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VALIDATION AND EXPLORATORY FACTOR ANALYSIS OF THE ABUSE WITHIN INTIMATE RELATIONSHIPS SCALE (AIRS)

A Dissertation APPROVED FOR THE
DEPARTMENT OF EDUCATIONAL PSYCHOLOGY

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Abstract

The purpose of the present study was to provide validation for and examine the factor structure of the Abuse with Intimate Relations Scale (AIRS; Borjesson, Aarons & Dunn, 2003). The AIRS was designed for use in identifying college students who may be at risk for becoming involved in violent intimate relationships. Using a sample of 190 students from a public community college and 88 students from a public university, both in a southwestern state, survey data was collected using the AIRS and two widely used instruments that have been previously validated. Data regarding social desirability was also gathered in order to control for this factor. Results indicated evidence for convergent validity, although the data generally did not support the hypotheses regarding discriminate validity. Exploratory factor analysis revealed a factor structure similar to that identified by the authors of the scale.

CHAPTER I

INTRODUCTION

Intimate partner violence is a widespread problem in our society. According to United States Department of Justice statistics (USDOJ; 2002), over 185,000 Americans are assaulted by a spouse or ex-spouse every year. To present the prevalence in more salient light, in the 40 month period from December, 1997 to March, 2001, there were 16,200 arrests for domestic violence assault in one Tennessee county (Henning& Feder, 2004). This is an average of over 13 arrests a day in a single county, and this figure doesn't include incidents in which police were not called or those in which an arrest was not made.

Victims of partner violence are known to suffer from physical injury, increased risk of homicide, low self-esteem, depression, feelings of inferiority, and increased risk for suicide (Arias, 1999). Monetary costs of partner violence to society are high and include medical costs, psychological services, police services, social services, legal costs, and imprisonment (Gelles & Straus, 1995).

Characteristics of Individuals Involved in Violent Relationships

Couples who are involved in violent relationships do not represent a homogenous group. However, a number of patterns have been identified. For example, there is evidence that violent relationships are more common in families that are patriarchically organized (Finkelhor, 1983), and some researchers have found correlations between alcohol use and violent relationships (Burgess & Draper, 1989; Feldman & Ridley, 1995).

Both victims and perpetrators of intimate partner violence are more likely to have witnessed parental violence as children (Bevan & Higgens, 2002; Feldman, 1997). Perpetrators are also more likely to have directly experienced neglect or abuse as children (Bevan & Higgens; Clawson, 1999; Dostal & Langhinrichsen-Rohlings, 1997; Feldman). Although most research has focused on male perpetrators, results of one study (Swan & Snow, 2003) indicate that female perpetrators were more likely to report experiencing sexual abuse as children.

Feldman (1997) found that low socioeconomic status, low self-esteem, and frequent alcohol use were found to be reliable correlates of perpetration of intimate partner violence. Swan and Snow (2003) found that 24% of female perpetrators in their study met criteria for alcohol abuse, and 66% of the women in this study reported significant levels of depressive symptoms.

Theoretical Considerations for Research on Intimate Partner Violence

Throughout the history of intimate partner violence research, there has persisted a pattern of disagreement among various researchers, and much of this controversy can be explained by differences between two theories upon which the majority of intimate partner violence has been based (Archer, 2000). The first perspective, Family Conflict Theory, asserts that intimate partner violence is one aspect of family violence, which is a serious problem in modern day society. This point of view is perhaps most accurately represented by the work of Murray Straus (see Hotaling, Finkelhor, Kirkpatrick & Straus, 1988; Straus & Gelles, 1995). The second perspective, which can be identified as Feminist Theory of Intimate Partner Violence, asserts that intimate partner violence is the culmination of centuries of male patriarchy and that many males in our society continue

to use physical force to keep women in subordinate roles (Feldman & Ridley, 1995). This perspective is probably best epitomized by Walker's research (1979; 1988), and is often found in research in which the male is assumed to be the perpetrator.

Men and Women as Perpetrators and Victims: Who is who?

As suggested by the foci of the two theories guiding research in intimate partner violence, there is considerable disagreement with respect to gender dynamics. Issues of gender in terms of perpetration and victimization have been the source of some of the most heated debates in the field. Some researchers seemed to simply ignore the issue by focusing research in such a way that men were assumed to be perpetrators and women were assumed to be victims (Hudson & McIntosh, 1981; Koss, Dinero, Seibel & Cox, 1988; Long & McNamara, 1989). Others participated in heated debates on what came to be known as "gender symmetry" in the field of intimate partner violence.

Plainly stated, the problem was this: Even though society was being inundated with horrible accounts of male-perpetrated violence, data collected from both sexes in general community populations have consistently shown females to aggress against their partners at least at the same rate as males (Follingstad, Wright, Lloyd, & Sebastian, 1991; O'Leary et al., 1989; O'Leary, Malone & Tyree, 1994). It seemed that no matter how the data were evaluated, by frequency, by type of violence, or even by who drew "first blood," so to speak, the numbers were the same. These findings were perhaps brought to light most vividly in a meta-analysis of 82 research studies (Archer, 2000), the results of which indicated that women were more likely than men to engage in acts of physical violence against their partners. Women who did engage in acts of violence also engaged in these acts more frequently than their male counterparts.

Violence and Population Samples with Respect to Gender Issues

As previously stated, researchers working from the family conflict perspective often collect data that appears to conflict with data collected by researchers working from a Feminist perspective. Johnson (1995) introduced a theory that appears to explain much of the information collected from the various types of studies. He noted that studies using community populations tended to be based on the family conflict perspective and that this data generally reflected gender symmetry with respect to prevalence rates (Archer, 2000; O'Leary et al., 1989; O'Leary et al., 1994; Straus, 1979; Straus & Gelles, 1999). In contrast, data collected from shelter inhabitants, police records, hospitals, and court data indicate that the vast majority of perpetrators of intimate partner violence are male (Dobash, Dobash, Wilson & Daly, 1993; Henning & Feder, 2004; Malloy, McCloskey, Grigsby & Gardner, 2003; Saunders, 2002; Straus, 1999). These researchers, including Walker (1979) and Pagelow (1984), have generally collected data from populations of women who were known to be victims of intimate partner violence.

Johnson (1995) suggested these differences were actually legitimate because researchers working from two different perspectives and collecting data from two different populations were actually measuring two different categories of violence: Common Couple Violence and Patriarchal Terrorism. According to Johnson's theory, couples whose relationships are characterized by Common Couple Violence are not products of patriarchy. Rather, these relationships are characterized by conflict that becomes unmanageable with respect to the couples' conflict strategies. Violence in this type of relationship is symmetrical with respect to gender. Common Couple Violence is usually minor, is not likely to escalate in severity over time, and the frequency of violent

incidents is lower than that of violence characterized by Patriarchal Terrorism. Couples involved in relationships characterized by Common Couple Violence are not likely to become involved with shelters, police, or other community agencies. Johnson argues that this is the type of violence being measured in community samples.

Patriarchal Terrorism is, according to Johnson (1995), different from Common Couple Violence and is the type of violence generally studied by feminist researchers. Patriarchal Terrorism is found in relationships marked by patriarchal traditions, and the men in these relationships feel they must be in control of their partners. Violence in this type of relationship escalates in severity over time and incidents of violence are more frequent than those in couples involved in Common Couple Violence. In more recent publications, Johnson divided Patriarchal Terrorism into three categories (Johnson, in press; Johnson & Ferraro, 2000). Intimate Terrorism is similar to Patriarchal Terrorism but is no longer described in terms of gender. Rather, it is characterized by a pattern of both violent and non-violent behaviors that are indicative of a motive to control one's partner. Violent Resistance is a category of intimate partner violence similar to self-defense, and Mutual Violent Control is described as a rare relationship dynamic in which both partners demonstrate behaviors typical of Intimate Terrorism.

Johnson's (1995) theory has received support from other researchers. O'Leary, whose research has long supported the concept of symmetry in intimate partner violence, has used Johnson's theory to explain the problem of partner violence to military families (O'Leary, 1999). In the conclusion of his metaanalysis of 82 studies, Archer (2000) noted that the findings were consistent with Johnson's theory that physical aggression is more likely to be symmetrical with respect to gender in community samples, and more

skewed toward male perpetration and female victims in samples selected for severe victimization. Archer later joined with a colleague (Graham-Kevan & Archer, 2003a, 2003b) to conduct two different studies specifically designed to test Johnson's theory. Results of both of these studies were generally supportive of Johnson's theory.

Gender issues have generated a sizable collection of research during the past 25 years, and in many ways these issues have worked to divide researchers who ultimately share the same goal – the elimination, or at least a sizable decrease, in the prevalence of intimate partner violence. The field may benefit when researchers succeed in moving their concentration away from gender and toward a more accurate picture of different types of violence perpetrated by both sexes. An important first step is the development of effective measurement instruments so that individuals who are or may become involved in violent relationships can be accurately identified.

Measurement of Intimate Partner Violence

Measurement issues in the field of intimate partner violence are complex and become apparent when one considers the enormous discrepancies in prevalence reports. For example, recently published USDOJ statistics (2002) indicate that over 185,000 Americans are assaulted by a spouse or ex-spouse every year. This would indicate that about 3/5 of 1% of United States citizens were victims of violent relationships every year. At the other end of the spectrum, a more recent survey of women attending family practice clinics indicated that over 55% of women reported some direct level of experience with intimate partner violence (Coker, Smith, McKeown & King, 2000). Intimate partner violence is difficult to measure, and problems include challenges with

accessing the individuals involved in violent relationships and difficulty in collecting accurate information once a population sample is obtained.

Underreporting of Intimate Partner Violence

Evidence indicates that intimate partner violence may be underreported for a number of reasons under a variety of circumstances. Many methods of data collection may put victims in danger (Campbell & Dienemann, 2001). Police officers may be inclined to minimize victims' reports of violence because of lack of risk to public order, the unlikelihood that the arrest will lead to conviction, and the fact that the behavior of many perpetrators does not appear hostile in the presence of the police officer (Buzawa, Austin & Buzawa, 1996).

The stigma associated with being either the victim or the perpetrator of intimate partner violence tends to keep either party from bringing these relationship dynamics to light (Makepeace, 1981). Graham et al. (2001) and Kennerley (2001) both found social desirability to be negatively correlated with reports of victimization of intimate partner violence.

Problems with Instrumentation

Intimate partner violence is very difficult to quantify. Many available instruments have little psychometric data to support them. The most widely used scale, Straus' Conflict Tactics Scale, has been widely criticized. Measurement of violence in dating couples is particularly difficult because none of the widely used, well-validated measures have been designed primarily for use with young dating couples.

Conflict Tactics Scales. The most commonly used scale in both research and practice is the Conflict Tactics Scale (CTS; Straus, 1979). This scale was designed for

use with married, heterosexual couples and normative data provided by Straus was collected from this category of couples. Also, with only 18 items and three subscales, it does not distinguish between different types of aggression within these two categories. Sexual violence is not addressed on this scale.

The Revised Conflict Tactics Scale (CTS2; Straus, Hamby, Boney-McCoy & Sugarman, 1996) is a more comprehensive scale, designed for use with both dating and married couples. However, it may not be feasible to assume that one scale can effectively and efficiently be used to assess the range of experiences involved with these two very different populations. Items on the Physical Assault, Sexual Coercion, and Injury subscales of the CTS2 may be considered too severe for new relationships. Fortunately, in most cases it is unnecessary to ask young adults, barely out of high school whether they have, "used force (like hitting, holding down, or using a weapon) to make my partner have oral or anal sex" (Straus et al., p 309). To further complicate matters, the authors of the scale made many revisions on the Sexual Coercion and Injury subscales after their data was collected for purposes of validation. For this reason, these two subscales cannot be used with the same level of certainty as the other three subscales.

Other measures. Other existing measures of partner violence have also been developed for use with married couples, and most of these scales measure severe levels of violence. The Spousal Assault Risk Assessment (SARA; Cooper & Yuille, 2003), the Measure of Wife Abuse (Desai, 1999; Rodenberg & Fantuzzo, 1993), the Index of Spouse Abuse (Hudson & McIntosh, 1981), and the Response to Conflict Scale (Birchler & Fals-Stewart, 1994) are all examples of scales intended to measure more serious levels of violence in well-established couples.

The Conflict Tactics Scales, along with other, less widely used measures of intimate partner violence, have been critical tools in helping us to address this important social problem. Although it has been difficult, if not impossible, to establish accurate prevalence rates, these rates have been established, at least to the level that this violence is widely recognized as a problem worthy of our attention. Just as importantly, these tools have helped us to find ways to effectively intervene with violent couples.

Preventative Intervention and Intimate Partner Violence

In a groundbreaking conference attended by over 200 psychologists, physicians, lawyers, law enforcement officials, judges, epidemiologists, hospital administrators, and representatives from victim's organizations (Association of Trial Lawyers of America, 1993), these professionals concluded that long term efforts at prevention are necessary in order to deal effectively with the problem of partner violence. Barnes and Greenwood (1991) also conclude that prevention would be the most effective form of intervention for college students who perpetrate partner violence. If we are able to identify precursors of intimate partner violence, we will gain an important tool in helping young people establish safe, healthy relationships. The college setting is an ideal setting in which this information can be gathered, because this is often the first setting in which young people begin to establish independent relationships

Dating Violence among College Students

College students represent a unique population in the field of intimate partner violence. Compared to individuals who are represented by research utilizing community samples, shelter inhabitants, and legal records, college students are less likely to be married and more likely to be involved in new relationships. Perhaps because of their

availability to researchers, a fair amount of intimate partner violence research has utilized college populations. This is fortuitous because this research has provided a great deal of useful information to researchers and clinicians who work to find effective preemptive interventions for use with these young adults. However, the college student population presents researchers with measurement problems that are unique to this particular group. It will be important to resolve these problems in order to find ways to effectively reduce the incidence of intimate partner violence in the college student population.

Prevalence Rates

Patterns of intimate partner violence in the relationships of college students appear to be different from patterns of violence one sees in the research with more established couples. However, although some details are different, many remain the same. Makepeace (1981) found that 21.2% of college students surveyed had direct personal experience with dating violence. Katz, Kuffel, and Coblentz (2002) found that 18% of college women and 13% of college age men reported that they had had intimate partners who had been violent towards them only one time in the past, while 26% of the women and 38% of the men reported having partners who had been repeatedly violent. In both community and college student populations, less injurious forms of violence are much more prevalent than more severe forms of violence (Makepeace, 1983; Straus & Gelles, 1995).

Effects of Violence

Dating violence has detrimental effects on both the victims and the perpetrators. Among college students, being a victim of dating violence is associated with loss of self-esteem, loss of confidence, impaired identity development, impaired capacity for

intimacy, and a diminished sense of personal control (Pezza & Bellotti, 1995). Koss et al. (1988) found that over 26% of women who had been victims of acquaintance rape had considered suicide.

Identifying College Students Involved in Potentially Violent Relationships

Researchers have identified a number of characteristics and circumstances that might be used to identify individual college students who are likely to become involved in violent relationships. Hammock and O'Hearn (2002) found that alcohol use was positively correlated with level of psychological abuse perpetration in men, but this did not hold true for the female college students in their study. Barnes and Greenwood (1991) and Makepeace (1986) also found that alcohol use in male college students was positively correlated with perpetration of dating violence. Gover (2004) found that female adolescents who participated in high risk behaviors were more likely to become victims of intimate partner violence.

Other interesting trends were noted in the Makepeace (1986) study. Makepeace found that reports of egalitarian relationships were positively correlated with reports of increased violence. Although students who were raised by a single parent, who were parented harshly, who had poor academic achievement, who attended church more frequently, and who began to date early were all more likely to experience dating violence, the situation most commonly related to intimate partner violence was being fired from a job on multiple occasions. More recently, Kaura and Allen (2004) noted other characteristics that were highly correlated with higher rates of intimate violence perpetration among college students. Results of this study indicate that increases in both mother's and father's levels of violence were correlated with increases of intimate

violence perpetration. Interestingly, for male perpetrators, the mothers' levels of violence were a better predictor than fathers' levels of violence. The opposite was true for female perpetrators; the father's level of violence was a greater predictor for levels of female perpetration.

Cultural Issues

Cultural and ethnic differences have not played a major role in research on dating violence among college students thus far. In fact, the majority of research results on the topic do not specify results along racial and ethic lines (Dunham & Senn, 2000; Graham et al., 2001; Kaura & Allen, 2004; Puente & Cohen, 2003; Rouse, Breen & Howell, 1988; Ryan, 1998; Smith, White & Holland, 2003). However, Makepeace did find some differences along racial lines. In his 1986 study of over 2,000 college students attending seven different universities, the lowest rates of violence were among Asian and Jewish populations, while the highest rates were among individuals who categorized themselves as "other".

Gender Asymmetry and Intimate Partner Violence in College Students

As with other populations, it is important to learn more about the students involved in intimate partner violence in order to find effective interventions. In populations of non-college adults and established couples, gender differences have proved to be a very important key in understanding relationship dynamics of couples involved in violent relationships. Gender differences are also an important factor in understanding dating violence among college students.

As mentioned previously, community samples of established couples tend to show gender symmetry with respect to perpetration and victimization of intimate partner

violence (Archer, 2000; O'Leary et al., 1989; O'Leary et al., 1994; Russell & Hulson, 1992). According to Johnson and others (Graham-Kevan & Archer, 2003a, 2003b; Johnson, 1995, in press; Johnson & Ferraro, 2000; Milardo, 1998; O'Leary, 1999), this is likely to be representative of Common Couple Violence.

Also mentioned previously, data collected from shelter inhabitants, police records, hospitals, and court data indicate that the majority of perpetrators of intimate partner violence are male (Dobash et al., 1992; Henning & Feder, 2004; Malloy et al., 2003; Saunders, 2002; Straus, 1999). According to Johnson's theory, this data represents a pattern of violence characterized by Intimate Terrorism either with or without Violent Resistance, or by Mutual Violent Control (Johnson & Ferraro, 2000).

Results of studies focusing on dating violence in college students have not been as clear cut as studies that focus on violence with more established couples with respect to gender asymmetry. A number of studies have indicated that female college students are more likely than male college students to be perpetrators of intimate partner violence (Follingstad et al., 1991; Hammock & O'Hearn, 2002;Kaura & Allen, 2004; Milardo, 1998; Ryan, 1998). Other researchers have found evidence that women are more likely to be victims and men are more likely to be perpetrators of dating violence (Gover, 2004; Makepeace, 1981).

Johnson has stated his belief that, like studies of community populations, studies of college student populations are representative of the population in general and are therefore similar with respect to gender symmetry and its association with patterns of Common Couple violence (Johnson, 1995, in press). However, these two populations are actually quite different.

Two of the most often referenced studies in which community samples were used were the longitudinal study used in the research by O'Leary and his colleagues (O'Leary et al., 1989, O'Leary et al., 1994) and the early Straus and Gelles (1995) study. O'Leary and his colleagues recruited participating couples using radio and newspaper advertising. Both types of advertising described their study as designed to "contribute to our knowledge of marriage and the family" (1989, p. 264). At first glance, it would appear very useful to have both partners available for data collection. However, couples who were experiencing escalated levels of Intimate Terrorism may have been underrepresented as neither victims of perpetrators of Intimate Terrorism would be likely to ask their partners to participate in this type of study.

In the extremely ambitious 1995 study, Straus and Gelles collected data from over 4,000 individuals in what may be the only study for which data from a sample representative of the general population was attempted. This data was collected through the use of telephone interviews with members of married or cohabitating couples. However, it would be understandable why neither victims nor perpetrators of Intimate Terrorism would choose to participate in these interviews if their partners were present, and the authors of the study did not discuss whether this possibility was considered when interviews were scheduled and conducted. Because of the types of data collection used, individuals or couples who were involved in relationships characterized by Intimate Terrorism, or Violent Resistance would very likely be grossly underrepresented.

One other factor contributes to the uniqueness of the college student populations, and this involves the length of time in which individuals have been in relationships in question. For each of the community studies described, couples were either married or

cohabitating. Although it is given that many couples cohabitate or even marry after only short periods of dating, it is reasonable to assume that, on average, cohabitating and married couples have been together for longer time periods than most couples consisting of college students, most of whom are unmarried. If Intimate Terrorism or Violent Resistance were present in these couples from community samples, it would in many cases have likely have escalated to some degree by the time the individual or couple participated in the study.

Neither of these factors was present in the research of college student populations. As with most research using the college student population, the vast majority of this research was conducted with individuals who were asked to participate for course credit with the collection of data taking place in the classroom (Barnes & Greenwood, 1991; Follingstad et al., 1991; Forbes & Adams-Curtis, 2001; Kaura & Allen, 2004; Makepeace, 1981, 1983; Ryan, 1998). For these studies that did report rates of participation (Forbes & Adams-Curtis; Makepeace, 1983; Ryan), participation rates were much higher than those of the Straus and Gelles study. Although study participation was always optional for these students, the higher participation rates indicate a more complete representation of the population sample.

Because these students participated in the classroom setting, none of these students were placed in a situation in which their partners could become aware of their responses to items on the surveys. For this reason, students who were involved in Intimate Terrorism or Violent Resistance were highly unlikely to be placed into situations in which their partners' presence might affect their responses or cause them to withdraw from the studies. In fact, the only situation in which this may have been the case would

be if their partners happened to be in same class. While possible, this is unlikely to be the case in the majority of situations. This may be an indication that data collected from college students is more likely than data collected from community samples to include individuals involved in relationships that are either characterized by Intimate Terrorism or Violent Resistance.

College students in these studies were identified as "dating" and not as married or cohabitating, and because their relationships had not reached this level of formal commitment, one could come to the conclusion that these couples were not as well established as the married and cohabitating couples represented in the community research. Therefore, if violence in the college samples was representative of patterns of Intimate Terrorism or Violent Resistance, it may not be discernable at this point from Common Couple Violence because it may not have escalated to any measurable degree.

These inherent differences in the methods used in recruitment and data collection work together to increase the probability that community samples and college student samples are quite different from one another. One critical difference is that college student populations may be more likely to include couples involved in relationships characterized by Intimate Terrorism and Violent Resistance.

Support is found in a study that included data from 104 British college students. Graham-Kevan and Archer (2003a) found that 9% of these students were involved in intimate relationships in which they could be characterized as perpetrators of Intimate Terrorism, while 5% were in relationship in which they could be identified as perpetrators of Violent Resistance. Seventy eight percent of the perpetrators of Intimate Terrorism were men, while all of the Violent Resistance perpetrators were women. The

information gained from this study is important because when one considers the data from all four categories of perpetration in this group of college students, 38% of the violence is perpetrated by females and 62% is perpetrated by males. This is in line with prevalence data from many of the studies described previously.

Measurement Issues

Of course, intimate partner violence among college students is subject to the same measurement issues that plague other studies of intimate partner violence, including underreporting. The college student population is also subject to measurement issues that are not problematic or are less problematic in other populations. The most critical of these is a lack of an accurate measure for the types of violence found more often in this population. As in research with older adults and married couples, various forms of the CTS are most commonly used in collecting data in college populations (Follingstad et al., 1991; Katz et al., 2002; Kaura & Allen, 2004; Makepeace, 1981; Ryan, 1998; Smith et al., 2003). The Conflict Tactics Scale, for reasons previously described, is inappropriate for use with this population. Researchers in one study used a short form of the Measure of Wife Abuse (Dunham & Senn, 2000), another scale that was obviously designed for use with married women.

