to the right of the item.

Qc. Any comments on this scale item in terms of readability, clarity, and length, etc.?

Q7. If my partner tried harder to please me, the incident would not occur.

Qa. What does Q7 represent? Check **only one** among the 4 options. □ Denial or No Denial □ Blame or No Blame □ Minimization or No Minimization □ Collusion or No Collusion

Qb. If you would like to suggest alternative wording please do so immediately to the right of the item.

Qc. Any comments on this scale item in terms of readability, clarity, and length?

Q8. The incident occurred because my partner tried to control me.

Qa. What does Q8 represent? Check **only one** among the 4 options. □ Denial or No Denial □ Blame or No Blame □ Minimization or No Minimization □ Collusion or No Collusion

Qb. If you would like to suggest alternative wording please do so immediately to the right of the item.

Qc. Any comments on this scale item in terms of readability, clarity, and length?

Q9. My behavior in the incident affected my partner.

Qa. What does Q9 represent? Check **only one** among the 4 options.
□ Denial or No Denial □ Blame or No Blame □ Minimization or No Minimization □ Collusion or No Collusion

Qb. If you would like to suggest alternative wording please do so immediately to the right of the item.

Qc. Any comments on this scale item in terms of readability, clarity, and length?

Q10. It was not a big deal.- we just argued.

Qa. What does Q10 represent? Check **only one** among the 4 options.
□ Denial or No Denial □ Blame or No Blame □ Minimization or No Minimization □ Collusion or No Collusion

Qb. If you would like to suggest alternative wording please do so immediately to the right of the item.

Qc. Any comments on this scale item in terms of readability, clarity, and length?

Q11. What I did in the incident was kind of funny.

Qa. What does Q11 represent? Check **only one** among the 4 options.
□ Denial or No Denial □ Blame or No Blame □ Minimization or No Minimization □ Collusion or No Collusion

Qb. If you would like to suggest alternative wording please do so immediately to the right of the item.

Qc. Any comments on this scale item in terms of readability, clarity, and length, etc.?

Q12. People would shush me up about the incident.

Qa. What does Q12 represent? Check **only one** among the 4 options.
□ Denial or No Denial □ Blame or No Blame □ Minimization or No Minimization □ Collusion or No Collusion

Qb. If you would like to suggest alternative wording please do so immediately to the right of the item.

Qc. Any comments on this scale item in terms of readability, clarity, and length?

Q13. My partner was responsible for my behavior in the incident.

Qa. What does Q13 represent? Check **only one** among the 4 options. □ Denial or No Denial □ Blame or No Blame □ Minimization or No Minimization □ Collusion or No Collusion

Qb. If you would like to suggest alternative wording please do so immediately to the right of the item.

Qc. Any comments on this scale item in terms of readability, clarity, and length?

Q14. I was responsible for my behavior in the incident.

Qa. What does Q14 represent? Check **only one** among the 4 options. □ Denial or No Denial □ Blame or No Blame □ Minimization or No Minimization □ Collusion or No Collusion

Qb. If you would like to suggest alternative wording please do so immediately to the right of the item.

Qc. Any comments on this scale item in terms of readability, clarity, and length?

Q15. I tried to deny what I had done to my partner.

Qa. What does Q15 represent? Check **only one** among the 4 options. □ Denial or No Denial □ Blame or No Blame □ Minimization or No Minimization □ Collusion or No Collusion

Qb. If you would like to suggest alternative wording please do so immediately to the right of the item.

Qc. Any comments on this scale item in terms of readability, clarity, and length?

Q16. It was just friendly fights.- we never got mad over it.

Qa. What does Q16 represent? Check **only one** among the 4 options. □ Denial or No Denial □ Blame or No Blame □ Minimization or No Minimization □ Collusion or No Collusion

Qb. If you would like to suggest alternative wording please do so immediately to the right of the item.

Qc. Any comments on this scale item in terms of readability, clarity, and length, etc.?

Q17. My partner deserved to be hurt.

Qa. What does Q17 represent? Check **only one** among the 4 options.
□ Denial or No Denial □ Blame or No Blame □ Minimization or No Minimization □ Collusion or No Collusion

Qb. If you would like to suggest alternative wording please do so immediately to the right of the item.

Qc. Any comments on this scale item in terms of readability, clarity, and length?

Q18. My family would understand why I was abusive in the incident.

Qa. What does Q18 represent? Check **only one** among the 4 options.
□ Denial or No Denial □ Blame or No Blame □ Minimization or No Minimization □ Collusion or No Collusion

Qb. If you would like to suggest alternative wording please do so immediately to the right of the item.

Qc. Any comments on this scale item in terms of readability, clarity, and length?

Q19. My partner pushed my buttons in the incident.

Qa. What does Q19 represent? Check **only one** among the 4 options.
□ Denial or No Denial □ Blame or No Blame □ Minimization or No Minimization □ Collusion or No Collusion

Qb. If you would like to suggest alternative wording please do so immediately to the right of the item.

Qc. Any comments on this scale item in terms of readability, clarity, and length?

Q20. I could change my behaviors if only my partner would change first.

Qa. What does Q20 represent? Check **only one** among the 4 options.
□ Denial or No Denial □ Blame or No Blame □ Minimization or No Minimization □ Collusion or No Collusion

Qb. If you would like to suggest alternative wording please do so immediately to the right of the item.

Qc. Any comments on this scale item in terms of readability, clarity, and length?

Q21. I accept consequences of my behavior in the incident.

Qa. What does Q21 represent? Check **only one** among the 4 options. □ Denial or No Denial □ Blame or No Blame □ Minimization or No Minimization □ Collusion or No Collusion

Qb. If you would like to suggest alternative wording please do so immediately to the right of the item.

Qc. Any comments on this scale item in terms of readability, clarity, and length, etc.?

Q22. I don't want to exaggerate.- we just had a relationship problem.

Qa. What does Q22 represent? Check **only one** among the 4 options. □ Denial or No Denial □ Blame or No Blame □ Minimization or No Minimization □ Collusion or No Collusion

Qb. If you would like to suggest alternative wording please do so immediately to the right of the item.

Qc. Any comments on this scale item in terms of readability, clarity, and length?