Studies that do not employ the use of the CTS or similar scales tend to use questionnaires that were created for the purpose of the study and have not withstood psychometric evaluation (see Campbell, Sapochnick & Muncer, 1997; Makepeace, 1981, 1986; Milardo, 1998; Ward, Chapman, Cohn, White & Williams, 1991). Individual scales created for the purpose of single studies have their own inherent problems,

including a lack of established psychometric data. Data collected through the use of individually designed scales are also difficult to compare.

Campus violence in general is a problem in this country and one of the most difficult aspects of this problem is the lack of accurate measures for this violence (Pezza, 1995). Pezza and Bellotti (1995) concluded that primary prevention would be one of the most effective ways to intervene with young adults in this setting. Finding a reliable and valid method of collecting data about dating violence among college students is a critical first step in gathering accurate information about prevalence rates in this population. This would also help us in identifying specific individuals who are at risk for developing violent relationships. Only after these steps are taken can we develop efficient and effective interventions for use with this population.

The Need for the Abuse within Intimate Relations Scale (AIRS)

Coker, Smith, McKeown et al. (2000) concluded their study of over 1,400 women by stating, "These results strongly suggest that need for earlier identification of intimate partner violence and intervention for the entire family" (p. 559). The family is the most important of any group found in human society (Jain, 1992). The intimate partner relationship is the platform upon which most families are built. The AIRS would work to take that recommendation one step further – a chance to intervene, in most cases, before those in violent relationships have children.

The research obviously indicates that intimate partner violence among college students is a problem across the country. Unfortunately, the tools we have to measure this violence are either primarily designed for use with other populations or are created for particular studies and are not shown to be reliable and valid before their use. The

AIRS scale, if found to be valid, can be established as a valuable tool for use in research and intervention with this population.

The purpose of this study is to provide validation for the Abuse within Intimate Relations Scale (AIRS; Borjesson et al., 2003). This scale is unique for two reasons. First, it was designed for use with younger adults, specifically college students. Existing, well-established scales have been designed primarily for use with married or well established couples, and these scales often include items that are either irrelevant or inappropriate for use with younger adults. There are simply no scales that have been designed for use with young adults that have been shown to be reliable and valid. Up to this point, research on dating violence in college students has been done either with the use of scales meant for older adults in well established relationships or through the use of scales that, for the most part, were created for specific studies and used without being psychometrically tested.

Second, the AIRS scale is intended to identify precursors of violence in dating couples. Up to this point, instruments intended for use in identifying cases of partner violence have focused on identifying violence that has already escalated to a serious level. The AIRS scale is the first and only scale designed to identify individuals who may be in relationships at risk for future violence. This could very well represent a critical change in the field of relationship violence because up to this point, most interventions focus on reacting to violence in relationships rather than preventing it.

The primary question to be answered as a result of this study is whether the AIRS scale is a valid instrument for identifying subtle forms of both physical and emotional violence in intimate relationships. If the AIRS is found to be valid, then the identification

of at-risk couples could be an important first step finding ways to prevent violence in many intimate relationships.

Hypotheses Concerning AIRS Validation:

A number of factors were considered in the formulation of these hypotheses. Broadly, it was important to determine whether the AIRS does in fact measure precursors, or subtle levels, of intimate partner violence. More specifically, it was also important to consider the individual subscales of the AIRS and whether these subscales are accurate measures of specific categories of intimate partner violence.

The Conflict Tactics Scales are by far the most widely used scales in the field of intimate partner violence (Archer, 2000). Because of the general acceptance of these scales as accurate measures of intimate partner violence, their inclusion is important in the validation of the AIRS. It is also important to note that all forms of the CTS have Negotiation subscales designed to measure healthy forms of conflict resolution, and this subscale provides an avenue to test the discriminate validity of the AIRS.

Although the original CTS has been used with more overall frequency than the newer CTS2, the CTS2 was chosen for the purposes of validating the AIRS for three reasons. First, the CTS was designed for administration in an interview format, while the CTS2 was designed as a self report instrument (Straus, Hamby & Warren, 2003). Second, the CTS consists of 18 items, with negotiation being represented by only three items and psychological violence as a whole being represented by only six items (Straus & Gelles, 1995). The CTS2 consists of 39 items, with six and eight items contributing to negotiation and psychological violence subscales, respectively. Finally, the CTS2 is designed in such a way that subscales are subdivided, in most cases, into categories

indicating “minor” or “severe” levels of violence. Because the AIRS was designed to measure subtle forms of violence, these subcategories on the CTS2 became important. It is much more reasonable to expect scores on AIRS subscales to correlate with scores on CTS2 ‘minor’ categories that with scores on CTS2 ‘severe’ categories.

The Conflict Tactics Scales are the most widely used scales for measuring levels of both physical and psychological violence in intimate relationships (Straus et al., 2003) However, because the CTS2 only includes one subscale measuring psychological violence, it was important to include a measure of psychological violence that provided some level of qualitative discrimination between types of psychological violence. The Psychological Maltreatment of Women Inventory (Tolman, 1989) was chosen because it has been used in over 25 studies (Tolman, 2004) and because feedback from professionals working with violent couples and from men and women with a history of violent relationships suggested high levels of content and face validity (Tolman, 1989).

Besides testing for concurrent and discriminate validity, it was important to test the factor structure of the scale. If exploratory factor analysis were to identify a factor structure similar to that found by the scale’s authors, it would provide further evidence that AIRS subscales are measuring discrete subcategories of intimate partner violence. Finally, because self reports of abuse perpetration are known to be affected by social desirability in respondents (Makepeace, 1981; Tutty, Bidgood, Rothery & Bidgood, 2001), it is important to control for this factor in order to assure more accurate results.

Hypothesis #1. Scores on the Emotional Abuse subscale of the AIRS will be positively correlated with scores on the Psychological Aggression subscale of the CTS2

and negatively correlated with scores on the Emotional items of the Negotiation subscale of the CTS2.

Hypothesis #2. Scores on the Verbal Abuse subscale of the AIRS will be positively correlated with scores on the Psychological Aggression subscale of the CTS2 and negatively correlated with scores on the Cognitive items of the Negotiation subscale of the CTS2.

Hypothesis #3. Scores on the Deception subscale of the AIRS will be positively correlated with scores on the Dominance-Isolation subscale of the PMWI.

Hypothesis #4. Scores on the Overt Violence subscale of the AIRS will be positively correlated with scores on the combined 'minor' items of the Physical Assault subscale of the CTS2.

Hypothesis #5. Scores on the Restrictive Violence subscale of the AIRS will be positively correlated with scores on the combined 'minor' items of the Physical Assault subscale and with the combined 'minor' items of the Sexual Coercion subscale of the CTS2. Scores on the Restrictive Violence subscale of the AIRS will be positively correlated with scores on the Dominance-Isolation subscale of the PMWI.

Hypothesis #6. Total score on the AIRS will be negatively correlated with scores on the Negotiation subscale of the CTS2.

Hypothesis #7. Combined scores on the Emotional Abuse and Verbal Abuse subscales of the AIRS will be predictive of scores on the Emotional-Verbal Abuse subscale of the PMWI.

Hypothesis #8. Exploratory factor analysis will reveal a second order factor model similar to that described by the scale's authors (Borjesson et al., 2003), with two

higher order factors representing psychological and physical violence, and three and two respective lower order factors representing the five subscales defined by the scale's authors.

CHAPTER II

REVIEW OF THE LITERATURE

Previous research has established the fact that intimate partner violence is a serious problem in our society. According to the most recently published United States Department of Justice statistics (USDOJ; 2002), over 185,000 Americans are assaulted by a spouse or ex-spouse every year. In a recent survey of women attending family practice clinics, over 55% of more than 1,100 women surveyed reported past or present experiences with partner violence (Coker, Smith, McKeown et al., 2000). Even though male-perpetrated intimate partner violence has received the most attention, a great deal of research has indicated that female-perpetrated violence is just as common (Archer, 2000; Follingstad et al., 1991; Katz et al., 2002; O'Leary et al., 1989; O'Leary et al., 1994).

Up to this point, the majority of efforts to alleviate this problem have focused on intervention with couples in which serious levels of violence have already been identified. Current instruments used to measure intimate partner violence have primarily been developed for use with married couples and with couples who have already experienced a serious level of violence in their relationships. The purpose of this study is to validate and explore the factor structure of a relatively new instrument intended for use in identifying college students at risk for violent relationships. If this study provides evidence that this instrument is valid and reliable, use of this instrument can become an important first step in identifying individuals who may be involved in relationships at risk for violence.

Definitions

As one considers basic facts in terms of intimate partner violence, definitions become very important. Because the study of intimate partner violence has changed considerably over the years, because attitudes have shifted, and perhaps because attitudes are so strong among those who study this problem, many of the words that are important in understanding this problem are not readily understood. Those who study the dynamics of intimate partner violence use a language that initially sounds simple but actually becomes quite complex upon closer examination. Often when these words appear to be understood by the receiver, they are not being understood in such a way as to hold the same definition intended by the sender. These definitions are not only important in understanding the dynamics of research and treatment, they directly affect measurement and reported prevalence rates because no universal definition of intimate partner violence exists.

Because of the ambiguity of terms often used in research involving intimate partner violence, it is important for any researcher in this field to clearly define terms used in his or her research. For the purpose of the current study, a review of terminology is offered, along with basic information and operational definitions used in this research.

Intimate Partner

One primary issue in the area of intimate partner violence is what constitutes an "intimate partner." Research studies have varied across time and across researchers with respect to the types of relationships on which studies have focused. Criteria for choosing what might constitute an intimate relationship have included specifics such as marital status, living conditions, and sexual orientation.

Early psychological research on family violence in the United States focused on violence within heterosexual, married couples (Gelles, 1980). These parameters are still in place in many circumstances. For example, USDOJ statistics, often used as a guideline for reporting frequency of intimate partner violence, continue to include only information about couples who are or have been married. Cohabitating couples are not included in these statistics, nor are dating couples (USDOJ; 1995).

For the purpose of the present study, the operational definition of "intimate partner" will be similar to that used by Henning and Feder (2004) who defined an "intimate partner" as a "current or former dating partner or spouse" (p. 72). However, although Henning and Feder limited their participants to individuals in heterosexual relationships, the phrase "intimate partner" is operationalized for the purpose of this study as a "current or dating partner or spouse in a heterosexual or same sex relationship."

Victims and Perpetrators

Operational definitions of victims and perpetrators have represented perhaps the most controversial of any in the field of intimate partner violence. Historically, whether couples are married, dating, or cohabitating, victim and perpetrator roles have been assumed to fit along predetermined gender lines. These roles have also been assumed to be static, meaning that one partner always acts as the perpetrator and the other spouse always acts as the victim. Many studies on marital violence continue to label the male as the consistent perpetrator and the female as the consistent victim, as do many studies that include dating and cohabitating couples (see Coker, Smith, McKeown et al., 2000).

However, this is not always the case. A great deal of recent research has focused on the female as perpetrator (Dasgupta, 2002; Erez & King, 2002; Katz et al., 2002). As controversial as this research has been, it has been consistent with several populations, and assumptions about gender are no longer appropriate in light of this data. Recent research has also indicated that, in many relationships, victim and perpetrator roles are not static, and each partner may act as both victim and perpetrator (Johnson, 1995; Vivian & Langhinrichsen-Rohling, 1994). For the purpose of the current study, the terms "victim" and "perpetrator" will be gender neutral and will not be assumed as static. Because the roles of victim and perpetrator are interchangeable in many relationships, one partner described as a victim or perpetrator at any given time is not assumed to fill this same role throughout the relationship or across interactions.

Victim. The most relevant definition for the word "victim" from Webster's dictionary is, "one that is acted upon and usually adversely affected by a force or agent" (Woolf, 1981, p. 1295). The USDOJ defines "victim" as "the recipient of a criminal act, usually used in relation to personal crimes" (1996, p. 175). Neither of these definitions are suitable, however, as the first is too vague and the second is too specific as it limits the definition to include criminal acts only. For the purpose of this study, these two definitions will be combined so that the term "victim" is operationally defined as "a person that is the recipient of an act of violence by an intimate partner."

Perpetrator. There are number of words that are used interchangeably with the word "perpetrator" throughout the literature, including offender, abuser, and batterer. For the purpose of the current study, "perpetrator" is operationally defined as "a person who inflicts violence on an intimate partner."

Violence

The meaning of the word "violence" itself presents one of the most complex definitions. The word "violence" has no universal definition in the literature and available definitions may or may not include non-physical forms of violence (Burgess & Roberts, 1996). Reported prevalence rates of intimate partner violence range drastically, in part because of the different definitions of violence employed by various researchers. Even the passage of time and changes in culture may have had an effect on differences in reported prevalence rates, as early researchers attempted to distinguish between legitimate use of force and non-legitimate use of violence between family members (Gelles, 1980).

Even when a researcher limits his or her focus to physical violence, it can become difficult to determine what behaviors might appropriately fit into this category and how sub-categories might be defined and weighted. For example, would using an object to hit a partner always be considered more severe than using a hand? Is sexual abuse to be considered more violent than other forms of physical abuse? How does one differentiate between the playful and flirtatious "wrestling" in which many young couples participate and a very real use of power one partner might use over another to get what one wants? It could be argued that, especially in young couples, the participants themselves are sometimes unsure.

At one end of the continuum, violence is defined as "any act that is harmful to the victim" (Gelles, 2000, p. 785). This definition clearly includes acts of verbal and emotional violence. However, this definition would also include acts that were completely accidental. At the other end of the continuum, however, we find violence as

implied in the USDOJ statistics (2002), as these figures only represent reported acts of violence that have resulted in arrest.

The terms violence, aggression, and abuse are often used interchangeably in the literature. As defined in previous research (Campbell et al., 1997), the word "violence" as used in the current study will be defined as "behavior used with the intent to harm or injure another person." Obviously, this definition encompasses a broad range of behaviors, and these behaviors can be grouped into three basic categories: physical violence, psychological violence, and sexual violence.

Physical Violence

Physical violence will be defined here with the help of Straus et al., (2003), who used the following definition of "violence" in the conceptualization of the Conflict Tactics Scales. Straus and his colleagues defined "violence" as "an act carried out with the intention, or the perceived intention, of causing physical pain or injury to another person" (p. 7). For the purpose of the current study, Straus' definition will apply specifically to physical violence.

Two specific terms often used interchangeably with "physical violence" are of note here. Although the terms "domestic violence" and "battering" are not used in the current study, they are prevalent in the literature, especially less recent literature. In order to provide a better understanding of the general topic of intimate partner violence, these two terms are defined to enhance the reader's understanding of the topic.

Domestic violence. Similar to "intimate partner violence," domestic violence is a term used historically to describe violence between intimate partners. This phrase was used frequently in previous decades when most researchers focused on violence within

the nuclear family. However, this particular phrase is no longer widely used as it implies relationships in which the partners are either married or cohabitating.

Battering: In line with Dasgupta's (2002) definition, battering here is defined as a pattern of intimidation, coercive control and oppression. This definition is similar to the one used by Coker and her colleagues (Coker, Smith, McKeown et al., 2000). Although this type of violence is usually physical, it can take place in the absence of physical violence. According to the descriptions offered by these researchers, battering is similar to Johnson's (1995) definition of "Patriarchal Terrorism" or "Intimate Terrorism." However, in contrast with the definitions offered by these researchers, the term "battering" is not necessarily gender based, as it has also been used to describe the behavior of females (Steinmetz, 1977-1978). For the purposes of this study the term "battering" is not gender-based. It will be used here only in describing results of specific studies in which this term is specifically used by the researcher.

Psychological Violence

Psychological violence is likely to be the most difficult to define, as use of terms to describe different forms of non-physical violence has been inconsistent in the literature. For example, in the Revised Conflict Tactics Scale (CTS2; Straus et al., 2003), behavior such as calling a partner fat or ugly is categorized as a severe level of "psychological aggression." On this same scale, swearing at a partner is categorized as a minor level of "psychological aggression." On Tolman's Psychological Maltreatment of Women Inventory (PMWI; Tolman, 1989), swearing at a partner is categorized on the "emotional-verbal" subscale. Tolman's instrument also includes examples of dominance and isolation such as keeping a victim from seeing family members, while this type of

violence is not addressed on the more widely used Conflict Tactics Scales. Peace and Paymar (1993) categorize acts of humiliation as "emotional abuse." In the literature focusing on religious cults, the systematic indoctrination of cult members is referred to as "psychological abuse" (Gasde & Block, 1998).

Although there has been a great deal of focus on physical violence, researchers are beginning to realize the negative effects of psychological violence. Coker, Smith, Bethea, King and McKeown (2000) found that women who experienced psychological abuse in the absence of physical abuse were more likely than women who experienced no intimate partner violence to present with a number of physical symptoms. These included arthritis, chronic pain, migraine, stammering, sexually transmitted infections, chronic pelvic pain, stomach ulcers, spastic colon, and frequent indigestion, diarrhea, or constipation.

Because of the inconsistency in the literature, it is particularly important to clearly state what is meant by the terms used to describe various forms of psychological violence. For the purpose of the present study, the following terms and definitions are used to describe specific sub-categories of psychological violence.

Verbal violence. Verbal violence is a type of violence that may or may not be part of a pattern of emotional or physical violence. Verbal violence is not necessarily used for the purpose of gaining control over one's partner. This type of violence is actually categorized by Straus et al. (2003, p. 50) as "minor psychological violence" and includes such actions as insulting, swearing, shouting or yelling. For the purpose of this study, "verbal violence" is defined as, "using derogatory words or voice tone with the intention of harming one's intimate partner."

Emotional violence. Emotional violence is a type of violence considered to be more severe, in most cases, than verbal violence. Emotional violence includes at least one or a combination of several non-physical control tactics, such as those described by Pence and Paymar's Power and Control Wheel (1993, p. 185). These include actions such as using intimidation (destroying property or displaying weapons), using isolation (controlling who a partner talks to or where a partner goes), using children (threatening to take children away), or using coercion and threats (threatening to leave or to commit suicide). For the purpose of this study, "emotional violence" is defined as "the perpetrator's use of non-physical tactics with the intention of gaining control over one's intimate partner."

Sexual Violence

Perhaps because its characteristics are so unique, statistics on sexual violence are consistently reported separately from those on physical violence, even though sexual violence is technically physical. This unique treatment of sexual violence is likely to have evolved for a number of reasons. Perhaps most importantly, the field of psychology began its research on intimate partner violence with studies of married couples. Until recently, it was not considered possible for rape to occur within the marriage. In fact, as recently as two decades ago, one state statute specifically described rape as, "sexual intercourse with a female, not his wife, by force or against her will" (Finkelhor & Yllo, 1985, p. 1).

Because sexual violence was not considered to be an aspect of "domestic violence," literature focusing on sexual violence was not included in intimate partner violence research until researchers began to address violence in dating relationships.

Also, even though sexual violence was studied as an entity separate from intimate partner violence, it was similar in one respect: sexual violence was assumed to be perpetrated by men in most cases (Ryan, 1998).

Aside from forcible rape, other sexual acts can be categorized as sexual violence. The USDOJ definition does not distinguish between physical force and verbal threats. However, for the purpose of the present study, separate definitions are used for these two different types of violence.

Sexual coercion. The definition for sexual coercion will be derived from the USDOJ definition for sexual assault, which describes a number of acts that are distinguishable from rape or attempted rape. Sexual assault is defined as "attacks or attempted attacks generally involving unwanted sexual contact between the victim and offender. Sexual assaults may or may not include force and include such things as grabbing or fondling. Sexual assault also includes verbal threats" (1996, p. 174). For the purpose of the current research, the definition of sexual coercion will include only non-physical aspects of violence. Also, in addition to threats, verbal pressure to engage in sexual activity will be included, as this form of coercion is included in the Experiences with Sexual Coercion Scale (Forbes & Adams-Curtis, 2001). Therefore, for the purpose of the current research, "sexual coercion" is defined as "perpetration of unwanted sexual contact between the victim and perpetrator through the use of verbal threats or other forms of verbal pressure."

Sexual assault Sexual assault will be distinguishable from sexual coercion by acts of physical force rather than verbal threats or pressure. The definition of sexual assault here is in line with the USDOJ definition, with the exception of the inclusion of

verbal aspects of force. Therefore, for the purpose of the current study, the definition of "sexual assault" is "attacks or attempted attacks generally involving unwanted sexual contact between the victim and offender. Sexual assaults involve force and include such things as grabbing or fondling (USDOJ; 1996, p. 174).

Rape. For the purpose of the present study, rape is defined using a variation of the USDOJ definition (1996, p. 174). The USDOJ defines "rape" as "forced sexual intercourse including both psychological coercion as well as physical force; forced sexual intercourse means vaginal, anal or oral penetration by the offender(s)." Because recent research has indicated that men also report being the victim of forced intercourse (Muehlenhard, 1998), "rape" will be defined here as "forced sexual intercourse including either psychological coercion or physical force."

Basic Facts about Intimate Partner Violence

Although research in the area of intimate partner violence has only been conducted in the field of psychology for three decades, a significant amount of data has been accrued during this time period. A great deal of information has been gained from the National Family Violence Surveys, and because data from these surveys have been analyzed in a number of studies, basic knowledge about these surveys is important. It is also helpful to be familiar with characteristics of individuals involved in violent relationships in order to determine who may benefit from intervention. Cycles of violence are often discussed in the literature, and they are pertinent with respect to many violent relationships. Understanding these basic facts is important to professionals interested in finding the best methods of measurement and ultimately, the most effective methods of intervention.

National Family Violence Surveys

The National Family Violence Surveys were conducted in 1975 and 1985 by Murray Straus and Richard Gelles (1995). Over 2,000 families were interviewed in the first survey, and over 6,000 married and cohabitating couples were interviewed in the second. The authors attempted to sample a nationwide population, and most interviews were conducted by telephone. The authors collected demographic data along with information about levels of violence experienced during the previous year for each family or couple. Although the vast majority of research was collected though other means, familiarization with this scale is helpful because the amount of data collected was substantial.

Characteristics of Individuals Involved in Violent Relationships

Couples who are involved in violent relationships do not represent a homogenous group. However, there are a number of patterns that have been found in the literature. There is some evidence that violent relationships are more common in families that are patriarchically organized (Finkelhor, 1983). Feldman and Ridley (1995) have concluded that there is a strong correlation between alcohol use and violent relationships, and this coincides with the findings of Burgess and Draper (1989). Individuals who are poor or unemployed are more likely to be involved in violent relationships (Burgess & Draper; Feldman & Ridley; Finkelhor). However, Straus, Gelles, and Steinmetz (1981) have suggested that this perception might be due to the fact that the poor and unemployed are more likely to be caught and labeled as a result of violent acts.

Cazenave and Straus (1990) provide evidence that spousal abuse is much more prominent among Black couples. However, socioeconomic status was not accounted for

in the research upon which this conclusion was reached and it is reasonable to hypothesize that this effect may disappear under more controlled research conditions. Analysis of data collected by Straus and Gelles for the National Family Violence Survey (Straus & Smith, 1990) indicated extremely high rates of abuse among Hispanic married couples. One in four of these couples reported at least one incident of violence in the year previous to the study. This high incidence rate may be intergenerational. Results of one qualitative study of Mexican American male and female adolescents who had experienced some form of abuse indicate that these young people tend to replicate the roles demonstrated by their parents, even though they vocalized an intention to manage their intimate relationships differently than their parents did (Champion, 1999).

Characteristics of Perpetrators of Intimate Partner Violence

A number of studies have been facilitated in order to learn more about perpetrators of violence. Researchers have learned a great deal about etiology of perpetration and about characteristics of individuals already identified as perpetrators of intimate partner violence. The most notable characteristics often found in populations of perpetrators involve witnessing parental violence, and experiencing neglect or abuse as children.

In a review of available literature on childhood precursors to adult intimate partner violence, Feldman (1997) concluded that witnessing parental violence was the most consistent correlate of perpetration of adult partner violence. Bevan and Higgens (2002) found that witnessing family violence was predictive of perpetration of psychological abuse in intimate partner relationships. However, Dostal and Langhinrichsen-Rohling (1997) did not find this to be the case.

Feldman (1997) and Clawson (1999) also found that abusive males were significantly more likely to have been abused as children than were non-abusive males. Dostal and Langhinrichsen-Rohling's findings with respect to direct experiences with abuse were similar (1997). Bevan and Higgens (2002) presented research that indicated that parental neglect was specifically predictive of spousal physical abuse. Although most research has focused on male perpetrators, one study indicates a similar pattern for female perpetrators. In one study of 95 female perpetrators of intimate partner violence (Swan & Snow, 2003), 52% of these women reported experiencing sexual abuse as children.

Feldman (1997) found that low socioeconomic status, low self-esteem, and frequent alcohol use were found to be reliable correlates of perpetration of adult intimate partner violence. Swan and Snow (2003) found that 24% of female perpetrators in their study met criteria for alcohol abuse. Sixty percent of the women in this study scored above the cutoff range on an instrument used to screen for clinical levels of depression.

Logan, Walker, and Leukefeld (2001) completed a study in which male perpetrators were compared according to whether they lived in rural, urban or urban-influenced areas. The results of this study indicated that there are a number of significant differences between these populations. Male perpetrators living in rural areas were less likely to be educated, less likely to be employed at the time of their arrest, less likely to be single, more likely to be divorced or separated, and were significantly more likely to be using medications such as antidepressants, antipsychotic drugs, and muscle relaxants. Rural males were also significantly more likely to have had prior convictions for intimate partner violence. The information gained from this study is important because the vast

majority of research on perpetrators of intimate partner violence has been performed using urban samples.

Characteristics of Victims in Intimate Partner Violence

In terms of childhood precursors of victimization, Feldman (1997) concluded, in a review of the literature, that 20% to 30% of female victims of intimate partner violence were exposed to violence as children. In her qualitative study of women who had been victimized by their male partners, Walker (1979) found that these women generally suffered from low self-esteem, although it was unclear as to whether this was a factor before they became involved in abusive relationships. Walker also found the women in her study likely to believe in traditional female roles in the family. There have been no studies to date focusing on male victims of intimate partner violence.

Cycles of Violence

The phrase "cycle of violence" is seen repeatedly in the literature on intimate partner violence. This phrase can be confusing because there are two different "cycles of violence" discussed in the literature. One of these cycles refers to the intergenerational patterns of violence in families. The other cycle refers to a specific repeated pattern of violence found to exist in many violent relationships.

The intergenerational cycle of violence. As previously mentioned, both victims and perpetrators of intimate partner violence are more likely to have been exposed to parental violence as children (Feldman, 1997). Social learning theory has been used to explain this pattern (Feldman). Children may well learn to aggress and to accept aggression as they observe this pattern between parents or between a parent and step-parent. Aggression is seen as a method of having one's needs met, and this pattern can

be globalized when children see this as an effective strategy used by a role model (see Bandura & Walters, 1963).

The cycle of violence within relationships. Lenore Walker first described this cycle of violence in her book, *The Battered Woman* (1979). Among many of the women she interviewed, she noted a repeated pattern from which violent incidents could be predicted. This repeated cycle has three distinct phases. During the first phase, Walker stated that tension builds within the perpetrator and tension also builds between the perpetrator and victim. Minor violent incidents may or may not take place during this time period. Phase two is represented by an acute incident of violence. During this phase, Walker believes that an uncontrolled release of tension results in violence, the level of which is generally unique to each couple but is always more severe than violence that takes place during the first phase of violence. During the last phase, often referred to as the 'honeymoon phase,' the perpetrator generally acts in a loving manner, often apologizing for violent behavior and vowing to make changes in behavior. It is during this phase that community mental health workers often first meet perpetrators and victims, and this is one reason why intervention can be very difficult; both the abuser and the victim often want to believe that changes will take place in the relationship in the absence of intervention.

It is important to note that Walker's first book consisted of qualitative research collected from a snowball sample and her research methods have been questioned by many. However, this cycle of violence has been widely accepted and adapted by many who work with both victims and perpetrators of intimate partner violence (see Berry, 2000; Eastside Domestic Violence Program, 2003; Oakland County Coordinating

Council against Domestic Violence, 2004). Because this model is so widely used, it is important for researchers and clinicians to be aware of its content.

Theoretical Considerations for Research on Intimate Partner Violence

There are many different theories of intimate partner violence, and these theories can be categorized in a number of ways. For example, Feldman and Ridley (1995) have identified ten prominent theories of intimate partner violence. These theories can be categorized by their Intraindividual, Psychosocial, and Sociocultural explanations for violence and are identified from an etiological perspective. Etiological explanations are important to anyone researching intimate partner violence and these ten theories offer important contributions to the literature.

Although etiological explanations are important, other types of theoretical differences have had more serious consequences in the field. Throughout the history of intimate partner violence research, there has persisted a pattern of serious disagreements among various researchers. Most of this controversy is based on various researchers' underlying assumptions about intimate partner violence. The majority of this controversy can be explained by differences between two primary theories upon which the majority of intimate partner violence has been based (Archer, 2000).

The first theoretical perspective, which could be identified as Family Conflict Theory, asserts that intimate partner violence is one aspect of family violence which is a serious problem in modern day society. This point of view is perhaps most accurately represented by the work of Murray Straus (see Hotaling, Finkelhor, Kirkpatrick & Straus, 1988; Straus & Gelles, 1995). Researchers working from this perspective focus less on etiology and more on identifying various aspects of violent relationships in modern day

society. Family conflict researchers have collected an enormous amount of data which have brought significant contributions to the field.

The second theoretical perspective, which can be identified as Feminist Theory of Intimate Partner Violence, asserts that intimate partner violence is the culmination of centuries of male patriarchy and that many males in our society continue to use physical force to keep women in subordinate roles (Feldman & Ridley, 1995). Researchers working from this perspective generally assert that, unless this aspect of the situation is specifically acknowledged and addressed, intimate partner violence will continue to be a problem in our society. This perspective is probably best epitomized by Walker's research (1979; 1988), and is often found in research in which the male is assumed to be the perpetrator. Researchers working from this perspective have also offered significant contributions to the field of intimate partner violence.

Although research based on these two different models is often contradictory with respect to findings, researchers who base their work on either Family Conflict theory or Feminist theory both have very strong models with which to work. These two perspectives have played very different roles in terms of research direction. Without bounds to the male perpetrator/female victim assumption, Family Violence researchers have managed to uncover and create grounds for the exploration of female perpetrated intimate partner violence. Feminist researchers have been very successful in establishing a strong network of resources for female victims of intimate partner violence.

Men and Women as Perpetrators and Victims: Who is who?

As suggested by the foci of these two primary theories driving research in intimate partner violence, there is considerable disagreement in the field with respect to

gender dynamics. Until recently, men were assumed by many to be the only perpetrators of domestic violence, in the United States or elsewhere. This viewpoint continues to be the driving force behind considerable research in the field. However, a number of researchers have long asserted that intimate partner violence perpetrated by women is a serious problem in our society (Steinmetz, 1977-1978; Straus, Gelles & Steinmetz, 1981). Issues of gender dynamics in terms of perpetration and victimization have come to be the source of some of the most heated debates in the field of intimate partner violence.

Historical Controversy Surrounding Gender Asymmetry

The persistence of the assumption of male perpetrated intimate partner violence may be, in part, due to the societal climate in which the problem of intimate partner violence first came to light in the United States. It wasn't until the 1970's that society even began to look at intimate partner violence as a social problem (Gelles, 1980). In a decade that featured Gloria Steinem's publication of the first issue of *Ms. Magazine,* congressional approval of the Equal Rights Amendment, and a Grammy award for Helen Reddy's *I am Woman*, it was very likely to be considered politically incorrect for any researcher to even suggest that women might play an aggressive role in this newly defined societal issue. Yet, early research in the field did suggest it.

As early as 1977, in an article titled, "The Battered Husband Syndrome," Steinmetz discussed results of research that indicated a need to address the problem of female-perpetrated intimate partner violence. When Steinmetz's paper wasn't being criticized, it was being ignored. In one of the first books on the topic of intimate partner violence, Lenore Walker (1979) offered two sentences to address the possibility of female-perpetrated intimate partner violence. Walker stated that, "Some studies have

raised the question of whether large numbers of men are being beaten by their women – but this situation has no reliable supportive facts to date." (p. x).

Walker's book, *The Battered Woman* (1979), fit well with the feminist theme of the decade. In a nation where women were searching for strong female role models, Walker arrived on the scene as a well educated, professional woman who dedicated herself to helping women. Many of the women interviewed in Walker's book had experienced the most brutal forms of abuse, and Walker included a multitude of incredibly graphic descriptions transcribed from interviews with abused women. This book may well have provided the cement that held the assumption of male-as-perpetrator in place for decades to follow.

A year after *The Battered Woman* was released, Straus, Gelles, and Steinmetz (1981) published a book in which results of the first major prevalence study on the topic of family violence were reviewed. Although Straus and his colleagues focused on areas of child abuse and male-perpetrated spousal abuse, the problem of female-perpetrated spousal abuse was addressed briefly. Although Straus went on to become one of the most well-known researchers in the field of family violence, he later remarked how this early mention of the possibility of female-perpetrated spousal abuse affected his career. In a 1999 book chapter, he commented,

> In the mid-1970's my colleagues and I made the disturbing discovery that women physically assaulted partners in marital, cohabitating, and dating relationships as often as men assaulted their partners. This finding caused me and my former colleague, Suzanne Steinmetz, to be excommunicated as feminists. Neither of us has accepted this sentence, but it remains in force. So when Salman Rushdie was

> condemned to death for his heresy, we may have felt even more empathy than most people because we had also experienced many threats, including a bomb threat (Straus, 1999, p. 18).

Despite the cool reception with which Straus' first book was received, he made one very critical contribution to the field during the seventies that may well be the sole reason that this issue of female-perpetrated intimate partner violence was not completely ignored. In 1979, Straus introduced the Conflict Tactics Scale (CTS). Although the CTS will be described in detail later, for the purposes of this discussion it will suffice to say that this scale was important because it was designed in such a way that it was intended to be given to both partners. Perhaps because this was the first scale to be introduced and therefore the first scale to undergo and stand up to psychometric testing, it quickly became the most widely used scale for measuring intimate partner violence. Although there is no way of knowing how research on the topic of intimate partner violence might have progressed in the absence of the CTS, the design of this scale certainly made it feasible to collect data from both sexes.

The 80's proved to be a tumultuous decade, as many researchers in the field of intimate partner violence polarized with respect to gender issues. Many researchers seemed to simply ignore the issue by focusing their research in such a way that men were assumed to be perpetrators and women were assumed to be victims of intimate partner violence (Hudson & McIntosh, 1981; Koss et al., 1988; Long & McNamara, 1989). Others participated in heated published debates on what came to be known as "gender symmetry" in the field of intimate partner violence. Researchers who participated in this

debate scrambled to explain the mysterious female perpetrator who brought so much cognitive dissonance to professionals in the field.

Gender Asymmetry and Explanations for Gender Issues

Plainly stated, the problem was this: Even though society was being inundated with horror stories of male-perpetrated violence, data collected from both sexes in general community populations have consistently shown females to aggress against their partners at least at the same rate as males (Archer, 2000; Follingstad et al., 1991; O'Leary et al., 1989; O'Leary et al., 1994). It seemed that no matter how the data were evaluated, by frequency, by type of violence, or even by who drew "first blood," so to speak, the numbers were the same.

One major study that seemed to epitomize the situation was performed by O'Leary and his colleagues in the late 80's (O'Leary et al., 1989). These researchers collected data from 272 couples at three points in time over a 30 month period. O'Leary and his colleagues found that 17% of women and 8% of the men in the study remained stably physically aggressive over the 30 month period. When the method and severity of aggression were evaluated, they found that the women in this study engaged in all forms of aggression at rates equal to or greater than those of men.

More recently, Archer (2000) completed a meta-analysis of 82 research studies in which comparisons of physical aggression or its consequences were made between male and female perpetrators. Results of this analysis were consistent with O'Leary's findings that women were more likely to engage in acts of physical violence against their partners. Women who did engage in physical acts of violence also engaged in these acts more frequently than their male counterparts.

Some researchers have insisted that female violence is generally retaliatory or used in self-defense (Kimmel, 2002; Russell & Hulson, 1992). The possibility of female retaliation to male perpetrated violence is worth addressing for a number of reasons. This explanation for female violence has been an issue in many well-publicized cases of female-perpetrated spousal homicide (Bradfield, 1998). The issue of self defense by victims of abuse is important. Results of one study provide evidence that women who employ either physical or verbal self protective measures during an assault by an intimate partner are almost twice as likely to sustain an injury (Bachman & Carmody, 1994).

Retaliatory violence as a single explanation for female perpetrated violence was brought into question by O'Leary and his colleagues (O'Leary et al., 1989), who found that the women who participated in their study often aggressed in the absence of aggression from their spouses. O'Leary et al. (1994) later completed a similar study with 393 couples, and found similar results.

Many researchers have not acknowledged true symmetry and argue that the methods used to collect this data are in question. Much of this criticism focuses on the wide use of the CTS in collecting data from community populations. These researchers argue that the CTS measures only numbers of specific incidents and data collected in this manner does not allow one to take into account motivations, interpretation, and intentions (Dobash et al., 1992; Kimmel, 2002). Another argument against the use of the CTS is that, because the original CTS does not attempt to measure sexual aggression, researchers who use it are ignoring a major aspect of intimate partner violence.

Similarities and Differences with Regard to Gender

Many researchers who do acknowledge symmetry with respect to prevalence have worked to explore what similarities and differences may exist between male and female abusers. There is evidence that male and female perpetrators are similar in a number of ways. O'Leary et al. (1994) found that, in their community sample of married couples, both males and females who were dissatisfied with their marriages and who were shown to have aggressive and defensive personality characteristics were likely to use psychological aggression against their spouses in the early years of their marriages. Hammock and O'Hearn (2002) reported that both males and females who perceived threat in their situation were more likely to inflict high levels of psychological abuse on their partners.

Gender issues and motivation to abuse. Many differences have been found in areas of intention and motivation and in the effects of abuse on the victim. Campbell et al. (1997) found that, although males and females were similar with respect to their willingness to use most forms of aggression measured, females were more likely to use expressive forms of aggression, meaning that their aggression was more likely to be a reaction to intense emotion. In a similar study in which researchers considered male and female differences in the use of instrumental versus expression aggression, Archer and Haigh (1999) found that men were much more likely to use instrumental aggression in general, but not in the intimate relationship. Instrumental aggression refers to an intentional aggression used as a tool for getting one's needs met. When intimate relationships were considered in the Archer and Haigh study, neither men nor women endorsed the use of instrumental aggression. Although women in this study were more

likely to use expressive aggression in the intimate relationship, especially verbal aggression, this did not hold true for men.

Other researchers who have explored motivation have been more specific in terms of the types of motivations they have studied. In a 1991 study of 495 male and female college students, Follingstad et al., (1991) found that males who aggressed against their female dating partners reported doing so in retaliation to being hit first or in response to feelings of jealousy.

There is disputed evidence that violence motivated by jealousy is considered to be more acceptable than other types of partner violence. Puente and Cohen (2003) asked college students to read a number of scenarios involving violent or non-violent interactions between married couples. Violent scenarios were either provoked by jealousy or by an event judged to be equal in terms of provoking anger. The students in this study were more accepting of the violence in these scenarios when this violence was provoked by jealousy. In fact, men who were violent in response to jealousy were gauged to love their wives more than the men in the non-violent, neutral scenarios. In a similar study in which scenarios were presented to 351 respondents approached by researchers in public areas (Delgado & Bond, 1993), this positive attitude toward jealous responses was not found. Older and more educated individuals tended to be less tolerant of violent responses to jealousy.

Many of the females in the Follingstad et al. study (1991) reported that their male partners had only used violence in response to their own female-perpetrated violence. Female perpetrators, on the other hand, reported that they initially used physical force in

response to emotional hurt. In this study, female perpetrators were more likely than male perpetrators to use physical violence as a means of control.

Alcohol use, gender, and intimate partner violence. Data on alcohol use in male and female perpetrators is inconsistent. Busch and Rosenberg (2004) found no differences between male and female perpetrators in terms of history of violence outside the home or in terms of evidence of substance abuse problems. Similarities with respect to substance abuse did not, however, hold true in a comparable study by Henning and Feder (2004) in which researchers used similar data collection methods but had a much larger sample. These researchers found that men were more likely than women to be under the influence of alcohol or other drugs at the time of the arrest. Hammock and O'Hearn (2002) found a positive relationship between alcohol intake and levels of psychological violence perpetration for male college students but not for females.

Gender and the effects of intimate partner violence. One area in which almost everyone agrees is in the major difference between the effects of violence on male versus female victims. Follingstad et al. (1991) found that females were far more likely to respond to partner violence with fear and anxiety. Results of Henning and Feder's (2004) study of over 6,000 individuals who had been arrested for domestic violence indicated that female victims were much more likely than male victims to report feeling threatened and to report wanting an end to their relationships. Hamberger and Guse (2002) found that women were more likely to be angry, afraid and insulted by their partner inflicted violence than were the men. The men in this study were more likely than women to laugh in response to partner inflicted violence. Katz et al., (2002) found that women

were more likely to report lower rates of relationship satisfaction as a result of experiencing partner violence than were men.

Gender issues and injury as a result of abuse. Despite obvious gender differences in terms of size and physical strength (Straus, 1999), there is also evidence that, at least sometimes, women are known to inflict injury to the same extent as men. In a study of 45 men and 45 women who had been arrested for domestic violence, Busch and Rosenberg (2004) found that there was no difference in the number of men and women who inflicted severe to extreme level of injury on their partners.

Busch and Rosenberg's (2004) results are, however, not consistent with the results of other studies. In a study of 93 discordant married couples, Cascardi, Langhinrichsen, and Vivian (1992) noted that, although histories of violence were reciprocal in 86% of the couples, wives were far more likely to sustain serious injury including broken bones, broken teeth, and injury to sensory organs. These women were also far more likely to meet criteria for clinical depression. Vivian and Langhinrichsen-Rohling (1994) also found that, even when measures of male and female violence are equal, women sustain more injuries than their male partners. In a meta-analysis of over 80 studies published 1976 to 1997, Archer (2000) found that 62% of individuals injured during a domestic dispute were women.

Sexual Violence and Gender Issues

As previously stated, some researchers have questioned the use of the CTS in establishing prevalence rates, in part because it does not address issues of sexual aggression. It is important to address sexual aggression because this unique form of intimate partner violence is a serious problem for many dating and well-established

couples. It is important to note that the vast majority of research indicates that women are the primary victims of sexual assault (Makepeace, 1986). While much concern has been appropriately expressed about sexual assault of women, researchers have only recently begun to look at the possibility that women might behave coercively during sexual relations.

In a study of 212 women enrolled in public institutions of higher learning (Anderson, 1996), 33% of these women agreed that they had used sex to "gain power or control of partner" and over 72% of the women in this study agreed that they had at some point become "too aroused to stop" during sexual relations. Overall, over 42% of women in this study reported using sexually aggressive strategies to initiate sexual contact. In a more recent study, Anderson and Sorenson (1999) found that over 13% of adult men stated that they had been coerced into sexual relations by women who threatened to end their relationships. Another major finding of this more recent study is that males and females had different perceptions of female aggression. Males reported that females initiated aggressive sexual acts more often than the females reported having done so. However, it is important to note that the sample in this study consisted of only 82 men and that the data was not collected from couples, but from individual men and women.

Gender Differences and Perpetrator Arrests

Two recent studies have been helpful in revealing male and female differences in terms of intimate partner violence. Busch and Rosenberg (2004) compared details from cases of 45 men and 45 women who had been arrested for domestic abuse and were court-mandated to receive treatment. Henning and Feder (2004) studied a number of

variables with respect to over six thousand men and women who had been arrested for domestic abuse violations over a 40 month period.

Busch and Rosenberg (2004) found a number of differences between the male and female groups. The men in this study were more likely to have a history of prior domestic violence arrest. This also held true in Henning and Feder's (2004) study, in which the male arrestees were significantly more likely to live in homes to which the police had been called previously in response to for domestic violence assaults.

The women in the Busch and Rosenberg (2004) study were more likely than the men to report that they had been assaulted or injured by their partners at the time of their own arrest. The men in this study were more likely than the women to have used a greater number of severely violent tactics in the arrest incident. The men in the Henning and Feder (2004) study were also more likely to have made homicidal threats against the victim or her children.

The women in both the Busch and Rosenberg (2004) study and the Henning and Feder (2004) study who inflicted injury on their partners had been more likely to use a weapon or other object, while the men were more likely to use their bodies alone in the assault. It's interesting to note that, although across studies injury levels are about the same for victims of unarmed men versus armed women, the use of a weapon constitutes a more serious charge, that of felony assault (Henning & Feder). In the Henning and Feder study, the male arrestees were more likely to have been involved in altercations in which children had become involved, either by being assaulted themselves or being threatened with assault.

Violence and Population Samples with Respect to Gender Issues

As previously stated, researchers working from the Family Conflict perspective often collect data that appears to conflict with data collected by researchers working from a Feminist perspective. One of the primary differences in these two types of research lies in the populations from which this data is collected. Family Conflict researchers generally collect data from community samples, while Feminist researchers are more likely to collect data from police records or shelter populations. Recently, researchers have begun to explore the reasons why data collected from these different populations are so conflictual with respect to gender symmetry.

Although data collected from community populations seems to reflect gender symmetry with respect to intimate partner violence (Archer, 2000; O'Leary et al., 1989; O'Leary et al., 1994; Russell & Hulson, 1992), data collected from shelter inhabitants, police records, hospitals, and court data do not reflect this symmetry and data from many of these studies show the majority of perpetrators of intimate partner violence to be male (Dobash et al., 1992; Henning & Feder, 2004; Malloy et al., 2003; Saunders, 2002; Straus, 1999).

In one recent study of over 6,700 people who had been arrested for domestic violence assaults, Henning and Feder (2004) found that less than 17% of the individuals arrested were female. Of these women who had been arrested, 34% experienced dual arrests, meaning they had been arrested along with their partner. This was true for only 7% of the men in the study. Of the 175 arrests that took place in the year following a mandatory arrest policy in Duluth, Minnesota, 12 of these arrested perpetrators were female (Shepard, 1985). USDOJ statistics support this slant on prevalence statistics, as

rates of assault on females by intimate partners in 2002 were almost ten times the rate of assaults on males by intimate partners during that year.