Q23. People close to me would support my behaviors in the incident.

Qa. What does Q23 represent? Check **only one** among the 4 options. □ Denial or No Denial □ Blame or No Blame □ Minimization or No Minimization □ Collusion or No Collusion

Qb. If you would like to suggest alternative wording please do so immediately to the right of the item.

Qc. Any comments on this scale item in terms of readability, clarity, and length?

Q24. People who know me would agree that I was the victim in the incident.

Qa. What does Q24 represent? Check **only one** among the 4 options. □ Denial or No Denial □ Blame or No Blame □ Minimization or No Minimization □ Collusion or No Collusion

Qb. If you would like to suggest alternative wording please do so immediately to the right of the item.

Qc. Any comments on this scale item in terms of readability, clarity, and length?

Q25. I was not responsible for my actions because it was provoked by my partner.

Qa. What does Q25 represent? Check **only one** among the 4 options.
□ Denial or No Denial □ Blame or No Blame □ Minimization or No Minimization □ Collusion or No Collusion

Qb. If you would like to suggest alternative wording please do so immediately to the right of the item.

Qc. Any comments on this scale item in terms of readability, clarity, and length?

Q26. The incident occurred because my partner was out of control.

Qa. What does Q26 represent? Check **only one** among the 4 options.
□ Denial or No Denial □ Blame or No Blame □ Minimization or No Minimization □ Collusion or No Collusion

Qb. If you would like to suggest alternative wording please do so immediately to the right of the item.

Qc. Any comments on this scale item in terms of readability, clarity, and length, etc.?

Q27. My behaviors were not abusive at all.

Qa. What does Q27 represent? Check **only one** among the 4 options.
□ Denial or No Denial □ Blame or No Blame □ Minimization or No Minimization □ Collusion or No Collusion

Qb. If you would like to suggest alternative wording please do so immediately to the right of the item.

Qc. Any comments on this scale item in terms of readability, clarity, and length?

Q28. I accept that I was violent in the incident.

Qa. What does Q28 represent? Check **only one** among the 4 options.
□ Denial or No Denial □ Blame or No Blame □ Minimization or No Minimization □ Collusion or No Collusion

Qb. If you would like to suggest alternative wording please do so immediately to the right of the item.

Qc. Any comments on this scale item in terms of readability, clarity, and length?

Q29. My abusiveness was really small and trivial in the incident.

Qa. What does Q29 represent? Check **only one** among the 4 options. □ Denial or No Denial □ Blame or No Blame □ Minimization or No Minimization □ Collusion or No Collusion

Qb. If you would like to suggest alternative wording please do so immediately to the right of the item.

Qc. Any comments on this scale item in terms of readability, clarity, and length?

Q30. My friends would just laugh about the incident.

Qa. What does Q30 represent? Check **only one** among the 4 options. □ Denial or No Denial □ Blame or No Blame □ Minimization or No Minimization □ Collusion or No Collusion

Qb. If you would like to suggest alternative wording please do so immediately to the right of the item.

Qc. Any comments on this scale item in terms of readability, clarity, and length?

Q31. My friends would say "it's none of my business."

Qa. What does Q31 represent? Check **only one** among the 4 options. □ Denial or No Denial □ Blame or No Blame □ Minimization or No Minimization □ Collusion or No Collusion

Qb. If you would like to suggest alternative wording please do so immediately to the right of the item.

Qc. Any comments on this scale item in terms of readability, clarity, and length, etc.?

Q32. The incident occurred because my partner did not listen to me.

Qa. What does Q32 represent? Check **only one** among the 4 options. □ Denial or No Denial □ Blame or No Blame □ Minimization or No Minimization □ Collusion or No Collusion

Qb. If you would like to suggest alternative wording please do so immediately to the right of the item.

Qc. Any comments on this scale item in terms of readability, clarity, and length?

Q33. Media was responsible for my behaviors in the incident.

Qa. What does Q33 represent? Check **only one** among the 4 options.
□ Denial or No Denial □ Blame or No Blame □ Minimization or No Minimization □ Collusion or No Collusion

Qb. If you would like to suggest alternative wording please do so immediately to the right of the item.

Qc. Any comments on this scale item in terms of readability, clarity, and length?

Q34. I accepted the consequences of my behaviors.

Qa. What does Q34 represent? Check **only one** among the 4 options.
□ Denial or No Denial □ Blame or No Blame □ Minimization or No Minimization □ Collusion or No Collusion

Qb. If you would like to suggest alternative wording please do so immediately to the right of the item.

Qc. Any comments on this scale item in terms of readability, clarity, and length?

Q35. I have no problem being violent.

Qa. What does Q35 represent? Check **only one** among the 4 options.
□ Denial or No Denial □ Blame or No Blame □ Minimization or No Minimization □ Collusion or No Collusion

Qb. If you would like to suggest alternative wording please do so immediately to the right of the item.

Qc. Any comments on this scale item in terms of readability, clarity, and length?

Q36. We had a few conflicts but noting serious

Qa. What does Q36 represent? Check **only one** among the 4 options.
□ Denial or No Denial □ Blame or No Blame □ Minimization or No Minimization □ Collusion or No Collusion

Qb. If you would like to suggest alternative wording please do so immediately to the right of the item.

Qc. Any comments on this scale item in terms of readability, clarity, and length, etc.?

Q37. My friends would say nothing about the incident.- it's about my family.

Qa. What does Q37 represent? Check **only one** among the 4 options.
□ Denial or No Denial □ Blame or No Blame □ Minimization or No Minimization □ Collusion or No Collusion

Qb. If you would like to suggest alternative wording please do so immediately to the right of the item.

Qc. Any comments on this scale item in terms of readability, clarity, and length?

Q38. The incident was a personal matter so that people should not interfere.

Qa. What does Q38 represent? Check **only one** among the 4 options.
□ Denial or No Denial □ Blame or No Blame □ Minimization or No Minimization □ Collusion or No Collusion

Qb. If you would like to suggest alternative wording please do so immediately to the right of the item.

Qc. Any comments on this scale item in terms of readability, clarity, and length?

Q39. My religion was responsible for my behaviors in the incident.