Studies collected from court-ordered, shelter, and medical populations that do show patterns of reciprocal violence show asymmetrical patterns along gender lines with respect to the victim's experience of abuse. Female victims in these populations experience higher levels of fear (Hamberger & Guse, 2002), experience greater physical injury (Cascardi et al., 1992), and were less likely to have started the overall pattern of violence in the relationship (Hamberger & Guse). Data from the Hamberger and Guse study also showed that women from the shelter population experienced a significantly greater number of violent incidents per year.

Unfortunately, the vast majority of research in the area of intimate partner violence has been done using student populations or community samples, and the information that has been gathered from shelter, court, police, and clinical populations is limited (Archer, 2000). It must be noted that the accuracy of data suggesting the higher rates of male-perpetrated abuse among shelter inhabitants has been questioned because the information collected from these victims is one-sided (O'Leary, 2000), and this is a legitimate argument. Unfortunately, data has not been collected from the intimate partners of shelter inhabitants. One can hypothesize many reasons why this might be the case; however, it is interesting to note that most research using shelter populations has been based on the feminist perspective and those who conduct research from the feminist perspective may have little incentive to collect data from this population.

Categorizing Perpetrators and Violent Couples

In a review of literature released before 1990, Flynn (1990) concluded that, in 50% of violent relationships the violence was mutual and that in couples with only one aggressor, the aggressor was just as likely to be female as male. This is an important conclusion because, although it is in line with the findings of equal levels of aggression between males and females, it might begin to explain how this might be the case. This research may have been one of the first indicators that the dynamics of partner violence were not the same across couples.

Dutton (1998) presented a compelling argument for the idea that not all violent relationships fit the same patterns. According to Dutton, male abusers could be classified into three categories: overcontrolled, generally violent, and borderline or cyclical. Although Dutton did not study female perpetrators of violence, this categorical method of looking at intimate partner violence may be an important key to dealing with an issue that is not at all homogenous.

In 1995, Johnson first introduced a theory that fits well with much of the information collected from the various types of studies. Johnson noted the polarization in the field with respect to gender issues and identified those studies using community populations as studies based on the family violence perspective. These studies, such as those conducted by Straus (1979), Straus and Gelles (1999), and O'Leary and his colleagues (O'Leary et al., 1989; O'Leary et al., 1994), were conducted using community populations. Researchers working from this perspective were generally interested in studying the many aspects of violence in the family, one of which was intimate partner violence.

In contrast, research from the feminist perspective dealt primarily with the problem of male-perpetrated intimate partner violence. These researchers, including Walker (1979) and Pagelow (1984), have generally collected data from populations of women who were known to be victims of intimate partner violence.

One of the primary differences between data collected from these two perspectives, including the two different types of population, is the difference in prevalence rates with respect to gender asymmetry. As mentioned previously, data collected from community samples tend to reflect gender asymmetry with respect to prevalence rates (Archer, 2000; O'Leary et al., 1989; O'Leary et al., 1994), while data collected from shelter inhabitants, police records, hospitals, and court data indicate that the majority of perpetrators of intimate partner violence are male (Dobash et al., 1992; Henning & Feder, 2004; Malloy et al., 2003; Saunders, 2002; Straus, 1999).

Johnson (1995) suggested these differences were actually legitimate because these researchers who were working from two different perspectives and collecting data from two different populations were actually measuring two different categories of violence: Common Couple Violence and Patriarchal Terrorism. Johnson argued that couples who are involved in Common Couple Violence show patterns much different than those involved in a relationship marked by Patriarchal Terrorism.

According to Johnson's (1995) theory, couples whose relationships are characterized by Common Couple Violence are not products of patriarchy. Rather, these relationships are characterized by conflict that becomes unmanageable with respect to the couples' conflict strategies. Violence in this type of relationship is symmetrical with respect to gender and is usually minor, although it does sometimes lead to serious injury

or even death. This type of violence is not likely to escalate in severity over time, and the frequency of violent incidents is lower than that of violence characterized by Patriarchal Terrorism. Couples involved in relationships characterized by Common Couple Violence are not likely to become involved with shelters, police, or other community agencies. They are, however, present in the general population and Johnson argues that this is the type of violence being measured in community samples.

Patriarchal Terrorism is, according to Johnson (1995) different from Common Couple Violence and is the type of violence generally studied by feminist researchers. Patriarchal Terrorism is found in relationships marked by patriarchal traditions. The men in these relationships feel they must be in control of their partners. Violence in this type of relationship does escalate in severity over time, and incidents of violence are more frequent than those in couples involved in Common Couple Violence. Patriarchal Terrorism is the type of violence described in Lenore Walker's first book and is the type of violence most people refer to when they discuss "battered women" or "wife battering".

Milardo used data from a 1998 study of college students to build on Johnson's theory and suggested that the category of Common Couple Violence could actually be divided into two categories based on motivation to abuse. Milardo noted that the first type of Common Couple Violence involved an individual's willingness to hit a partner during an argument. He added that the second type of Common Couple Violence was more serious and involved dating couples who were willing, at least hypothetically, to beat up their partners. Milardo stated that, although this type of violence was much more dangerous than the first type, it did meet the criteria for Common Couple Violence and did not meet the criteria for Patriarchal Terrorism.

Johnson's (1995) theory has received support from other researchers. O'Leary, whose research has long supported the concept of symmetry in intimate partner violence, has used Johnson's theory to explain the problem of partner violence to military families (O'Leary, 1999). As previously noted, Archer (2000) completed a metaanalysis of 82 studies in which data was collected on dating or married couples. Although the number of studies for which data was collected from shelter populations was limited and studies utilizing data from arrest records was not analyzed in this study, Archer concluded that, "these limited findings are consistent with M. P. Johnson's view that physical aggression is generally mutual in community samples, whereas it is much more in the male direction in samples selected for severe victimization" (2000, p. 664).

Archer and a colleague (Graham-Kevan & Archer, 2003a, 2003b) later conducted two different studies specifically designed to test Johnson's theory. In the first, they used a discriminate function analysis to compare samples of shelter residents, university students, male prisoners, and men in a treatment program for domestic violence, although this last group had only four members. These researchers used measures to estimate frequency of physical aggression, escalation of aggression, and severity of violence to categorize participants according to the type of violence used, in keeping with Johnson's model. In the second study, Graham-Kevan and Archer used cluster analysis to categorize relationships as characterized by either Intimate Terrorism or Common Couple Violence. A similar but different, slightly larger sample was taken from similar populations in the second study. The results of both of these studies provided support for Johnson's theory. It is unfortunate that neither of these studies included community samples of established couples, and escalation was measured only by one self-report

item. However, this research was innovative and provided good models for future studies.

In more recent publications, Johnson offers further distinction in terms of categories of abuse (Johnson, in press; Johnson & Ferraro, 2000). The category of Common Couple Violence remained unchanged. However, the category of Patriarchal Terrorism was divided into three categories. Intimate Terrorism was describe as similar to Patriarchal Terrorism but is no longer described in terms of gender. According to Johnson and Ferraro, Intimate Terrorism is characterized by a pattern of both violent and non-violent behaviors that are indicative of a motive to control one's partner. It is likely to include emotional abuse. Violent Resistance is a category of intimate partner violence similar to self-defense, and this is one category of abuse almost entirely perpetrated by women. Swan and Snow (2003) found that females who fit into this particular category were more likely to sustain injuries than any other group of female perpetrators of intimate partner violence. Finally, Mutual Violent Control is described as a rare relationship dynamic in which both partners demonstrate behaviors typical of Intimate Terrorism. This form of violence is also likely to escalate over time. Johnson and Ferraro made the most compelling argument for their categorization of intimate partner violence in their conclusion of this article in which they stated,

> The modeling of the causes and consequences of partner violence will never be powerful so long as we aggregate behaviors as disparate as a "feminine" slap in the face, a terrorizing pattern of beatings accompanied by humiliating psychological abuse, an argument that escalates into a mutual shoving match, or a

homicide committed by a person who feels there is no other way to save her own life (p. 959).

Gender issues have generated a sizable collection of research during the past 25 years, and in many ways these issues have worked to divide researchers who ultimately share the same goal – the elimination, or at least a sizable decrease, in the prevalence of intimate partner violence. Researchers have identified a number of similarities and differences in men and women involved in the perpetration of intimate partner violence. The field may benefit when researchers succeed in moving their concentration away from gender and toward a more accurate picture of different types of violence perpetrated by both sexes. An important first step is the development of accurate measurement instruments so that individuals who are or may become involved in violent relationships can be accurately identified.

Measurement of Intimate Partner Violence

Measurement issues in the field of intimate partner violence are complex. Finkelhor's (1988) observation that very little family violence takes place in the presence of anyone other than the participants and almost no family violence takes place in the presence of researchers may seem obvious. However, he makes an important point. Researchers cannot use direct observation, and therefore all research is conducted using other, less reliable, measures.

These issues are perhaps most salient when one considers the enormous discrepancies in various reports of the prevalence of abuse. For example, recently published USDOJ statistics (2002) indicate that over 185,000 Americans are assaulted by a spouse or ex-spouse every year. Using the current United States government total

population figure of just over 293 million (United States Central Intelligence Agency, 2004), this would indicate that about 3/5 of 1% of United States citizens were victims of violent relationships every year. At the other end of the spectrum, a more recent survey of women attending family practice clinics indicated that over 55% of women reported some direct level of experience with intimate partner violence (Coker, Smith, McKeown et al., 2000).

This example illustrates a number of problems that can be sorted into two major categories with respect to measurement of intimate partner violence. The first problem is obvious to researchers but may well be confusing to laypersons that hear or read these types of statistics. It involves a comparison of figures somewhat akin to a comparison of apples and oranges. Other problems are more complex and can be explained to some extent by measurement issues that are difficult for researchers to overcome. These problems involve difficulty with accessing the individuals involved in violent relationships and difficulty in collecting accurate information once a population sample is obtained.

Apples and Oranges: Problems with Comparing Data across Studies

In a comparison of data from the USDOJ with data from the Coker study (Coker, Smith, McKeown et al., 2000), obvious differences include population sampling and methods of measuring experience with abuse. The USDOJ research used data from National Crime Victimization Survey (NCVS), and this sample included data collected from a national sample of over 47,000 households, with each person over the age of 12 participating in the survey (1995). Data from the Coker study was gathered from over 1,400 women who were seeking medical care from one of two university affiliated family

practice clinics in Columbia, South Carolina. In this study, only women between the ages of 18 and 65 with medical insurance (including Medicaid) were asked to participate (Coker, Smith, McKeown et al., 2000).

Obviously two completely different populations were sampled by the researchers in these two studies. For this reason alone, the data derived from these two studies cannot be reliably compared. A second major difference that makes the two studies incomparable involves what amounts to differences in operational definitions. The data reported by the USDOJ (1995) includes only violence perpetrated by spouses or ex-spouses, while the data from the Coker study (Coker, Smith, McKeown et al., 2000) includes only male perpetrated violence, and then goes on to include violence perpetrated by any man with whom the women had an intimate (defined here as sexual) relationship that lasted at least three months (Coker, Smith, McKeown et al.).

The list of other major differences between these two study designs appears to be endless: The USDOJ (1995) collected information about events that happened during a specific time period, while the researchers in the Coker study (Coker et al., 2000) asked about any event that ever happened. The USDOJ study was longitudinal, and data was collected from the same individuals for a number of studies taking place over a three year period. Data was collected for the Coker study during a single session. Both studies utilized formal, structured interviews, but most of the NCVS interviews took place over the telephone while the Coker interviews took place in person. Finally, researchers in the Coker study used several instruments, the content of which were modified and read to the participants during a five to ten minute session. For the purposes of the NCVS interview, individuals were screened using a 22 page structured interview designed for the purpose

of this specific study, and interviews with histories of victimization were subjected to an additional 20 pages of structured interview.

Problems with comparison of data collected across studies are not unique to intimate partner violence research. However, this type of problem in this specific area of research does appear to be exaggerated. The history of intimate partner violence and the way that the field has evolved both seem to have played roles, especially with respect to gender asymmetry and married versus dating couples. Operational definitions also appear to be an important factor in the major differences in methodology across studies. The inability to make accurate comparisons across studies is particularly problematic in terms of our ability to clearly state the need for public awareness of this issue. Additionally, researchers are faced with the task of sifting through and attempting to make sense of data that is difficult to interpret. Difficulty with comparisons across studies is only one of the measurement problems with which they are faced.

Underreporting of Intimate Partner Violence

Evidence indicates that intimate partner violence may be underreported for a number of reasons under a variety of circumstances. Victim safety, ambiguity of police protocol, and the stigma attached to being either a perpetrator or a victim of intimate partner violence all play a role in underreporting. Results of research collected through a variety of means provide evidence of underreporting, and underreporting in turn affects research results to an extent that is impossible to determine accurately.

Victim safety issues. Many methods of data collection may either put victims in danger (Campbell & Dienemann, 2001) or cause victims to feel they are in danger even when the victim's safety is accounted for in the research design. Although victims and

perpetrators of Common Couple Violence are not likely to be intimidated by their partners, this is not the case for victims of Intimate Terrorism. Victims who experience this chronic and continuous type of violence are known to respond with feelings of psychological vulnerability, along with perceptions of loss of power and control (Walker, 1988). These individuals may feel as though their partners have the ability to learn of their participation in research, even when they are assured this is not possible.

Telephone interviews can be dangerous for any victim of violence because it is impossible for an interviewer to know whether a perpetrator may be listening to a victim's responses either across the room or on an extension. Under these circumstances, a perpetrator could become angry and violence could result. Also, if researchers mail participation information to potential participants, the perpetrator could access the information and assume that the victim had disclosed the abuse. In home interviews can be dangerous to both the researcher and the victim for many of the same reasons.

Information collected for the NCVS, which is used in establishing USDOJ Statistics, is arrived at both by telephone and in-person interview (USDOJ, 1995). These particular data were discussed earlier with respect to the fact that they only address relationships in which the participants were either married or had been married. In addition to this strict restriction to one category of couples, the data collection method could cause danger or perceived danger to victims and could therefore result in underreporting. This could explain, at least in part, why USDOJ statistics often represent the lowest numbers in terms of prevalence rates of partner violence.

Ambiguity of police protocol. Another source of information regarding prevalence of intimate partner violence is through police reports. Obviously, these

reports only include information on violent incidents to which police have responded, and this inherently indicates underreporting. In addition, one research study indicates that, even for incidents which have involved a police report, underreporting may be a factor. In a study in which researchers compared police officers' reports of violence to victims' reports of the same violent incidents, Harris, Dean, Holden, and Carlson (2001) found that victims perceived a greater level of violence than the police officers had reported.

Buzawa et al. (1996) discuss three reasons why police officers may be inclined to minimize reports of intimate partner violence. First, police officers, in most cases, are more likely to place priority in cases in which public order and authority has been challenged, and in most cases, intimate partner violent does not challenge the public order. Second, police officers are encouraged to spend the majority of their time on cases that are likely to lead to conviction. Because many intimate partner violence cases are often initially categorized as or "downgraded" to the category of misdemeanor offenses, they do not ultimately lead to conviction. Also, for a variety of reasons, victims of intimate partner violence are well known for failing to follow through with charges that lead to conviction. Finally, police are more likely to arrest perpetrators of intimate partner violence who become hostile toward police who arrive on the scene. Perpetrators who are respectful toward police officers are less likely to be arrested.

Stigma associated with reporting perpetration. Another reason for possible underreporting of intimate partner violence is the stigma involved in being a perpetrator of violence. Makepeace (1981) found evidence that individuals may be more likely to describe themselves as victims rather than perpetrators. Two hundred college students were surveyed about their experiences with dating violence. The survey was designed so

that participants were first asked if they had been involved in dating violence, and then asked whether they considered themselves the victims or the perpetrators of this violence. Under these circumstances, 71% of respondents who identified themselves as being involved in dating violence also identified themselves as victims as opposed to perpetrators. This may be an indication that individuals find it more socially acceptable to describe themselves as victims as opposed to perpetrators.

Cook (2002) found that social desirability scores among the participants in her study did not indicate that this was a factor in reporting perpetration of abuse. However, because her sample consisted of inmates in a correctional facility, it may be reasonable to assume that this is a population not generally concerned with issues of social desirability.

Stigma associated with being a victim. There are a number of indications that secrecy may be a major factor in underreporting of being a victim of intimate partner violence. One of the most important indications is that some studies have shown social desirability to be negatively correlated with reports of experiencing victimization (Graham et al., 2001; Kennerley, 2001).

A great deal of evidence supports the hypothesis that victims tend to underreport their experiences. Bachman and Carmody (1994) found that victims of partner violence were less likely to receive medical attention for their injuries than victims of stranger violence. This trend indicates two ways in which reported prevalence rates might be affected. First, one way of collecting data on the prevalence of partner violence is from medical reports. If victims of violence are not seeking medical attention, data collected in this way is obviously affected.

Second, the fact that victims of partner violence are less likely to seek medical attention indicates that these victims may tend to be more secretive about their experiences. This secrecy indicates that other methods of data collection could be affected because of the victim's hesitancy to report. In a study of 306 female undergraduate students (Dunham & Senn, 2000), 182 of whom reported having experienced abuse, 36% of those who disclosed the abuse reported that they had minimized the experience during the disclosure.

Perhaps the most understandable explanation for keeping one's victimization secret can be brought to light by one of the participants in a qualitative study conducted by Jory, Anderson, and Greer (1997). When asked why she had not brought the subject of her abuse into previous marital counseling, this victim stated, "I guess I had an image of myself. I viewed myself as a capable person. I didn't believe that I would get involved with a man who would abuse me. I didn't want to face it myself" (p. 413).

Underreporting may represent an even greater problem for male victims of intimate partner violence. In one study of 136 couples seeking marital counseling, Ehrensaft and Vivian (1996) found that men were significantly less likely to report their partner's aggression as a problem, even though the men in this study were as likely as their wives to be victims of violence. The authors of this study hypothesized that stereotypical masculine gender roles may make it difficult for men to report violence.

Problems with Instrumentation

A number of instruments have been designed for use by researchers and clinicians to determine the prevalence of intimate partner violence and to identify individuals and couples who may be involved in violent relationships. Upon inspection of these

instruments, one realizes that intimate partner violence is very difficult to quantify. Many available instruments are not widely used and have little psychometric data to support them. The most widely used scale, Straus' Conflict Tactics Scale, has been widely criticized. The measurement problem becomes even more difficult when one considers measurement of intimate partner violence in dating couples, because none of these widely used, well validated measures have been designed primarily for use with young dating couples.

In a study in which reasons for not reporting violence in couples counseling were explored, Ehrensaft and Vivian (1996) found that both males and females reported significantly higher levels of both their own and their partners' use of violence on a standardized questionnaire than in a structured interview. Although this may indicate that perpetrators and victims are both more likely to over-report in a paper and pencil survey, it is probably more likely to be an indication of underreporting in the structured interview, given that social desirability is negatively correlated with reports of victimization in terms of intimate partner violence.

Paper and pencil, self report measures are by far the primary method of collecting information about which individuals or couples might be involved in relationships characterized by intimate partner violence. However, problems seem to arise regardless of how these instruments are designed. There is evidence that both perpetrators and victims underreport their experiences. Although violence is difficult to define, it is even more difficult to measure.

Some scale items use the presence and severity of victim injury as a measurement tool. However, this method of measurement can also be problematic. Obviously, any

instrument that uses injury level as a measure of relationship violence is not subtle and probably not precise. One could argue that any level of injury represents a level of violence that has already reached dangerous depths. One attempting to measure the presence and severity of injury also encounters the same problems as one attempting to measure the presence and severity of violence in general. Does one measure and count bruises? Does a broken bone equal or outrank a pierced eardrum?

Conflict Tactics Scales. The most commonly used scale in both research and practice is the Conflict Tactics Scale (CTS; Straus, 1979). This scale was designed for use with married, heterosexual couples and normative data provided by Straus was collected from this category of couples. Also, with only 14 items and three subscales this leaves 'verbal aggression' and 'violence' represented by only four and six items respectively, and does not distinguish between different types of aggression within these two categories. Sexual violence is not addressed on this scale.

The Revised Conflict Tactics Scale (CTS2; Straus et al., 1996) is a more comprehensive scale, designed for use with both dating and married couples. However, it may not be feasible to assume that one scale can effectively and efficiently be used to assess the range of experiences involved with these two very different populations. For example, psychological aggression is encompassed on one subscale, although these items are differentiated as either 'minor' or 'severe.' Therefore, the realm of verbal and emotional violence is treated as one construct, and these items are distinguished quantitatively but not qualitatively.

Items on the Physical Assault, Sexual Coercion, and Injury subscales of the CTS2 may be considered too severe for new relationships. Fortunately, in most cases it is

unnecessary to ask young adults, barely out of high school whether they have, "used force (like hitting, holding down, or using a weapon) to make my partner have oral or anal sex" (Straus et al., 1996, p 309). To further complicate matters, the authors of the scale made many revisions on the Sexual Coercion and Injury subscales after their data was collected for purposes of validation. For this reason, these two subscales cannot be used with the same level of certainty as the other three subscales.

Instructions for both the CTS and the CTS2 frame the instrument in such a way that it assumes violence to take place as a result of settling differences (Straus et al., 1996). This could be problematic because violence that is part of a systematic effort to control one's spouse would not generally fit into this category (Kimmel, 2002).

Other measures. Other existing measures of partner violence have also been developed for use with married couples, and most of these scales measure severe levels of violence. For example, the Spousal Assault Risk Assessment (SARA; Cooper & Yuille, 2003) is not only intended for use with married individuals, but includes items about criminal history and past physical and sexual assault, both of which indicate that it may not be ideal for detecting more subtle forms of violence.

Another well-established scale, The Measure of Wife Abuse, contains items such as, "Your partner kidnapped your children," and "Your partner mutilated your genitals" (Desai, 1999; Rodenberg & Fantuzzo, 1993). The Index of Spouse Abuse (Hudson & McIntosh, 1981) manages to use less constricting language ('partner' versus 'husband' or 'wife'), but contains items with which college students may not identify, such as "My partner demands that I stay home to take care of the children." The Response to Conflict Scale (Birchler & Fals-Stewart, 1994) is another example of a brief measure of partner

violence specifically designed for use with married, heterosexual couples. Although this scale does measure more subtle forms of abuse than the CTS, the Response to Conflict Scale was intended for use by marital counselors to identify areas in which intervention might be most helpful.

One might assume that scales intended to measure verbal or emotional abuse might suffice as a method of identifying precursors of abuse; however, this is not the case. Although early researchers focused on the detrimental effects of physical abuse, researchers are now finding that some forms of psychological abuse are at least as harmful as physical abuse. Sackett and Saunders (1999) found that psychological abuse contributed to depression and low self-esteem independent of the effects of physical abuse. Like physical abuse, psychological abuse also has a wide range of behaviors, the damaging effects of which cover a range at least as wide as that of physical abuse.

Items on some current measures of psychological abuse may help to explain the extent to which these behaviors might range. For example, one item on the Psychological Aggression subscale of the CTS2, "Shouted or yelled at my partner," (Straus et al, 1996, p. 308) would probably be endorsed by the majority of individuals in relationships. However, endorsement of this item with a report of great frequency might be a useful indicator a relationship at-risk for violence. This item stands in stark contrast to an item on the Profile of Psychological Abuse (Sackett & Saunders, 1999), which asks, "How often does your partner threaten to hurt a prized possession, pets, friends, or relatives if you don't comply with his wishes?" Endorsement of this item is obviously indicative of much more serious relationship issues.

Although the Conflict Tactics Scales have been criticized, they have also been widely used. In fact, The Conflict Tactics Scale and the Revised Conflict Tactics scale have been so widely used, that when Archer (2000) attempted to compare effect sizes from studies using the Conflict Tactics Scales and other scales for the purposes of his meta-analysis, he found this almost impossible because so few other measures have been used in the field.

The Conflict Tactics Scales, along with other, less widely used measures of intimate partner violence, have been critical tools in helping us to address this important social problem. Although it has been difficult, if not impossible, to establish accurate prevalence rates, these rates have been established, at least to the level that this violence is widely recognized as a problem worthy of our attention. Just as importantly, these tools have helped us to find ways to effectively intervene with violent couples.

Escalation of Intimate Partner Violence

An important theory of domestic violence is that of escalation. This theory posits that, not only do patterns of intimate partner violence continue within relationships, this violence also tends to become more severe with the passage of time. An understanding of which individuals are more likely to re-perpetrate or to stay in relationships in which they are being victimized is an important aspect in understanding the theory of escalation. A number of theories have been used to explain why many violent relationships escalate, and it is likely that many dynamics work together to explain this pattern of escalation within violent relationships.

Recidivism and Intimate Partner Violence

Perpetration and victimization turn into lifetime patterns for many people. Some research studies have focused on these patterns of recidivism. Certain characteristics of perpetrators have been found to correlate with recidivism. Also, researchers have worked to understand why some victims remain in relationships in which they are repeatedly hurt, both physically and psychologically.

Perpetrators and recidivism. Shepard (1992) found that of 100 male perpetrators who had experienced some form of community intervention, 40 of these men re-perpetrated within a five year period. In a comparison of these men with those who did not re-perpetrate, she found that men were more likely to re-perpetrate if they had been abused as children or if they had been previously convicted of crimes that did not involve assault. She also learned that the men who had been court ordered to have a chemical dependency evaluation or had chemical dependency treatment were also more likely to re-offend.

Victims and recidivism. People often wonder aloud why victims of intimate partner violence stay in violent relationships or return to violent relationships once they have left. Mears, Carlson, Holden and Harris (2001) looked at demographic information related to female victims of intimate partner violence in relation to records of intimate partner violence reported to the police. They found a number of factors that seem to contribute to the likelihood of re-victimization. Black women were over three times more likely than white women to be re-victimized within a two year period after the first police call. Age and prior experience with police-involved victimization were not related to re-victimization rates.

Surprisingly, women who had attained a protective order after the initial victimization were no less likely to be re-victimized (Mears et al., 2001). Fischer and Rose (1995) found that fear was a primary deterrent that keeps many victimized women from seeking protective orders. In this qualitative study, the researchers learned that the women they interviewed doubted the legal system's ability to protect them. Apparently, this doubt is well grounded. Wilson and Daly (1993) found that the vast majority of male to female spousal homicides take place after the woman has separated from her husband.

Attribution theory has been used to explain why victims may choose to leave their abusive partners. Pape and Arias (2000) found that women who attributed causes to their partner's violence that were stable and global, and who attributed blameworthiness, malicious intent, and selfish motivations to their partners were more likely to state an intent to permanently leave their abusive partners.

Secrecy and Uninterrupted Violence

The tendency for violence to escalate is perhaps exacerbated by the fact that, for a variety of reasons, this pattern of violence often goes uninterrupted by those who might otherwise intervene. Secrecy becomes an issue in the theory of violence escalation because friends, parents, co-workers, and health care providers who are unaware of abuse within a relationship are not generally in a position to intervene. Secrecy becomes a primary reason why violence continues and subsequently escalates in many cases.

In an analysis of information provided by the National Crime Victimization Survey, Bachman and Carmody (1994) provided evidence that victims of partner violence were less likely to receive medical attention for their injuries than victims of stranger violence. Because medical intervention might well lead to additional resources

being offered to the victim, it would be reasonable to assume that the lack of medical intervention may indicate secrecy and hesitancy on the part of the victim to seek other interventions.

Because abuse often takes place in the home, and because both victims and perpetrators are very hesitant to disclose the abuse, this violence is not likely to be detected and reported to the police, another possible source of intervention. In Walker's qualitative study of a sample of physically abused women, these women consistently reported that the frequency of abuse increased over time (1979). In a study of motivations for domestic violence, Hamberger, Lohr, Bonge, and Tolin (1997) found that control, anger expression, and coercive communication were primary motivators for perpetration of partner violence, regardless of the gender of the abuser. It would follow that, in the absence of intervention, violence successfully used to meet these needs in one instance would be used again when the same or similar needs are perceived. The perpetrator in this case is likely to see the assault as successful and use this tactic in the future.

Escalation of Frequency and Severity of Violence over Time

Research evidence supports the theory that violence escalates in many cases (Feld & Straus, 1990; Walker, 1979). Feld and Straus (1990) theorize that, although violence in many couples does not escalate, escalation is a pattern in many violent relationships. They state that, for many couples, physical abuse is likely to escalate over time for a number of reasons. The first reason is that the presence of any violence is an indication that the perpetrator perceives the violence as acceptable. The second argument for their theory is that the presence of violence at any time increases the likelihood of subsequent

acts of violence. The third argument is that violence may escalate because more minor forms of violence may cease to be an effective way for the perpetrator to meet his needs. Finally, assaults on the part of one partner increase the likelihood of retaliatory violence on the part of the other partner, which in turn could be perceived to justify escalated violence on the part of the first partner.

One motivational theory for partner violence is basic operant conditioning theory. In a study of motivations for domestic violence, Hamberger et al. (1997) found that control, anger expression, and coercive communication were primary motivators for perpetration of partner violence, and these results were found for both male and female perpetrators. Jealousy has also been cited as a primary motivator to abuse (Delgado & Bond, 1993). Using this theory to explain intimate partner violence, punishment is simply used as a way to control one's partner in an intimate relationship in much the same way some parents attempt to control their children's behavior.

According to this basic operant conditioning theory, violence successfully used to meet needs in one instance would be used again when the same or similar needs are perceived. Under these circumstances, the violence is reinforced, either positively or negatively, by the increase, decrease, or change in the victim's behavior. In the absence of intervention, the perpetrator is likely to see the assault as successful and use this tactic in the future.

Social learning theory (Bandura & Walters, 1963) can be used to explain the tendency for intimate partner violence to continue after the first instance of violence. If violence can be successfully used to reach a goal once, this same tactic is likely to be used in future instances. Partners in intimate relationships by definition are bound to one

another to some extent. This ongoing relationship increases the likelihood for future abuse (Burgess & Roberts, 1996). Bandura and Walters' research also provides evidence that if violence is successfully used to meet one goal, this tactic is likely to be globalized and subsequently used to meet other goals. This theory was supported by Coker, Smith, McKeown et al. (2000), who found that past relationship violence was significantly correlated with current violence.

Hammock and O'Hearn (2002) found evidence for the escalation of psychological aggression in their study of over 350 college students. These researchers found a positive correlation between length of relationship and level of psychological aggression. Coker et al. (2000) found that increasing age of victims was significantly and positively correlated with physical and sexual partner violence, and the increasing age of the perpetrator also predicted physical and sexual violence. Over 85% of the victims in this study who reported physical and sexual abuse also reported emotional abuse, while about one half of the women reporting emotional abuse also reported physical abuse. These facts together work to support the theory of escalation: If younger victims are more often suffering from emotional abuse alone and older victims tend to be suffering from combinations of emotional and physical/sexual abuse, it would stand to reason that these victims' abusers were resorting to more physical tactics. Murphy and O'Leary (1989) also conducted research, the results of which indicated that psychological abuse is a precursor to physical abuse.

Bachman and Carmody (1994) also found that intimate partner violence was more likely to increase in severity in cases in which the victim used verbal or physical self-protective behavior. This was not true in cases of stranger violence. In fact, in a study of

60 married couples who had a history of husband to wife violence, Jacobson et al. (1994) found that no victim behaviors suppressed batterer violence once it began. This is an important supporting factor in the theory of violence escalation because it would likely to follow that victims of abuse would increase self-protective behavior in instances of repeated abuse. This is exacerbated by the fact that well-meaning counselors and social workers who do not have knowledge of abuse patterns often encourage victims to increase self-protective behaviors or even to physically retaliate when being beaten by someone who is usually much stronger than the victim.

One longitudinal study, the results of which do not support the theory of escalation, is O'Leary and his colleagues' 30-month study of 393 couples (O'Leary et al., 1989; O'Leary et al., 1994). Each spouse's rate of aggression was measured at the beginning of the study, then again at 18 and 30 months. The results of this study were mixed with respect to the escalation of violence. Although incidence of physical violence did not increase over the course of study, psychological aggression did appear to be a precursor to physical aggression. This finding may be further support of Johnson's theory of Common Couple Violence versus other forms of abuse. Because Common Couple Violence is hypothesized to be characteristic of community samples, one would not expect violence in these samples to escalate over time.

As previously discussed, a primary reason for the lack of support for the theory of escalation can be explained by Johnson's theory on the different types of intimate partner violence. O'Leary and his colleagues collected data from a community sample that they recruited through the use of newspaper and radio advertisements in which volunteers were asked to contact the researchers. Although these researchers did find a great

number of mutually aggressive couples, presumably those in relationships characterized by Common Couple Violence, it is unlikely that any individual who actually feared his or her spouse would volunteer to participate in such a study.

It is interesting to note that, because the O'Leary et al (1989; 1994) studies were longitudinal, one might have expected the researchers to find situations in which levels of Intimate Terrorism were inconsequential at the beginning of the study but developed into dangerous levels of violence over the course of the study. However, there are several reasons why this may not be the case. First, because married or cohabitating couples were recruited for the study, the couples in relationships characterized by various stages of Intimate Terrorism may have been far enough into the pattern of violence to avoid participating in the study. Another reason for which this pattern may have gone unnoticed is because of participant attrition. Couples in relationships characterized by Intimate Terrorism may be overrepresented in the group of couples who terminated their participation in the study. Finally, because what we know about Intimate Terrorism has been collected from very specific population samples, we know very little about the rates of Intimate Terrorism in the general population. If only a few of the over 200 couples participating in the study were involved in relationships characterized by Intimate Terrorism, it is likely that the data from these couples was not enough to stand out among the couples in relationships characterized by Common Couple Violence, which is much more common.

As mentioned previously, Johnson's theory supports the idea that violence does escalate in cases of Intimate Terrorism, while is has not shown to escalate in cases of

Common Couple Violence (Johnson, 1985). Dutton (1999) also noted that violence tends to escalate in some relationships, but not in others.

Preventative Intervention and Intimate Partner Violence

In a groundbreaking conference attended by over 200 psychologists, physicians, lawyers, law enforcement officials, judges, epidemiologists, hospital administrators, and representatives from victim's organizations (Association of Trial Lawyers of America, 1993), these professionals concluded that long term efforts at prevention are necessary in order to deal effectively with the problem of partner violence. Barnes and Greenwood (1991) also conclude that prevention would be the most effective form of intervention for college students who perpetrate partner violence. In order to intervene most efficiently, it would be useful to determine who is most at-risk for violent relationships.

Understanding the ways in which subtle forms of violence can escalate over the course of the intimate relationship is critical to the design of effective preventative intervention with young adults. If we are able to identify precursors of intimate partner violence, we will gain an important tool in helping young people establish safe, healthy relationships. The college setting is an ideal setting in which this information can be gathered, because this is often the first setting in which young people begin to establish independent relationships

Dating Violence among College Students

College students represent a unique population in the field of intimate partner violence. Compared to individuals who are represented by research utilizing community samples, shelter inhabitants, and legal records, college students are less likely to be

married and more likely to be involved in new relationships. College students are quite often young adults who are living independently for the first time.

Perhaps because of their availability to researchers, a fair amount of intimate partner violence research has utilized college populations. This is somewhat fortuitous because this research has provided the field with a great deal of useful information about young men and women who are involved in violent relationships. As researchers and clinicians work to find effective preemptive interventions for use with young adults, this information provided by college students becomes critical. However, the college student population presents researchers with measurement problems that are unique to this particular group. It will be important to resolve these problems in order to find ways to effectively reduce the incidence of intimate partner violence in the college student population.

Prevalence Rates

Patterns of intimate partner violence in the relationships of college students appear to be different from patterns of violence one sees in the research with more established couples. However, although some details are different, many remain the same and the problem remains significant. In both community and college student populations, less injurious forms of violence are much more prevalent than more severe forms of violence (Makepeace, 1983; Straus & Gelles, 1995). Katz et al. (2002) found that severe violence as measured by the Conflict Tactics Scale was reported by only 2% of the undergraduates who participated in their study. However, these researchers did not find a general lack of violence in the college student population. Eighteen percent of college women and 13% of college age men in the Katz et al. study reported that they had

had intimate partners who had been violent towards them only one time in the past, while 26% of the women and 38% of the men reported having partners who had been repeatedly violent.

Makepeace (1981) found that 21.2% of college students surveyed had direct personal experience with dating violence. In their study of over two hundred male Canadian college students, Barnes and Greenwood (1991) found that over 42% of college males in their study had perpetrated intimate partner violence at least once while over 25% of them had perpetrated more than once. Results of another study (Milardo, 1998) suggested even higher rates, 83% of women and 53% of men indicated that they would hit their partners under certain circumstances, although these students were responding to hypothetical scenarios rather than reporting actual events.

Effects of Violence

Dating violence has detrimental effects on both the victims and the perpetrators. Among college students, being a victim of dating violence is associated with loss of self-esteem, loss of confidence, impaired identity development, impaired capacity for intimacy, and a diminished sense of personal control (Pezza & Bellotti, 1995). Koss et al. (1988) found that over 26% of women who had been victims of acquaintance rape had considered suicide. Perpetration of dating violence is associated with experiencing legal sanctions, loss of student status, financial sanctions, and a sense of shame (Pezza & Bellotti).

Identifying College Students Involved in Potentially Violent Relationships

Researchers have identified and number of characteristics and circumstances that might be used to identify individual college students who are likely to become involved

in violent relationships. Hammock and O'Hearn (2002) found that alcohol use was positively correlated with level of psychological abuse perpetration in men, but this did not hold true for the female college students in their study. Barnes and Greenwood (1991) and Makepeace (1986) also found that alcohol use in male college students was positively correlated with perpetration of dating violence. Gover (2004) found that female adolescents who participated in high risk behaviors were more likely to become victims of intimate partner violence.

Other interesting trends were noted in the Makepeace (1986) study. Makepeace found that reports of egalitarian relationships were positively correlated with reports of increased violence. Although students who were raised by a single parent, who were parented harshly, who had poor academic achievement, who attended church more frequently, and who began to date early were all more likely to experience dating violence, the situation most commonly related to courtship violence was being fired from a job on multiple occasions. More recently, Kaura and Allen (2004) noted other characteristics that were highly correlated with higher rates of intimate violence perpetration among college students. Results of this study indicate that increases in both mother's and father's levels of violence were correlated with increases of intimate violence perpetration. Interestingly, for male perpetrators, the mothers' levels of violence were a better predictor than fathers' levels of violence. The opposite was true for female perpetrators; the father's level of violence was a greater predictor for levels of female perpetration.

Kaura and Allen (2004) also found that levels of dating violence increased as levels of relationship power dissatisfaction increased, and this was equally true for both

male and female perpetrators. Ryan (1998) found that using threats and blaming the partner when things went wrong were both accurate predictors of physical aggression in men, while sudden mood swings, threats, jealousy, a quick temper, and verbal abuse were all accurate predictors of physical aggression in women.

Sexual Violence and College Students

Sexual violence is one specific area of intimate partner violence that is known to be a problem on college campuses. In a 1986 study, Makepeace found that over 24% of female college students reported that they had been victims of attempted forced sex. Ward et al. (1991) found that 20% of college women had experienced an attempt at unwanted intercourse, while 10% had experienced completed acquaintance rape. In a recently published longitudinal study, Smith et al. (2003) found that 68% of college women reported that they had experienced at least one incident of physical or sexual victimization during their adolescent or college years, while 13% reported having experience forcible rape at the hands of a "romantic partner". Ryan (1998) found that, for both men and women, physical and sexual aggression were highly correlated.

Sexual violence is one form of intimate partner violence that is almost exclusively assumed to be perpetrated by men. In fact, results of one study in which data was collected from 524 college women and 337 college men (Ward et al., 1991), the researchers failed to report any data on female perpetrated sexual violence, even though it appears that men and women completed the same questionnaire.

Ryan (1998) did find that the college men in her study were more likely than the women to be perpetrators of sexual violence, while the women in her study were more likely than men to be victims of sexual victimization. However the research is not clear-

cut with respect to gender asymmetry. In Luckey's (1999) study of over 3,000 university students, 4% of these students reported being sexually victimized while on campus. Of these students who had been victimized, 62% reported unwanted kissing or petting, 31% reported unwanted intercourse or sexual activity, and 7% reported being the victim of forced or threatened sexual intercourse. Of all sexual violence reported in this study, 76% of victims were female and 24% of victims were male. However, when figures are limited to those involving forced or threatened sexual intercourse, 45% of these victims were female and 55% were male.

In one study of 178 female and 146 male college students, Forbes and Adams-Curtis (2001) found that 2.8% of the women reported having been raped, while none of the men reported this experience. In fact, women in this study were more likely then men to report a greater number of experiences with most forms of sexually victimization measured including but not limited to: verbal pressure for kissing, petting, noncoital sex, and coitus, being successfully threatened to engage in kissing, petting, and noncoital sex, and being forced to engage in kissing, petting, and noncoital sex. In fact, more women than men were shown to have experienced every category of sexual violence; however, the numbers in five very specific forms of violence were not statistically significant.

While these numbers are convincing with respect to the assumption of male perpetration, the results of these studies are not as clear-cut as they may seem. For example, even though 53% of the women in the Forbes and Adam-Curtis (2001) study reported experiencing sexual aggression, only 21% of the males reported engaging in this aggression. None of the males reported raping or using force to engage in sexual activity. These findings are similar to the findings of Ward and her colleagues (Ward et al., 1991).

Although 34% of the women in this sample had experienced unwanted sexual contact and 10% had reported experiencing unwanted and completed sexual intercourse, only 9% of the males reported having sexual contact with a woman who didn't want this contact, and only 3% reported having perpetrated unwanted and completed sexual intercourse.

It is possible that, because males and females were reporting experiences with others who were not necessarily involved in these studies, these figures could be accurate. However, this is highly unlikely. Although some degree of social desirability is likely to play a factor in these differences, it is impossible to estimate the degree to which differences in perception may play a role in reporting.

The results of the Forbes and Adam-Curtis (2001) study are also somewhat ambiguous with respect to reports of rape. Among the number of rapes reported, it is impossible to tell from the data collected whether these numbers represent instances of dating violence, or whether they represent rapes perpetrated by strangers. However, there is some evidence that the majority of rapes on the college campus are perpetrated as instances of intimate partner violence. For example, in Pezza's 1995 research review, over 61% of college sexual assaults were perpetrated by someone known to the victim. This research included only assaults reported to authorities, and Koss et al. (1988) found that women who were raped by acquaintances were significantly less likely to report this experience to authorities.

Cultural Issues

Cultural and ethnic differences have not played in a major role in research on dating violence among college students thus far. In fact, the majority of research results on the topic do not specify results along racial and ethic lines (Dunham & Senn, 2000;

Graham et al., 2001; Kaura & Allen, 2004; Puente & Cohen, 2003; Rouse et al., 1988; Ryan, 1998; Smith et al., 2003). However, Makepeace did find some differences along racial lines. In his 1986 study of over 2,000 college students attending seven different universities, the lowest rates of violence were among Asian and Jewish populations, while the highest rates were among individuals who categorized themselves as "other". Makepeace hypothesized that this category was likely to represent Native American and Arabic students, as these were the most commonly noted ethnic groups among people who wrote their ethnicity on the questionnaire.

Gender Asymmetry and Intimate Partner Violence in College Students

As with other populations, it is important to learn more about the students involved in intimate partner violence in order to find ways to help them change their relationship dynamics. In populations of non-college population adults and established couples, gender differences have proved to be a very important key in understanding relationship dynamics of couples involved in violent relationships. Gender differences are also an important factor in understanding dating violence among college students.

As mentioned previously, community samples of established couples tend to show gender symmetry with respect to perpetration and victimization of intimate partner violence (Archer, 2000; O'Leary et al., 1989; O'Leary et al., 1994; Russell & Hulson, 1992). According to Johnson and others (Graham-Kevan & Archer, 2003a, 2003b; Johnson, 1995, in press; Johnson & Ferraro, 2000; Milardo, 1998; O'Leary, 1999), this is likely to be representative of Common Couple Violence, a specific category of intimate partner violence characterized by a level of conflict that becomes unmanageable with

respect to the couples' conflict strategies. Common Couple Violence does not escalate in severity under most circumstances, and is generally symmetrical with respect to gender.

Also mentioned previously, data collected from shelter inhabitants, police records, hospitals, and court data tend to show the majority of perpetrators of intimate partner violence to be male (Dobash et al., 1992; Henning & Feder, 2004; Malloy et al., 2003; Saunders, 2002; Straus, 1999). According to Johnson's theory, this data represents a much different pattern of violence, characterized by Intimate Terrorism either with or without Violent Resistance, or characterized by Mutual Violent Control (Johnson & Ferraro, 2000). These types of violence are indicative of relationship dynamics much different than those characterized by Common Couple Violence. Although Mutual Violent Control is symmetrical with respect to gender, it is an uncommon form of violence and its patterns are largely unknown. Violent Resistance is a type of violence usually perpetrated by women in response to Intimate Terrorism. Intimate Terrorism is more likely to be perpetrated by males, is more likely to escalate in severity over time, and violent incidents are much more frequent for these couples than for couples whose relationships are characterized by Common Couple violence.

Results of studies focusing on dating violence in college students have not been as clear cut as studies that focus on violence with more established couples with respect to gender asymmetry. Some researchers have found symmetry of prevalence rates in male and female college students (Campbell et al., 1997). However, as described previously, there has been a great deal of disagreement about whether abuse among college students has been symmetrical or asymmetrical, and those who have reported asymmetrical

prevalence rates have not been in agreement as to which sex represents the primary perpetrator role.

A number of studies have indicated that female college students are more likely than male college students to be perpetrators of physical violence (Follingstad et al., 1991; Kaura & Allen, 2004; Ryan, 1998). However, the results of one of these studies (Follingstad et al.) indicated that college women were less likely to believe that physical force could be justified. In another study of 160 undergraduate students, Milardo (1998) reported that female students were more likely to use violence against a partner than male students, at least in the hypothetical situations used in the study. Hammock and O'Hearn (2002) found that female college students used higher levels of psychological aggression than male students.

Other researchers have found evidence that women are more likely to be victims and men are more likely to be perpetrators of dating violence. For example, Gover (2004) found that adolescent females were more likely than males to become victims of dating violence. Makepeace (1981) found that college males in one study were over 2.5 times more likely to be perpetrators of dating violence than were females. When considering only the most severe types of physical violence, Makepeace found males 4.5 times more likely than females to be perpetrators. In fact, in this study, college males were more likely than females to use every type of violence measured on the CTS. Interestingly, in this same study, males were just as likely as females to report being victims of violence.