Qa. What does Q39 represent? Check **only one** among the 4 options.
□ Denial or No Denial □ Blame or No Blame □ Minimization or No Minimization □ Collusion or No Collusion

Qb. If you would like to suggest alternative wording please do so immediately to the right of the item.

Qc. Any comments on this scale item in terms of readability, clarity, and length?

Q40. My culture was responsible for my behaviors in the incident.

Qa. What does Q40 represent? Check **only one** among the 4 options.
□ Denial or No Denial □ Blame or No Blame □ Minimization or No Minimization □ Collusion or No Collusion

Qb. If you would like to suggest alternative wording please do so immediately to the right of the item.

Qc. Any comments on this scale item in terms of readability, clarity, and length?

Q41. There were no alternatives to my abusive behavior in the incident.

Qa. What does Q41 represent? Check **only one** among the 4 options.
□ Denial or No Denial □ Blame or No Blame □ Minimization or No Minimization □ Collusion or No Collusion

Qb. If you would like to suggest alternative wording please do so immediately to the right of the item.

Qc. Any comments on this scale item in terms of readability, clarity, and length, etc.?

Q42. It was not something serious.- it was an accident.

Qa. What does Q42 represent? Check **only one** among the 4 options.
□ Denial or No Denial □ Blame or No Blame □ Minimization or No Minimization □ Collusion or No Collusion

Qb. If you would like to suggest alternative wording please do so immediately to the right of the item.

Qc. Any comments on this scale item in terms of readability, clarity, and length?

Q43. I believe that my neighbor would overlook or ignore the incident.

Qa. What does Q43 represent? Check **only one** among the 4 options.
□ Denial or No Denial □ Blame or No Blame □ Minimization or No Minimization □ Collusion or No Collusion

Qb. If you would like to suggest alternative wording please do so immediately to the right of the item.

Qc. Any comments on this scale item in terms of readability, clarity, and length?

Q44. After the incident, I regretted what I had done to my partner.

Qa. What does Q44 represent? Check **only one** among the 4 options.
□ Denial or No Denial □ Blame or No Blame □ Minimization or No Minimization □ Collusion or No Collusion

Qb. If you would like to suggest alternative wording please do so immediately to the right of the item.

Qc. Any comments on this scale item in terms of readability, clarity, and length?

Q45. The incident occurred because I was under the influence (e.g., alcohol, drugs, etc.).

Qa. What does Q45 represent? Check **only one** among the 4 options.
□ Denial or No Denial □ Blame or No Blame □ Minimization or No Minimization □ Collusion or No Collusion

Qb. If you would like to suggest alternative wording please do so immediately to the right of the item.

Qc. Any comments on this scale item in terms of readability, clarity, and length?

Q46. The incident occurred because I was under the weather (e.g., depression, mood, etc).

Qa. What does Q46 represent? Check **only one** among the 4 options.
□ Denial or No Denial □ Blame or No Blame □ Minimization or No Minimization □ Collusion or No Collusion

Qb. If you would like to suggest alternative wording please do so immediately to the right of the item.

Qc. Any comments on this scale item in terms of readability, clarity, and length, etc.?

Q47. I am committed not to repeat my abusive behaviors.

Qa. What does Q47 represent? Check **only one** among the 4 options.
□ Denial or No Denial □ Blame or No Blame □ Minimization or No Minimization □ Collusion or No Collusion

Qb. If you would like to suggest alternative wording please do so immediately to the right of the item.

Qc. Any comments on this scale item in terms of readability, clarity, and length?

Q48. My partner was affected by my behavior in the incident.

Qa. What does Q48 represent? Check **only one** among the 4 options.
□ Denial or No Denial □ Blame or No Blame □ Minimization or No Minimization □ Collusion or No Collusion

Qb. If you would like to suggest alternative wording please do so immediately to the right of the item.

Qc. Any comments on this scale item in terms of readability, clarity, and length?

Q49. I admit that I was abusive; however, it did not hurt my partner too much.

Qa. What does Q49 represent? Check **only one** among the 4 options. □ Denial or No Denial □ Blame or No Blame □ Minimization or No Minimization □ Collusion or No Collusion

Qb. If you would like to suggest alternative wording please do so immediately to the right of the item.

Qc. Any comments on this scale item in terms of readability, clarity, and length?

Q50. I would not let my partner go to victim's advocates.

Qa. What does Q50 represent? Check **only one** among the 4 options. □ Denial or No Denial □ Blame or No Blame □ Minimization or No Minimization □ Collusion or No Collusion

Qb. If you would like to suggest alternative wording please do so immediately to the right of the item.

Qc. Any comments on this scale item in terms of readability, clarity, and length, etc.?

Q51. If the police listen to the whole story, they will support me.

Qa. What does Q51 represent? Check **only one** among the 4 options. □ Denial or No Denial □ Blame or No Blame □ Minimization or No Minimization □ Collusion or No Collusion

Qb. If you would like to suggest alternative wording please do so immediately to the right of the item.

Qc. Any comments on this scale item in terms of readability, clarity, and length?

Q52. The incident occurred because I was under stress.

Qa. What does Q52 represent? Check **only one** among the 4 options. □ Denial or No Denial □ Blame or No Blame □ Minimization or No Minimization □ Collusion or No Collusion

Qb. If you would like to suggest alternative wording please do so immediately to the right of the item.

Qc. Any comments on this scale item in terms of readability, clarity, and length?

Q53. I feel guilty about what I have done in the incident.

Qa. What does Q53 represent? Check **only one** among the 4 options. □ Denial or No Denial □ Blame or No Blame □ Minimization or No Minimization □ Collusion or No Collusion

Qb. If you would like to suggest alternative wording please do so immediately to the right of the item.

Qc. Any comments on this scale item in terms of readability, clarity, and length?

Q54. My behavior in the incident did not affect my partner seriously.

Qa. What does Q54 represent? Check **only one** among the 4 options. □ Denial or No Denial □ Blame or No Blame □ Minimization or No Minimization □ Collusion or No Collusion

Qb. If you would like to suggest alternative wording please do so immediately to the right of the item.

Qc. Any comments on this scale item in terms of readability, clarity, and length?

Q55. I don't want to talk about the incident because it was a private matter.