Johnson has stated his belief that, like studies of community populations, studies of college student populations are representative of the population in general and are

therefore similar with respect to gender symmetry and its association with patterns of Common Couple violence (Johnson, 1995, in press). However, these two populations are actually quite different.

Two of the most often referenced studies in which community samples were used were the longitudinal study used in the research by O'Leary and his colleagues (O'Leary et al., 1989, O'Leary et al., 1994) and the early Straus and Gelles (1995) study. O'Leary and his colleagues recruited participating couples using radio and newspaper advertising. Both types of advertising described their study as designed to "contribute to our knowledge of marriage and the family" (1989, p. 264). Methodologically, it would at first glance appear very useful to have both partners available for data collection. However, as previously discussed, there are a number of reasons for which couples in relationships characterized by Intimate Terrorism may have chosen to either avoid participating in, or drop out of, these studies.

One research study in which symmetrical prevalence rates were found in a community population was performed by Russell and Hulson in 1992. However, the method with which couples were recruited for this study was somewhat questionable. One of the researchers recruited 40% of the sample of 53 couples through personal contacts. The remaining 60% of the couples were recruited by asking undergraduate students to recruit one couple each as part of a course requirement. Obviously, the population in this study is not representative of the general population. It is also questionable whether these couples were secure with the confidentiality of their responses, as many of the couples who were recruited by students returned the questionnaires to the students, albeit in sealed envelopes.

In the ambitious 1995 study, Straus and Gelles collected data from over 4,000 individuals in what may be the only study for which data from a sample representative of the general population was attempted. This data was collected through the use of telephone interviews with members of married or cohabitating couples. However, it would be understandable why neither victims nor perpetrators of Intimate Terrorism would choose to participate in these interviews if their partners were present. The authors of this study did not discuss this possibility, nor did they explain what, if any, measures were taken to ensure the safety of the victims. Victims of Intimate Terrorism may well be so intimidated as to refuse to participate at all for fear of having to explain the telephone call to partners who walk in unexpectedly and find them talking on the telephone. Because of the types of data collection used, individuals or couples who were involved in relationships characterized by Intimate Terrorism, or Violent Resistance would likely be underrepresented.

One other factor contributes to the uniqueness of the college student populations, and this involves the length of time in which individuals have been in relationships in question. For each of the community studies described, couples were either married or cohabitating. These relationships would likely be more longstanding, on average, than relationships of most college students. If Intimate Terrorism or Violent Resistance were present in these couples from community samples, it would likely have escalated, at least to some degree, by the time the individual or couple participated in the study.

Neither of these factors was present in the research of college student populations. As with most research using the college student population, the vast majority of this research was conducted with individuals who were asked to participate for course credit

with the collection of data taking place in the classroom (Barnes & Greenwood, 1991; Follingstad et al., 1991; Forbes & Adams-Curtis, 2001; Kaura & Allen, 2004; Makepeace, 1981, 1983; Ryan, 1998). For these studies that did report rates of participation (Forbes & Adams-Curtis; Makepeace, 1983; Ryan), participation rates were much higher than those of the Straus and Gelles study, indicating a more complete representation of the population sample.

Because these students participated in the classroom setting, none of these students were placed in a situation in which their partners could become aware of their responses to items on the surveys. For this reason, students who were involved in Intimate Terrorism or Violent Resistance were highly unlikely to be placed into situations in which their partners' presence might affect their responses or cause them to withdraw from the studies. In fact, the only situation in which this may have been the case would be if their partners happened to be in same class. While possible, this is unlikely to be the case in the majority of situations. This may be an indication that data collected from college students is more likely than data collected from community samples to include individuals involved in relationships that are either characterized by Intimate Terrorism or Violent Resistance.

Because these students were only identified as "dating" and not as married or cohabitating, one could come to the conclusion that these couples were not as well established as the married and cohabitating couples represented in the community research. Therefore, if violence in the college samples was representative of patterns of Intimate Terrorism or Violent Resistance, it may not be discernable at this point from Common Couple Violence because it may not have escalated to any measurable degree.

These inherent differences in the methods used in recruitment and data collection work together to increase the probability that community samples and college student samples are quite different from one another. One critical difference is that college student populations are more likely to include couples involved in relationships that may at some point be characterized by Intimate Terrorism and Violent Resistance. The fact that the violence in these relationships has not reached dangerous levels in the early stages of these relationships underscores the importance of validating the AIRS: If college students involved in violent relationships can be identified before violence escalates, researchers can then find ways to intervene effectively and therefore help these individuals to avoid becoming victims or perpetrators of more serious violence.

Support is found in a study that included data from 104 British college students. Graham-Kevan and Archer (2003b) found that 9% of these students were involved in intimate relationships in which they could be characterized as perpetrators of Intimate Terrorism, while 5% were in relationship in which they could be identified as perpetrators of Violent Resistance. Seventy eight percent of the perpetrators of Intimate Terrorism were men, while all of the Violent Resistance perpetrators were women. The information gained from this study is important because when one considers the data from all four categories of perpetration in this group of college students, 38% of the violence is perpetrated by females and 62% is perpetrated by males. This is in line with prevalence data from many of the studies described previously.

Measurement Issues

Of course, intimate partner violence among college students is subject to the same measurement issues that plague other studies of intimate partner violence, including

underreporting. In an analysis of survey information collected from 3,187 female college students, Koss et al. (1988) found that, of the 416 women who reported being the victims of acquaintance rape, only 3.2% of these women reported the incident to the police and only 3.1% had utilized crisis services. In a qualitative doctoral dissertation, Davis (1995) found that many students do not report crime on campus, primarily because of fear of retaliation, lack of information about how to report crime, or a belief that reporting will not make a difference.

The college student population is also subject to measurement issues that are not problematic or are less problematic in other populations. The most critical of these is a lack of an accurate measure for the types of violence found more often in this population. As in research with older adults and married couples, various forms of the CTS are most commonly used in collecting data in college populations (Follingstad et al., 1991; Katz et al., 2002; Kaura & Allen, 2004; Makepeace, 1981; Ryan, 1998; Smith et al., 2003). The Conflict Tactics Scale, for reasons previously described, is inappropriate for use with this population. Researchers in one study used a short form of the Measure of Wife Abuse (Dunham & Senn, 2000), another scale that was obviously designed for use with married women.

Studies that do not employ the use of the CTS or similar scales tend to use questionnaires that were created for the purpose of the study and have not withstood psychometric evaluation (see Campbell et al., 1997; Makepeace, 1981, 1986; Milardo, 1998; Ward et al., 1991). Individual scales created for the purpose of individual studies have their own inherent problems, including a lack of established psychometric data.

Data collected through the use of individually designed scales are also difficult to compare.

Campus violence in general is a problem in this country and one of the most difficult aspects of this problem is the lack of accurate measures for this violence (Pezza, 1995). Pezza and Bellotti (1995) concluded that primary prevention would be one of the most effective ways to intervene with young adults in this setting. Finding a reliable and valid method of collecting data about dating violence among college students is a critical first step in gathering accurate information about prevalence rates in this population. This would also help us in identifying specific individuals who are at risk for developing violent relationships. Only after these steps are taken can we develop efficient and effective interventions for use with this population.

The Need for the Abuse within Intimate RelationsScale (AIRS)

Coker et al. (2000) concluded their study of over 1,400 women by stating, "These results strongly suggest that need for earlier identification of intimate partner violence and intervention for the entire family" (p. 559). The family is the most important of any group found in human society (Jain, 1992). The intimate partner relationship is the platform upon which most families are built. The AIRS would work to take that recommendation one step further – a chance to intervene, in most cases, before those in violent relationships have children.

The research obviously indicates that intimate partner violence among college students is a problem across the country. Unfortunately, the tools we have to measure this violence are either primarily designed for use with other populations or are created for particular studies and are not shown to be reliable and valid before their use. The

AIRS scale, if found to be valid, can be established as a valuable tool for use in research and intervention with this population.

CHAPTER III

METHODS

The basic design for this study consisted of partial correlations, with the effects of social desirability factored out. One predictive method was used. Total scores on the AIRS, along with scores on subscales of the AIRS, were compared to scores on established measures for the purpose of establishing discriminate and concurrent validity of the AIRS. Testing of one hypothesis required the use of a regression in order to determine whether total scores on two AIRS subscales used together were predictive of subscale scores on an established measure. An exploratory factor analyses was run in order to explore the factor structure of this scale. This analysis was used to determine what factors, if any, could be found to exist among the items of the AIRS with the sample of students who participated in this study.

Participants

The population for this study consisted of community college and university students attending Rose State College and the University of Oklahoma. A convenience sample of 278 students was collected, with 190 students from Rose State College and 88 students from the University of Oklahoma participating. The sample from Rose State College consisted of students enrolled in courses in the Division of Social Sciences, while the sample from the University of Oklahoma consisted of undergraduate students taking classes taught by faculty within the College of Education. All students completed instruments outside of their regular class time, and all students were given course credit for their participation.

Sample Size, Institutional Affiliations, Sex and Age

A sample size of 250 to 300 was attempted according to guidelines suggested by Olejnik (1984) who stated that, for a partial correlation with an $\alpha = .05$ and a small effect size, 195 participants are required for statistical power of 0.5, and 312 participants are required for statistical power of 0.7. A small effect size was expected because, in most cases, subscales being correlated for the purpose of the validation study are not consistent with respect to degree of violence. For example, the AIRS is designed to identify individuals in relationships with subtle levels of violence, while the CTS2 and the PMWI are designed to identify individuals in relationships characterized by a more severe level of violence.

A total of 278 students participated in this study. Eight students did not complete the AIRS, and these students' data were dropped from the study, leaving a total of 270 participants. Two hundred participants were female, and 70 were male. Eighty four of these participants were from the University of Oklahoma (OU), while 186 were from Rose State College (RSC). Demographics for college and sex are as follows:

Participants by College and Gender

	Male	Female	Total
U of Oklahoma	30	54	84
Rose State	40	146	186
Total Sample	70	200	270

Demographics for participant age are as follows:

Participant Age Statistics

	Low	High	Mean	Median	Mode	SD
U of Oklahoma	18	53	22	21	19	5.4
Rose State	18	50	25	23	18	7.4
Total Sample	18	53	24	22	20	7.0

Participants reported their partners' ages to have a mean of 26, with a range from 17 to 60. Standard deviation for partner ages for all partners was 8.2. Participants' and partners' ages were highly correlated, ($r = .87$, $p < 0.001$).

Participants' and Partners' Ethnicities

The majority of participants ($n = 192$; 71%) reported their ethnicity as Caucasian. Thirty three participants (12.2%) identified themselves as African American or African American and Caucasian, 22 (8.1%) identified themselves as Native American or Native American and Caucasian, 15 (5.6%) identified themselves as Hispanic or Hispanic and Caucasian, 3 (1.1%) identified themselves as Asian American or Asian and Caucasian, and 5 (1.9%) identified themselves as Other.

Two hundred four participants (76%) reported their partners' ethnicity as Caucasian. Thirty seven participants (13.7%) reported their partners' ethnicities as African American or African American and Caucasian, 12 (4.4%) reported their partners' ethnicities as Native American or Native American and Caucasian, 10 (3.7%) reported their partners' ethnicities as Hispanic, 3 (1.1%) reported their partners' ethnicities as Asian, and 4 (1.5%) reported their partners' ethnicities as Other.

Participant Relationship Status

The vast majority of participants reported heterosexual relationships, with only 8 participants (3%) reporting same sex relationships. Fifty percent (n = 135) of participants reported that they were involved in permanent relationships. Forty-two (16%) reported that they had been involved in casual relationships, 76 (28%) stated that they were in exclusive relationships but not cohabitating, and 15 (6%) reported that they were in cohabitating relationships. The phrase "permanent relationship" was used in lieu of "marriage" on the demographic questionnaire in order to avoid discriminating against same-sex couples. It is reasonable to assume that many of the unmarried, heterosexual participants reported their relationship status as "permanent" rather than "cohabitating."

Partner Drug Use

Thirteen percent (n = 35) of participants endorsed an item questioning whether they believed their partner had a problem with alcohol or drug use. Ten percent of OU students endorsed this item, while 15% of RSC students endorsed this item.

Instruments

The Abuse within Intimate Relations Scale (AIRS)

The AIRS (Borjesson et al., 2003) is a 26 item, self report instrument designed to identify precursors of intimate partner violence in young adult relationships. Exploratory and confirmatory factor analyses were performed by the authors of the scale using two different populations of undergraduate students.

AIRS subscales. Three subscales on the AIRS are intended to measure different forms of psychological violence. The Verbal Abuse subscale appears to measure a type of abuse characterized by language use, withdrawal of verbal interaction, and voice tone.

It includes 5 items such as, "I have given my partner the silent treatment," and "I have used profanity towards my partner." The Emotional Abuse subscale measures a level of non-physical violence that is more likely to be considered an attack on the victim's character. This subscale contains 7 items such as, "I have degraded my partner," and "I have criticized my partner." The Deceptive Behaviors subscale appears to measure behaviors that are likely to lead to mistrust. This scale consists of four items, including, "I have kept secrets from my partner," and "I have lied to my partner."

Two subscales on the AIRS are intended to measure two different types of physical violence. The Restrictive Violence subscale appears to measure physical violence that restricts the victim's movement to some extent. It contains three items such as, "I have grabbed my partner in a rough manner," and "I have grabbed my partner's arm tightly. The Overt Violence subscale appears to measure levels of physical violence that are somewhat subtle. It contains 7 items, including, "I have pushed my partner," and "I have thrown objects while arguing with my partner."

Exploratory factor analyses. Borjesson et al. (2003) performed an initial exploratory factor analysis on the original 137 items generated for the AIRS. A sample of 518 undergraduate students was used for this analysis. A number of items were eliminated after this initial analysis due to practical and conceptual issues. The initial examination of results of this analysis revealed two primary factors, the first of which contained items related to psychological abuse, and the second of which contained items related to physical abuse. Items representing these two factors were then subjected to two separate factor analyses to determine the factor structure of these two constructs.

Exploratory factor analysis of the items representing the psychological factor was performed, and a number of items were eliminated according to pre-established criteria. Sixteen items representing three separate factors were revealed, and these were identified as the three psychological subscales described above. These sixteen items accounted for 58% of the variance in the data set. The Verbal Abuse subscale accounted for 7.9% of the variance, the Emotional Violence subscale accounted for 38.6% of the variance, and the Deception subscale accounted for 10.3% of the variance. The correlations between these three subscales ranged from .48 to .67.

Exploratory factor analysis of the items representing the physical factor was performed, and again items were eliminated using the pre-established criteria. Two factors were revealed, and these consisted of a total of ten items accounting for 59% of the variance in the data set. The Restrictive Violence subscale accounted for 12.2% of the variance, and the Overt Violence subscale accounted for 47.1%. The correlation between these two subscales was .59.

The final AIRS consists of 26 items. Each of these items loaded at least .40 on one factor and not more than .30 on any other factor.

Confirmatory factor analysis. After completion of the exploratory factor analyses and the elimination of a number of items, Borjesson et al. (2003) tested two, three, and five factor models that they considered with regard to relative fit. This analysis was performed on data collected from a sample of 504 undergraduate students who participated in the initial research phase but whose data was withheld for the purpose of the confirmatory analysis. Two factor physical, three factor psychological, and five factor combined models were all shown to be viable. A second order factor model was

selected as the final model. Two higher order factors represented psychological and physical violence, while three and two respective lower order factors represented the five subscales measuring psychological and physical violence.

Revised Conflict Tactics Scales (CTS2)

The CTS2 (Straus et al., 1996) is a modified version of the original Conflict Tactics Scale (Straus, 1979), which is the most widely used instrument for measuring intimate partner violence. The CTS2 has been used in over 40 studies (Straus & Gelles, 1999). The CTS2 consists of 39 pairs of self-report items intended to measure ways in which individuals deal with conflict in their intimate partner relationships and ways in which they perceive their partners as dealing with conflict in these relationships. For the purpose of the present study and with permission from Western Psychological Services (personal communication, April 21, 2004), the scale was adapted so that individuals would be responding only with respect to their own behaviors and not those of their partners. This is not expected to affect validity as the absence of questions about one's partner's behavior is not likely to affect one's response as to his or her own behavior.

CTS2 subscales. The CTS2 consists of five subscales. The Negotiation subscale consists of six items intended to measure healthy ways in which partners might deal with conflict. This subscale has been further divided into two sections, with three items measuring cognitive methods of negotiation and three items targeting emotional methods of negotiation. The Negotiation subscale is the only subscale that is not intended to measure some form of violence.

The remaining four subscales deal with different forms of intimate partner violence, and each of these four subscales is further divided according to the severity of

violence. Each of these four subscales has items described as "minor" and items described as "severe." The Psychological Aggression subscale is the only subscale that measures psychological violence. It consists of 8 items.

Two subscales are intended to measure physical violence. The first, the Physical Assault subscale, consists of 12 items that describe acts of physical violence. The second, the Injury subscale, consists of 6 items. These items describe a partner's injuries that have resulted from the respondent's violence. The final subscale, the Sexual Coercion subscale, consists of 7 items intended to measure acts of sexual violence.

Psychometric data on the CTS2. Psychometric data is provided by the authors of the CTS2 (Straus et al., 1996). The items on the CTS2 have been shown to have good internal consistency, and the Internal Consistency Reliability of the subscales ranges from .79 to .95. The Psychological Aggression subscale is the least internally consistent, while the Injury subscale is the most internally consistent.

Construct validity was found in the authors' correct hypothesis that the Physical Assault subscale would negatively correlate with a measure of social integration. Discriminate validity was established in part by a successful test of the hypothesis that scores on the Negotiation subscale would correlate negatively with scores on the Sexual Coercion and Injury subscales.

Construct validity has been established through a number of avenues. Straus et al. (1996) hypothesized and then found the Sexual Coercion subscale to be more highly correlated with the Psychological Aggression and Physical Assault subscales for men than for women, and that the Physical Assault and Injury subscales were more highly correlated for men than for women. These two hypotheses were made on the assumption

that men would be more likely to employ sexual coercion than women, and that physical assault by men would be more likely to result in injury than would physical assault on the part of women. The authors also hypothesized and then found the Psychological Aggression and Physical Assault subscales to be highly correlated, which they submit is a support of the theory of escalation of abuse.

Psychological Maltreatment of Women Inventory (PMWI)

The PMWI (Tolman, 1989) is a 58 item self report scale intended to measure the extent to which males psychologically mistreat their female partners. Respondents are asked to endorse items on a likert scale according to the relative pervasiveness of each occurrence. Tolman (2004) has published two versions of this instrument, a "Female" version with items intended to measure victims' experiences and a "Male" version with the same items reworded to measure perpetrator behaviors. Both versions of the scale are actually worded in such a way as to be gender neutral, although the title of the scale is not. For the purposes of this study, the "Male" version was used for all respondents.

PMWI subscales. The PMWI contains two subscales. The Dominance-Isolation subscale contains 26 items intended to measure the extent to which victims are isolated from potential resources and subjected to demands for subservience. This subscale also includes items that measure a rigid adherence to traditional gender roles. The Emotional-Verbal subscale contains 22 items. This subscale includes items that describe verbal attacks, withholding emotional resources, and behavior that demeans one's partner.

Psychometric data on the PMWI. Tolman (1989) provides information on psychometric data for this instrument. Feedback from professionals working with violent couples and from men and women with a history of violent relationships suggested high

levels of content and face validity. Exploratory factor analysis on data collected from both men and women separately revealed two factors, and these two factors are represented by the two subscales previously described. Internal consistency for the subscales using the data from female participants was .95 for the Dominance-Isolation subscale and .93 for the Emotional-Verbal subscale. Using the data from the male participants, the internal consistency for the Dominance-Isolation subscale was .92, and internal consistency for the Emotional-Verbal subscale was .93.

Marlowe-Crown Social Desirability Scale, Short Form

The Marlowe-Crowne Social Desirability Scale, Short Form (Reynolds, 1982) is a 13 item, self-report scale intended to measure the extent to which respondents hope to be looked upon as socially acceptable. Respondents are asked to respond to items as either 'true' or 'false.' This short form of the scale was also employed by Follingstad and her colleagues in a 1991 study of dating violence.

In a study of 608 undergraduate students (Reynolds, 1982), the mean number of 'true' responses to this short form was 5.7, with a standard deviation of 3.2. The reliability estimate for this instrument was .76, while the reliability estimate for the full length, 33 item form was .82. Concurrent validity was established by Reynolds using the standard version of the Marlowe-Crowne (r = .93) and the Edwards Social Desirability Scale (r = .41).

Procedure

Undergraduate students attending classes taught by faculty in the Division of Social Sciences at Rose State College and by faculty in the College of Education at the University of Oklahoma were invited to participate in this study. One of two short

scripts, both of which were approved by the University of Oklahoma Institutional Review Board, was read to students in their regular classrooms, either by the researcher or by a proctor. The script read to students at Rose State College was also approved by the Dean of the Division of Social Sciences at Rose State College. All students were advised that their participation was voluntary and that they would receive course credit for their participation. After scripts were read, students were invited to sign up for one of a number of data collection locations and times at their respective institutions.

Data was collected in classrooms reserved for this purpose on students' respective campuses. All data was collected either by the researcher or by a graduate student proctor who was trained by the researcher. Each participant was presented with a manila envelope containing the consent letter, a list of counseling resources, the AIRS, the CTS2, the PMWI, and the Marlowe-Crowne Social Desirability Scale, Short Form. The order of questionnaires was counterbalanced. Students were instructed to keep the list of resources for their own use. Students were then asked to read the consent form, and complete all questionnaires if they chose to participate in the study. Students who chose to participate were asked to return the consent letter along with the completed questionnaires to the manila envelopes, which they were instructed to seal and turn in to the researcher or proctor at the front of the room.

The researcher or proctor collected each envelope, then coded the outside of each envelope according to which institute the student attended. Each student then marked their name on the list on which they originally signed up to participate in the study. These lists were forwarded to the appropriate classroom instructors for the purpose of assigning course credit.

CHAPTER IV

RESULTS

This chapter will contain descriptive statistics, a report of methods used for data imputation, and results of statistical analyses including correlations, regression, and exploratory factor analysis. Information will be provided on participants, followed by descriptive statistics for data collected from each instrument. Methods with which missing data were imputated will then be discussed. Because social desirability is an important factor in partner violence research and is controlled for in these analyses, correlations between total scores on the Marlowe-Crowne Social Desirability Scale and scores on other relevant scales and subscales will be discussed.

Hypothesis testing for the current study required the use of partial correlations, multiple regression, and exploratory factor analysis. A number of partial correlations and one multiple regression were used for the purpose of validity testing. An exploratory factor analysis was used in order to explore the appropriateness of scale item placement within subscales as proposed by the scale's authors.

Missing Data

Given the number of items to which participants were asked to respond, it is not surprising that a number of participants did not respond to every single item on every questionnaire. Missing data is known to be prevalent in studies in which surveys are the primary source of data collection (Roth, 1994). Failing to use data from participants who do not respond to every item is a poor option because it decreases both the power and the accuracy of the data analysis (Downey & King, 1998). Streiner (2002) actually concluded that this is the worst of all possible options in terms of seeking accurate data

analyses. Various methods of data imputation are available for use, and the appropriate use of each varies depending on the circumstances under which data might be missing. Generally, more complex methods of data imputation are required when the amount of missing data reaches 20 to 30% (Downey & King). When the amount of missing data remains below 15%, the method of missing data imputation becomes less important (Roth).

A conservative approach was used in the imputation of data for the current study. Very few respondents failed to complete demographic items, and because these missing items represent only 1% of data from these variables, mean substitution was used as the method of data imputation when this method was possible. Mean substitution is the method of data imputation suggested by Streiner (2002) for circumstances such as these, and this consists of simply substituting the missing items with the mean of all participant responses to these items. In terms of demographic data, mean substitution was possible only for participant age and partner age, as other demographic items were represented by nominal data.

Less than 1% of respondents failed to complete items represented by nominal data, and because it would not be meaningful to use mean substitution for these items, these missing items were replaced by the mode of total responses for these items. For example, two participants (< 1% of total respondents) failed to complete the 'partner ethnicity' item, and because 76% of respondents reported their partner ethnicity to be 'Caucasian', these two missing items were coded as 'Caucasian'.

Because item responses to data from scales were, in general, unique to each respondent, mean substitution was not an appropriate method of data imputation for

missing data on scale items. Missing data from scale items was imputated using a method described by Green, Salkind, and Akey (2000). This method involved substituting missing data from items within a subscale with the mean for all completed items on the subscale. Using the previously described guideline proposed by Roth (1994), data on each subscale was imputated only when at least 85% of subscale items were completed. The only exception to this guideline was made for missing data on the Dominance-Isolation subscale of the PMWI, on which an 80% guideline was used for data imputation. This exception was made because a greater number of items were presumably left unanswered because they were written in such a way that they assumed a cohabitating relationship.

Descriptive Statistics for Scales and Subscales

Descriptive statistics for instruments used in this research is presented in Table One. The minimum score for every subscale is zero, so maximum scores are equal to range. Although each subscale did have a minimum score of zero, no participant provided this response to every item on every questionnaire.

Table 1: Descriptive Statistics for Instrument Scales and Subscales

	Items	A	Mean	SD	Max
AIRS Verbal Abuse Subscale	5	.78	5.0	3.2	10
AIRS Deception Subscale	4	.82	2.8	2.5	8
AIRS Emotional Abuse Subscale	7	.88	4.3	4.3	14
Total AIRS Psychological Abuse Subscales	16	.91	12.0	8.5	32
AIRS Restrictive Violence Subscale	3	.75	0.5	1.2	6
AIRS Overt Violence Subscale	7	.90	1.4	2.8	14

Total AIRS Physical Violence Subscales	10	.90	1.9	3.7	18
Total AIRS Scores	26	.93	13.8	11.0	50
CTS2 Negotiation Emotional Items	3	.77	14.5	4.9	21
CTS2 Negotiation Cognitive Items	3	.79	12.6	5.1	21
CTS2 Total Negotiation Subscale	6	.88	27.0	9.4	42
CTS2 Psych Aggression Minor Items	4	.79	7.9	6.7	25
CTS2 Psych Aggression Severe Items	4	.66	1.0	2.7	20
CTS2 Total Psych Aggression Subscale	8	.80	8.9	8.4	43
CTS2 Physical Assault Minor Items	5	.77	1.7	3.6	25
CTS2 Sexual Coercion Minor Items	3	.47	1.5	3.0	18
PMWI Dominance-Isolation Subscale	26	.86	6.6	7.0	44
PMWI Emotional-Verbal Subscale	22	.93	14.5	11.9	60
Marlowe-Crowne, Short Form Total Score	13	.70	6.8	2.9	13

As expected, there was a great deal of homogeneity of scores on scales measuring Physical Assault and Sexual Coercion, with few participants' endorsing items on these scales. Standardized alpha reliability coefficients for all subscales were quite strong with two exceptions, both of which were CTS2 subscales. The reliability coefficient for the CTS2 Psychological Aggression, Severe items was .66, and the reliability coefficient for the CTS2 Sexual Coercion, Minor items was .47.

Marlowe-Crowne Correlations

Participant scores on the Marlowe-Crowne Social Desirability Scale, Short Form had significant correlations with scores on a number of scales and subscales used in this

research. Pearson correlations between Marlowe-Crowne total scores and AIRS total scores were moderate and significant (r = -.30; p < .001). Correlations between total scores on the Marlowe-Crowne and AIRS subscales that measure psychological violence were weak to moderate, but significant. This includes the Emotional Abuse subscale (r = -.31, p < .001), the Deception subscale (r = -.32, p < .001), and the Verbal Abuse subscale (r = -.25, p < .001). Participants' Marlowe-Crown scores were also negatively correlated with the totals of all Psychological Abuse subscales on the AIRS (r = -.34, p < .001).

There was no significant correlation between Marlowe-Crowne scores and the AIRS Overt Violence subscale, nor was there a significant correlation between Marlowe Crowne scores and participants' total combined scores on the two AIRS scales measuring Physical Abuse. There was, however, a weak but significant correlation between participant scores on the Marlowe-Crown scale and scores on the Restrictive Violence subscale of the AIRS (r = -.11; p < .05).

Hypothesis Testing

Partial Correlations Controlling for Social Desirability

Table 2 includes partial correlations relevant to hypothesis testing, controlling for the effects of social desirability, as measured by the Marlowe-Crowne Social Desirability Scale, Short Form.

Table 2: Partial Correlations between AIRS Scores and Scores on CTS2 and PSWI Subscales Controlling for the Effects of Social Desirability

	AIRS EA	AIRS Dec	AIRS VA	AIRS RV	AIRS OV	AIRS TTL
CTS2 Cog Negotiation	.14*	.08	.24**	.06	.14*	.16*

CTS2 Em Negotiation	.06	.07	.18**	.01	.08	.11
CTS2 Total Negotiation	.11	.08	.22**	.04	.11	.16*
CTS2 Psych Aggression	.64***	.37***	.68***	.44***	.58***	.72***
CTS2 Physical Minor	.47***	.27***	.40***	.61***	.70***	.61***
CTS2 Sex Minor	.18**	.21**	.22**	.16*	.09	.22**
PMWI E/V	.72***	.46***	.71***	.53***	.62***	.80***
PMWI D/I	.63***	.47***	.58***	.49***	.55***	.71***

n = 229; * denotes p < .05; **denotes p < .01; *** denotes p<.001

Reported correlations are bi-variate Pearson product-moment correlations. Caution should be taken when interpreting statistically significant but weak correlations, as there is a possibility for Type I errors under these circumstances. This can be corrected to some extent by using a Bonferroni adjustment when considering the results of these correlations. Using this more conservative method, with a predetermined significance level of .05 and considering 48 correlations, one would arrive at the conclusion that the significance level must be <.001 to be considered significant (.05/48 = .001).

Hypothesis #1. Scores on the Emotional Abuse subscale of the AIRS will be positively correlated with scores on the Psychological Aggression subscale of the CTS2 and negatively correlated with scores on the Emotional items of the Negotiation subscale of the CTS2.

Findings. As indicated in Table 2, there was a moderate and significant positive correlation between participant scores on the Emotional Abuse subscale of the AIRS and the Psychological Aggression subscale of the CTS2 ($r = .64$; $p < .001$). However, there was no correlation between participant scores on the Emotional Abuse subscale of the

AIRS and the Emotional items on the Negotiation subscale of the CTS2 (r = .06; p = .365).

Hypothesis #2. Scores on the Verbal Abuse subscale of the AIRS will be positively correlated with scores on the Psychological Aggression subscale of the CTS2 and negatively correlated with scores on the Cognitive items of the Negotiation subscale of the CTS2.

Findings. As indicated in Table 2, there was a moderate and significant positive correlation between participant scores on the Verbal Abuse subscale of the AIRS and the Psychological Aggression subscale of the CTS2 (r = .68; p < .001). However, there was actually a weak but significant positive correlation between participant scores on the Verbal Abuse subscale of the AIRS and the Cognitive items on the Negotiation subscale of the CTS2 (r = .24; p < .001).

Hypothesis #3. Scores on the Deception subscale of the AIRS will be positively correlated with scores on the Dominance-Isolation subscale of the PMWI.

Finding. As indicated in Table 2, there was a moderate and significant positive correlation between participant scores on the Deception subscale of the AIRS and the Dominance-Isolation subscale of the PMWI (r = .47; p < .001).

Hypothesis #4. Scores on the Overt Violence subscale of the AIRS will be positively correlated with scores on the combined 'minor' items of the Physical Assault subscale of the CTS2.

Finding. As indicated in Table 2, there was a strong and significant positive correlation between participant scores on the Overt Violence subscale of the AIRS and

scores on the combined 'minor' items of the Physical Assault subscale of the CTS2 (r = .70; $p < .001$).

Hypothesis #5. Scores on the Restrictive Violence subscale of the AIRS will be positively correlated with scores on the combined 'minor' items of the Physical Assault subscale and with the combined 'minor' items of the Sexual Coercion subscale of the CTS2. Scores on the Restrictive Violence subscale of the AIRS will be positively correlated with scores on the Dominance-Isolation subscale of the PMWI.

Findings. As indicated in Table 2, there was a moderate and significant positive correlation between participant scores on the Restrictive Violence subscale of the AIRS and the combined 'minor' items of the Physical Assault subscale of the CTS2 (r = .61; $p < .001$). Also controlling for social desirability, there was a weak but significant positive correlation between participant scores on the Restrictive Violence subscale of the AIRS and the combined 'minor' items of the Sexual Coercion subscale of the CTS2 (r = .16; $p < .05$). Scores on the Restrictive Violence subscale of the AIRS were also moderately and significantly correlated with scores on the Dominance-Isolation subscale of the PMWI (r = .49; $p < .001$) when the effects of social desirability were partialled out of the equation.

Hypothesis #6. Total score on the AIRS will be negatively correlated with scores on the Negotiation subscale of the CTS2.

Finding. Controlling for social desirability as measured by scores on the Marlowe-Crowne Social Desirability Scale, Short Form, there was actually a weak but significant positive correlation between total scores on the AIRS and scores on the Negotiation subscale of the CTS2 (r = .16; $p < .05$).

Multiple Regression

Multiple regression was used to determine whether combined scores on the Emotional Abuse and Verbal Abuse subscales of the AIRS could be used to predict scores on the Emotional-Verbal Abuse subscale of the PMWI, controlling for the effects of social desirability. A forced enter blocks method was used in order to control for the effects of social desirability, with total scores of the Marlowe-Crowne, Short Form being entered as the first block. Block two consisted of subscale scores from the AIRS Emotional Abuse subscale and the AIRS Verbal Abuse Subscale.

Table 3: Regression Analysis for Prediction of Scores on PMWI E/V Subscale from AIRS EA and VA Subscales

	Coefficient B	Std. Error	Beta
MC Total Score	-.376	.159	-.093*
AIRS VA Subscale	1.552	.201	.412***
AIRS EA Subscale	1.145	.151	.411***

* denotes $p < .05$; *** denotes $p < .001$

Hypothesis #7. Combined scores on the Emotional Abuse and Verbal Abuse subscales of the AIRS will be predictive of scores on the Emotional-Verbal Abuse subscale of the PMWI.

Finding: Results of multiple regression indicate that a model consisting of scores on the Emotional Abuse and Verbal Abuse subscales of the AIRS is a consistent predictor of scores on the Emotional-Verbal Abuse subscale of the PMWI; $F(3,264) = 150.4$, $p < .001$. The predictor variables, when considered together, account for 63% of the variance in the criterion variable (adjusted $R^2 = .63$).

Factor Analysis

An exploratory factor analysis using principal axis factoring with Promax rotation was used to further evaluate the AIRS scale. Promax rotation was used in order to duplicate the method used by Borjesson et al. (2003). An absolute magnitude of eigenvalues of factors was used to determine the number of factors to extract. Using this method, five factors were identified.

Two of these factors included items characteristic of physical violence, and the actual items contributing to these factors were distributed identically to the model originally identified by the scale's authors (Borjesson et al., 2003). Three items represented the factor previously identified as the Restrictive Violence Subscale, and this factor accounted for 4.8% of the variance. Seven items represented the Overt Violence Subscale, and this factor accounted for 38.1% of the variance.

Also as found by Borjesson and her colleagues (2003), three factors were identified that included items characteristic of psychological violence. The subscale previously identified as the Deception subscale contained the same four items found with the previously reported factor analysis. The factor representing the Deception subscale accounted for 6.5% of the variance.

The two remaining subscales containing items measuring various types of psychological violence were somewhat different than those previously identified by Borjesson et al. (2003). While Borjesson et al. previously identified a Verbal Abuse subscale containing five items, the current factor analysis revealed a subscale containing only two items, both of which were included in Borjesson's Verbal Abuse subscale. This factor consisting of two items accounted for 4.3% of the variance.

On the current analysis, the remaining items loaded onto what Borjesson had described as the Emotional Abuse subscale, creating a subscale that contains ten items as opposed to Borjesson's seven. This factor accounted for 10.2% of the variance. One of these ten items, 'I have sneered at my partner,' loaded at only .39 and was therefore not clearly defined as belonging to this specific factor.

Factor Loadings of AIRS Items for all Participants

	STATISTIC		FACTOR/AIRS SUBSCALE				
Item	M	SD	1/OV	2/EA	3/D	4/RV	5/VA
Used object to hit	0.11	0.41	**.632**	.000	.002	.000	-.006
Pushed	0.35	0.66	**.699**	.007	-.008	.160	.102
Shoved	0.27	0.60	**.802**	.001	-.006	.007	.009
Had pushing matches	0.17	0.49	**.787**	-.183	.000	.122	.101
Forcefully pushed	0.16	0.47	**.878**	.002	.000	.001	-.003
Physically attacked	0.11	0.39	**.740**	.005	.139	-.003	-.143
Thrown objects	0.19	0.53	**.488**	.299	.132	-.009	-.127
Blamed	0.53	0.76	.003	**.645**	.004	-.147	.004
Mocked	0.84	0.86	-.002	**.536**	-.002	.100	.007
Insulted	0.64	0.83	.009	**.669**	-.008	.103	.162
Criticized	0.97	0.88	-.119	**.722**	.000	-.001	.111
Ridiculed	0.48	0.76	-.008	**.801**	-.006	.220	-.008
Belittled	0.41	0.71	.001	**.479**	.334	.213	-.157
Used profanity	1.03	0.91	.009	**.536**	.002	-.183	.346

Screamed at	0.98	0.90	.156	**.521**	-.007	-.180	.353
Degraded	0.38	0.73	.007	**.620**	.009	.119	-.006
Sneered	0.57	0.84	.007	**.388**	.008	.007	.219
Kept secrets from	1.13	0.85	-.004	.006	**.637**	-.118	.154
Betrayed	0.30	0.63	.157	.007	**.616**	-.003	-.115
Lied to	0.85	0.85	-.003	-.001	**.765**	-.007	.230
Deceived	0.51	0.77	.002	-.009	**.781**	.153	.005
Squeezed forcefully	0.11	0.38	.144	-.008	.000	**.470**	.003
Grabbed arm	0.24	0.56	.008	.149	-.006	**.674**	.007
Grabbed roughly	0.17	0.49	.220	.005	.001	**.617**	.007
Silent Treatment	1.37	0.82	-.002	.008	.008	.119	**.515**
Ignored	1.08	0.89	-.101	.170	.170	.167	**.597**

Data from the current study revealed five primary factors, and these five factors are very similar to those identified by Borjesson et al. (2003). However, a second order analysis was not run because the first analysis did not confirm the presence of two primary factors representing physical and psychological abuse. Similar to the Borjesson study, two factors representing two different types of physical abuse were identified and consisted of the same items as those in the Borjesson study. These two factors are represented by the Overt Violence and Restrictive Violence subscales. Items in these two subscales meet the criteria identified by Borjesson et al. in that each of these items loaded at least .40 on one factor and not more than .30 on any other factor.

Hypothesis #8. Exploratory factor analysis will reveal a second order factor model similar to that described by the scale's authors (Borjesson et al., 2003), with two higher order factors representing psychological and physical violence, and three and two respective lower order factors representing the five subscales defined by the scale's authors.

Findings. The previously described exploratory factor analysis performed for the purpose of the current study actually revealed a five factor model. Because this five factor model was identified, a second order factor structure was not performed for the current analysis. This difference in results is likely due to the fact that the original factor analysis performed by Borjesson et al. was completed using the original, much larger scale. The five factor model identified in the current study is very similar to the model ultimately identified by Borjesson et al.

Three of the factors identified in the current analysis consist of the same items as three of the subscales identified by the scales authors. These three subscales are the Overt Violence subscale, the Restrictive Violence subscale, and the Deception subscale.

Although the current analysis revealed two other factors consisting of items identifying types of psychological abuse, these are not characterized by the same items as the remaining two psychological abuse subscales identified by Borjesson et al. The current analysis revealed a ten item factor along with a two item factor while the Borjesson study revealed two factors with seven and five items respectively.

Gender Asymmetry and Factor Structure

In light of the current focus on gender symmetry versus asymmetry in the field of intimate partner violence, a second factor analysis was run using only the female study

participants. Because of the limited number of male participants, this procedure was not completed with the male participants. Although there were a number of similarities in the factor structure of the entire sample when compared to the sample of female-only participants, there were also many differences.

Factor Loadings of AIRS Items for Female Participants

	STATISTIC		FACTOR/AIRS SUBSCALE				
Item	M	SD	1/OV	2/EA	3/D	4/RV	5/VA
Used object to hit	0.13	0.44	**.620**	-.149	-.001	.186	.461
Pushed	0.36	0.69	**.807**	.005	-.005	.006	.003
Shoved	0.27	0.63	**.938**	-.006	-.004	.002	-.010
Had pushing matches	0.16	0.49	**.838**	-.156	-.004	.128	.228
Forcefully pushed	0.18	0.50	**.930**	-.002	.005	-.003	-.001
Physically attacked	0.13	0.44	**.795**	-.008	.201	-.006	-.007
Thrown objects	0.19	0.54	**.608**	-.008	.160	.009	.002
Blamed	0.57	0.78	-.008	**.525**	.103	.269	.003
Mocked	0.81	0.86	-.120	**.644**	-.008	.235	.344
Insulted	0.61	0.81	.118	**.679**	-.119	.207	.115
Criticized	0.93	0.88	-.178	**.782**	-.002	.173	-.107
Ridiculed	0.46	0.75	-.002	**.929**	-.001	-.010	.151
Belittled	0.38	0.70	.005	**.677**	.409	-.235	.007
Used profanity	1.02	0.90	.173	**.212**	-.004	.471	-.411
Screamed at	1.03	0.88	.241	**.117**	-.009	.532	-.363

Degraded	0.36	0.71	.198	**.692**	.110	-.114	-.005
Sneered	0.58	0.85	.114	**.242**	.008	.380	.005
Kept secrets from	1.06	0.83	-.173	.003	**.757**	139	-.007
Betrayed	0.27	0.60	.243	-.006	**.751**	-.008	-.005
Lied to	0.75	0.83	-.007	-.002	**.733**	.312	-.005
Deceived	0.40	0.71	.009	.006	**.820**	-.008	-.007
Squeezed forcefully	0.00	0.35	.145	.264	-.106	**.006**	.747
Grabbed arm	0.20	0.52	.504	.478	-.153	**-.170**	.004
Grabbed roughly	0.13	0.44	.762	.239	-.009	**-.159**	-.007
Silent Treatment	1.35	0.83	-.002	-.101	.003	.773	**.164**
Ignored	1.05	0.89	-.108	.010	.138	.739	**.108**

*Note: highlighted numbers are indicative of factor loadings on respective subscales in the entire sample.

Results of the factor analysis using only the female sample of participants reveal a somewhat different factor structure. The Overt Violence subscale and the Deception Subscale remain unchanged with respect to item placement. However, the placement of items on the Emotional Abuse, Restrictive Violence, and Verbal Abuse subscales changed significantly, with no clear cut definition between items describing physical and psychological forms of abuse.

CHAPTER V: GENERAL DISCUSSION

The purpose of the present study was to provide validation for and explore the factor structure of the Abuse within Intimate Relationships Scale (AIRS). In order to satisfy this objective, data was collected from 270 college students using the AIRS and two widely used and accepted scales. Data was also collected using a social desirability scale in order to control for the effects of social desirability. An exploratory factor analysis was used in order to explore the appropriateness of scale item placement within subscales as proposed by the scale's authors.

The overall results of this study suggest that the AIRS is a valid instrument for use in identifying college students who may be at risk for violence in intimate relationships. Hypotheses designed to provide convergent validation were well supported, meaning that scores from AIRS subtests were well correlated in the expected direction with scores from subtests from well known scales measuring similar, albeit more severe, forms of violence. However, tests of discriminate validity were not supported. Exploratory factor analysis revealed a factor structure very similar to that found by the authors of the scale. However, this factor structure was less cohesive when the analysis was performed using only the female participants from the current sample.

Hypotheses Testing

Hypotheses Concerning AIRS Validation

Hypothesis #1. Findings from the present study provide partial support for the hypothesis that the Emotional Abuse subscale of the AIRS is a valid measure of emotional violence in the intimate relationships of college students. As hypothesized, statistical analysis revealed a significant positive correlation between the Emotional

Abuse subscale of the AIRS and the Psychological Aggression subscale of the CTS2, controlling for the effects of social desirability. However, the significant negative correlation hypothesized between the Emotional Abuse subscale of the AIRS and the Emotional items from the Negotiation subscale of the CTS2 was not found. This lack of correlation may be, in part, due to the fact that there are only three Emotional items on the Negotiation subscale of the CTS2.

Hypothesis #2. Findings from the present study provide partial support for the hypothesis that the Verbal Abuse subscale of the AIRS is a valid measure of verbal violence in the intimate relationships of college students. As hypothesized, scores on the Verbal Abuse subscale of the AIRS were significantly and positively correlated with scores on the Psychological Aggression subscale of the CTS2, controlling for the effects of social desirability. However, although a significant negative correlation was expected between scores on the Verbal Abuse subscale of the AIRS and the Cognitive items of the Negotiation subscale of the CTS2, a significant positive correlation was actually found. This positive correlation is interesting considering the two opposing types of interactions being measured by these two subscales. It could be in part due to the fact that there are only three Cognitive items on the Negotiation subscale of the CTS2. However, there is also a possibility that some individuals have a tendency to be very verbal, and these individuals may verbalize in ways that have both positive and negative effects on the relationship.

Hypothesis #3. Results of the present study provide evidence for the convergent validity of the Deception subscale of the AIRS. As hypothesized, there was a moderate and significant positive correlation between participant scores on the Deception subscale

of the AIRS and the Dominance-Isolation subscale of the PMWI when the effects of social desirability are partialled out of the equation.

Hypothesis #4. Results of the present study indicate evidence for the convergent validity of the Overt Violence subscale of the AIRS. As hypothesized, when the effects of social desirability are controlled, scores from the Overt Violence subscale of the AIRS were significantly and positively correlated with scores on the combined 'minor' items of the Physical Assault subscale of the CTS2.

Hypothesis #5. Results of the present study provide evidence for the convergent validity of the Restrictive Violence subscale of the AIRS. As hypothesized, scores from the Restrictive Violence subscale of the AIRS were significantly and positively correlated with scores on the combined 'minor' items of the Physical Assault subscale and with the combined 'minor' items of the Sexual Coercion subscale of the CTS2. Also as hypothesized, scores on the Restrictive Violence subscale of the AIRS were positively correlated with scores on the Dominance-Isolation subscale of the PMWI. Each of these correlations was calculated controlling for the effects of social desirability.