Qa. What does Q55 represent? Check **only one** among the 4 options. □ Denial or No Denial □ Blame or No Blame □ Minimization or No Minimization □ Collusion or No Collusion

Qb. If you would like to suggest alternative wording please do so immediately to the right of the item.

Qc. Any comments on this scale item in terms of readability, clarity, and length, etc.?

Q56. My religious beliefs would support me not my partner.

Qa. What does Q56 represent? Check **only one** among the 4 options. □ Denial or No Denial □ Blame or No Blame □ Minimization or No Minimization □ Collusion or No Collusion

Qb. If you would like to suggest alternative wording please do so immediately to the right of the item.

Qc. Any comments on this scale item in terms of readability, clarity, and length?

Q57. My behavior was acceptable in my culture.

Qa. What does Q57 represent? Check **only one** among the 4 options.
□ Denial or No Denial □ Blame or No Blame □ Minimization or No Minimization □ Collusion or No Collusion

Qb. If you would like to suggest alternative wording please do so immediately to the right of the item.

Qc. Any comments on this scale item in terms of readability, clarity, and length?

Q58. I have reasons why I had to be violent.

Qa. What does Q58 represent? Check **only one** among the 4 options.
□ Denial or No Denial □ Blame or No Blame □ Minimization or No Minimization □ Collusion or No Collusion

Qb. If you would like to suggest alternative wording please do so immediately to the right of the item.

Qc. Any comments on this scale item in terms of readability, clarity, and length?

Q59. There is no excuse for what I have done in the incident.

Qa. What does Q59 represent? Check **only one** among the 4 options.
□ Denial or No Denial □ Blame or No Blame □ Minimization or No Minimization □ Collusion or No Collusion

Qb. If you would like to suggest alternative wording please do so immediately to the right of the item.

Qc. Any comments on this scale item in terms of readability, clarity, and length?

Q60. I honestly apologized for what I did to my partner.

Qa. What does Q60 represent? Check **only one** among the 4 options.
□ Denial or No Denial □ Blame or No Blame □ Minimization or No Minimization □ Collusion or No Collusion

Qb. If you would like to suggest alternative wording please do so immediately to the right of the item.

Qc. Any comments on this scale item in terms of readability, clarity, and length, etc.?

Q61. The incident was nothing serious.

Qa. What does Q61 represent? Check **only one** among the 4 options. □ Denial or No Denial □ Blame or No Blame □ Minimization or No Minimization □ Collusion or No Collusion

Qb. If you would like to suggest alternative wording please do so immediately to the right of the item.

Qc. Any comments on this scale item in terms of readability, clarity, and length?

Q62. My behavior was acceptable in my religion.

Qa. What does Q62 represent? Check **only one** among the 4 options. □ Denial or No Denial □ Blame or No Blame □ Minimization or No Minimization □ Collusion or No Collusion

Qb. If you would like to suggest alternative wording please do so immediately to the right of the item.

Qc. Any comments on this scale item in terms of readability, clarity, and length?

Q63. There were many reasons for my abusive behavior toward my partner.

Qa. What does Q63 represent? Check **only one** among the 4 options. □ Denial or No Denial □ Blame or No Blame □ Minimization or No Minimization □ Collusion or No Collusion

Qb. If you would like to suggest alternative wording please do so immediately to the right of the item.

Qc. Any comments on this scale item in terms of readability, clarity, and length?

Q64. I know how my behavior affected people around me.

Qa. What does Q64 represent? Check **only one** among the 4 options. □ Denial or No Denial □ Blame or No Blame □ Minimization or No Minimization □ Collusion or No Collusion

Qb. If you would like to suggest alternative wording please do so immediately to the right of the item.

Qc. Any comments on this scale item in terms of readability, clarity, and length?

Q65. My behavior in the incident was accepted in our social norm.

Qa. What does Q65 represent? Check **only one** among the 4 options.

- □ Denial or No Denial
- □ Blame or No Blame
- □ Minimization or No Minimization
- □ Collusion or No Collusion

Qb. If you would like to suggest alternative wording please do so immediately to the right of the item.

Qc. Any comments on this scale item in terms of readability, clarity, and length, etc.?

Can you think of any possible items that should be included? Please write them in the box provided below	
Blame	
Denial	
Minimization	
Collusion	

Appendix F

INTERITEM CORRELATIN MATRIX

Interitem Correlations and Probabilities for the IVRS Form

	Ivrs1	ivrs2	ivrs3	ivrs4	ivrs5	ivrs6	ivrs7	ivrs8	Ivrs9
ivrs1	1	.633**	.416**	.335**	.113*	.155**	-.158**	-.179**	.130**
		.000	.000	.000	.014	.001	.001	.000	.005
	472	472	472	472	472	472	471	472	472
ivrs2	.633**	1	.349**	.223**	.146**	.123**	-.237**	-.222**	.200**
	.000		.000	.000	.001	.007	.000	.000	.000
	472	473	473	473	473	473	472	473	473
ivrs3	.416**	.349**	1	.674**	.158**	-.019	.090	.054	.143**
	.000	.000		.000	.001	.683	.051	.239	.002
	472	473	473	473	473	473	472	473	473
ivrs4	.335**	.223**	.674**	1	.102*	-.065	.174**	.148**	.135**
	.000	.000	.000		.026	.156	.000	.001	.003
	472	473	473	473	473	473	472	473	473
ivrs5	.113*	.146**	.158**	.102*	1	.298**	-.123**	-.117*	.138**
	.014	.001	.001	.026		.000	.008	.011	.003
	472	473	473	473	473	473	472	473	473
ivrs6	.155**	.123**	-.019	-.065	.298**	1	-.337**	-.301**	.063
	.001	.007	.683	.156	.000		.000	.000	.170
	472	473	473	473	473	473	472	473	473
ivrs7	-.158**	-.237**	.090	.174**	-.123**	-.337**	1	.811**	-.059
	.001	.000	.051	.000	.008	.000		.000	.201
	471	472	472	472	472	472	472	472	472
ivrs8	-.179**	-.222**	.054	.148**	-.117*	-.301**	.811**	1	-.015
	.000	.000	.239	.001	.011	.000	.000		.741
	472	473	473	473	473	473	472	473	473
ivrs9	.130**	.200**	.143**	.135**	.138**	.063	-.059	-.015	1
	.005	.000	.002	.003	.003	.170	.201	.741	
	472	473	473	473	473	473	472	473	473
ivrs10	.186**	.307**	.180**	.103*	.204**	.049	-.102*	-.072	.584**
	.000	.000	.000	.025	.000	.286	.027	.118	.000
	471	472	472	472	472	472	471	472	472

Appendix F (Cont.)

	Ivrs1	ivrs2	ivrs3	ivrs4	ivrs5	ivrs6	ivrs7	ivrs8	Ivrs9
ivrs11	.329**	.329**	.347**	.308**	.065	.056	-.016	-.032	.123**
	.000	.000	.000	.000	.155	.223	.721	.491	.008
	472	473	473	473	473	473	472	473	473
ivrs12	.147**	.180**	.249**	.173**	.068	.064	-.034	.014	.193**
	.001	.000	.000	.000	.140	.165	.456	.764	.000
	472	473	473	473	473	473	472	473	473
ivrs13	.508**	.393**	.416**	.416**	.050	.096*	-.071	-.109*	.011
	.000	.000	.000	.000	.274	.037	.123	.018	.812
	472	473	473	473	473	473	472	473	473
ivrs14	.421**	.384**	.287**	.267**	.142**	.175**	-.177**	-.193**	.075
	.000	.000	.000	.000	.002	.000	.000	.000	.101
	471	472	472	472	472	472	471	472	472
ivrs15	.055	.101*	.123**	.079	-.067	-.143**	.130**	.125**	.073
	.235	.027	.007	.085	.147	.002	.005	.006	.111
	472	473	473	473	473	473	472	473	473
ivrs16	.048	.015	.061	.114*	-.046	-.101*	.198**	.198**	-.011
	.299	.747	.185	.013	.318	.028	.000	.000	.807
	472	473	473	473	473	473	472	473	473
ivrs17	.186**	.168**	.228**	.171**	.054	-.038	.083	.127**	.090
	.000	.000	.000	.000	.244	.404	.071	.006	.050
	472	473	473	473	473	473	472	473	473
ivrs18	.054	.101*	.141**	.099*	.060	-.093*	.131**	.163**	.133**
	.245	.028	.002	.032	.192	.043	.004	.000	.004
	472	473	473	473	473	473	472	473	473
ivrs19	.133**	.121**	.209**	.147**	.034	-.036	.056	.039	.050
	.004	.009	.000	.001	.466	.435	.229	.403	.276
	471	472	472	472	472	472	471	472	472
ivrs20	.054	.046	.014	.046	.018	-.005	-.070	-.025	.088
	.242	.315	.758	.323	.699	.916	.126	.586	.055
	472	473	473	473	473	473	472	473	473
ivrs21	-.085	-.026	-.063	-.069	.085	.120**	-.063	-.126**	-.010
	.065	.571	.174	.132	.064	.009	.170	.006	.825
	472	473	473	473	473	473	472	473	473

Appendix F (Cont.)

	ivrs1	ivrs2	ivrs3	ivrs4	ivrs5	ivrs6	ivrs7	ivrs8	Ivrs9
ivrs22	.017	.015	.002	.004	.167**	.176**	-.070	-.139**	.031
	.713	.749	.973	.928	.000	.000	.130	.003	.503
	472	473	473	473	473	473	472	473	473
ivrs23	-.033	-.113*	.011	.037	.062	-.218**	.278**	.283**	-.137**
	.470	.014	.807	.420	.178	.000	.000	.000	.003
	471	472	472	472	472	472	471	472	472
ivrs24	-.030	-.154**	.084	.166**	-.099*	-.096*	.288**	.276**	-.194**
	.512	.001	.067	.000	.032	.037	.000	.000	.000
	471	472	472	472	472	472	471	472	472
ivrs25	.015	.134**	.039	.026	.086	-.027	-.050	-.061	.370**
	.750	.004	.396	.577	.063	.555	.275	.182	.000
	472	473	473	473	473	473	472	473	473
ivrs26	.221**	.209**	.257**	.238**	.026	-.108*	.116*	.083	.243**
	.000	.000	.000	.000	.566	.019	.012	.071	.000
	472	473	473	473	473	473	472	473	473
ivrs27	.240**	.178**	.303**	.309**	-.026	-.087	.139**	.137**	.060
	.000	.000	.000	.000	.567	.058	.002	.003	.193
	472	473	473	473	473	473	472	473	473
ivrs28	.186**	.159**	.328**	.306**	-.037	-.085	.173**	.152**	.088
	.000	.000	.000	.000	.424	.063	.000	.001	.055
	472	473	473	473	473	473	472	473	473
ivrs29	-.016	-.048	.121**	.131**	.119**	.058	.090	.070	.017
	.733	.300	.008	.004	.010	.206	.050	.130	.712
	472	473	473	473	473	473	472	473	473
ivrs30	.029	-.015	.153**	.185**	.053	.032	.149**	.107*	-.017
	.530	.749	.001	.000	.247	.492	.001	.020	.708
	472	473	473	473	473	473	472	473	473
ivrs31	-.071	-.099*	.118**	.186**	-.121**	-.288**	.411**	.326**	-.097*
	.122	.031	.010	.000	.008	.000	.000	.000	.034
	472	473	473	473	473	473	472	473	473
ivrs32	.153**	.076	.232**	.331**	-.103*	-.121**	.246**	.198**	.020
	.001	.098	.000	.000	.025	.008	.000	.000	.667
	471	472	472	472	472	472	471	472	472

Appendix F (Cont.)