Hypothesis #6. Contrary to this hypothesis, there was actually a weak but significant positive correlation between total scores on the AIRS and scores on the Negotiation subscale of the CTS2, controlling for the effects of social desirability. If the AIRS is indeed a valid indicator that the relationships of college students might be at risk for violence, this would indicate that college students who are at risk for violence may be more likely to be active in attempting verbal negotiations with their intimate partners. If this is the case, the reasons behind this are indeed a mystery. However, it may be that

these individuals perceive a substantial investment in the relationship and have few resources for coping with frustration when attempts at verbal negotiation fail.

Hypothesis #7. Results of the current study provide evidence for the convergent validity of both the Emotional Abuse and Verbal Abuse subscales of the AIRS. As predicted, a model consisting of scores on the Emotional Abuse and Verbal Abuse subscales of the AIRS is a consistent predictor of scores on the Emotional-Verbal Abuse subscale of the PMWI. This information supports the finding from Hypotheses 1 and 2, both of which provided evidence for the convergent validity of these two AIRS subscales.

Hypothesis #8: Factor Structure Hypothesis

Results of the current study provide support for the factor subscale structure of the AIRS as defined by the scale's authors (Borjesson et al., 2003). Borjesson et al. originally identified five scales for which each of the 26 items loaded at least .40 on one factor and not more than .30 on any other factor. Although results of the current study are similar, they are not identical. The authors of the scale originally identified two factors representing physical and psychological abuse and then performed a second order exploratory factor analysis to further define these two factors. In the first study performed by the scale's authors, a number of scale items were removed after the first exploratory factor analysis was run.

For the purpose of the current study, a second order analysis was not run because the first analysis did not confirm the presence of two primary factors representing physical and psychological abuse. Rather, data from the current study revealed five primary factors, and these five factors are very similar to those ultimately identified by Borjesson et al. (2003). As in the Borjesson study, two factors representing two different

types of physical abuse were identified and consisted of the same items as those in the Borjesson study. These two factors are represented by the Overt Violence and Restrictive Violence subscales. Items in these two factors identified by the current analysis meet the criteria identified by Borjesson et al. in that each of these items loaded at least .40 on one factor and not more than .30 on any other factor.

One factor representing a type of psychological violence was also identified in the current study by the same items as those in the Borjesson study. These items are represented by the Deception subscale. These four items representing this factor in the current study also meet the criteria of loading at least .40 on this factor and not more than .30 on any other factor.

Borjesson et al.'s (2003) factor analysis revealed two other factors representing psychological violence as did the factor analysis run for the purpose of the current study. However, the items representing these two factors, which have made up the Verbal Abuse and Emotional Abuse subscales of the AIRS, are inconsistent across studies. The Verbal Abuse subscale identified in the Borjesson study consisted of five items: Blamed for uncontrollable things, Ignored, Silent treatment, Used profanity and Screamed at. The fourth factor on the current study can be compared to the Verbal Abuse subscale of the AIRS but consists of only two items, Silent treatment and Ignored.

The fifth factor identified by the current factor analysis consisted of ten items. This factor shares a number of items with the Emotional Abuse subscale of the AIRS (Borjesson et al., 2003). There are five items common to this factor on the Borjesson analysis and the current analysis, and these five items all load at least .40 on this scale and less than .30 on any other scale. These five items are Mocked, Criticized, Insulted,

Ridiculed, and Degraded. In the Borjesson factor analysis, these five items were placed with two other items, Belittled, and Sneered at, to complete the Emotional Abuse subscale. Both of these items also loaded onto the Emotional Abuse subscale on the current study, but did not meet the criteria of loading at least .40 on one factor and less than .30 on any other factor. Belittled loaded at .479 on the second factor, but also loaded .334 on the third factor representing the Deception subscale. The Second item, Sneered at, also loaded onto the second factor on the current study, but only loaded at .388.

Three other items, Blamed, Used profanity, and Screamed at, also loaded onto the Emotional Abuse subscale on the current analysis. Two more items on the current study, Used Profanity and Screamed at, loaded .536 and .521 respectively onto the fifth factor representing Emotional Abuse, but did not meet the criteria of loading less than .30 on a second factor. These two items loaded .346 and .353, respectively, on the fourth factor representing Verbal Abuse. Finally, on the current analysis, Blamed for uncontrollable things, did not load onto the fifth factor, but clearly fit onto the fourth factor and met the criteria established by Borjesson and her colleagues.

In terms of hypothesis testing, item placement on the subscales as defined by the scale's authors becomes more questionable when one considers the changes in the analysis that take place when only the female sample is considered. Although the Overt Violence and Deception subscales contained the same items as those defined by the Borjesson et al. (2003) study regardless of which subset of the sample was analyzed for this study, the content of the other three subscales was not so well defined. When the female-only sample was considered, the items were not so clearly defined in terms of

psychological versus physical violence. Obviously, more research is needed to understand the differences between violence perpetrated by females and that perpetrated by males.

As previously stated, the original sample from which data was collected by the authors of the AIRS consisted of students attending a Florida university. For the purpose of the current study, data was collected from a sample of students attending either a four year university or a two year community college in Oklahoma. Given the difference in populations, the similarities in the factor structure when both genders are considered are surprising. Three of the five subscales clearly consist of the same items. Two of the five subscales contained the same items regardless of whether the current analysis was done with the entire sample or with the female sample only. More research would be needed in order to explore the appropriate fit of the remaining items into theVerbal Abuse , Emotional Abuse, and Restrictive Violence subscales.

Limitations

Although the current study provides evidence for the validity of the AIRS and for the appropriateness of item placement on the subscales of the AIRS, some limitations are important to note. For several reasons, it is reasonable to question the extent to which the results of this study may be generalized to the population of undergraduate college students in the United States. First, the sample used in this research was limited to students in one geographical area in the United States, and the population of college students in both of these institutions is predominately Caucasian. This sample also consisted of students who chose to voluntarily participate for extra credit and this brings one to question what other characteristics this group might share. For example, this

sample was largely female, and it would be reasonable to question whether the data would look much different if more males had volunteered to participate. Also, although an attempt was made to include students from more than one discipline, the sample from which data was collected for the purpose of this study was limited to undergraduate students taking classes in areas of social science and education. It is not known whether these findings would apply to college or university students in other disciplines, in other areas of the country, or in other areas of the world.

It must also be noted that measurement problems that affect the field of intimate partner violence in general are also sure to affect the results of the present study. Although an attempt was made to control for the effects of social desirability, this study was based on data collected using self report on a sensitive topic. It is difficult, if not impossible, to understand, much less account for, respondents' thought processes as they complete self-report questionnaires and the extent to which these thought processes affect their responses.

Direction for Future Research

Although much data has been collected in the field of intimate partner violence, there remain a substantial number of questions left unanswered. The prevalence of intimate partner violence is high, and although professionals across disciplines continue to work toward a solution, men, women, and children continue to be victimized.

Professionals in the field of intimate partner violence have focused much time and energy on theoretical disagreement and resulting issues of gender symmetry. At times it appears that many professionals who profess to be focused on reducing levels of violence in families have instead worked to convince others that the data collected from their own

theoretical orientations was in fact the only legitimate data in terms of understanding the problem. One important way in which future research can be enhanced is for individual researchers to consider the data from all sources in order to work toward a comprehensive solution to the problem of intimate partner violence. Another way in which research on intimate partner violence might be enhanced is through the incorporation of the base of research on relationships in general. A strong base of data has been collected on intimate relationships and this has, to a great extent, been ignored in terms of research on intimate partner violence.

The college student population is an ideal one in which to begin exploring the problem of intimate partner violence in a comprehensive manner because it is unique in many ways. This predominately young population is likely to include individuals who will one day be represented in all categories of intimate partner violence. For many reasons, neither community populations of adult couples nor clinical populations of known victims or perpetrators have been inclusive of all types of intimate partner violence. Community populations have tended to include couples involved in relationships characterized by Common Couple Violence, while clinical samples of adult victims or perpetrators have included individuals more likely to be involved in relationships characterized by Intimate Terrorism, Violent Resistance, or Mutual Couple Control. The college student population may well be more inclusive of individuals who are involved in various levels of all four categories of intimate partner violence. For this reason, it is the most logical population with which researchers can really begin to explore these different categories of violence and the individuals involved in them.

The AIRS is an excellent starting point; however, the current study is only one of the first steps in a process of establishing it as an effective instrument. Additional validation studies need to be performed before the AIRS can be used with confidence. If future studies are successful in providing further validation for the AIRS, the AIRS can provide researchers from different theoretical orientations with an excellent tool for identifying college students who may be at risk for being involved in, or becoming involved in, intimate partner violence. Researchers might then be able to provide clinicians with useful data with which effective interventions can be implemented.

Clinical Applications

As with many social problems, preventative measures are far more effective than interventions put in place after the damage has been done. The first step in finding effective preventative measures is targeting individuals at risk for intimate partner violence. Although professionals in the field have access to a store of etiological data, it is not possible at this point to target specific individuals who are likely to be at risk for violent intimate relationships.

Because the AIRS was designed to identify college students who may be at risk for intimate partner violence, there are many ways in which the AIRS could be used clinically. The AIRS is the only scale that has been specifically designed to help clinicians identify which college students might be involved in violent relationships. Because this scale was designed specifically for this population and for identifying those involved in relationships characterized by subtle levels of violence, it can be used in a number of ways to implement preventative measures with this population.

One way the AIRS might be used with individual college students is in the university counseling center setting. Because the AIRS is a relatively short instrument, it could easily be incorporated as part of the intake paperwork given to new patients in this setting. As such, these students could be quickly and efficiently screened in term of the extent to which they might be at-risk for violent relationships. Students who score high on the AIRS could be asked to complete a CTS2 in order to assess the severity of violence in their intimate relationships. Students who score high on the AIRS but low on the CTS2 might benefit from group counseling or psychoeducational interventions, while students who score high on both instruments might benefit more from individual counseling.

The AIRS could also be used for group screening in university settings. Although there has been a great deal of speculation regarding whether specific groups of students, such as athletes or fraternity members, are more likely to be involved in relationships characterized by violence, the AIRS could be used along with other relevant information to make accurate assessments about whether these groups of college students might actually be more prone to violent intimate relationships. If so, these groups might be successfully targeted for outreach programs.

If the AIRS is accepted as a valid instrument for identifying college students who are at risk for violence, a variety of clinical applications could be made available to clinicians working with college students. Screening of individual students and of specific groups are two ways in which the AIRS could be used to make immediate and positive changes in the lives of university students.

Summary

The purpose of the current study was to provide validation for, and explore the factor structure of, the Abuse within Intimate Relationships Scale (AIRS; Borjesson et al., 2003). The AIRS is a measure of intimate partner violence that was designed for use with college students, particularly in terms of identifying individuals who may be at risk for violent intimate relationships. Results of convergent validation analysis indicated that the subscales of the AIRS are accurate measures of qualitatively different aspects of intimate partner violence. However, results of discriminate validation analysis did not indicate discriminate validity. Results of exploratory factor analysis indicated that the subscale structure as identified by the authors of the scale is largely supported. However, the current factor analysis identified several differences in terms of possible item placement into subscales intended to measure verbal violence and emotional violence.

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APPENDIX A

Informed Consent Form

INFORMED CONSENT COVER LETTER FOR ANONYMOUS/CONFIDENTIAL SURVEYS

Date:

Dear Participant,

I am a graduate student under the direction of Dr. Cal Stoltenberg in the Department of Educational Psychology at the University of Oklahoma – Norman Campus. I invite you to participate in a research study being conducted under the auspices of the University of Oklahoma – Norman Campus, entitled Validation of the Abuse within Intimate Relationships Scale (AIRS). This study has been approved by the University of Oklahoma Institutional Review Board (Approval #_____). The purpose of this research is to provide validation for the Abuse within Intimate Relationships Scale. You must be between the ages of 18 and 65 years of age (inclusive) to participate in this study.

RISKS AND BENEFITS: If you choose to participate in this study, you will be asked to respond to some questions that contain violent and sexually violent content. Some participants may experience some discomfort because of the nature of the questions being asked. Because of this possible discomfort, you are being provided with a list of counseling resources that you may find helpful. Your instructor may offer course credit for participation in this study. Results of this study will provide important information to professionals working in the area of intimate partner violence.

CONDITIONS OF PARTICIPATION: Your participation will involve completing several questionnaires and will take about 30 minutes. Your involvement in the study is voluntary. Refusal to participate will involve no penalty or loss of benefits to which you are otherwise entitled. Furthermore, you may discontinue participation at any time without penalty or loss of benefits to which you are otherwise entitled. You will not, however, receive course credit if you choose not to participate or if you choose to discontinue participation.

CONFIDENTIALITY: This questionnaire is anonymous. The results of our study may be published, but your name will not be linked to responses in publications that are released from this project. In fact, the published results will be presented in summary form only. All information you provide will remain strictly confidential.

CONTACTS FOR QUESTIONS ABOUT THE STUDY: Participants may contact Rita Conger at 405-249-8695 or at rita-conger@ouhsc.edu with questions about the study. Ms. Conger's faculty supervisor, Cal Stoltenberg, can be reached at 405-325-5974. Questions about your rights as a research participant or concerns about the project should be directed to the University of Oklahoma-Norman Campus Institutional Review Board at 405/325-8110 or irb@ou.edu.

By returning this questionnaire in the envelope provided, you will be agreeing to participate in the above described project.

Thanks for your consideration!

Sincerely,

Rita Conger, M.A.
Doctoral Candidate
Department of Educational Psychology
University of Oklahoma

APPENDIX B

Referral List for Counseling Services

Referral List for Counseling Services

If you experience adverse or uncomfortable feelings as a result of participation in this study, please refer to the following list of resources for counseling:

If you are a student at Rose State College, you may contact Dr. JoAnne McMillin at 405 733-7373.

If you are a student at the University of Oklahoma, you may contact the University of Oklahoma Counseling and Testing Center at 405-325-2700.

The following resources are available to anyone:

University of Oklahoma Counseling Psychology Clinic is a community counseling center. Fees for counseling are based on a sliding scale according to client income. They can be reached at: 405-325-2914

If you would like to talk confidentially and anonymously with a counselor, telephone counseling is available through Number Nyne Crisis Phone Line: 405-325-6963

The following toll free number is a national resource for victims of partner violence: 800-799-7233

APPENDIX C

Demographic Questionnaire

General Information

In order to learn more about ways that different people resolve conflict, we need to know something about the individuals who complete our surveys. The information you provide will be used to gain more information about people in general and will not be used to identify you in any way. If you feel that any question might identify you specifically, please feel free to leave that question blank.

Please identify your gender: ____ Male ____ Female

How old are you? _____

What has been the nature of your current or most recent intimate relationship?

____ I have never been in an intimate relationship
____ I have casually dated men but not in a committed relationship
____ I have casually dated women but not in a committed relationship
____ I have been in an exclusive relationship with a man but have not lived with him
____ I have been in an exclusive relationship with a woman but have not lived with her
____ I've had a live-in relationship with a man but not with a permanent commitment
____ I've had a live-in relationship with a woman but not with a permanent commitment
____ I am or did consider myself to be in a permanent relationship with a man
____ I am or did consider myself to be in a permanent relationship with a woman

What ethnicity do you consider yourself?

____ African American ____ Asian American
____ Caucasian ____ Hispanic
____ Native American ____ Other, please specify: _____

What is the highest level of formal education you have completed?

____ High School ____ 1st year of college
____ 2nd year of college ____ 3rd year of college

What is the age of your current or most recent relationship partner? _____

What ethnicity do you consider your current or most recent partner?

____ African American ____ Asian American
____ Caucasian ____ Hispanic
____ Native American ____ Other, please specify: _____

Do you believe that your current or most recent partner has a problem with drug or alcohol use?

____ Yes ____ No

APPENDIX D

Abuse within Intimate Relations Scale (AIRS)

Please **check the appropriate box** for how often you have engaged in these behaviors

	Never	Once	Twice or more
1. I have given my partner the silent treatment	☐	☐	☐
2. I have used an object to hit my partner	☐	☐	☐
3. I have pushed my partner	☐	☐	☐
4. I have shoved my partner	☐	☐	☐
5. I have had pushing matches with my partner	☐	☐	☐
6. I have forcefully pushed my partner	☐	☐	☐
7. I have squeezed my partner is a forceful way	☐	☐	☐
8. I have blamed my partner for things that were uncontrollable	☐	☐	☐
9. I have mocked my partner	☐	☐	☐
10. I have purposely insulted my partner	☐	☐	☐
11. I have criticized my partner	☐	☐	☐
12. I have ridiculed my partner	☐	☐	☐
13. I have kept secrets from my partner	☐	☐	☐
14. I have physically attacked my partner	☐	☐	☐
15. I have grabbed my partner's arm tightly	☐	☐	☐
16. I have betrayed my partner	☐	☐	☐
17. I have lied to my partner	☐	☐	☐
18. I have belittled my partner	☐	☐	☐
19. I have deceived my partner	☐	☐	☐
20. I have used profanity towards my partner	☐	☐	☐
21. I have screamed at my partner	☐	☐	☐
22. I have degraded my partner	☐	☐	☐
23. I have sneered at my partner	☐	☐	☐
24. I have ignored my partner	☐	☐	☐
25. I have grabbed my partner in a rough manner	☐	☐	☐
26. I have thrown objects while arguing with my partner	☐	☐	☐

APPENDIX E

Revised Conflicts Tactics Scale (CTS2), Adapted

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 check 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.	Once in the past year	Twice in the past year	3-5 times in the past year	6-10 times in the past year	11-20 times in the past year	More than 20 times in the past year	Not in the past year, but it did happen before	This has never happened
1	I showed my partner I cared even though we disagreed.								
2	I explained my side of a disagreement to my partner.								
3	I insulted or swore at my partner.								
4	I threw something at my partner that could hurt.								
5	I twisted my partner's arm or hair.								
6	I had a sprain, bruise, or small cut because of a fight with my partner.								
7	I showed respect for my partner's feelings about an issue.								
8	I made my partner have sex without a condom.								
9	I pushed or shoved my partner.								
10	I used force (hitting, holding down, using a weapon) to make my partner have oral or anal sex.								
11	I used a knife or gun on my partner.								
12	I passed out from being hit on the head by my partner in a fight.								
13	I called my partner fat or ugly.								
14	I punched or hit my partner with something that could hurt.								
15	I destroyed something belonging to my partner.								
16	I went to a doctor because of a fight with my partner.								
17	I choked my partner.								
18	I shouted or yelled at my partner.								
19	I slammed my partner against a wall.								
20	I said I was sure we could work out a problem.								
21	I needed to see a doctor because of a fight with my partner, but I didn't.								
22	I beat up my partner.								

		Once in the past year	Twice in the past year	3-5 times in the past year	6-10 times in the past year	11-20 times in the past year	More than 20 times in the past year	Not in the past year, but it did happen before	This has never happened
23	I grabbed my partner.								
24	I used force (like hitting, holding down, or using a weapon) to make my partner have sex.								
25	I stomped out of the room or house or yard during a disagreement.								
26	I insisted on sex when my partner did not want to (but did not use physical force).								
27	I slapped my partner.								
28	I had a broken bone from a fight with my partner.								
29	I used threats to make my partner have oral or anal sex.								
30	I suggested a compromise to a disagreement.								
31	I burned or scalded my partner on purpose.								
32	I insisted my partner have oral or anal sex (but did not use physical force).								
33	I accused my partner of being a lousy lover.								
34	I did something to spite my partner.								
35	I threatened to hit or throw something at my partner.								
36	I felt physical pain that still hurt the next day because of a fight with my partner.								
37	I kicked my partner.								
38	I used threats to make my partner have sex.								
39	I agreed to try a solution to a disagreement my partner suggested.								

Taken from Straus, M. A., Hamby, S. L., McCoy, S. B., & Sugarman, D. B. Journal of Family Issues 17(3) 283-316

APPENDIX F

Psychological Maltreatment of Women Inventory

	Please check the appropriate box for each item depending on how frequently each of these behaviors occurs in your current or most recent relationship.	NEVER	RARELY	SOMETIMES	FREQUENTLY	VERY FREQUENTLY
1	I put down my partner's physical appearance.					
2	I insulted or shamed my partner in front of others.					
3	I treated my partner like he or she was stupid.					
4	I was insensitive to my partner's feelings.					
5	I told my partner that he/she couldn't manage or take care of him/herself without me.					
6	I put down my partner's care of the children.					
7	I criticized the way my partner took care of the house.					
8	I said something to spite my partner.					
9	I brought up something from the past to hurt my partner.					
10	I called my partner names.					
11	I swore at my partner.					
12	I yelled or screamed at my partner.					
13	I treated my partner like an inferior.					
14	I sulked or refused to talk about a problem.					
15	I stomped out of a house or yard during a disagreement.					
16	I gave my partner the silent treatment or acted as if my partner wasn't there.					
17	I withheld affection from my partner.					
18	I did not let my partner talk about his or her feelings.					
19	I was insensitive to my partner's sexual needs and desires.					
20	I demanded obedience to my whims.					
21	I became upset if dinner, housework, or laundry was not done when I thought it should be.					
22	I acted like my partner was my personal servant.					
23	I did not do a fair share of household tasks.					
24	I did not do a fair share of child care.					
25	I ordered my partner around.					
26	I monitored my partner's time and made my partner account for where he or she was.					
27	I was stingy in giving my partner money to run our home.					
28	I acted irresponsibly with our financial resources.					
29	I did not contribute enough to support our family.					
30	I used our money or made important financial decisions without talking to my partner about it.					
31	I kept my partner from getting the medical care that he or she needed.					
32	I was jealous or suspicious of my partner's friends.					
33	I was jealous of other men or women.					
34	I did not want my partner to go to school or other self-improvement activities.					

35	I did not want my partner to socialize with other friends of the same sex.					
36	I accused my partner of having an affair.					
37	I demanded that my partner stay home and take care of the children.					
38	I tried to keep my partner from seeing or talking to his or her family.					
39	I interfered with my partner's relationships with other family members					
40	I tried to keep my partner from doing things to help him or herself.					
41	I restricted my partner's use of the car.					
42	I restricted my partner's use of the telephone.					
43	I did not allow my partner to go out of the house when he or she wanted to go.					
44	I refused to let my partner work outside the home.					
45	I told my partner his or her feelings were irrational or crazy.					
46	I blamed my partner for my problems.					
47	I tried to turn our family, friends, and children against my partner.					
48	I blamed my partner for causing my violent behavior.					
49	I tried to make my partner feel like he or she was crazy.					
50	My moods changed radically, from calm to angry, or vice versa.					
51	I blamed my partner when I was upset about something, even when it had nothing to do with him or her.					
52	I tried to convince my partner's friends, family, or children that my partner was crazy.					
53	I threatened to hurt myself if my partner left me.					
54	I threatened to hurt myself if my partner didn't do what I wanted him or her to do.					
55	I threatened to have an affair with someone else.					
56	I threatened to leave the relationship.					
57	I threatened to take the children away from my partner.					
58	I threatened to have my partner committed to a mental institution.					

from Tolman (1989) Violence and Victims, 4(3)

APPENDIX G

Marlowe-Crowne Social Desirability Scale, Short Form

Please respond to each of these statements by circling either “true” or “false”, according to which response best describes your own personality characteristics and traits:

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

Taken from: Reynolds, W. M. (1982) Development of reliable and valid short forms of the Marlowe-Crowne Scale. Journal of Clinical Psychology 38(1).