	ivrs10	ivrs11	ivrs12	ivrs13	ivrs14	ivrs15	ivrs16	ivrs17	ivrs18
ivrs1	.186**	.329**	.147**	.508**	.421**	.055	.048	.186**	.054
	.000	.000	.001	.000	.000	.235	.299	.000	.245
	471	472	472	472	471	472	472	472	472
ivrs2	.307**	.329**	.180**	.393**	.384**	.101*	.015	.168**	.101*
	.000	.000	.000	.000	.000	.027	.747	.000	.028
	472	473	473	473	472	473	473	473	473
ivrs3	.180**	.347**	.249**	.416**	.287**	.123**	.061	.228**	.141**
	.000	.000	.000	.000	.000	.007	.185	.000	.002
	472	473	473	473	472	473	473	473	473
ivrs4	.103**	.308**	.173**	.416**	.267**	.079	.114**	.171**	.099*
	.025	.000	.000	.000	.000	.085	.013	.000	.032
	472	473	473	473	472	473	473	473	473
ivrs5	.204**	.065	.068	.050	.142**	-.067	-.046	.054	.060
	.000	.155	.140	.274	.002	.147	.318	.244	.192
	472	473	473	473	472	473	473	473	473
ivrs6	.049	.056	.064	.096*	.175**	-.143**	-.101*	-.038	-.093*
	.286	.223	.165	.037	.000	.002	.028	.404	.043
	472	473	473	473	472	473	473	473	473
ivrs7	-.102**	-.016	-.034	-.071	-.177**	.130**	.198**	.083	.131**
	.027	.721	.456	.123	.000	.005	.000	.071	.004
	471	472	472	472	471	472	472	472	472
ivrs8	-.072	-.032	.014	-.109	-.193**	.125**	.198**	.127**	.163**
	.118	.491	.764	.018	.000	.006	.000	.006	.000
	472	473	473	473	472	473	473	473	473
ivrs9	.584**	.123**	.193**	.011	.075	.073	-.011	.090	.133**
	.000	.008	.000	.812	.101	.111	.807	.050	.004
	472	473	473	473	472	473	473	473	473
ivrs10	1	.223**	.252**	.125**	.154**	.143**	.085	.204**	.286**
		.000	.000	.007	.001	.002	.064	.000	.000
	472	472	472	472	471	472	472	472	472
ivrs11	.223**	1	.363**	.325**	.248**	.135**	.119**	.160**	.160**
	.000		.000	.000	.000	.003	.010	.000	.000
	472	473	473	473	472	473	473	473	473

Appendix F (Cont.)

	ivrs10	ivrs11	ivrs12	ivrs13	ivrs14	ivrs15	ivrs16	ivrs17	ivrs18
ivrs12	.252**	.363**	1	.145**	.063	.125**	.136**	.189**	.270**
	.000	.000		.002	.171	.007	.003	.000	.000
	472	473	473	473	472	473	473	473	473
ivrs13	.125**	.325**	.145**	1	.583**	.059	.238**	.167**	.060
	.007	.000	.002		.000	.203	.000	.000	.193
	472	473	473	473	472	473	473	473	473
ivrs14	.154**	.248**	.063	.583**	1	.053	.177**	.190**	.090
	.001	.000	.171	.000		.255	.000	.000	.051
	471	472	472	472	472	472	472	472	472
ivrs15	.143**	.135**	.125**	.059	.053	1	.365**	.319**	.345**
	.002	.003	.007	.203	.255		.000	.000	.000
	472	473	473	473	472	473	473	473	473
ivrs16	.085	.119**	.136**	.238**	.177**	.365**	1	.345**	.368**
	.064	.010	.003	.000	.000	.000		.000	.000
	472	473	473	473	472	473	473	473	473
ivrs17	.204**	.160**	.189**	.167**	.190**	.319**	.345**	1	.560**
	.000	.000	.000	.000	.000	.000	.000		.000
	472	473	473	473	472	473	473	473	473
ivrs18	.286**	.160**	.270**	.060	.090	.345**	.368**	.560**	1
	.000	.000	.000	.193	.051	.000	.000	.000	
	472	473	473	473	472	473	473	473	473
ivrs19	.147**	.186**	.246**	.157**	.187**	.175**	.160**	.249**	.340**
	.001	.000	.000	.001	.000	.000	.000	.000	.000
	471	472	472	472	471	472	472	472	472
ivrs20	.227**	.132**	.232**	.023	.072	.158**	.154**	.234**	.295**
	.000	.004	.000	.623	.116	.001	.001	.000	.000
	472	473	473	473	472	473	473	473	473
ivrs21	-.025	.049	-.046	-.006	.025	-.058	.019	-.043	-.050
	.584	.292	.322	.898	.581	.206	.682	.353	.275
	472	473	473	473	472	473	473	473	473
ivrs22	.054	.100*	-.029	.099*	.131**	-.050	.048	-.039	-.049
	.240	.030	.533	.032	.004	.275	.294	.400	.290
	472	473	473	473	472	473	473	473	473

Appendix F (Cont.)

	ivrs10	ivrs11	ivrs12	ivrs13	ivrs14	ivrs15	ivrs16	ivrs17	ivrs18
ivrs23	-.042 .358 471	.006 .900 472	-.016 .727 472	-.077 .096 472	-.038 .416 471	.086 .061 472	.188** .000 472	.105* .022 472	.178** .000 472
ivrs24	-.175** .000 471	-.001 .983 472	-.076 .099 472	.088 .057 472	-.048 .298 471	-.020 .669 472	.110* .017 472	-.007 .884 472	-.039 .393 472
ivrs25	.365** .000 472	.084 .067 473	.249** .000 473	-.077 .096 473	.013 .785 472	.175** .000 473	.140** .002 473	.288** .000 473	.462** .000 473
ivrs26	.343** .000 472	.148** .001 473	.255** .000 473	.198** .000 473	.152** .001 472	.250** .000 473	.313** .000 473	.397** .000 473	.459** .000 473
ivrs27	.119** .010 472	.186** .000 473	.244** .000 473	.249** .000 473	.127** .006 472	.177** .000 473	.181** .000 473	.295** .000 473	.286** .000 473
ivrs28	.127** .006 472	.236** .000 473	.241** .000 473	.225** .000 473	.123** .008 472	.198** .000 473	.230** .000 473	.230** .000 473	.248** .000 473
ivrs29	.001 .976 472	.082 .075 473	-.009 .843 473	.166** .000 473	.106* .021 472	.058 .206 473	.157** .001 473	.074 .108 473	.022 .636 473
ivrs30	-.011 .811 472	.231** .000 473	.097* .035 473	.186** .000 473	.120** .009 472	.097* .035 473	.186** .000 473	.091* .047 473	.087 .059 473
ivrs31	-.085 .066 472	-.043 .346 473	-.008 .855 473	.033 .468 473	-.056 .225 472	.149** .001 473	.130** .005 473	.098* .033 473	.149** .001 473
ivrs32	.108* .019 471	.239** .000 472	.128** .005 472	.239** .000 472	.099* .031 471	.214** .000 472	.335** .000 472	.216** .000 472	.314** .000 472

Appendix F (Cont.)

	ivrs19	ivrs20	ivrs21	ivrs22	ivrs23	ivrs24	ivrs25	ivrs26	ivrs27
ivrs1	.133**	.054	-.085	.017	-.033	-.030	.015	.221**	.240**
	.004	.242	.065	.713	.470	.512	.750	.000	.000
	471	472	472	472	471	471	472	472	472
ivrs2	.121**	.046	-.026	.015	-.113*	-.154**	.134**	.209**	.178**
	.009	.315	.571	.749	.014	.001	.004	.000	.000
	472	473	473	473	472	472	473	473	473
ivrs3	.209**	.014	-.063	.002	.011	.084	.039	.257**	.303**
	.000	.758	.174	.973	.807	.067	.396	.000	.000
	472	473	473	473	472	472	473	473	473
ivrs4	.147**	.046	-.069	.004	.037	.166**	.026	.238**	.309**
	.001	.323	.132	.928	.420	.000	.577	.000	.000
	472	473	473	473	472	472	473	473	473
ivrs5	.034	.018	.085	.167**	.062	-.099*	.086	.026	-.026
	.466	.699	.064	.000	.178	.032	.063	.566	.567
	472	473	473	473	472	472	473	473	473
ivrs6	-.036	-.005	.120**	.176**	-.218**	-.096*	-.027	-.108*	-.087
	.435	.916	.009	.000	.000	.037	.555	.019	.058
	472	473	473	473	472	472	473	473	473
ivrs7	.056	-.070	-.063	-.070	.278**	.288**	-.050	.116*	.139**
	.229	.126	.170	.130	.000	.000	.275	.012	.002
	471	472	472	472	471	471	472	472	472
ivrs8	.039	-.025	-.126**	-.139**	.283**	.276**	-.061	.083	.137**
	.403	.586	.006	.003	.000	.000	.182	.071	.003
	472	473	473	473	472	472	473	473	473
ivrs9	.050	.088	-.010	.031	-.137**	-.194**	.370**	.243**	.060
	.276	.055	.825	.503	.003	.000	.000	.000	.193
	472	473	473	473	472	472	473	473	473
ivrs10	.147**	.227**	-.025	.054	-.042	-.175**	.365**	.343**	.119**
	.001	.000	.584	.240	.358	.000	.000	.000	.010
	471	472	472	472	471	471	472	472	472
ivrs11	.186**	.132**	.049	.100	.006	-.001	.084	.148**	.186**
	.000	.004	.292	.030	.900	.983	.067	.001	.000
	472	473	473	473	472	472	473	473	473

Appendix F (Cont.)

	ivrs19	ivrs20	ivrs21	ivrs22	ivrs23	ivrs24	ivrs25	ivrs26	ivrs27
ivrs12	.246**	.232**	-.046	-.029	-.016	-.076	.249**	.255**	.244**
	.000	.000	.322	.533	.727	.099	.000	.000	.000
	472	473	473	473	472	472	473	473	473
ivrs13	.157**	.023	-.006	.099*	-.077	.088	-.077	.198**	.249**
	.001	.623	.898	.032	.096	.057	.096	.000	.000
	472	473	473	473	472	472	473	473	473
ivrs14	.187**	.072	.025	.131**	-.038	-.048	.013	.152**	.127**
	.000	.116	.581	.004	.416	.298	.785	.001	.006
	471	472	472	472	471	471	472	472	472
ivrs15	.175**	.158**	-.058	-.050	.086	-.020	.175**	.250**	.177**
	.000	.001	.206	.275	.061	.669	.000	.000	.000
	472	473	473	473	472	472	473	473	473
ivrs16	.160**	.154**	.019	.048	.188**	.110*	.140**	.313**	.181**
	.000	.001	.682	.294	.000	.017	.002	.000	.000
	472	473	473	473	472	472	473	473	473
ivrs17	.249**	.234**	-.043	-.039	.105*	-.007	.288**	.397**	.295**
	.000	.000	.353	.400	.022	.884	.000	.000	.000
	472	473	473	473	472	472	473	473	473
ivrs18	.340**	.295**	-.050	-.049	.178**	-.039	.462**	.459**	.286**
	.000	.000	.275	.290	.000	.393	.000	.000	.000
	472	473	473	473	472	472	473	473	473
ivrs19	1	.245**	-.041	.011	.099*	.022	.176**	.241**	.284**
		.000	.370	.808	.031	.634	.000	.000	.000
	472	472	472	472	471	471	472	472	472
ivrs20	.245**	1	.040	-.024	.118*	-.047	.262**	.300**	.209**
	.000		.383	.596	.010	.311	.000	.000	.000
	472	473	473	473	472	472	473	473	473
ivrs21	-.041	.040	1	.543**	-.166**	-.065	.018	-.043	-.084
	.370	.383		.000	.000	.161	.690	.347	.068
	472	473	473	473	472	472	473	473	473
ivrs22	.011	-.024	.543**	1	-.244**	-.141**	.075	.039	-.073
	.808	.596	.000		.000	.002	.103	.398	.113
	472	473	473	473	472	472	473	473	473

Appendix F (Cont.)

	ivrs19	ivrs20	ivrs21	ivrs22	ivrs23	ivrs24	ivrs25	ivrs26	ivrs27
ivrs23	.099*	.118*	-.166**	-.244**	1	.230**	.054	.164**	.071
	.031	.010	.000	.000		.000	.242	.000	.121
	471	472	472	472	472	471	472	472	472
ivrs24	.022	-.047	-.065	-.141**	.230**	1	-.282**	-.011	.069
	.634	.311	.161	.002	.000		.000	.809	.136
	471	472	472	472	471	472	472	472	472
ivrs25	.176**	.262**	.018	.075	.054	-.282**	1	.587**	.281**
	.000	.000	.690	.103	.242	.000		.000	.000
	472	473	473	473	472	472	473	473	473
ivrs26	.241**	.300**	-.043	.039	.164**	-.011	.587**	1	.501**
	.000	.000	.347	.398	.000	.809	.000		.000
	472	473	473	473	472	472	473	473	473
ivrs27	.284**	.209**	-.084	-.073	.071	.069	.281**	.501**	1
	.000	.000	.068	.113	.121	.136	.000	.000	
	472	473	473	473	472	472	473	473	473
ivrs28	.313**	.186**	.010	.043	.074	.170**	.210**	.452**	.619**
	.000	.000	.828	.354	.110	.000	.000	.000	.000
	472	473	473	473	472	472	473	473	473
ivrs29	.019	.054	.273**	.245**	.040	.145**	.024	.123**	.157**
	.683	.242	.000	.000	.386	.002	.605	.007	.001
	472	473	473	473	472	472	473	473	473
ivrs30	.057	.117*	.296**	.261**	-.020	.164**	.066	.160**	.215**
	.219	.011	.000	.000	.671	.000	.153	.000	.000
	472	473	473	473	472	472	473	473	473
ivrs31	.028	.007	-.137**	-.140	.332**	.342**	-.026	.181**	.147**
	.551	.882	.003	.002	.000	.000	.571	.000	.001
	472	473	473	473	472	472	473	473	473
ivrs32	.211**	.187**	.003	.012	.174**	.288**	.221**	.461**	.433**
	.000	.000	.955	.794	.000	.000	.000	.000	.000
	471	472	472	472	471	471	472	472	472

Appendix F (Cont.)

	Ivrs28	ivrs29	ivrs30	ivrs31	ivrs32
ivrs1	.186**	-.016	.029	-.071	.153**
	.000	.733	.530	.122**	.001
	472	472	472	472	471
ivrs2	.159**	-.048	-.015	-.099*	.076
	.000	.300	.749	.031	.098
	473	473	473	473	472
ivrs3	.328**	.121**	.153**	.118**	.232**
	.000	.008	.001	.010	.000
	473	473	473	473	472
ivrs4	.306**	.131**	.185**	.186**	.331**
	.000	.004	.000	.000	.000
	473	473	473	473	472
ivrs5	-.037	.119**	.053	-.121**	-.103*
	.424	.010	.247	.008	.025
	473	473	473	473	472
ivrs6	-.085	.058	.032	-.288**	-.121**
	.063	.206	.492	.000	.008
	473	473	473	473	472
ivrs7	.173**	.090	.149**	.411**	.246**
	.000	.050	.001	.000	.000
	472	472	472	472	471
ivrs8	.152**	.070	.107*	.326**	.198**
	.001	.130	.020	.000	.000
	473	473	473	473	472
ivrs9	.088	.017	-.017	-.097*	.020
	.055	.712	.708	.034	.667
	473	473	473	473	472
ivrs10	.127**	.001	-.011	-.085	.108*
	.006	.976	.811	.066	.019
	472	472	472	472	471
ivrs11	.236**	.082	.231**	-.043	.239**
	.000	.075	.000	.346	.000
	473	473	473	473	472

Appendix F (Cont.)

	ivrs28	ivrs29	ivrs30	ivrs31	ivrs32
ivrs12	.241**	-.009	.097*	-.008	.128**
	.000	.843	.035	.855	.005
	473	473	473	473	472
ivrs13	.225**	.166**	.186**	.033	.239**
	.000	.000	.000	.468	.000
	473	473	473	473	472
ivrs14	.123**	.106*	.120**	-.056	.099*
	.008	.021	.009	.225	.031
	472	472	472	472	471
ivrs15	.198**	.058	.097*	.149**	.214**
	.000	.206	.035	.001	.000
	473	473	473	473	472
ivrs16	.230**	.157**	.186**	.130**	.335**
	.000	.001	.000	.005	.000
	473	473	473	473	472
ivrs17	.230**	.074	.091*	.098*	.216**
	.000	.108	.047	.033	.000
	473	473	473	473	472
ivrs18	.248**	.022	.087	.149**	.314**
	.000	.636	.059	.001	.000
	473	473	473	473	472
ivrs19	.313**	.019	.057	.028	.211**
	.000	.683	.219	.551	.000
	472	472	472	472	471
ivrs20	.186**	.054	.117*	.007	.187**
	.000	.242	.011	.882	.000
	473	473	473	473	472
ivrs21	.010	.273**	.296**	-.137**	.003
	.828	.000	.000	.003	.955
	473	473	473	473	472
ivrs22	.043	.245**	.261**	-.140**	.012
	.354	.000	.000	.002	.794
	473	473	473	473	472

Appendix F (Cont.)

	ivrs28	ivrs29	ivrs30	ivrs31	ivrs32
ivrs23	.074	.040	-.020	.332**	.174**
	.110	.386	.671	.000	.000
	472	472	472	472	471
ivrs24	.170**	.145**	.164**	.342**	.288**
	.000	.002	.000	.000	.000
	472	472	472	472	471
ivrs25	.210**	.024	.066	-.026	.221**
	.000	.605	.153	.571	.000
	473	473	473	473	472
ivrs26	.452**	.123**	.160**	.181**	.461**
	.000	.007	.000	.000	.000
	473	473	473	473	472
ivrs27	.619**	.157**	.215**	.147**	.433**
	.000	.001	.000	.001	.000
	473	473	473	473	472
ivrs28	1	.246**	.307**	.214**	.529**
		.000	.000	.000	.000
	473	473	473	473	472
ivrs29	.246**	1	.650**	.049	.250**
	.000		.000	.287	.000
	473	473	473	473	472
ivrs30	.307**	.650**	1	.007	.315**
	.000	.000		.884	.000
	473	473	473	473	472
ivrs31	.214**	.049	.007	1	.221**
	.000	.287	.884		.000
	473	473	473	473	472
ivrs32	.529**	.250**	.315**	.221**	1
	.000	.000	.000	.000	
	472	472	472	472	472

Note. * Correlation is significant at the .05 level (2-tailed).

** Correlation is significant at the .01 level (2-tailed).